

Employment and Earnings

August 1978



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CALENDAR OF SPECIAL FEATURES								
Features	Jan.	Feb.	Mar.	Apr.	May	Jul.	Oct.	Dec.
Household data								
Annual averages	x							
Revised seasonally adjusted series		x						
Quarterly averages:								
Seasonally adjusted data								
Persons not in labor force								
Persons of Hispanic origin								
Vietnam-Era veterans and nonveterans								
Poverty-nonpoverty area data								
Family relationship data	x			x		x	x	
Establishment data								
National annual averages:								
Industry divisions (preliminary)	x							
Industry detail (final)			x					
National data adjusted to new benchmarks		(1)					(1)	
Revised seasonally adjusted series								(2)
State and area annual averages					x			
Area definitions					x			

¹ The issue that introduces new benchmarks varies. The October 1975 issue marks the introduction of March 1974 benchmarks. Interim revisions of selected series appear in the February 1977 issue.

² Revised data introduced December 1977.

Employment and Earnings

Vol. 25 No. 8 August 1978

Editors: Chester L. Green, Gloria P. Green, Rosalie K. Epstein

CONTENTS

	Page
List of statistical tables	2
Employment and unemployment developments, July 1978	4
Charts	7
Statistical tables:	
Not seasonally adjusted—	
Household data	19
Establishment data:	
Employment	49
Hours and earnings	81
Labor turnover	109
State and area unemployment data	118
Seasonally adjusted series—	
Household data	42
Establishment data:	
Employment	65
Hours and earnings	100
Productivity	101
Labor Turnover	114
Explanatory notes	123

MONTHLY HOUSEHOLD DATA

Page

Employment Status

A- 1: Employment status of the noninstitutional population 16 years and over, 1947 to date	19
A- 2: Employment status of the noninstitutional population 16 years and over by sex, 1967 to date	20
A- 3: Employment status of the noninstitutional population by sex, age, and race	21
A- 4: Labor force by sex, age, and race	23
A- 5: Employment status of black workers by sex and age	25
A- 6: Employment status of the noninstitutional population by sex, age, and race	26
A- 7: Employment status of the noninstitutional population 16-21 years of age by race and sex	26
A- 8: Full- and part-time status of the civilian labor force by sex, age, and race	27

Characteristics of the Unemployed

A- 9: Employment status of the noninstitutional population by family relationship	28
A-10: Unemployed persons by marital status, sex, age, and race	28
A-11: Unemployed persons by occupation of last job and sex	29
A-12: Unemployed persons by industry of last job and sex	29
A-13: Unemployed persons by reason for unemployment, sex, age, and race	30
A-14: Unemployed persons by reason for unemployment, duration, sex, and age	30
A-15: Unemployed jobseekers by the jobsearch methods used, sex, age, and race	31
A-16: Unemployed jobseekers by the jobsearch methods used, sex, and reason for unemployment	31
A-17: Unemployed persons by duration of unemployment	32
A-18: Unemployed persons by duration, sex, age, race, and marital status	32
A-19: Unemployed persons by duration, occupation, and industry of last job	33

Characteristics of the Employed

A-20: Employed persons by sex and age	33
A-21: Employed persons by occupation, sex, and age	34
A-22: Employed persons by occupation, sex, and race	35
A-23: Employed persons by class of worker, age, and sex	36
A-24: Employed persons by industry and occupation	36
A-25: Employed persons with a job but not at work by reason, pay status, and sex	37
A-26: Persons at work by type of industry and hours of work	37
A-27: Persons at work 1-34 hours by usual status and reason for working less than 35 hours	38
A-28: Nonagricultural workers-by industry and full- or part-time status	38
A-29: Persons at work in nonagricultural industries by full- or part-time status, sex, age, race, and marital status	39
A-30: Persons at work in nonfarm occupations by full- or part-time status and sex	40

Characteristics of 14 and 15 year-olds

A-31: Employment status of 14-15 year-olds by sex and race	41
A-32: Employed 14-15 year-olds by sex, class of worker, and occupation	41

Seasonally Adjusted Employment and Unemployment Data

A-33: Employment status of the noninstitutional population by sex and age, seasonally adjusted	42
A-34: Full- and part-time status of the civilian labor force, seasonally adjusted	42
A-35: Employment status by race, sex, and age, seasonally adjusted	43
A-36: Major unemployment indicators, seasonally adjusted	44
A-37: Unemployed persons by duration of unemployment, seasonally adjusted	44
A-38: Rates of unemployment by sex and age, seasonally adjusted	45
A-39: Unemployed persons by reason for unemployment, seasonally adjusted	45
A-40: Employed persons by sex and age, seasonally adjusted	46
A-41: Unemployed persons by sex and age, seasonally adjusted	46
A-42: Employed persons by selected social and economic categories, seasonally adjusted	47

Characteristics of Vietnam-Era Veterans and Nonveterans

A-43: Employment status of male Vietnam-era veterans and nonveterans 20 to 39 years of age	48
---	----

MONTHLY ESTABLISHMENT DATA

Page

Employment—National

B- 1: Employees on nonagricultural payrolls, by industry division, 1919 to date	49
B- 2: Employees on nonagricultural payrolls, by industry	50
B- 3: Women employees on nonagricultural payrolls, by industry	58
B- 4: Employees on nonagricultural payrolls, by industry, seasonally adjusted	65
B- 5: Women employees on nonagricultural payrolls, by industry, seasonally adjusted	66
B- 6: Production or nonsupervisory workers on private nonagricultural payrolls, seasonally adjusted	67
B- 7: Indexes of diffusion: Percent of industries in which employment increased	68

Employment—State and Area

B- 8: Employees on nonagricultural payrolls for States and selected areas, by industry division	70
---	----

Hours and Earnings—National

C- 1: Gross hours and earnings of production or nonsupervisory workers on private nonagricultural payrolls, 1955 to date	81
C- 2: Gross hours and earnings of production or nonsupervisory workers on private nonagricultural payrolls, by industry	82
C- 3: Employment, hours, and indexes of earnings in the Executive Branch of the Federal Government	96
C- 4: Average hourly earnings excluding overtime of production workers on manufacturing payrolls, by industry	96
C- 5: Gross and spendable average weekly earnings of production or nonsupervisory workers on private nonagricultural payrolls, in current and 1967 dollars	97
C- 6: Indexes of aggregate weekly hours and payrolls of production or nonsupervisory workers on private nonagricultural payrolls	98
C- 7: Average weekly hours of production or nonsupervisory workers on private nonagricultural payrolls, by industry division and major manufacturing group, seasonally adjusted	100
C- 8: Average hourly and weekly earnings of production or nonsupervisory workers on private nonagricultural payrolls, seasonally adjusted	100
C- 9: Indexes of aggregate weekly hours of production or nonsupervisory workers on private nonagricultural payrolls by industry division and major manufacturing group, seasonally adjusted	101
C-10: Hours of wage and salary workers in nonagricultural establishments, by industry division	101
C-11: Indexes of output and compensation per hour, unit costs, and prices, private business sector, seasonally adjusted	102
C-12: Percent changes from preceding quarter and year in productivity, hourly compensation, unit costs, and prices, private business sector, seasonally adjusted, at annual rate	103

Hours and Earnings—State and Area

C-13: Gross hours and earnings of production workers on manufacturing payrolls, by State and selected areas	104
---	-----

Labor Turnover—National

D- 1: Labor turnover rates in manufacturing, 1969 to date	109
D- 2: Labor turnover rates, by industry	110
D- 3: Labor turnover rates in manufacturing, 1966 to date, seasonally adjusted	114

Labor Turnover—State and Area

D- 4: Labor turnover rates in manufacturing for selected States and areas	115
---	-----

MONTHLY STATE AND AREA UNEMPLOYMENT DATA

E- 1: Labor force and unemployment by State and selected metropolitan areas	118
---	-----

Employment and Unemployment Developments, July 1978

Unemployment rose in July, following a drop of about the same magnitude in June. The unemployment rate was 6.2 percent, up from 5.7 percent in June and returning to the 6.0-6.2 percent range which has prevailed throughout most of this year.

Employment movements differed sharply in the two major sample surveys between June and July. Total employment—as measured by the monthly survey of households—declined by 400,000 to 94.4 million in July. Employment had expanded by 700,000 in the prior month. The proportion of the population that is employed was 58.6 percent in July, down from the June peak but equal to the May level.

In contrast to the over-the-month downturn in total employment, nonfarm payroll employment—as measured by the monthly survey of establishments—rose by 265,000 in July, following a slightly larger increase in the previous month. Over the past year, nonagricultural employment in each survey has risen by approximately the same magnitude.

Unemployment

Both the July unemployment rate, 6.2 percent, and the number of persons unemployed, 6.2 million, were up from the previous month but were in line with the rates and levels which had prevailed from February through May of this year. During that 4-month period, the unemployment rate fluctuated between 6.0 and 6.2 percent, and unemployment averaged 6.1 million.

Teenagers accounted for half of the 440,000 increase in unemployment in July, as their rate rose from 14.2 to 16.3 percent. Most of the remaining increase occurred among adult women, whose rate advanced from 6.1 to 6.5 percent. The rate for adult men, 4.1 percent, rose slightly over the month but was a full percentage point below the July 1977 figure. (See table A-36.)

The white unemployment rate increased over the month from 4.9 to 5.3 percent. The unemployment rate for black workers, 12.5 percent, was little changed, remaining within a range of 11.8-12.7 percent evident since last December. Among other worker categories, unemployment increased for persons looking for full-time work, job losers, persons unemployed less than 5 weeks, and women who head families. However, virtually all worker groups have shown improvement over the past year. (See tables A-36, A-37, and A-39.)

Total employment and the labor force

The number of employed persons declined by 400,000 in July to 94.4 million (according to the household survey). However, employment growth has been generally strong and steady for some time and since last July has advanced by nearly 3.6 million; nearly every major demographic group has shared in this expansion.

The civilian labor force was 100.6 million in July, essentially unchanged from the June level. Over the year, the labor force has risen by 3.1 million, with adult women accounting for nearly three-fifths of the growth.

The civilian labor force participation rate remained at the all-time high of 63.3 percent attained in June. This percentage was almost a full point above the year-earlier level.

Industry payroll employment

Nonagricultural payroll employment increased by 265,000 in July to 86.0 million (according to the establishment survey). Nearly all of the major industry groups posted gains, as employment increased in 60 percent of the 172 industries that comprise the BLS diffusion index of private nonagricultural payroll employment. Nonfarm payroll employment has expanded by 3.6 million over the past year. (See tables B-4 and B-7.)

Two-thirds of July's overall gain occurred in the service-producing industries, led by the services component. Services rose by 110,000, the largest month-to-month increase over the last 12 months in an industry that has shown sizeable gains all year. Over-the-month job increases also were posted in retail trade (60,000) and finance, insurance, and real estate (20,000). The only notable decline occurred in transportation and public utilities, where employment dropped by 25,000.

In the goods-producing sector, contract construction registered another large over-the-month increase—50,000. Construction jobs have increased by more than half a million over the past year. Employment in durable goods rose by 45,000 in July, led by machinery and electrical equipment. Both industries have posted reasonably steady, if not always large, employment gains since late 1977. By contrast, employment in nondurable goods edged down slightly, with the largest decline occurring in apparel and other textile products. Thus, employment in the manu-

facturing industry as a whole showed little movement over the month, and the gain over the past 3 months has totaled less than 100,000.

Hours

The average workweek for production or nonsupervisory workers on private nonagricultural payrolls was 36.1 hours in July, unchanged from both the previous month and a year earlier.

Contract construction hours rose 0.3 hour to 37.7, the longest workweek for the industry since early 1977. The manufacturing workweek (40.4 hours) and overtime (3.5 hours) were unchanged from the June level. (See table C-7.)

As a result of the increase in the level of employment, the index of aggregate hours of production or nonsuper-

visory workers on private nonagricultural payrolls increased from 120.5 to 121.0 in July (1967=100). The index was 4.5 percent above the year-earlier level. (See table C-9.)

Hourly and weekly earnings

Average hourly earnings of production or nonsupervisory workers on private nonagricultural payrolls increased 0.9 percent in July, seasonally adjusted. Average weekly earnings rose by the same margin. Since last July, average hourly and weekly earnings have increased by 8.7 percent.

Before adjustment for seasonality, average hourly earnings were \$5.71 in July, up 4 cents from June and 46 cents from a year earlier. Average weekly earnings were \$208.42, \$2.60 above their June level and \$16.79 higher than last July. (See tables C-1 and C-4.)

CHARTS

Page

1. Labor force and employment, 1959-78	7
2. Major unemployment indicators, 1959-78	8
3. Civilian labor force participation rates by sex and age, 1959-78	8
4. Total employment by sex and age, 1959-78	9
5. Employment-population ratios by sex and age, 1959-78	10
6. Payroll employment in goods and service-producing industries, 1959-78	10
7. Nonagricultural payroll employment by industry, 1959-78	11
8. Persons at work full and part time in nonagricultural industries, 1959-78	12
9. Employment in nonfarm occupations, 1959-78	13
10. Unemployment rates by sex and age, 1959-78	14
11. Unemployment rates by race, 1959-78	14
12. Unemployment rates by major occupational groups, 1959-78	15
13. Duration of unemployment, 1959-78	16
14. Average weekly hours in nonagricultural industries, 1959-78	17
15. Average weekly earnings in nonagricultural industries, 1959-78	17
16. Total private gross and spendable weekly earnings, 1959-78	18
17. Labor turnover rates in manufacturing, 1959-78	18

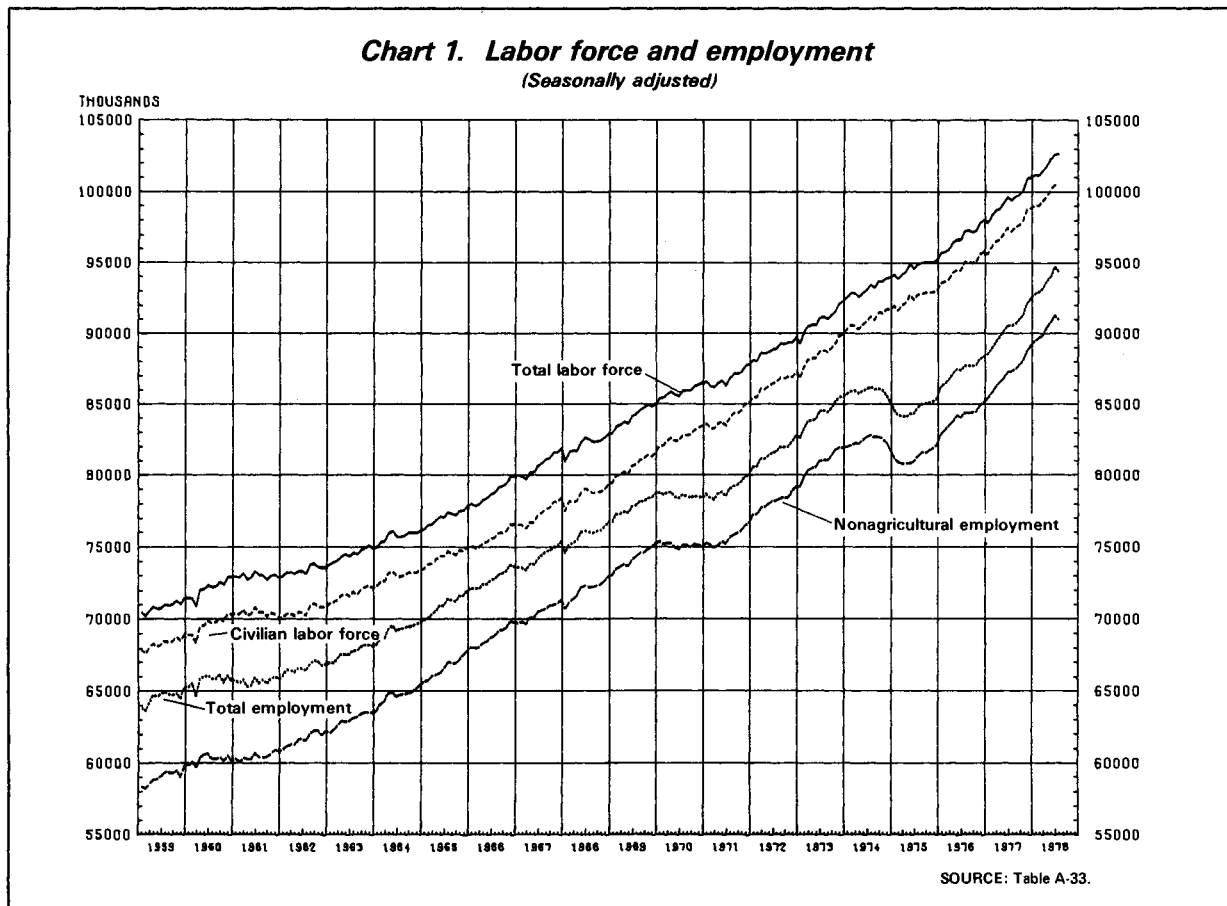


Chart 2. Major unemployment indicators
(Seasonally adjusted)

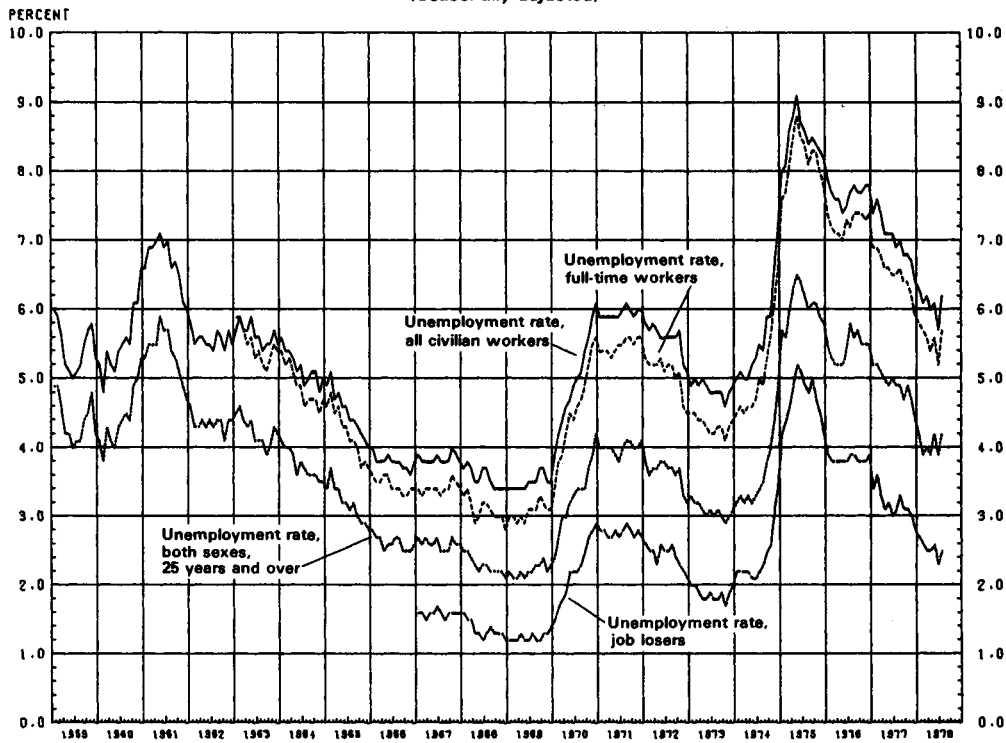


Chart 3. Civilian labor force participation rates by sex and age
(Seasonally adjusted)

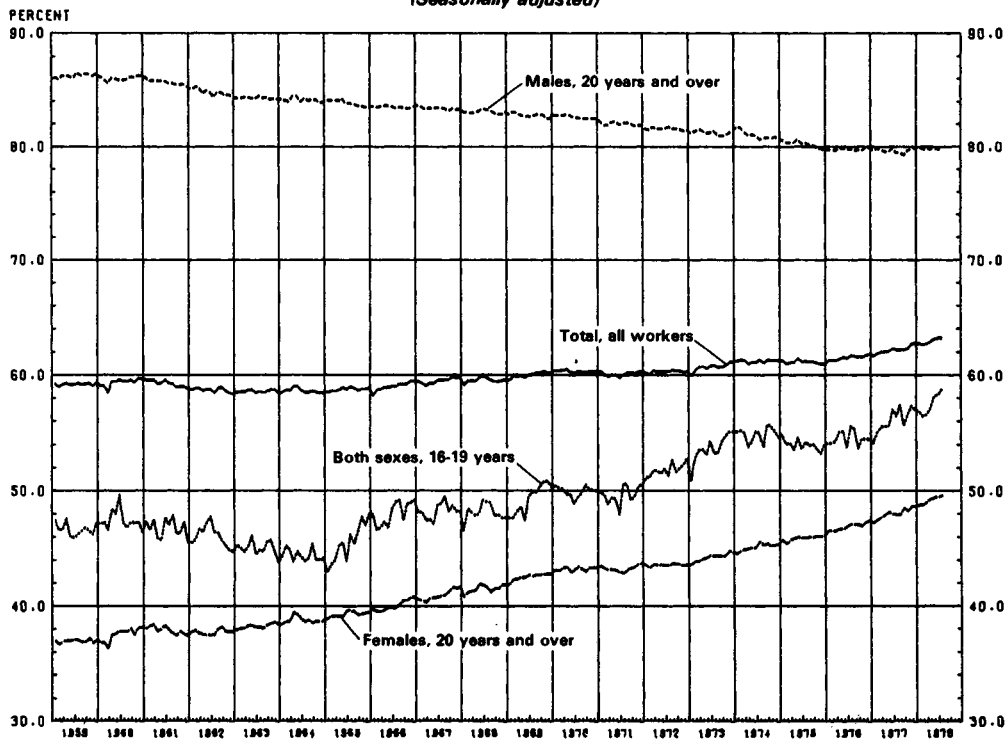
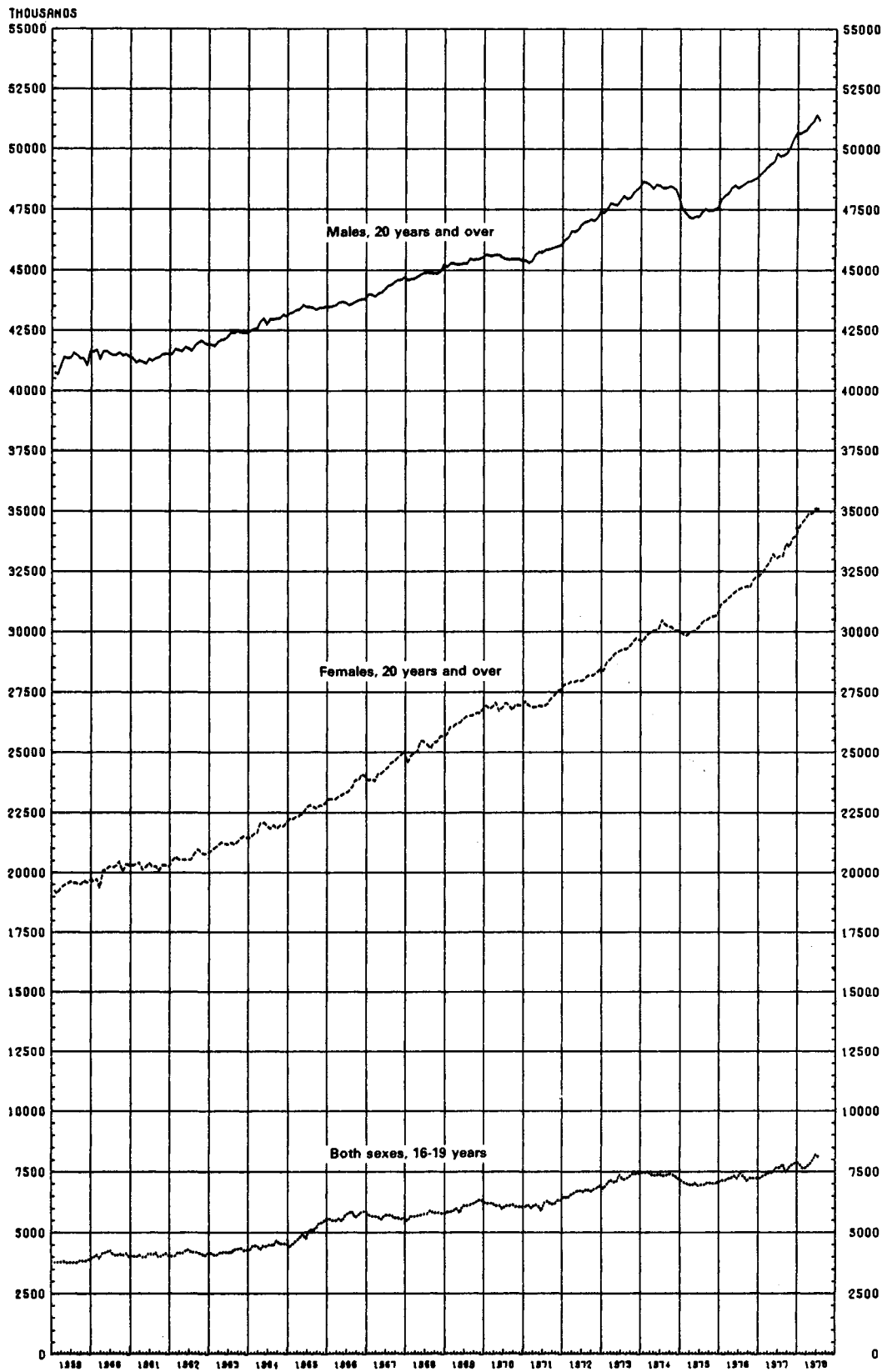


Chart 4. Total employment by sex and age

(Seasonally adjusted)



SOURCE: Table A-33.

Chart 5. Employment—population ratios by sex and age
(Seasonally adjusted)

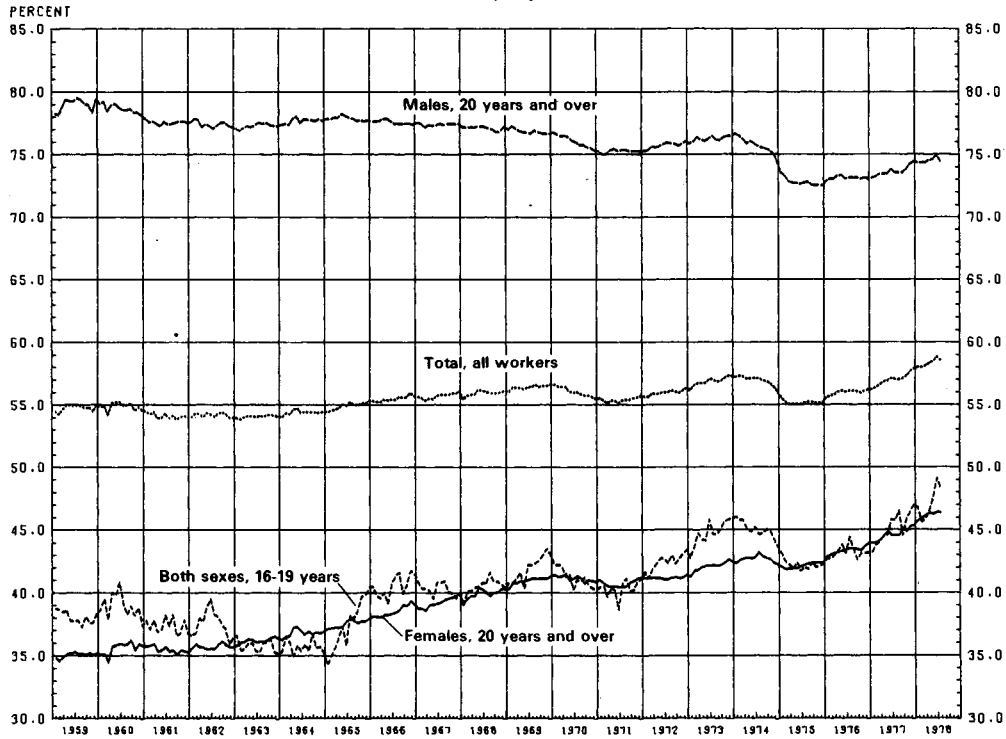


Chart 6. Payroll employment in goods and service-producing industries
(Seasonally adjusted)

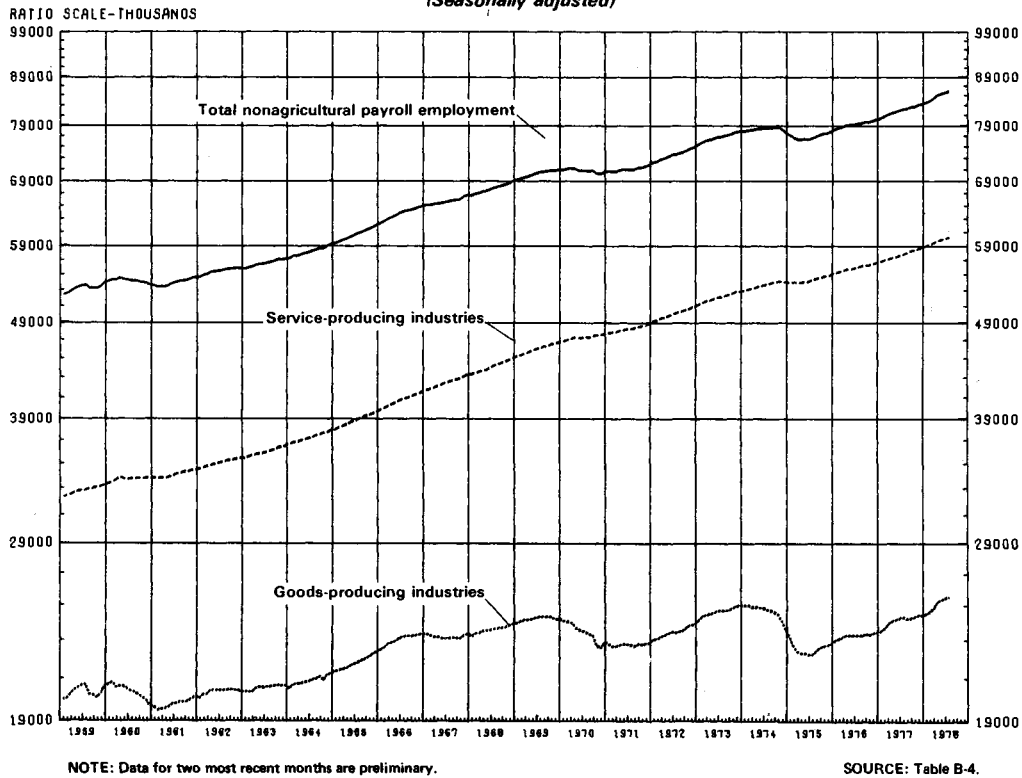
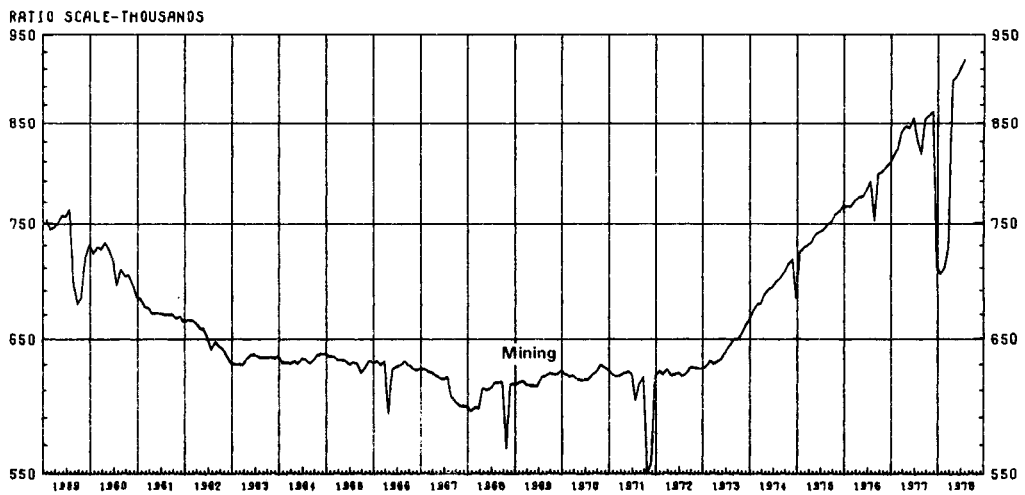
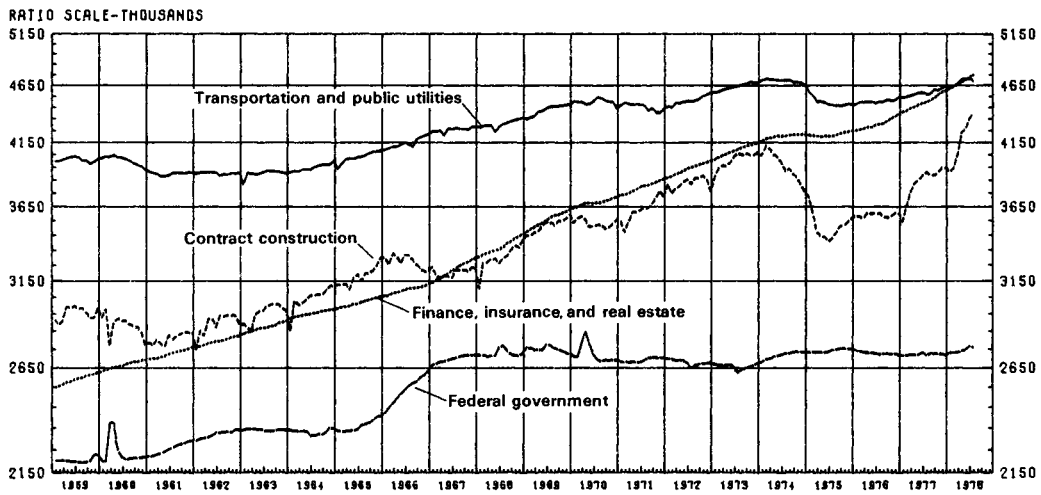
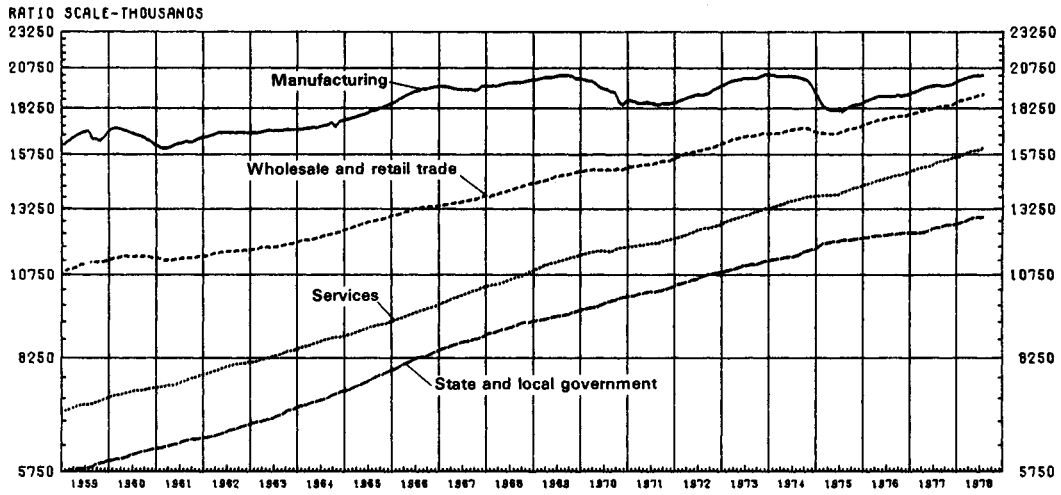


Chart 7. Nonagricultural payroll employment by industry

(Seasonally adjusted)

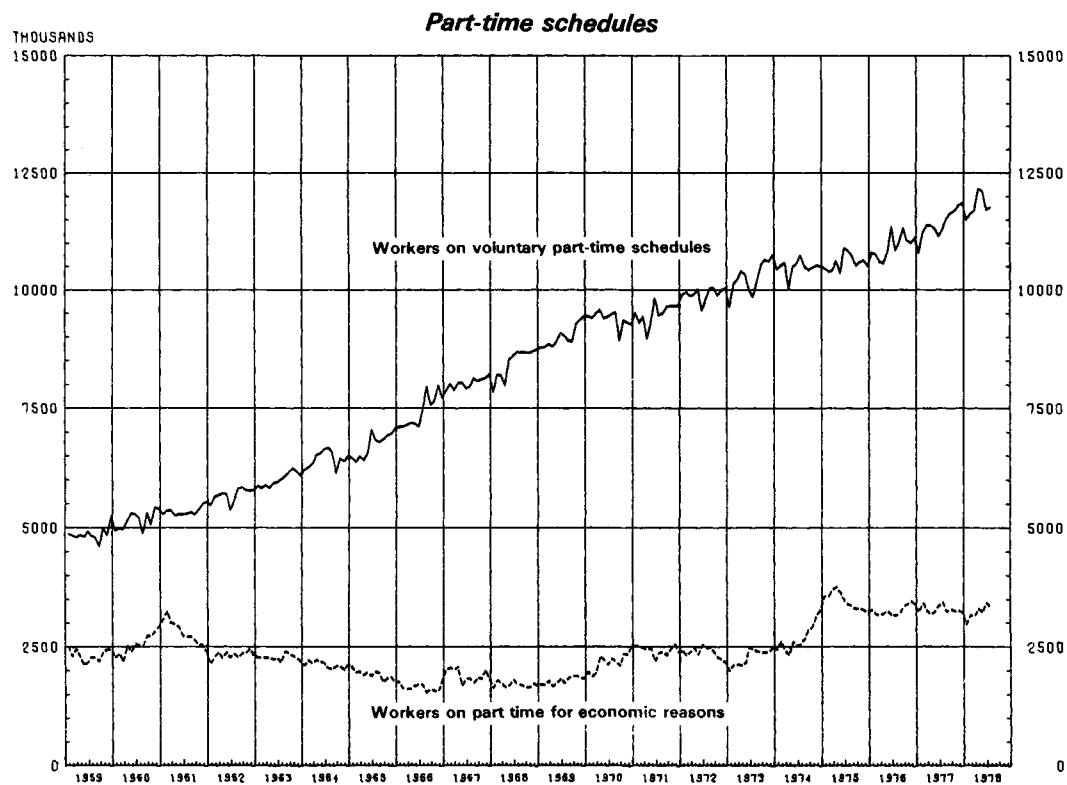
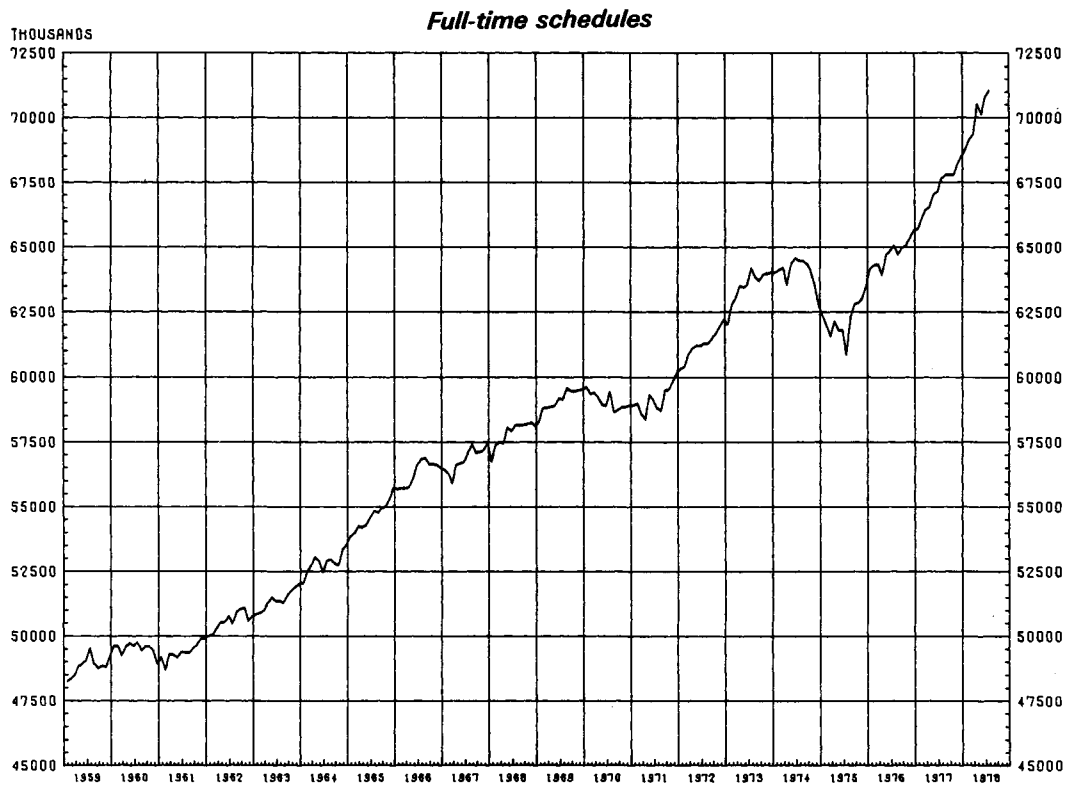


NOTE: Data for two most recent months are preliminary.

SOURCE: Table B-4.

Chart 8. Persons at work full and part time in nonagricultural industries

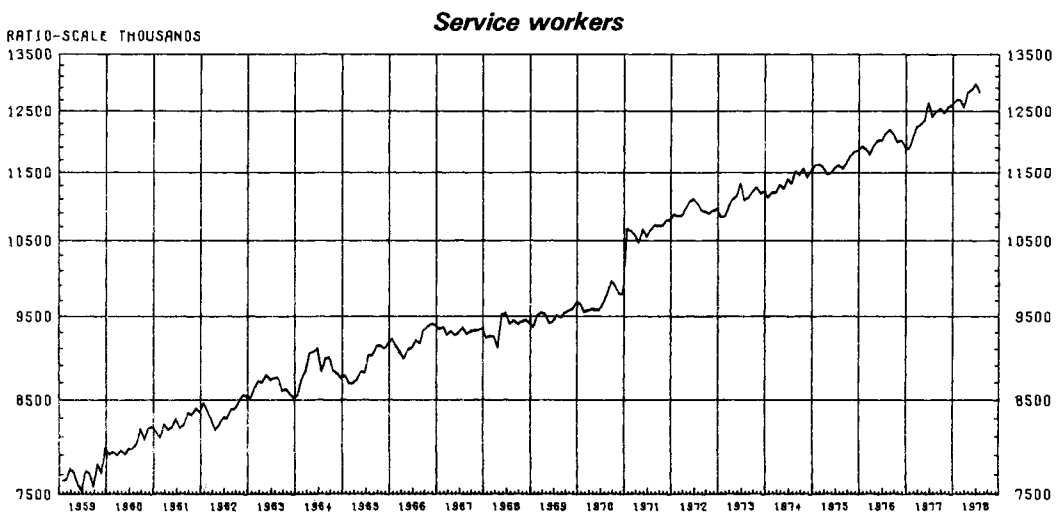
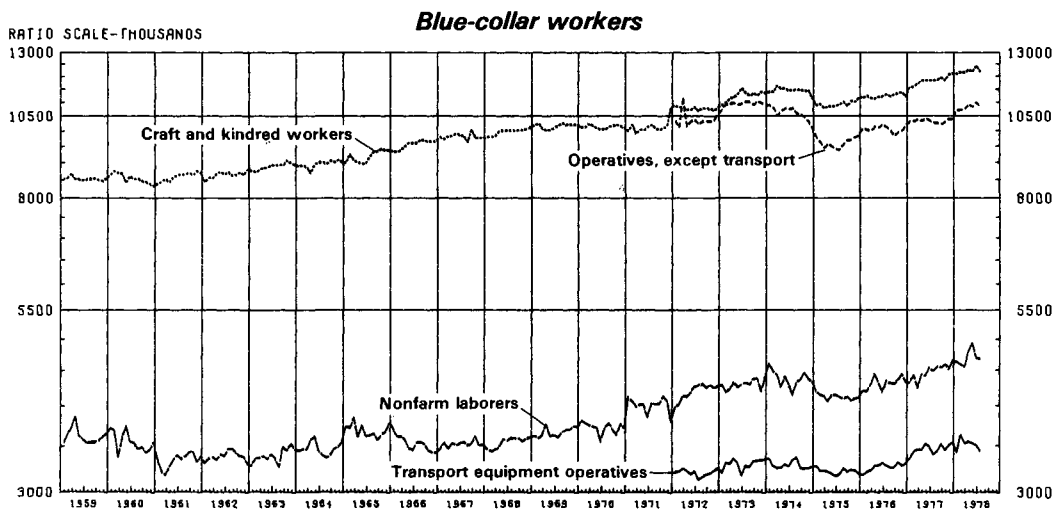
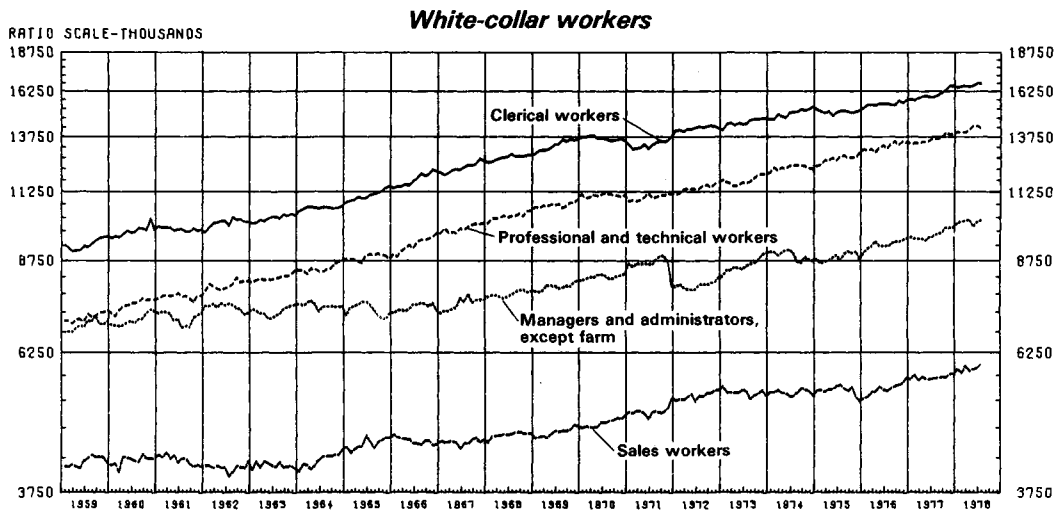
(Seasonally adjusted)



SOURCE: Table A-42.

Chart 9. Employment in nonfarm occupations

(Seasonally adjusted)



NOTE: Two breaks in series occurred in 1971 stemming from the reclassification of occupations introduced in January and from a questionnaire change concerning "major activity" introduced in December. See "Changes in occupational classification system" in the Explanatory Notes.

SOURCE: Table A-42.

Chart 10. Unemployment rates by sex and age

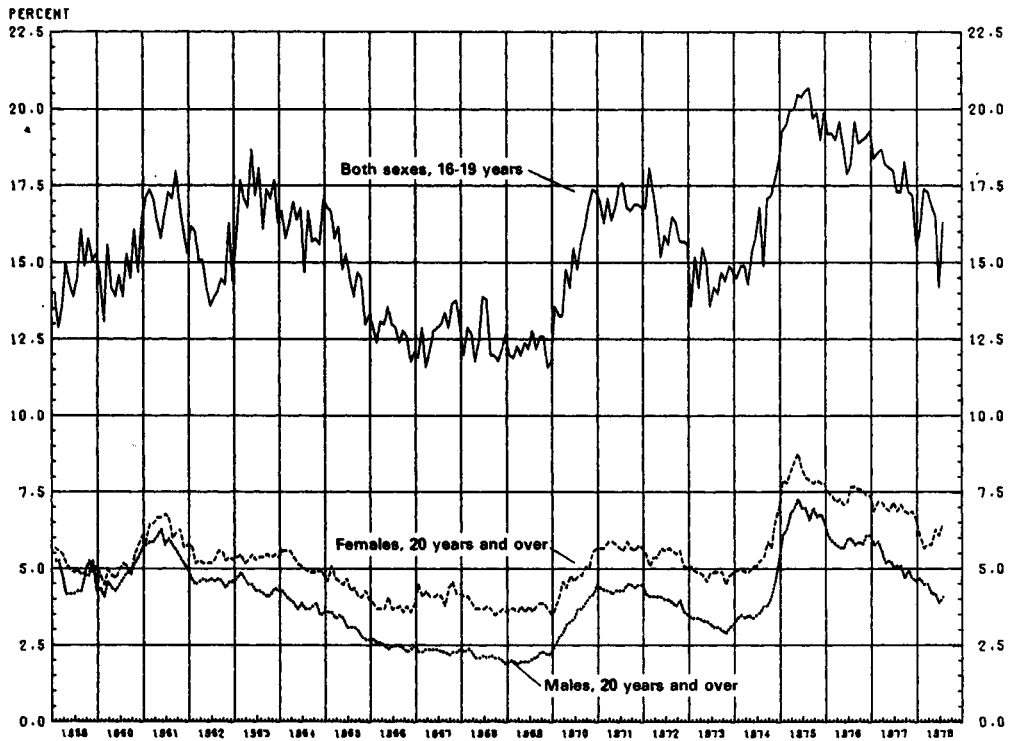
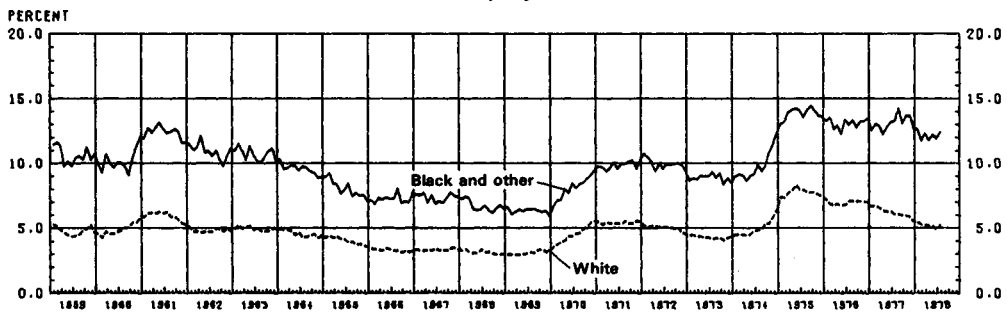
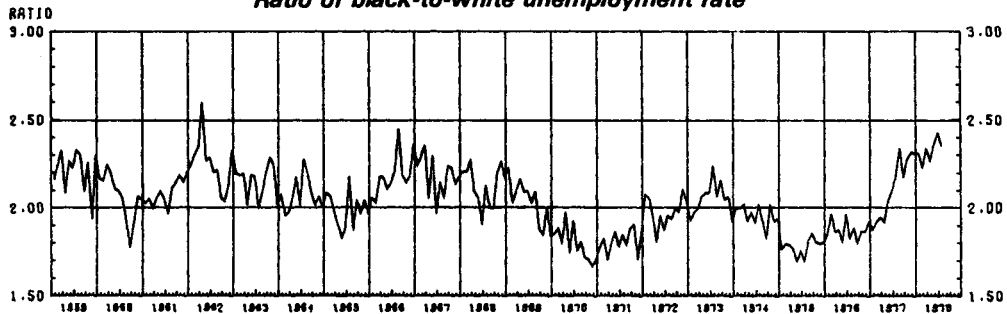


Chart 11. Unemployment rates by race
(Seasonally adjusted)

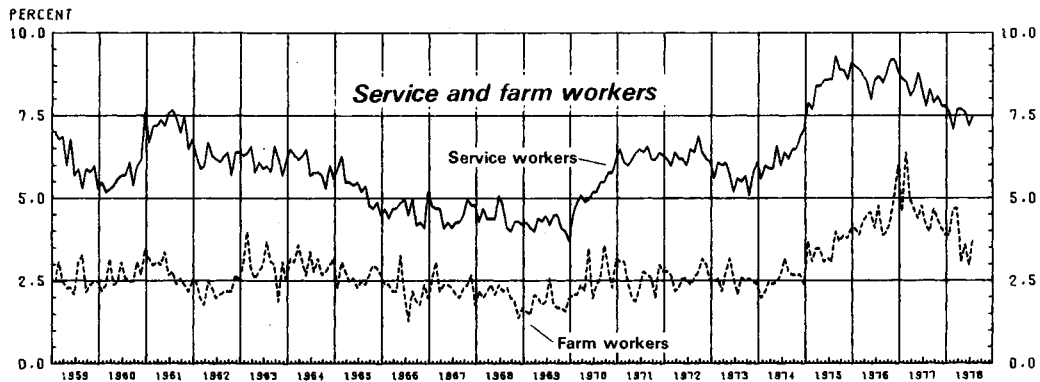
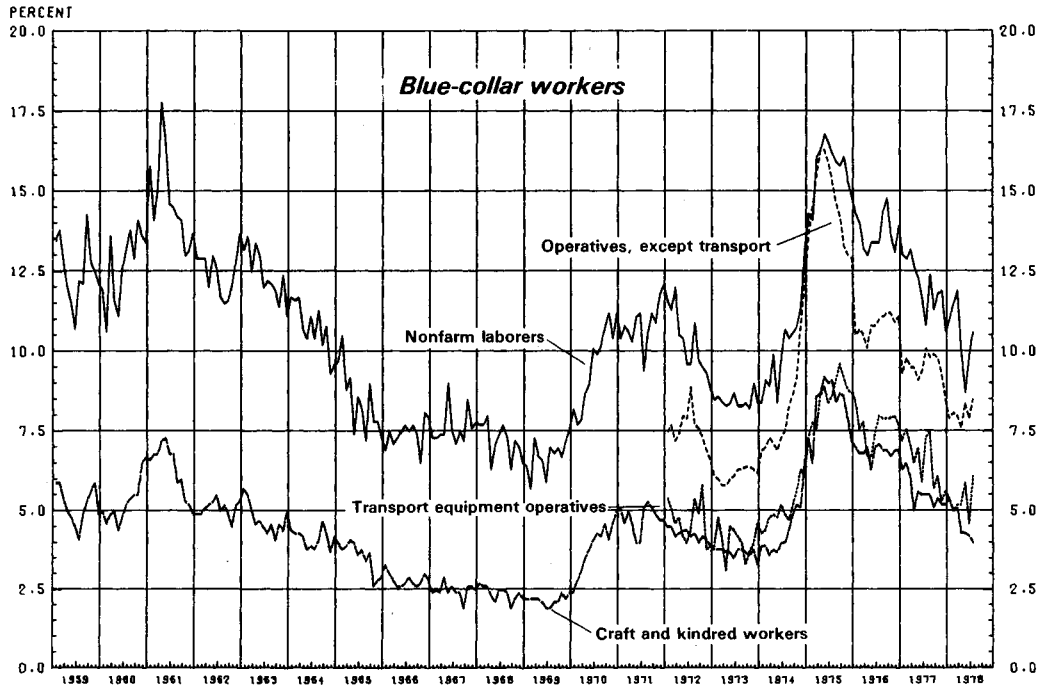
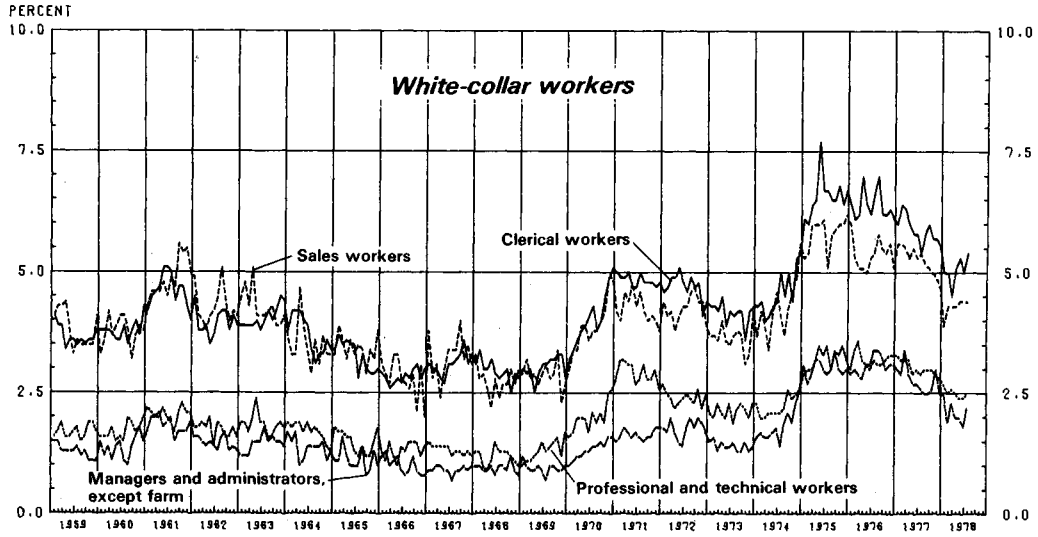


Ratio of black-to-white unemployment rate



SOURCE: Table A-35.

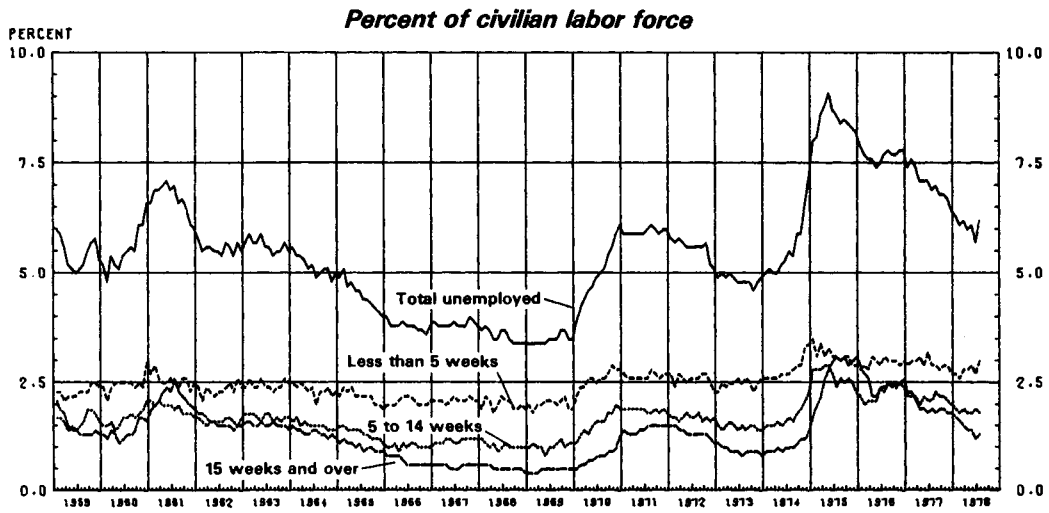
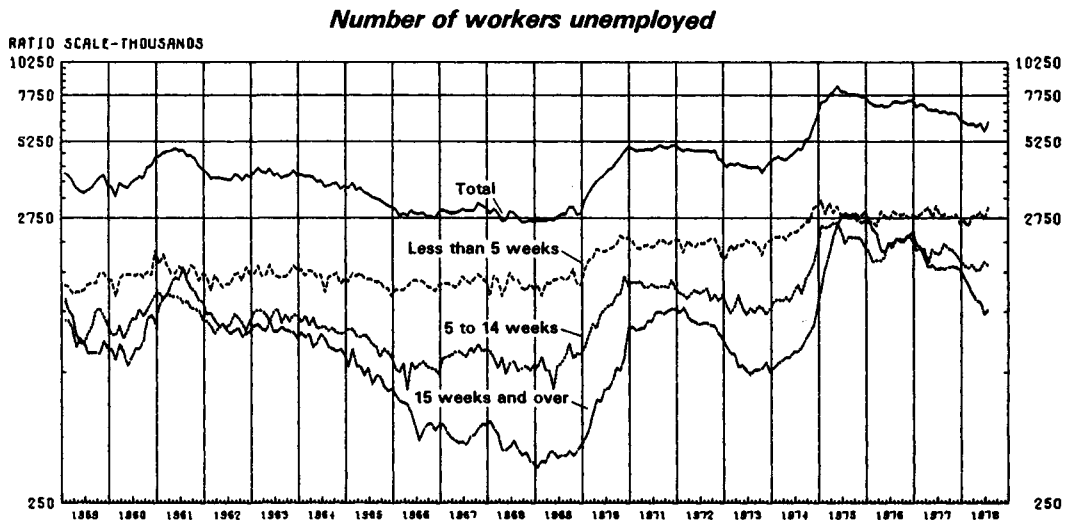
Chart 12. Unemployment rates by major occupational groups
(Seasonally adjusted)



SOURCE: Table A-36.

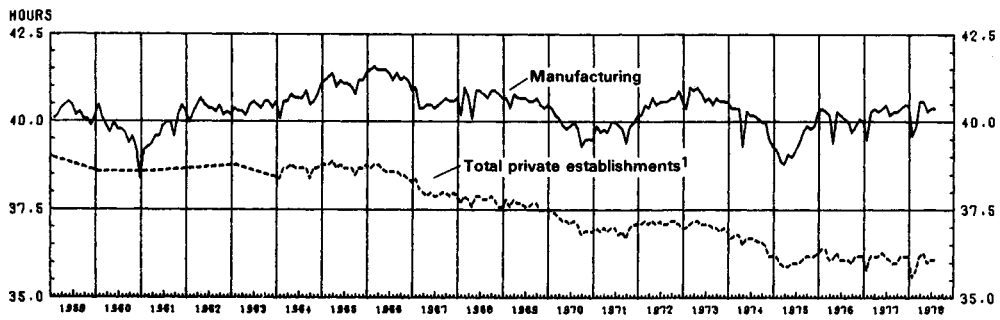
Chart 13. Duration of unemployment

(Seasonally adjusted)

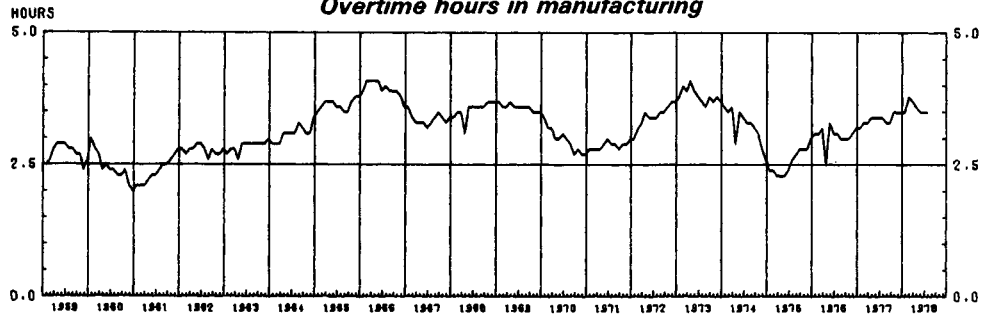


SOURCE: Table A-37.

Chart 14. Average weekly hours in nonagricultural industries
(Seasonally adjusted)



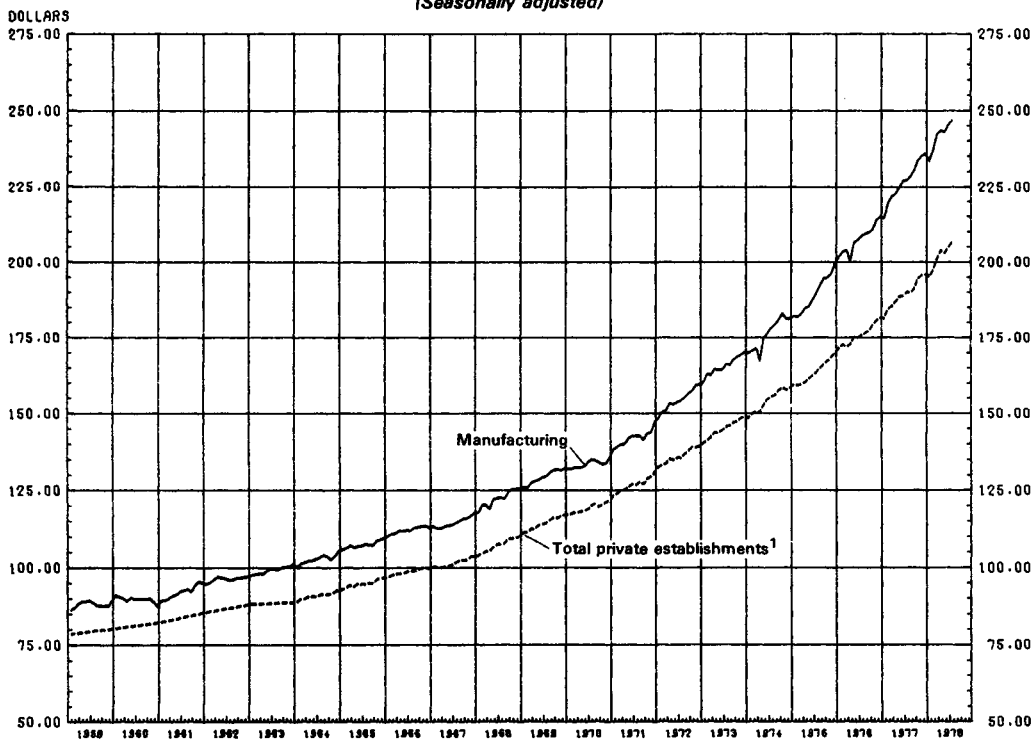
Overtime hours in manufacturing



¹Annual averages prior to 1964.
NOTE: Data for two most recent months are preliminary.

SOURCE: Table C-7.

Chart 15. Average weekly earnings in nonagricultural industries
(Seasonally adjusted)

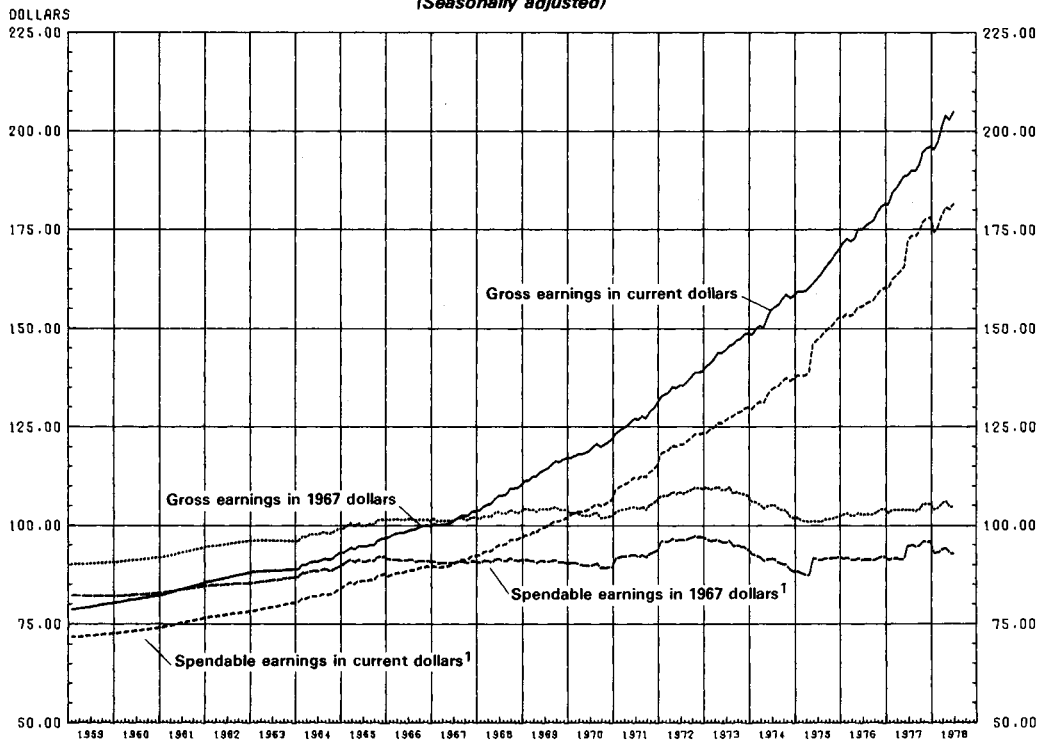


¹Annual averages prior to 1964.
NOTE: Data for two most recent months are preliminary.

SOURCE: Tables C-7 and C-8.

Chart 16. Total private gross and spendable weekly earnings

(Seasonally adjusted)



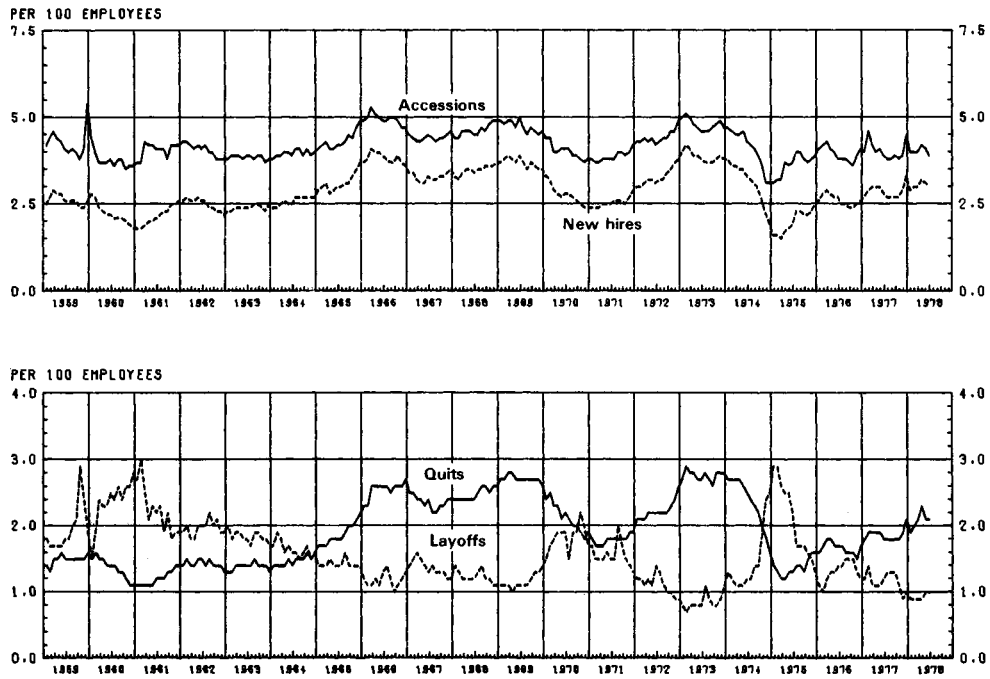
¹ Married worker with three dependents.

NOTE: Data prior to 1964 are annual averages. Data for current month are preliminary.

SOURCE: Table C-8.

Chart 17. Labor turnover rates in manufacturing

(Seasonally adjusted)



NOTE: Data for current month are preliminary.

SOURCE: Table D-3.

**HOUSEHOLD DATA
HISTORICAL**

A-1. Employment status of the noninstitutional population 16 years and over, 1947 to date

(Numbers in thousands)

Year and month	Total noninstitutional population	Total labor force		Civilian labor force						Not in labor force
		Number	Percent of population	Total	Employed			Unemployed		
					Total	Agri-culture	Nonagri-cultural industries	Number	Percent of labor force	
TOTAL										
Annual averages										
1947.....	103,418	60,941	58.9	59,350	57,038	7,890	49,148	2,311	3.9	42,477
1948.....	104,527	62,080	59.4	60,621	58,343	7,629	50,714	2,276	3.8	42,447
1949.....	105,611	62,903	59.6	61,286	57,651	7,658	49,993	3,637	5.9	42,708
1950.....	106,645	63,858	59.9	62,208	58,918	7,160	51,758	3,288	5.3	42,787
1951.....	107,721	65,117	60.4	62,017	59,961	6,726	53,235	2,055	3.3	42,604
1952.....	108,823	65,730	60.4	62,138	60,250	6,500	53,749	1,883	3.0	43,093
1953 ¹	110,601	66,560	60.2	63,015	61,179	6,260	54,919	1,834	2.9	44,041
1954.....	111,671	66,993	60.0	63,643	60,109	6,205	53,904	3,532	5.5	44,678
1955.....	112,732	68,072	60.4	65,023	62,170	6,450	55,722	2,852	4.4	44,660
1956.....	113,811	69,409	61.0	66,552	63,799	6,283	57,514	2,750	4.1	44,402
1957.....	115,065	69,729	60.6	66,929	64,071	5,947	58,123	2,559	4.3	45,336
1958.....	116,363	70,275	60.4	67,639	64,786	5,786	57,450	4,602	6.8	46,088
1959.....	117,881	70,921	60.2	68,369	64,630	5,565	59,065	3,740	5.5	46,960
1960 ¹	119,759	72,142	60.2	69,628	65,778	5,458	60,318	3,852	5.5	47,617
1961.....	121,343	73,031	60.2	70,459	65,746	5,200	60,546	4,714	6.7	48,312
1962 ¹	122,981	73,442	59.7	70,614	66,702	4,944	61,759	3,911	5.5	49,539
1963.....	125,154	74,571	59.6	71,833	67,762	4,687	63,076	4,070	5.7	50,583
1964.....	127,224	75,830	59.6	73,091	69,305	4,523	64,782	3,786	5.2	51,394
1965.....	129,236	77,178	59.7	74,455	71,088	4,361	66,726	3,366	4.5	52,055
1966.....	131,180	78,893	60.1	75,770	72,895	3,979	68,915	2,875	3.8	52,288
1967.....	133,319	80,793	60.6	77,347	74,372	3,844	70,527	2,975	3.8	52,527
1968.....	135,562	82,272	60.7	78,737	75,920	3,817	72,103	2,817	3.6	53,291
1969.....	137,841	84,240	61.1	80,734	77,902	3,606	74,296	2,832	3.5	53,602
1970.....	140,182	85,903	61.3	82,715	78,627	3,462	75,165	4,088	4.9	54,280
1971.....	142,596	86,929	61.0	84,113	79,120	3,387	75,732	4,893	5.9	55,666
1972 ¹	145,775	88,991	61.0	86,542	81,702	3,472	78,230	4,840	5.6	56,785
1973 ¹	148,263	91,040	61.4	88,714	84,409	3,452	80,957	4,304	4.9	57,222
1974.....	150,827	93,240	61.8	91,011	85,935	3,492	82,443	5,076	5.6	57,587
1975.....	153,449	94,793	61.8	92,613	84,783	3,380	81,403	7,830	8.5	58,655
1976.....	156,048	96,917	62.1	94,773	87,485	3,297	84,188	7,288	7.7	59,130
1977.....	158,559	99,534	62.8	97,401	90,546	3,244	87,302	6,855	7.0	59,025
Monthly data, seasonally adjusted²										
1977:										
July.....	158,682	99,442	62.7	97,307	90,588	3,206	87,382	6,719	6.9	59,241
August.....	158,899	99,751	62.8	97,614	90,793	3,224	87,569	6,821	7.0	59,147
September.....	159,114	99,887	62.8	97,756	91,088	3,199	87,889	6,668	6.8	59,227
October.....	159,334	100,205	62.9	98,071	91,383	3,243	88,140	6,688	6.8	59,130
November.....	159,522	101,009	63.3	98,877	92,214	3,357	88,857	6,663	6.7	58,512
December.....	159,736	101,048	63.3	98,919	92,609	3,323	89,286	6,310	6.4	58,689
1978:										
January ¹	159,937	101,228	63.3	99,107	92,881	3,354	89,527	6,226	6.3	58,709
February.....	160,128	101,217	63.2	99,093	93,003	3,242	89,761	6,090	6.1	58,911
March.....	160,313	101,536	63.3	99,414	93,266	3,310	89,956	6,148	6.2	58,776
April.....	160,504	101,902	63.5	99,784	93,801	3,275	90,526	5,983	6.0	58,602
May.....	160,713	102,374	63.7	100,261	94,112	3,235	90,877	6,149	6.1	58,340
June.....	160,928	102,671	63.8	100,573	94,819	3,473	91,346	5,754	5.7	58,257
July.....	161,148	102,734	63.8	100,618	94,425	3,387	91,038	6,193	6.2	58,414

¹ Not strictly comparable with data for prior years. For an explanation, see "Historic Comparability" under the Household Data section of the Explanatory Notes.

² Because seasonality, by definition, does not exist in population figures, data for "total noninstitutional population" are not seasonally adjusted.

HOUSEHOLD DATA HISTORICAL

A-2. Employment status of the noninstitutional population 16 years and over by sex, 1967 to date

[Numbers in thousands]

Year, month, and sex	Total noninstitutional population	Total labor force		Civilian labor force					Not in labor force	
		Number	Percent of population	Total	Employed			Unemployed		
					Total	Agriculture	Nonagricultural industries	Number		Percent of labor force
MALES										
Annual averages										
1967.....	64,316	52,398	81.5	48,987	47,479	3,164	44,315	1,508	3.1	11,919
1968.....	65,345	53,030	81.2	49,533	48,114	3,157	44,957	1,419	2.9	12,315
1969.....	66,365	53,688	80.9	50,221	48,818	2,963	45,855	1,403	2.8	12,677
1970.....	67,409	54,343	80.6	51,195	48,960	2,861	46,099	2,235	4.4	13,066
1971.....	68,512	54,797	80.0	52,021	49,245	2,790	46,455	2,776	5.3	13,715
1972 ¹	69,864	55,671	79.7	53,265	50,630	2,839	47,791	2,635	4.9	14,193
1973 ¹	71,020	56,479	79.5	54,203	51,963	2,833	49,130	2,240	4.1	14,541
1974.....	72,253	57,349	79.4	55,186	52,518	2,900	49,618	2,668	4.8	14,904
1975.....	73,494	57,706	78.5	55,615	51,230	2,801	48,429	4,385	7.9	15,788
1976.....	74,739	58,397	78.1	56,359	52,391	2,716	49,675	3,968	7.0	16,341
1977.....	75,981	59,467	78.3	57,449	53,861	2,639	51,222	3,588	6.2	16,514
Monthly data, seasonally adjusted²										
1977:										
July.....	76,041	59,418	78.1	57,399	53,901	2,613	51,288	3,498	6.1	16,623
August.....	76,144	59,496	78.1	57,475	53,942	2,647	51,295	3,533	6.1	16,647
September.....	76,246	59,332	77.8	57,318	53,964	2,630	51,334	3,354	5.9	16,915
October.....	76,352	59,826	78.4	57,810	54,341	2,642	51,699	3,469	6.0	16,526
November.....	76,439	60,112	78.6	58,097	54,745	2,685	52,060	3,352	5.8	16,327
December.....	76,541	60,236	78.7	58,225	55,012	2,702	52,310	3,213	5.5	16,305
1978:										
January ¹	76,636	60,210	77.4	58,207	54,975	2,749	52,226	3,232	5.6	16,426
February.....	76,725	60,149	78.4	58,142	54,897	2,566	52,331	3,245	5.6	16,577
March.....	76,811	60,285	78.5	58,284	55,013	2,613	52,400	3,271	5.6	16,526
April.....	76,901	60,261	78.4	58,264	55,208	2,576	52,632	3,056	5.2	16,640
May.....	77,000	60,439	78.5	58,447	55,446	2,638	52,808	3,001	5.1	16,561
June.....	77,102	60,570	78.6	58,597	55,869	2,778	53,091	2,728	4.7	16,531
July.....	77,206	60,489	78.3	58,499	55,534	2,736	52,798	2,965	5.1	16,718
FEMALES										
Annual averages										
1967.....	69,003	28,395	41.2	28,360	26,893	680	26,212	1,468	5.2	40,608
1968.....	70,217	29,242	41.6	29,204	27,807	660	27,147	1,397	4.8	40,976
1969.....	71,476	30,551	42.7	30,513	29,084	643	28,441	1,429	4.7	40,924
1970.....	72,774	31,560	43.4	31,520	29,667	601	29,066	1,853	5.9	41,214
1971.....	74,084	32,132	43.4	32,091	29,875	598	29,277	2,217	6.9	41,952
1972 ¹	75,911	33,320	43.9	33,277	31,072	633	30,439	2,205	6.6	42,591
1973 ¹	77,242	34,561	44.7	34,510	32,446	619	31,827	2,064	6.0	42,681
1974.....	78,575	35,892	45.7	35,825	33,417	592	32,825	2,408	6.7	42,683
1975.....	79,954	37,087	46.4	36,998	33,553	579	32,973	3,445	9.3	42,668
1976.....	81,309	38,520	47.4	38,414	35,095	582	34,513	3,320	8.6	42,789
1977.....	82,577	40,067	48.5	39,952	36,685	605	36,080	3,267	8.2	42,510
Monthly data, seasonally adjusted²										
1977:										
July.....	82,642	40,024	48.4	39,908	36,687	593	36,094	3,221	8.1	42,618
August.....	82,755	40,255	48.6	40,139	36,851	577	36,274	3,288	8.2	42,500
September.....	82,868	40,556	48.9	40,438	37,124	569	36,555	3,314	8.2	42,312
October.....	82,983	40,379	48.7	40,261	37,042	601	36,441	3,219	8.0	42,604
November.....	83,082	40,898	49.2	40,780	37,469	672	36,797	3,311	8.1	42,185
December.....	83,195	40,812	49.1	40,694	37,597	621	36,976	3,097	7.6	42,385
1978:										
January ¹	83,301	41,017	48.6	40,900	37,906	605	37,301	2,994	7.3	42,284
February.....	83,403	41,068	49.2	40,951	38,106	676	37,430	2,845	6.9	42,335
March.....	83,501	41,252	49.4	41,130	38,253	697	37,556	2,877	7.0	42,250
April.....	83,603	41,641	49.8	41,520	38,593	699	37,894	2,927	7.0	41,962
May.....	83,714	41,935	50.1	41,814	38,666	597	38,069	3,148	7.5	41,779
June.....	83,826	42,101	50.2	41,976	38,950	695	38,255	3,026	7.2	41,725
July.....	83,941	42,245	50.3	42,119	38,891	651	38,240	3,228	7.7	41,696

¹ See footnote 1, table A-1.

² See footnote 2, table A-1.

A-3. Employment status of the noninstitutional population by sex, age, and race

[Numbers in thousands]

Sex, age, and race	July 1978										
	Total labor force		Civilian labor force				Not in labor force				
	Number	Percent of population	Total	Employed	Unemployed		Total	Keeping house	Going to school	Unable to work	Other reasons
					Number	Percent of labor force					
MALES											
16 years and over	62,364	80.8	60,374	57,324	3,050	5.1	14,842	413	821	1,761	11,847
16 to 21 years	10,602	83.0	9,923	8,592	1,331	13.4	2,169	19	407	44	1,699
16 to 19 years	6,718	79.2	6,418	5,444	974	15.2	1,759	17	269	17	1,456
16 to 17 years	2,986	70.5	2,968	2,415	553	18.6	1,252	11	136	7	1,098
18 to 19 years	3,732	88.0	3,450	3,029	421	12.2	507	7	133	9	358
20 to 64 years	53,723	90.5	52,033	50,041	1,993	3.8	5,611	170	553	1,273	3,615
20 to 24 years	9,294	91.7	8,545	7,834	711	8.3	839	5	322	54	458
25 to 54 years	37,331	94.4	36,392	35,287	1,104	3.0	2,220	94	227	684	1,216
25 to 29 years	8,445	95.4	8,073	7,696	377	4.7	410	1	140	34	234
30 to 34 years	7,488	96.2	7,243	7,034	209	2.9	298	27	42	76	152
35 to 39 years	6,087	96.3	5,893	5,741	151	2.6	236	4	16	93	124
40 to 44 years	5,183	94.8	5,093	4,970	123	2.4	282	19	9	112	142
45 to 49 years	5,086	92.7	5,054	4,931	123	2.4	401	19	13	160	208
50 to 54 years	5,042	89.5	5,036	4,915	121	2.4	594	23	6	208	356
55 to 64 years	7,098	73.6	7,097	6,919	177	2.5	2,552	72	5	535	1,940
55 to 59 years	4,414	83.3	4,412	4,286	127	2.9	886	38	5	269	574
60 to 64 years	2,684	61.7	2,684	2,634	50	1.9	1,666	34	--	266	1,366
65 years and over	1,923	20.5	1,923	1,839	83	4.3	7,472	225	--	471	6,776
65 to 69 years	1,133	30.4	1,133	1,073	60	5.3	2,593	69	--	167	2,358
70 years and over	789	13.9	789	766	23	3.0	4,878	156	--	304	4,419
White											
16 years and over	55,390	81.3	53,786	51,489	2,297	4.3	12,712	337	643	1,418	10,315
16 to 21 years	9,222	84.8	8,684	7,715	969	11.2	1,653	16	302	31	1,304
16 to 19 years	5,819	80.9	5,581	4,882	699	12.5	1,375	15	187	13	1,160
16 to 17 years	2,581	72.1	2,566	2,168	397	15.5	1,000	8	94	7	892
18 to 19 years	3,238	89.6	3,015	2,714	301	10.0	375	7	93	6	268
20 to 64 years	47,851	91.2	46,485	44,960	1,526	3.3	4,592	128	456	1,020	2,989
20 to 24 years	8,144	93.2	7,557	7,036	520	6.9	592	--	253	40	299
25 to 54 years	33,248	95.1	32,470	31,614	856	2.6	1,725	67	200	536	923
25 to 29 years	14,102	96.3	13,598	13,145	453	3.3	541	21	159	89	272
30 to 34 years	10,031	96.2	9,792	9,579	213	2.2	401	14	23	162	201
35 to 44 years	9,116	92.1	9,081	8,891	190	2.1	784	32	18	285	449
45 to 54 years	6,459	74.0	6,458	6,309	149	2.3	2,275	62	3	444	1,767
55 to 59 years	4,013	84.0	4,012	3,903	109	2.7	766	33	3	221	508
60 to 64 years	2,446	61.8	2,446	2,406	40	1.6	1,510	29	--	223	1,259
65 years and over	1,720	20.3	1,720	1,647	72	4.2	6,745	194	--	385	6,166
Black and other											
16 years and over	6,973	76.6	6,588	5,835	753	11.4	2,130	76	179	343	1,533
16 to 21 years	1,380	72.8	1,239	877	362	29.2	516	3	106	13	394
16 to 19 years	899	70.0	837	562	275	32.9	384	3	82	4	296
16 to 17 years	405	61.6	402	247	155	38.6	252	3	42	1	206
18 to 19 years	494	78.9	435	315	120	27.6	132	--	40	3	90
20 to 64 years	5,872	85.2	5,548	5,082	467	8.4	1,019	42	97	253	626
20 to 24 years	1,151	82.3	988	798	191	19.3	247	5	69	14	159
25 to 54 years	4,082	89.2	3,921	3,673	248	6.3	495	27	26	148	294
25 to 34 years	1,831	91.7	1,718	1,585	133	7.7	166	8	23	21	114
35 to 44 years	1,238	91.3	1,194	1,132	62	5.2	118	9	2	43	64
45 to 54 years	1,013	82.8	1,009	955	54	5.3	211	10	1	84	116
55 to 64 years	639	69.8	639	611	28	4.4	277	10	2	91	173
55 to 59 years	401	77.0	401	383	18	4.5	120	5	2	48	66
60 to 64 years	238	60.3	238	228	10	4.2	157	5	--	44	107
65 years and over	203	21.8	203	192	11	5.3	727	31	--	86	610

HOUSEHOLD DATA

A-3. Employment status of the noninstitutional population by sex, age, and race—Continued

(Numbers in thousands)

Sex, age, and race	July 1978										
	Total labor force		Civilian labor force				Not in labor force				
	Number	Percent of population	Total	Employed	Unemployed		Total	Keeping house	Going to school	Unable to work	Other reasons
					Number	Percent of labor force					
FEMALES											
16 years and over	42,391	50.5	42,265	38,877	3,388	8.0	41,550	33,297	881	1,021	6,352
16 to 21 years	8,508	68.0	8,458	7,123	1,335	15.8	4,001	1,693	536	22	1,751
16 to 19 years	5,467	65.9	5,447	4,493	953	17.5	2,831	951	337	13	1,530
16 to 17 years	2,421	59.0	2,420	1,913	507	20.9	1,684	363	184	4	1,132
18 to 19 years	3,046	72.6	3,026	2,580	446	14.7	1,148	587	154	9	398
20 to 64 years	35,817	57.6	35,711	33,318	2,393	6.7	26,419	22,759	542	445	2,673
20 to 24 years	7,183	71.0	7,117	6,312	805	11.3	2,936	2,161	323	24	428
25 to 54 years	24,308	58.8	24,268	22,793	1,475	6.1	17,020	15,024	214	265	1,518
25 to 29 years	5,689	63.0	5,661	5,211	450	8.0	3,340	2,918	104	26	292
30 to 34 years	4,615	57.8	4,608	4,273	334	7.3	3,375	3,014	56	27	277
35 to 39 years	3,907	58.7	3,905	3,682	222	5.7	2,746	2,441	25	36	243
40 to 44 years	3,477	60.2	3,476	3,302	174	5.0	2,301	2,010	14	45	232
45 to 49 years	3,385	58.5	3,385	3,236	149	4.4	2,405	2,146	11	43	206
50 to 54 years	3,234	53.1	3,234	3,089	145	4.5	2,854	2,495	4	88	268
55 to 64 years	4,326	40.1	4,326	4,212	114	2.6	6,463	5,575	5	156	726
55 to 59 years	2,762	47.4	2,762	2,695	67	2.4	3,065	2,682	4	68	310
60 to 64 years	1,564	31.5	1,564	1,517	47	3.0	3,398	2,893	1	88	416
65 years and over	1,107	8.3	1,107	1,066	41	3.7	12,300	9,587	1	563	2,149
65 to 69 years	689	14.7	689	661	28	4.1	4,008	3,288	--	102	618
70 years and over	419	4.8	419	406	13	3.1	8,293	6,300	--	461	1,531
White											
16 years and over	36,494	49.8	36,394	33,921	2,472	6.8	36,769	29,834	691	811	5,433
16 to 21 years	7,382	69.9	7,341	6,422	919	12.5	3,179	1,340	412	19	1,408
16 to 19 years	4,747	67.9	4,731	4,058	673	14.2	2,242	738	253	12	1,239
16 to 17 years	2,109	61.2	2,109	1,741	367	17.4	1,339	265	134	5	935
18 to 19 years	2,638	74.5	2,622	2,316	306	11.7	903	473	119	7	304
20 to 64 years	30,758	56.8	30,674	28,908	1,766	5.8	23,355	20,294	437	338	2,285
20 to 24 years	6,187	72.1	6,134	5,593	542	8.8	2,398	1,793	258	19	328
25 to 54 years	20,719	57.8	20,688	19,550	1,138	5.5	15,100	13,425	175	193	1,306
25 to 29 years	8,651	59.2	8,624	8,026	598	6.9	5,969	5,312	127	43	486
30 to 34 years	6,294	58.5	6,291	5,990	302	4.8	4,458	3,954	37	56	410
35 to 44 years	5,774	55.3	5,773	5,535	238	4.1	4,673	4,160	11	94	409
55 to 64 years	3,851	39.7	3,851	3,764	86	2.2	5,857	5,076	3	127	651
55 to 59 years	2,458	47.0	2,458	2,410	48	1.9	2,766	2,420	2	54	290
60 to 64 years	1,393	31.1	1,393	1,355	39	2.8	3,091	2,656	1	73	361
65 years and over	989	8.1	989	956	33	3.3	11,172	8,802	1	461	1,909
Black and other											
16 years and over	5,897	55.2	5,871	4,956	915	15.6	4,781	3,463	189	209	919
16 to 21 years	1,126	57.8	1,117	701	416	37.3	823	353	124	3	343
16 to 19 years	720	55.0	716	436	280	39.1	589	213	84	1	291
16 to 17 years	312	47.5	312	172	140	44.8	345	98	50	--	197
18 to 19 years	408	62.5	404	264	141	34.8	244	114	34	1	95
20 to 64 years	5,059	62.3	5,037	4,410	627	12.4	3,064	2,464	105	106	387
20 to 24 years	996	64.9	983	720	263	26.8	538	368	65	5	100
25 to 54 years	3,588	65.1	3,579	3,243	337	9.4	1,920	1,598	39	71	212
25 to 29 years	1,653	68.9	1,645	1,458	187	11.4	746	620	33	10	83
30 to 34 years	1,090	64.9	1,090	995	95	8.7	588	497	2	25	65
35 to 44 years	845	59.1	845	789	56	6.6	586	481	4	36	65
55 to 64 years	475	44.0	475	448	27	5.7	606	499	2	30	75
55 to 59 years	305	50.5	305	285	19	6.3	299	262	2	15	20
60 to 64 years	171	35.7	171	163	8	4.7	307	236	--	15	55
65 years and over	118	9.5	118	110	8	6.6	1,128	786	--	102	241

HOUSEHOLD DATA

A-4. Labor force by sex, age, and race

Sex, age, and race	Total labor force				Civilian labor force			
	Thousands of persons		Participation rates		Thousands of persons		Participation rates	
	July 1977	July 1978	July 1977	July 1978	July 1977	July 1978	July 1977	July 1978
MALES								
16 years and over	61,256	62,364	80.6	80.8	59,237	60,374	80.0	80.3
16 to 19 years	6,662	6,718	78.3	79.2	6,335	6,418	77.5	78.5
16 to 17 years	2,945	2,986	69.3	70.5	2,917	2,968	69.1	70.3
18 to 19 years	3,716	3,732	87.4	88.0	3,418	3,450	86.4	87.2
20 to 24 years	9,130	9,294	91.7	91.7	8,382	8,545	91.0	91.1
25 to 54 years	36,616	37,331	94.3	94.4	35,672	36,392	94.1	94.2
25 to 34 years	15,591	15,933	95.9	95.7	14,973	15,316	95.7	95.6
35 to 44 years	10,856	11,269	95.5	95.6	10,569	10,986	95.3	95.5
45 to 54 years	10,169	10,129	90.7	91.1	10,130	10,090	90.7	91.0
55 to 64 years	7,003	7,098	73.5	73.6	7,002	7,097	73.5	73.6
55 to 59 years	4,330	4,414	83.1	83.3	4,329	4,412	83.1	83.3
60 to 64 years	2,673	2,684	61.9	61.7	2,673	2,684	61.9	61.7
65 years and over	1,846	1,923	20.1	20.5	1,846	1,923	20.1	20.5
White								
16 years and over	54,562	55,390	81.2	81.3	52,903	53,786	80.7	80.9
16 to 19 years	5,816	5,819	80.4	80.9	5,547	5,581	79.6	80.2
16 to 17 years	2,571	2,581	71.4	72.1	2,547	2,566	71.2	72.0
18 to 19 years	3,245	3,238	89.2	89.6	3,000	3,015	88.4	88.9
20 to 24 years	8,000	8,144	92.9	93.2	7,405	7,557	92.4	92.7
25 to 54 years	32,650	33,248	94.9	95.1	31,858	32,470	94.8	95.0
25 to 34 years	13,824	14,102	96.3	96.3	13,310	13,598	96.2	96.2
35 to 44 years	9,643	10,031	95.9	96.2	9,400	9,792	95.8	96.1
45 to 54 years	9,183	9,116	91.8	92.1	9,148	9,081	91.8	92.1
55 to 64 years	6,414	6,459	74.3	74.0	6,413	6,458	74.3	73.9
55 to 59 years	3,954	4,013	84.0	84.0	3,953	4,012	84.0	84.0
60 to 64 years	2,460	2,446	62.6	61.8	2,460	2,446	62.6	61.8
65 years and over	1,681	1,720	20.3	20.3	1,681	1,720	20.3	20.3
Black and other								
16 years and over	6,694	6,973	75.6	76.6	6,333	6,588	74.6	75.6
16 to 19 years	846	899	66.8	70.0	788	837	65.3	68.5
16 to 17 years	374	405	57.8	61.6	370	402	57.5	61.5
18 to 19 years	471	494	76.3	78.9	418	435	74.1	76.7
20 to 24 years	1,129	1,151	83.8	82.3	977	988	81.7	80.0
25 to 54 years	3,965	4,082	89.2	89.2	3,814	3,921	88.9	88.8
25 to 34 years	1,767	1,831	92.3	91.7	1,663	1,718	91.9	91.2
35 to 44 years	1,213	1,238	91.8	91.3	1,169	1,194	91.6	91.0
45 to 54 years	986	1,013	81.6	82.8	982	1,009	81.5	82.7
55 to 64 years	589	639	65.9	69.8	589	639	65.9	69.8
55 to 59 years	376	401	75.0	77.0	376	401	75.0	77.0
60 to 64 years	213	238	54.2	60.3	213	238	54.2	60.3
65 years and over	164	203	18.2	21.8	164	203	18.2	21.8

HOUSEHOLD DATA

A-4. Labor force by sex, age, and race—Continued

Sex, age, and race	Total labor force				Civilian labor force			
	Thousands of persons		Participation rates		Thousands of persons		Participation rates	
	July 1977	July 1978	July 1977	July 1978	July 1977	July 1978	July 1977	July 1978
FEMALES								
16 years and over	40,193	42,391	48.6	50.5	40,077	42,265	48.6	50.4
16 to 19 years	5,177	5,467	62.2	65.9	5,159	5,447	62.1	65.8
16 to 17 years	2,202	2,421	53.5	59.0	2,201	2,420	53.5	59.0
18 to 19 years	2,975	3,046	70.7	72.6	2,957	3,026	70.6	72.5
20 to 24 years	6,783	7,183	68.2	71.0	6,719	7,117	68.0	70.8
25 to 54 years	23,043	24,308	56.7	58.8	23,010	24,268	56.7	58.8
25 to 34 years	9,652	10,304	58.0	60.5	9,622	10,269	58.0	60.5
35 to 44 years	6,960	7,384	58.0	59.4	6,956	7,381	58.0	59.4
45 to 54 years	6,432	6,620	53.6	55.7	6,431	6,619	53.6	55.7
55 to 64 years	4,216	4,326	39.5	40.1	4,216	4,326	39.5	40.1
55 to 59 years	2,653	2,762	46.3	47.4	2,653	2,762	46.3	47.4
60 to 64 years	1,563	1,564	31.7	31.5	1,563	1,564	31.7	31.5
65 years and over	973	1,107	7.4	8.3	973	1,107	7.4	8.3
White								
16 years and over	34,807	36,494	48.2	49.8	34,713	36,394	48.1	49.7
16 to 19 years	4,563	4,747	64.9	67.9	4,547	4,731	64.8	67.8
16 to 17 years	1,953	2,109	56.3	61.2	1,953	2,109	56.3	61.2
18 to 19 years	2,610	2,638	73.2	74.5	2,595	2,622	73.1	74.4
20 to 24 years	5,871	6,187	69.4	72.1	5,820	6,134	69.3	71.9
25 to 54 years	19,720	20,719	55.9	57.8	19,692	20,688	55.8	57.8
25 to 34 years	8,148	8,651	56.9	59.2	8,125	8,624	56.8	59.1
35 to 44 years	5,940	6,294	57.3	58.5	5,937	6,291	57.3	58.5
45 to 54 years	5,631	5,774	53.2	55.3	5,630	5,773	53.2	55.3
55 to 64 years	3,783	3,851	39.4	39.7	3,783	3,851	39.4	39.7
55 to 59 years	2,392	2,458	46.5	47.0	2,392	2,458	46.5	47.0
60 to 64 years	1,391	1,393	31.2	31.1	1,391	1,393	31.2	31.1
65 years and over	869	989	7.3	8.1	869	989	7.3	8.1
Black and other								
18 years and over	5,386	5,897	51.9	55.2	5,364	5,871	51.8	55.1
16 to 19 years	614	720	47.5	55.0	611	716	47.4	54.9
16 to 17 years	249	312	38.3	47.5	249	312	38.3	47.5
18 to 19 years	365	408	56.8	62.5	362	404	56.6	62.3
20 to 24 years	912	996	61.4	64.9	899	983	61.1	64.6
25 to 54 years	3,324	3,588	62.2	65.1	3,317	3,579	62.1	65.1
25 to 34 years	1,504	1,653	65.4	68.9	1,498	1,645	65.3	68.8
35 to 44 years	1,020	1,090	62.4	64.9	1,019	1,090	62.4	64.9
45 to 54 years	801	845	56.6	59.1	801	845	56.6	59.1
55 to 64 years	433	475	41.1	44.0	433	475	41.1	44.0
55 to 59 years	261	305	45.1	50.5	261	305	45.1	50.5
60 to 64 years	172	171	36.1	35.7	172	171	36.1	35.7
65 years and over	104	118	8.7	9.5	104	118	8.7	9.5

A-5. Employment status of black workers by sex and age

[Numbers in thousands]

Sex and age	July 1978						Not in labor force	
	Civilian labor force					Percent of labor force		
	Total	Employed			Unemployed			
		Total	Agri-culture	Nonagri-cultural industries	Number			
Total								
16 years and over	10,630	9,140	279	8,861	1,491	14.0	6,024	
16 to 19 years	1,345	843	49	794	502	37.3	879	
16 to 17 years	614	345	28	318	269	43.8	546	
18 to 19 years	731	498	21	476	233	31.9	333	
20 to 24 years	1,711	1,301	26	1,275	410	24.0	661	
25 to 54 years	6,317	5,801	111	5,690	516	8.2	2,039	
25 to 34 years	2,828	2,545	43	2,502	283	10.0	716	
35 to 44 years	1,933	1,791	26	1,765	142	7.4	613	
45 to 54 years	1,555	1,465	43	1,422	91	5.8	710	
55 to 64 years	970	923	51	872	47	4.9	804	
55 to 59 years	610	579	22	557	31	5.1	375	
60 to 64 years	360	344	29	315	16	4.5	428	
65 years and over	287	271	42	230	16	5.4	1,642	
Males								
16 years and over	5,588	4,917	233	4,684	672	12.0	1,879	
16 to 19 years	727	479	38	441	248	34.1	339	
16 to 17 years	344	205	21	185	140	40.7	230	
18 to 19 years	383	274	17	257	108	28.2	109	
20 to 24 years	857	682	21	661	175	20.4	199	
25 to 54 years	3,280	3,061	90	2,972	219	6.7	454	
25 to 34 years	1,426	1,307	33	1,273	119	8.3	140	
35 to 44 years	1,010	952	21	931	58	5.7	111	
45 to 54 years	844	803	26	767	41	4.9	203	
55 to 64 years	550	527	46	481	23	4.2	259	
55 to 59 years	342	329	20	308	13	3.8	110	
60 to 64 years	208	199	26	173	10	4.8	147	
65 years and over	174	165	38	129	8	4.6	630	
Females								
16 years and over	5,042	4,223	46	4,177	819	16.2	4,145	
16 to 19 years	618	364	11	353	254	41.1	540	
16 to 17 years	270	140	7	133	129	48.0	316	
18 to 19 years	348	224	4	219	125	35.8	224	
20 to 24 years	854	619	5	614	235	27.5	462	
25 to 54 years	3,037	2,740	21	2,718	297	9.8	1,585	
25 to 34 years	1,402	1,238	10	1,229	164	11.7	576	
35 to 44 years	923	839	5	834	84	9.1	502	
45 to 54 years	711	662	7	655	50	7.0	507	
55 to 64 years	420	396	5	391	24	5.8	545	
55 to 59 years	268	250	2	249	18	6.7	265	
60 to 64 years	152	145	3	142	6	4.2	281	
65 years and over	113	106	4	101	8	6.8	1,012	

NOTE: According to the 1970 Census, black workers comprised about 89 percent of the "black and other" population group.

HOUSEHOLD DATA

A-6. Employment status of the noninstitutional population by sex, age, and race

[Numbers in thousands]

Employment status and race	Total		Males, 20 years and over		Females, 20 years and over		Both sexes, 16-19 years	
	July 1977	July 1978	July 1977	July 1978	July 1977	July 1978	July 1977	July 1978
TOTAL								
Total noninstitutional population	158,682	161,148	67,537	68,729	74,315	75,643	16,830	16,776
Total labor force	101,448	104,755	54,594	55,646	35,016	36,924	11,839	12,185
Percent of population	63.9	65.0	80.8	81.0	47.1	48.8	70.3	72.6
Civilian labor force	99,314	102,639	52,902	53,956	34,918	36,818	11,494	11,865
Employed	92,372	96,202	50,379	51,880	32,456	34,384	9,537	9,937
Agriculture	3,790	3,997	2,464	2,599	683	759	643	639
Nonagricultural industries	88,582	92,204	47,916	49,281	31,772	33,625	8,894	9,299
Unemployed	6,941	6,438	2,522	2,076	2,462	2,434	1,957	1,927
Percent of labor force	7.0	6.3	4.8	3.8	7.1	6.6	17.0	16.2
Not in labor force	57,234	56,393	12,943	13,083	39,299	38,719	4,992	4,591
White								
Total noninstitutional population	139,450	141,366	59,948	60,908	65,230	66,274	14,273	14,184
Total labor force	89,369	91,885	48,746	49,571	30,243	31,747	10,379	10,566
Percent of population	64.1	65.0	81.3	81.4	46.4	47.9	72.7	74.5
Civilian labor force	87,616	90,179	47,357	48,205	30,165	31,663	10,094	10,311
Employed	82,331	85,410	45,394	46,607	28,263	29,864	8,673	8,940
Agriculture	3,510	3,637	2,284	2,357	632	707	594	573
Nonagricultural industries	78,820	81,773	43,110	44,249	27,631	29,157	8,079	8,367
Unemployed	5,285	4,769	1,962	1,598	1,902	1,799	1,421	1,372
Percent of labor force	6.0	5.3	4.1	3.3	6.3	5.7	14.1	13.3
Not in labor force	50,082	49,481	11,202	11,337	34,986	34,527	3,893	3,617
Black and other								
Total noninstitutional population	19,232	19,782	7,589	7,821	9,085	9,370	2,558	2,592
Total labor force	12,080	12,870	5,848	6,075	4,772	5,177	1,459	1,618
Percent of population	62.8	65.1	77.1	77.7	52.5	55.3	57.1	62.4
Civilian labor force	11,697	12,460	5,545	5,751	4,753	5,155	1,400	1,553
Employed	10,042	10,791	4,985	5,274	4,193	4,520	864	998
Agriculture	280	360	179	242	51	53	49	66
Nonagricultural industries	9,761	10,431	4,806	5,032	4,141	4,468	814	932
Unemployed	1,656	1,668	560	478	560	635	536	556
Percent of labor force	14.2	13.4	10.1	8.3	11.8	12.3	38.3	35.8
Not in labor force	7,152	6,912	1,741	1,746	4,313	4,192	1,098	973

A-7. Employment status of the noninstitutional population 16-21 years of age by race and sex

[Numbers in thousands]

Employment status	July 1978								
	Total			White			Black and other		
	Both sexes	Males	Females	Both sexes	Males	Females	Both sexes	Males	Females
Total noninstitutional population	25,280	12,771	12,509	21,436	10,875	10,561	3,844	1,896	1,949
Total labor force	19,110	10,602	8,508	16,604	9,222	7,382	2,506	1,380	1,126
Percent of population	75.6	83.0	68.0	77.5	84.8	69.9	65.2	72.8	57.8
Civilian labor force	18,381	9,923	8,458	16,026	8,684	7,341	2,355	1,239	1,117
Employed	15,715	8,592	7,123	14,138	7,715	6,422	1,577	877	701
Agriculture	846	668	178	765	608	156	82	60	22
Nonagricultural industries	14,869	7,924	6,945	13,373	7,107	6,266	1,495	817	679
Unemployed	2,666	1,331	1,335	1,888	969	919	778	362	416
Looking for full-time work	2,045	1,054	991	1,430	769	662	615	286	329
Looking for part-time work	621	277	344	457	200	257	163	77	87
Percent of labor force	14.5	13.4	15.8	11.8	11.2	12.5	33.0	29.2	37.3
Not in labor force	6,170	2,169	4,001	4,831	1,653	3,179	1,339	516	823
MAJOR ACTIVITY: GOING TO SCHOOL									
Civilian labor force	418	197	221	338	164	174	80	33	47
Employed	291	129	162	255	114	141	37	16	21
Agriculture	14	10	4	15	11	5	--	--	--
Nonagricultural industries	277	119	158	239	103	137	37	16	21
Unemployed	127	68	59	83	51	33	43	17	26
Looking for full-time work	39	17	21	13	9	5	25	9	16
Looking for part-time work	88	50	38	70	42	28	18	8	10
Percent of labor force	30.3	34.3	26.7	24.7	30.8	18.9	54.0	(1)	(1)
Not in labor force	943	407	536	713	302	412	230	106	124
MAJOR ACTIVITY: OTHER									
Civilian labor force	17,963	9,726	8,237	15,688	8,520	7,167	2,276	1,206	1,070
Employed	15,424	8,463	6,961	13,883	7,602	6,281	1,540	861	680
Agriculture	832	658	174	749	597	152	83	61	22
Nonagricultural industries	14,592	7,805	6,787	13,134	7,004	6,130	1,458	800	658
Unemployed	2,539	1,264	1,276	1,804	918	886	735	345	390
Looking for full-time work	2,007	1,037	970	1,417	760	657	590	277	313
Looking for part-time work	533	226	306	387	158	229	145	68	77
Percent of labor force	14.1	13.0	15.5	11.5	10.8	12.4	32.3	28.6	36.5
Not in labor force	5,227	1,762	3,466	4,118	1,351	2,767	1,109	410	699

¹ Percent not shown where base is less than 75,000.

A-8. Full- and part-time status of the civilian labor force by sex, age, and race

[Numbers in thousands]

Race, sex, and age	July 1978								
	Full-time labor force					Part-time labor force			
	Total	Employed		Unemployed (looking for full-time work)		Total	Employed on voluntary part time ¹	Unemployed (looking for part-time work)	
		Full-time schedules ¹	Part time for economic reasons	Number	Percent of full-time labor force			Number	Percent of part-time labor force
TOTAL									
Both sexes, 16 years and over	90,172	80,655	4,190	5,327	5.9	12,467	11,356	1,111	8.9
16 to 21 years	14,712	10,666	2,001	2,045	13.9	3,669	3,048	621	16.9
16 to 19 years	8,881	5,908	1,583	1,389	15.6	2,984	2,446	538	18.0
16 to 17 years	3,457	1,879	914	664	19.2	1,931	1,535	396	20.5
18 to 19 years	5,424	4,029	669	726	13.4	1,053	910	142	13.5
20 years and over	81,291	74,747	2,607	3,937	4.8	9,483	8,910	573	6.0
20 to 24 years	14,251	12,086	785	1,380	9.7	1,411	1,275	136	9.6
25 years and over	67,041	62,660	1,823	2,558	3.8	8,072	7,635	436	5.4
25 to 54 years	55,471	51,779	1,422	2,270	4.1	5,190	4,879	310	6.0
55 years and over	11,570	10,881	401	289	2.5	2,883	2,756	126	4.4
Males, 16 years and over	56,629	51,904	2,082	2,643	4.7	3,745	3,338	407	10.9
16 to 21 years	8,362	6,258	1,050	1,054	12.6	1,561	1,284	277	17.7
16 to 19 years	5,093	3,513	853	726	14.3	1,325	1,077	248	18.7
20 years and over	51,536	48,390	1,228	1,917	3.7	2,420	2,261	159	6.6
20 to 24 years	8,101	7,060	366	676	8.3	444	409	35	8.0
25 years and over	43,435	41,330	863	1,241	2.9	1,977	1,853	123	6.2
25 to 54 years	35,696	33,978	672	1,045	2.9	696	636	59	8.5
55 years and over	7,739	7,352	191	197	2.5	1,280	1,217	63	4.9
Females, 16 years and over	33,543	28,751	2,109	2,684	8.0	8,722	8,018	704	8.1
16 to 21 years	6,349	4,408	951	991	15.6	2,109	1,765	344	16.3
16 to 19 years	3,788	2,395	730	663	17.5	1,659	1,369	290	17.5
20 years and over	29,755	26,356	1,379	2,020	6.8	7,063	6,649	414	5.9
20 to 24 years	6,150	5,026	419	704	11.5	967	867	101	10.4
25 years and over	23,605	21,330	959	1,317	5.6	6,096	5,783	314	5.2
25 to 54 years	19,775	17,800	749	1,225	6.2	4,494	4,243	251	5.6
55 years and over	3,831	3,530	210	92	2.4	1,602	1,540	63	3.9
White									
Males, 16 years and over	50,569	46,876	1,704	1,989	3.9	3,217	2,909	308	9.6
16 to 21 years	7,380	5,739	872	769	10.4	1,304	1,104	200	15.4
16 to 19 years	4,483	3,259	700	524	11.7	1,097	923	174	15.9
20 years and over	46,086	43,617	1,004	1,465	3.2	2,119	1,985	134	6.3
20 to 24 years	7,157	6,349	321	487	6.8	399	366	33	8.3
25 years and over	38,929	37,269	682	978	2.5	1,720	1,619	102	5.9
25 to 54 years	31,892	30,556	529	807	2.5	580	529	50	8.6
55 years and over	7,037	6,713	153	171	2.4	1,141	1,090	51	4.5
Females, 16 years and over	28,584	24,965	1,693	1,926	6.7	7,809	7,264	546	7.0
16 to 21 years	5,481	3,987	833	662	12.1	1,860	1,603	257	13.8
16 to 19 years	3,262	2,170	632	460	14.1	1,469	1,256	213	14.5
20 years and over	25,323	22,795	1,060	1,467	5.8	6,340	6,008	332	5.2
20 to 24 years	5,295	4,480	353	462	8.7	839	759	80	9.5
25 years and over	20,027	18,315	708	1,005	5.0	5,501	5,248	252	4.6
25 to 54 years	16,594	15,106	554	935	5.6	4,095	3,891	204	5.0
55 years and over	3,434	3,209	154	71	2.1	1,406	1,357	49	3.5
Black and other									
Males, 16 years and over	6,060	5,028	378	654	10.8	529	430	99	18.7
16 to 21 years	982	519	178	286	29.1	256	180	77	29.9
16 to 19 years	610	254	154	202	33.1	228	154	74	32.4
20 years and over	5,450	4,773	224	453	8.3	301	276	25	8.3
20 to 24 years	944	711	44	188	19.9	45	42	2	(2)
25 years and over	4,507	4,062	180	264	5.9	256	234	22	8.6
25 to 54 years	3,804	3,423	143	238	6.3	117	107	10	8.5
55 years and over	702	639	37	26	3.7	140	127	12	8.6
Females, 16 years and over	4,959	3,786	416	757	15.3	912	754	158	17.3
16 to 21 years	868	421	118	329	38.0	249	162	87	34.8
16 to 19 years	526	225	97	204	38.7	190	113	76	40.3
20 years and over	4,433	3,561	318	554	12.5	723	641	82	11.3
20 to 24 years	855	546	66	242	28.4	128	107	21	16.1
25 years and over	3,578	3,015	252	312	8.7	596	533	61	10.2
25 to 54 years	3,181	2,694	196	291	9.1	399	352	47	11.8
55 years and over	397	321	56	21	5.3	196	181	14	7.1

¹ Employed persons with a job but not at work are distributed proportionately among the full- and part-time employed categories.

² Percent not shown where base is less than 75,000.

HOUSEHOLD DATA

A-9. Employment status of the noninstitutional population by family relationship

[Numbers in thousands]

Family relationship	July 1978									
	Civilian labor force					Not in labor force				
	Total	Percent of population	Employed	Unemployed		Total	Keeping house	Going to school	Unable to work	Other reasons
				Number	Percent of labor force					
Total, 16 years and over	102,639	64.5	96,202	6,438	6.3	56,393	33,710	1,702	2,782	18,199
Husbands ¹	40,457	81.6	39,458	999	2.5	9,124	176	157	1,164	7,626
With employed wife	18,974	91.7	18,576	398	2.1	1,720	55	96	379	1,192
With unemployed wife	1,153	94.4	1,071	82	7.1	68	--	5	17	46
With wife not in labor force	18,801	73.3	18,374	427	2.3	6,845	90	46	702	6,008
Wives	21,916	46.1	20,696	1,221	5.6	25,644	23,086	169	256	2,134
With employed husband	19,649	51.7	18,578	1,071	5.5	18,372	16,795	146	95	1,337
With unemployed husband	481	53.0	398	82	17.0	427	399	6	6	17
With husband not in labor force	1,787	20.7	1,720	68	3.8	6,845	5,893	17	156	780
Relatives in husband-wife families	16,842	72.5	14,878	1,964	11.7	6,382	1,554	805	394	3,630
16-19 years	8,743	73.7	7,506	1,237	14.1	3,116	348	430	20	2,317
20-24 years	5,539	85.2	5,011	528	9.5	961	182	310	40	430
25 years and over	2,560	52.6	2,361	199	7.8	2,305	1,024	65	334	883
Women who head families	4,764	58.0	4,288	476	10.0	3,447	2,841	74	147	384
Relatives in female-headed families	4,651	64.7	3,774	876	18.8	2,539	855	245	270	1,168
16-19 years	1,855	67.6	1,360	494	26.6	890	181	128	9	573
20-24 years	1,262	77.4	1,017	245	19.4	368	99	84	25	160
25 years and over	1,534	54.5	1,397	137	8.9	1,281	575	33	236	435
Persons not living in families ²	14,009	60.2	13,108	902	6.4	9,257	5,198	252	551	3,257

¹ Includes a small number of single, separated, widowed, or divorced men who head families.

² Individuals living alone or with unrelated persons plus a small number of persons in secondary families.

A-10. Unemployed persons by marital status, sex, age, and race

Marital status, sex, age, and race	Males				Females			
	Thousands of persons		Unemployment rates		Thousands of persons		Unemployment rates	
	July 1977	July 1978	July 1977	July 1978	July 1977	July 1978	July 1977	July 1978
	Total, 16 years and over	3,560	3,050	6.0	5.1	3,381	3,388	8.4	8.0
Married, spouse present	1,222	960	3.1	2.4	1,458	1,291	6.8	5.8
Widowed, divorced, or separated	321	279	7.7	6.2	505	642	7.0	8.2
Single (never married)	2,017	1,811	13.2	11.3	1,418	1,455	12.6	12.0
White, 16 years and over	2,705	2,297	5.1	4.3	2,580	2,472	7.4	6.8
Married, spouse present	1,001	797	2.8	2.2	1,233	1,072	6.4	5.4
Widowed, divorced, or separated	243	192	7.1	5.2	375	447	6.4	7.1
Single (never married)	1,461	1,309	11.0	9.4	972	953	10.1	9.4
Black and other, 16 years and over	855	753	13.5	11.4	801	915	14.9	15.6
Married, spouse present	221	163	6.2	4.6	224	218	9.7	9.1
Widowed, divorced, or separated	78	87	10.6	10.2	130	195	9.3	13.0
Single (never married)	556	502	27.4	23.0	447	502	26.9	25.4
Total, 20 to 64 years of age	2,442	1,993	4.8	3.8	2,418	2,393	7.1	6.7
Married, spouse present	1,130	880	3.0	2.3	1,335	1,193	6.4	5.5
Widowed, divorced, or separated	318	262	8.1	6.1	476	617	7.2	8.6
Single (never married)	994	851	10.9	8.7	608	584	9.4	8.3
White, 20 to 64 years of age	1,887	1,526	4.1	3.3	1,860	1,766	6.3	5.8
Married, spouse present	916	722	2.6	2.1	1,117	989	6.0	5.2
Widowed, divorced, or separated	240	182	7.5	5.3	355	422	6.6	7.4
Single (never married)	732	621	9.3	7.3	390	355	7.3	6.2
Black and other, 20 to 64 years of age	555	467	10.3	8.4	558	627	12.0	12.4
Married, spouse present	214	157	6.2	4.6	218	204	9.6	8.8
Widowed, divorced, or separated	78	80	11.1	9.9	121	195	9.3	13.7
Single (never married)	262	229	21.0	17.0	218	228	20.3	17.7

HOUSEHOLD DATA

A-11. Unemployed persons by occupation of last job and sex

Occupation	Thousands of persons		Unemployment rates					
			Total		Males		Females	
	July 1977	July 1978	July 1977	July 1978	July 1977	July 1978	July 1977	July 1978
Total	6,941	6,438	7.0	6.3	6.0	5.1	8.4	8.0
White-collar workers	1,969	1,899	4.2	3.9	2.8	2.4	5.5	5.2
Professional and technical	460	418	3.4	3.0	2.3	2.0	4.8	4.2
Managers and administrators, except farm	262	235	2.6	2.2	2.0	1.7	4.7	4.0
Sales workers	317	269	5.2	4.2	4.0	3.1	6.8	5.7
Clerical workers	930	977	5.5	5.5	4.6	4.2	5.7	5.8
Blue-collar workers	2,481	2,160	7.3	6.2	6.5	5.3	11.0	9.9
Craft and kindred workers	618	460	4.7	3.5	4.5	3.4	8.6	5.0
Carpenters and other construction craft	305	226	7.2	5.2	7.0	5.1	(1)	9.2
All other	313	234	3.6	2.6	3.3	2.5	7.5	4.5
Operatives, except transport	1,090	956	9.4	8.0	8.0	6.1	11.4	10.6
Transport equipment operatives	246	206	6.6	5.6	6.4	5.0	10.6	13.8
Nonfarm laborers	528	539	9.0	8.9	8.9	8.9	10.1	8.8
Construction laborers	120	163	10.5	12.0	10.2	12.2	(1)	(1)
All other	408	376	8.7	8.0	8.6	7.8	9.5	8.9
Service workers	1,075	1,064	7.8	7.5	7.1	6.6	8.2	8.0
Private household	66	76	5.3	6.1	(1)	(1)	5.5	6.1
All other	1,009	988	8.0	7.6	7.2	6.6	8.7	8.3
Farm workers	108	101	3.2	2.9	3.0	2.7	3.9	3.8
No previous work experience	1,309	1,213	--	--	--	--	--	--
16 to 19 years	1,049	982	--	--	--	--	--	--
20 to 24 years	171	181	--	--	--	--	--	--
25 years and over	88	50	--	--	--	--	--	--

¹ Percent not shown where base is less than 75,000.

A-12. Unemployed persons by industry of last job and sex

Industry	Percent distribution		Unemployment rates					
			Total		Males		Females	
	July 1977	July 1978	July 1977	July 1978	July 1977	July 1978	July 1977	July 1978
Total	100.0	100.0	7.0	6.3	6.0	5.1	8.4	8.0
Nonagricultural private wage and salary workers	67.5	65.8	6.5	5.7	5.8	4.7	7.6	7.0
Mining	.5	.4	4.2	3.1	3.5	3.2	11.1	2.2
Construction	6.7	6.3	9.4	7.6	9.3	7.7	11.5	6.0
Manufacturing	19.8	18.3	6.3	5.3	5.1	3.9	8.9	8.4
Durable goods	10.6	9.7	5.7	4.7	5.3	3.8	7.2	7.6
Lumber and wood products	.9	.8	8.6	7.5	9.0	6.3	5.5	15.0
Furniture and fixtures	.7	.6	8.8	6.9	7.2	6.5	12.4	7.6
Stone, clay, and glass products	.7	.6	6.6	5.1	5.3	4.3	11.2	8.9
Primary metal industries	.9	.6	4.6	2.8	4.8	2.6	3.7	4.5
Fabricated metal products	1.3	1.1	5.8	4.7	5.4	4.0	7.2	7.3
Machinery, except electrical equipment	1.6	1.4	4.5	3.5	4.2	3.3	5.4	4.7
Electrical equipment	1.6	1.7	5.2	4.9	3.8	2.0	7.2	8.6
Transportation equipment	1.9	1.6	5.8	4.2	5.8	3.9	5.9	6.3
Automobiles	1.0	.9	5.5	4.4	5.6	4.3	4.5	4.9
Other transportation equipment	.9	.6	6.4	4.0	6.1	3.4	8.3	8.3
Instruments and related products	.3	.6	4.4	6.0	4.9	3.5	3.9	9.0
Other durable goods industries	.7	.9	8.0	7.2	5.6	6.6	11.3	8.0
Nondurable goods	9.2	8.6	7.1	6.1	4.9	4.0	10.5	9.0
Food and kindred products	2.9	2.2	9.9	6.9	6.3	5.7	18.2	9.8
Textile mill products	1.2	.9	8.3	6.5	8.3	5.9	8.3	7.1
Apparel and other textile products	1.6	1.8	8.4	8.0	5.9	4.5	9.0	9.0
Paper and allied products	.6	.4	5.7	3.3	4.8	2.3	8.9	6.3
Printing and publishing	1.0	1.1	5.3	4.9	4.5	3.9	6.5	6.3
Chemicals and allied products	.6	.5	3.6	2.8	1.8	1.6	9.2	6.5
Rubber and plastics products	.7	1.1	6.6	9.5	4.2	6.5	11.3	14.7
Other nondurable goods industries	.6	.7	6.8	6.7	3.6	.3	11.5	14.7
Transportation and public utilities	3.2	3.2	4.3	3.8	3.7	3.2	6.4	5.7
Railroads and railway express	.1	.3	1.0	3.7	.9	3.1	(1)	(1)
Other transportation	2.2	2.0	6.3	5.2	5.3	4.4	10.5	9.0
Communication and other public utilities	.9	.8	2.9	2.2	2.4	1.5	3.9	3.4
Wholesale and retail trade	20.6	20.2	7.8	6.8	6.6	5.4	9.3	8.4
Finance, insurance, and real estate	2.2	2.2	3.2	2.8	1.7	2.3	4.3	3.2
Service industries	14.5	15.3	6.2	5.8	6.2	5.1	6.2	6.3
Professional services	6.0c	6.8	4.8	4.7	4.1	3.8	5.1	5.1
All other service industries	8.5c	8.6	7.9c	7.3	8.0	6.2	7.9	8.3
Agricultural wage and salary workers	1.9	2.2	7.6	7.5	7.0	7.2	9.6	8.5
All other classes of workers	11.7	13.2	3.4	3.4	2.3c	2.3	4.8c	4.9
No previous work experience	18.9	18.8	--	--	--	--	--	--

¹ Percent not shown where base is less than 75,000.

c=corrected.

HOUSEHOLD DATA

A-13. Unemployed persons by reason for unemployment, sex, age, and race

Reason for unemployment	Total unemployed		Males, 20 years and over		Females, 20 years and over		Both sexes, 16 to 19 years		White		Black and other	
	July 1977	July 1978	July 1977	July 1978	July 1977	July 1978	July 1977	July 1978	July 1977	July 1978	July 1977	July 1978
UNEMPLOYMENT LEVEL												
Total unemployed, in thousands	6,941	6,438	2,522	2,076	2,462	2,434	1,957	1,927	5,285	4,769	1,656	1,668
Job losers	2,869	2,407	1,562	1,212	1,051	903	255	291	2,277	1,890	592	517
On layoff	787	639	415	300	312	277	60	62	654	501	133	138
Other job losers	2,082	1,768	1,147	912	739	626	195	229	1,623	1,389	459	379
Job leavers	879	907	329	339	403	377	147	191	756	744	123	163
Reentrants	1,886	1,909	520	427	861	1,020	504	462	1,384	1,360	502	550
New entrants	1,308	1,215	111	97	147	134	1,050	983	869	775	439	439
Total unemployed, percent distribution	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Job losers	41.3	37.4	62.0	58.4	42.7	37.1	13.0	15.1	43.1	39.6	35.7	31.0
On layoff	11.3	9.9	16.5	14.5	12.7	11.4	3.0	3.2	12.4	10.5	8.0	8.3
Other job losers	30.0	27.5	45.5	43.9	30.0	25.7	10.0	11.9	30.7	29.1	27.7	22.7
Job leavers	12.7	14.1	13.0	16.3	16.4	15.5	7.5	9.9	14.3	15.6	7.4	9.8
Reentrants	27.2	29.7	20.6	20.6	35.0	41.9	25.8	24.0	26.2	28.5	30.3	33.0
New entrants	18.8	18.9	4.4	4.7	6.0	5.5	53.7	51.0	16.4	16.3	26.5	26.3
UNEMPLOYMENT RATE												
Total unemployment rate	7.0	6.3	4.8	3.8	7.1	6.6	17.0	16.2	6.0	5.3	14.2	13.4
Job loser rate ¹	2.9	2.3	3.0	2.3	3.0	2.5	2.2	2.4	2.6	2.1	5.0	4.1
Job leaver rate ¹ .....	.9	.9	.6	.6	1.2	1.0	1.3	1.6	.9	.8	1.1	1.3
Reentrant rate ¹	1.9	1.9	1.0	.8	2.5	2.8	4.4	3.9	1.6	1.5	4.3	4.4
New entrant rate ¹	1.3	1.2	.2	.2	.4	.4	9.1	8.3	1.0	.9	3.7	3.5

¹ Unemployment rates are calculated as a percent of the civilian labor force.

A-14. Unemployed persons by reason for unemployment, duration, sex, and age

[Percent distribution]

Reason, sex, and age	July 1978						
	Total unemployed		Duration of unemployment				
	Thousands of persons	Percent	Less than 5 weeks	5 to 14 weeks	15 weeks and over	15 to 26 weeks	27 weeks and over
Total, 16 years and over	6,438	100.0	49.3	31.7	19.0	8.6	10.4
Job losers	2,407	100.0	44.4	28.7	26.9	11.5	15.4
On layoff	639	100.0	61.6	25.5	12.9	4.5	8.3
Other job losers	1,768	100.0	38.2	29.8	32.0	14.0	17.9
Job leavers	907	100.0	57.7	24.8	17.5	9.2	8.4
Reentrants	1,909	100.0	51.9	32.6	15.5	7.1	8.4
New entrants	1,215	100.0	48.7	41.5	9.8	4.5	5.3
Males, 20 years and over	2,076	100.0	42.1	28.2	29.7	12.1	17.5
Job losers	1,212	100.0	39.6	28.1	32.3	13.0	19.3
On layoff	300	100.0	62.7	22.3	15.0	4.0	11.0
Other job losers	912	100.0	32.0	30.1	37.9	15.9	22.0
Job leavers	339	100.0	54.7	22.2	23.1	10.7	12.4
Reentrants	427	100.0	41.9	30.4	27.6	10.8	16.9
New entrants	97	100.0	30.6	38.8	30.6	13.3	17.3
Females, 20 years and over	2,434	100.0	51.8	29.3	18.9	9.1	9.8
Job losers	903	100.0	45.0	29.8	25.2	11.2	14.1
On layoff	277	100.0	56.2	31.2	12.7	5.4	7.2
Other job losers	626	100.0	40.0	29.2	30.8	13.7	17.1
Job leavers	377	100.0	54.1	26.3	19.6	11.1	8.5
Reentrants	1,020	100.0	56.9	29.4	13.7	6.9	6.9
New entrants	134	100.0	53.3	32.6	14.1	6.7	7.4
Both sexes, 16 to 19 years	1,927	100.0	54.0	38.6	7.4	4.0	3.4
Job losers	291	100.0	62.7	27.4	9.9	6.8	3.1
On layoff	62	100.0	(1)	(1)	(1)	(1)	(1)
Other job losers	229	100.0	57.8	30.4	11.7	7.4	4.3
Job leavers	191	100.0	70.9	25.9	3.2	2.6	.5
Reentrants	462	100.0	50.3	41.5	8.2	4.3	3.9
New entrants	983	100.0	49.7	42.9	7.3	3.5	3.9

¹ Percent not shown where base is less than 75,000.

A-15. Unemployed jobseekers by the jobsearch methods used, sex, age, and race

Sex, age, and race	July 1978								Average number of methods used
	Thousands of persons		Methods used as a percent of total jobseekers						
	Total unemployed	Total job-seekers	Public employment agency	Private employment agency	Employer directly	Placed or answered ads	Friends or relatives	Other	
Total, 16 years and over	6,438	5,625	25.1	5.8	71.7	28.2	13.9	5.5	1.50
16 to 19 years	1,927	1,822	18.7	4.3	79.3	25.8	12.4	3.4	1.44
20 to 24 years	1,516	1,334	27.8	4.8	72.6	29.5	14.3	5.0	1.54
25 to 34 years	1,371	1,151	28.2	7.2	68.7	31.1	15.1	5.1	1.56
35 to 44 years	671	534	36.9	8.2	65.7	24.3	13.1	6.2	1.54
45 to 54 years	538	441	25.4	7.7	61.7	32.7	14.3	10.9	1.53
55 to 64 years	291	239	20.5	6.7	56.1	28.9	14.6	12.6	1.39
65 years and over	124	104	16.3	5.8	67.3	22.1	21.2	10.6	1.43
Males, 16 years and over	3,050	2,626	27.6	5.6	70.6	26.0	17.7	6.9	1.54
16 to 19 years	974	921	18.6	2.9	78.6	22.9	16.7	4.2	1.44
20 to 24 years	711	607	34.9	3.5	68.7	29.7	19.4	5.6	1.62
25 to 34 years	586	468	31.4	7.1	69.2	29.5	20.3	6.0	1.63
35 to 44 years	275	211	44.1	12.3	61.1	22.7	13.7	11.4	1.65
45 to 54 years	244	206	29.1	9.2	60.2	25.2	18.0	11.2	1.53
55 to 64 years	177	142	21.1	9.9	59.9	25.4	13.4	17.6	1.47
65 years and over	83	72	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Females, 16 years and over	3,388	2,999	23.0	6.1	72.6	30.2	10.5	4.3	1.47
16 to 19 years	953	900	18.9	5.8	80.1	28.8	8.0	2.7	1.44
20 to 24 years	805	727	21.9	5.9	75.9	29.3	10.0	4.5	1.48
25 to 34 years	785	683	26.1	7.5	68.2	32.2	11.6	4.5	1.50
35 to 44 years	396	323	32.5	5.6	68.7	25.1	12.7	2.8	1.47
45 to 54 years	294	236	22.0	6.8	62.7	39.4	11.0	10.6	1.53
55 to 64 years	114	97	19.6	2.1	50.5	35.1	16.5	5.2	1.29
65 years and over	41	32	(1)	(1)	(1)	(1)	(1)	(1)	(1)
White	4,769	4,111	22.1	5.7	73.0	30.2	14.0	5.5	1.50
Males	2,297	1,961	23.5	4.8	72.5	27.3	17.5	7.0	1.53
Females	2,472	2,149	20.8	6.5	73.5	32.8	10.8	4.1	1.48
Black and other	1,668	1,514	33.2	6.3	68.2	23.0	13.5	5.6	1.50
Males	753	665	39.5	7.7	65.1	22.0	18.3	6.6	1.59
Females	915	849	28.3	5.2	70.6	23.8	9.8	4.8	1.42

¹ Percent not shown where base is less than 75,000.

waiting to begin a new wage and salary job within 30 days are not actually seeking jobs. It should also be noted that the percent using each method will always total more than 100 because many jobseekers use more than one method.

NOTE: The jobseekers total is less than the total unemployed because persons on layoff or

A-16. Unemployed jobseekers by the jobsearch methods used, sex, and reason for unemployment

Sex and reason	July 1978								Average number of methods used
	Thousands of persons		Methods used as a percent of total jobseekers						
	Total unemployed	Total job-seekers	Public employment agency	Private employment agency	Employer directly	Placed or answered ads	Friends or relatives	Other	
Total, 16 years and over	6,438	5,625	25.1	5.8	71.7	28.2	13.9	5.5	1.50
Job losers	2,407	1,758	32.9	7.2	67.6	28.6	17.7	6.5	1.61
Job leavers	907	889	27.4	6.4	70.4	35.2	12.0	4.3	1.56
Reentrants	1,909	1,795	20.2	5.0	71.8	27.7	11.6	6.6	1.43
New entrants	1,215	1,183	19.3	4.6	78.5	23.3	13.0	3.4	1.42
Males, 16 years and over	3,050	2,626	27.6	5.6	70.6	26.0	17.7	6.9	1.54
Job losers	1,402	1,048	34.2	6.1	66.9	25.2	20.6	8.5	1.61
Job leavers	433	422	29.1	5.9	72.5	29.9	13.5	4.3	1.55
Reentrants	671	619	21.6	6.3	70.1	26.8	16.3	9.2	1.50
New entrants	544	538	20.4	3.2	76.8	23.6	16.9	3.0	1.44
Females, 16 years and over	3,388	2,999	23.0	6.1	72.6	30.2	10.5	4.3	1.47
Job losers	1,005	710	31.0	8.9	68.9	33.5	13.2	3.5	1.59
Job leavers	474	468	25.9	6.8	68.4	40.0	10.9	4.3	1.56
Reentrants	1,238	1,176	19.3	4.3	72.6	28.1	9.0	5.0	1.38
New entrants	670	645	18.4	5.9	80.0	23.3	9.9	3.7	1.41

NOTE: See note, table A-15.

HOUSEHOLD DATA

A-17. Unemployed persons by duration of unemployment

Duration of unemployment	Total				Full-time workers			
	Thousands of persons		Percent distribution		Thousands of persons		Percent distribution	
	July 1977	July 1978	July 1977	July 1978	July 1977	July 1978	July 1977	July 1978
Total, 16 years and over	6,941	6,438	100.0	100.0	5,797	5,326	100.0	100.0
Less than 5 weeks	2,960	3,176	42.6	49.3	2,355	2,484	40.6	46.6
5 to 14 weeks	2,258	2,041	32.5	31.7	1,856	1,711	32.0	32.1
5 to 10 weeks	1,836	1,636	26.5	25.4	1,503	1,358	25.9	25.5
11 to 14 weeks	421	405	6.1	6.3	353	353	6.1	6.6
15 weeks and over	1,724	1,221	24.8	19.0	1,585	1,133	27.3	21.3
15 to 26 weeks	717	551	10.3	8.6	648	512	11.2	9.6
27 weeks and over	1,007	670	14.5	10.4	937	621	16.2	11.7
27 to 51 weeks	501	300	7.2	4.7	471	282	8.1	5.3
52 weeks and over	506	369	7.3	5.7	466	339	8.0	6.4
Average (mean) duration, in weeks	13.5	11.3	--	--	14.4	12.2	--	--
Median duration, in weeks	6.2	5.1	--	--	6.6	5.5	--	--

A-18. Unemployed persons by duration, sex, age, race, and marital status

Sex, age, race, and marital status	Thousands of persons					Average (mean) duration, in weeks	Median duration, in weeks	Less than 5 weeks as a percent of unemployed in group		15 weeks and over as a percent of unemployed in group	
	Total	Less than 5 weeks	5 to 14 weeks	15 to 26 weeks	27 weeks and over			July 1977	July 1978	July 1977	July 1978
Total, 16 years and over	6,438	3,176	2,041	551	670	11.3	5.1	42.6	49.3	24.8	19.0
16 to 21 years	2,666	1,407	993	144	123	7.6	4.7	48.6	52.8	13.7	10.0
16 to 19 years	1,927	1,040	744	78	66	6.7	4.6	49.5	54.0	9.9	7.4
20 to 24 years	1,516	752	488	152	124	10.4	5.1	40.9	49.6	24.5	18.2
25 to 34 years	1,371	703	368	139	161	11.8	4.9	40.8	51.3	29.3	21.9
35 to 44 years	671	330	165	62	114	14.5	5.2	41.6	49.2	35.4	26.1
45 to 54 years	538	186	187	73	93	16.7	8.4	39.0	34.6	36.8	30.7
55 to 64 years	291	99	71	36	85	24.5	11.1	35.2	34.0	39.7	41.6
65 years and over	124	66	18	12	29	18.5	4.7	26.4	52.8	44.1	32.7
Males, 16 years and over	3,050	1,404	953	296	397	13.1	5.7	41.0	46.0	27.2	22.7
16 to 21 years	1,331	702	483	77	70	7.9	4.7	49.0	52.8	15.4	11.0
16 to 19 years	974	529	368	44	32	6.8	4.6	49.0	54.3	11.3	7.9
20 to 24 years	711	334	235	70	72	11.1	5.5	39.1	47.0	27.5	20.0
25 to 34 years	586	255	157	83	91	15.0	6.8	36.8	43.6	34.3	29.7
35 to 44 years	275	116	51	39	69	20.0	7.6	39.8	42.1	38.3	39.3
45 to 54 years	244	70	85	37	52	19.8	11.2	35.5	28.5	41.3	36.7
55 to 64 years	177	59	46	14	58	25.9	10.7	38.7	33.5	38.9	40.4
65 years and over	83	41	11	9	22	20.9	5.6	27.5	48.8	38.6	37.9
Females, 16 years and over	3,388	1,773	1,087	255	273	9.7	4.8	44.4	52.3	22.3	15.6
16 to 21 years	1,335	705	510	67	53	7.2	4.7	48.2	52.8	11.8	9.0
16 to 19 years	953	511	375	33	33	6.6	4.7	49.9	53.6	8.4	7.0
20 to 24 years	805	418	253	82	51	9.7	4.8	42.9	52.0	21.2	16.6
25 to 34 years	785	448	211	56	70	9.5	4.4	45.0	57.1	23.9	16.0
35 to 44 years	396	214	114	23	44	10.7	4.6	43.1	54.1	33.0	17.0
45 to 54 years	294	117	102	35	41	14.0	6.6	41.9	39.6	33.1	25.7
55 to 64 years	114	40	25	22	27	22.4	12.0	31.5	34.9	40.5	43.4
65 years and over	41	25	7	3	6	13.7	4.1	(1)	(1)	(1)	(1)
White	4,769	2,462	1,432	410	465	10.7	4.8	44.1	51.6	24.6	18.3
Males	2,297	1,093	678	242	284	12.6	5.5	42.0	47.6	27.1	22.9
Females	2,472	1,369	754	168	180	9.0	4.5	46.3	55.4	21.9	14.1
Black and other	1,668	714	609	141	205	13.0	5.9	38.0	42.8	25.6	20.7
Males	753	311	275	54	113	14.6	6.0	37.6	41.3	27.5	22.2
Females	915	403	333	87	92	11.7	5.8	38.4	44.0	23.6	19.5
Males:											
Married, spouse present	960	399	254	127	180	17.2	7.8	38.1	41.6	34.2	32.0
Widowed, divorced, or separated	279	121	66	26	66	19.8	6.9	37.9	43.4	38.2	32.9
Single (never married)	1,811	883	633	143	151	9.9	5.2	43.2	48.8	21.2	16.2
Females:											
Married, spouse present	1,291	707	372	99	113	9.9	4.6	47.0	54.8	25.3	16.4
Widowed, divorced, or separated	642	341	171	60	70	11.2	4.7	37.8	53.2	32.3	20.2
Single (never married)	1,455	725	545	96	90	9.0	5.0	44.1	49.8	15.8	12.8

¹ Percent not shown where base is less than 75,000.

HOUSEHOLD DATA

A-19. Unemployed persons by duration, occupation, and industry of last job

Occupation and industry	Thousands of persons					Average (mean) duration, in weeks	Median duration, in weeks	Less than 5 weeks as a percent of unemployed in group		15 weeks and over as a percent of unemployed in group	
	Total	Less than 5 weeks	5 to 14 weeks	15 to 26 weeks	27 weeks and over			July 1977	July 1978	July 1977	July 1978
	July 1978										
OCCUPATION											
White-collar workers	1,899	929	549	200	221	12.3	5.2	38.3	48.9	29.3	22.2
Professional and managerial	653	295	210	61	87	13.1	5.9	35.6	45.2	33.5	22.7
Sales workers	269	136	57	41	35	13.7	4.9	41.5	50.6	25.2	28.3
Clerical workers	977	497	282	99	100	11.3	4.9	39.3	50.9	27.6	20.3
Blue-collar workers	2,160	1,029	625	206	301	13.1	5.6	42.7	47.6	29.4	23.4
Craft and kindred workers	460	218	129	42	70	15.0	5.6	39.8	47.5	29.4	24.4
Operatives, except transport	956	439	273	107	137	12.9	5.9	44.7	45.9	29.2	25.5
Transport equipment operatives	206	85	72	20	29	12.6	6.7	46.4	41.1	26.5	23.8
Nonfarm laborers	539	287	150	36	65	12.0	4.7	40.5	53.3	31.1	18.8
Service workers	1,064	562	336	85	80	10.2	4.7	45.9	52.9	23.4	15.6
INDUSTRY¹											
Agriculture	139	91	37	6	6	6.5	3.8	52.8	65.3	17.3	8.4
Construction	431	224	105	35	67	13.6	4.8	39.9	52.0	32.8	23.6
Manufacturing	1,186	515	358	127	187	13.9	6.6	43.7	43.4	31.6	26.5
Durable goods	632	252	200	66	115	14.8	7.8	43.7	39.8	32.6	28.6
Non-durable goods	554	263	158	61	72	12.9	5.5	43.8	47.5	30.4	24.0
Transportation and public utilities	238	118	67	22	32	13.6	5.4	36.0	49.4	30.4	22.7
Wholesale and retail trade	1,304	675	364	147	118	11.1	4.8	42.5	51.7	27.5	20.3
Finance and service industries	1,594	814	485	132	164	11.5	4.9	41.9	51.1	24.6	18.6
Public administration	211	85	75	25	26	12.9	7.4	33.9	40.3	33.9	24.1
No previous work experience	1,213	590	503	55	64	8.2	5.1	45.2	48.7	11.4	9.8

¹ Includes wage and salary workers only.

A-20. Employed persons by sex and age

[In thousands]

Age and type of industry	Total		Males		Females	
	July 1977	July 1978	July 1977	July 1978	July 1977	July 1978
All industries	92,372	96,202	55,677	57,324	36,696	38,877
16 to 19 years	9,537	9,937	5,297	5,444	4,240	4,493
16 to 17 years	4,125	4,328	2,349	2,415	1,776	1,913
18 to 19 years	5,412	5,609	2,948	3,029	2,463	2,580
20 to 24 years	13,519	14,146	7,552	7,834	5,967	6,312
25 to 54 years	55,782	58,080	34,258	35,287	21,525	22,793
25 to 34 years	23,002	24,214	14,146	14,730	8,857	9,484
35 to 44 years	16,769	17,696	10,231	10,711	6,537	6,985
45 to 54 years	16,011	16,170	9,880	9,846	6,131	6,324
55 to 64 years	10,839	11,132	6,805	6,919	4,034	4,212
55 to 59 years	6,755	6,981	4,209	4,286	2,546	2,695
60 to 64 years	4,084	4,151	2,595	2,634	1,488	1,517
65 years and over	2,695	2,906	1,765	1,839	929	1,066
Nonagricultural industries	88,582	92,204	52,706	54,222	35,876	37,982
16 to 19 years	8,894	9,299	4,791	4,941	4,103	4,357
16 to 17 years	3,747	3,946	2,067	2,115	1,680	1,831
18 to 19 years	5,147	5,353	2,724	2,827	2,423	2,527
20 to 24 years	13,077	13,670	7,197	7,440	5,880	6,231
25 to 54 years	53,968	56,145	32,895	33,876	21,073	22,270
25 to 34 years	22,374	23,496	13,658	14,204	8,716	9,291
35 to 44 years	16,208	17,135	9,825	10,308	6,383	6,827
45 to 54 years	15,386	15,515	9,412	9,363	5,974	6,152
55 to 64 years	10,300	10,565	6,370	6,461	3,930	4,104
55 to 59 years	6,432	6,694	3,952	4,062	2,480	2,632
60 to 64 years	3,868	3,871	2,418	2,398	1,450	1,473
65 years and over	2,343	2,525	1,454	1,505	890	1,020
Agriculture	3,790	3,997	2,970	3,102	820	895
16 to 19 years	643	639	506	503	137	136
16 to 17 years	379	383	282	300	97	83
18 to 19 years	265	256	225	202	40	53
20 to 24 years	442	476	355	394	87	82
25 to 54 years	1,814	1,935	1,363	1,411	452	523
25 to 34 years	628	718	487	526	140	192
35 to 44 years	561	561	406	403	154	158
45 to 54 years	626	655	468	483	158	173
55 to 64 years	539	567	435	459	104	108
55 to 59 years	324	287	257	224	66	63
60 to 64 years	216	280	178	235	38	45
65 years and over	352	381	312	335	40	47

HOUSEHOLD DATA

A-21. Employed persons by occupation, sex, and age

(In thousands)

Occupation	Total		Males, 20 years and over		Females, 20 years and over		Males, 16-19 years		Females, 16-19 years	
	July 1977	July 1978	July 1977	July 1978	July 1977	July 1978	July 1977	July 1978	July 1977	July 1978
TOTAL	92,372	96,202	50,379	51,880	32,456	34,384	5,297	5,444	4,240	4,493
White-collar workers	44,765	46,886	21,157	21,946	20,760	22,070	789	744	2,059	2,125
Professional and technical	13,253	13,712	7,562	7,896	5,373	5,540	147	135	171	142
Health workers	2,565	2,640	906	947	1,621	1,670	9	5	29	18
Teachers, except college	2,307	2,286	582	627	1,699	1,640	9	5	17	14
Other professional and technical	8,381	8,786	6,074	6,322	2,053	2,230	129	125	125	110
Managers and administrators, except farm	9,660	10,233	7,448	7,754	2,114	2,378	63	59	36	43
Salaried workers	7,747	8,331	5,965	6,310	1,690	1,928	60	53	32	42
Self-employed workers in retail trade	1,008	906	699	611	306	292	1	2	2	1
Self-employed workers, except retail trade	906	995	784	833	118	158	2	4	2	--
Sales workers	5,750	6,053	2,995	3,148	2,014	2,202	301	238	439	464
Retail trade	3,128	2,282	995	1,054	1,489	1,612	241	190	404	427
Other industries	2,622	2,771	1,999	2,095	526	591	61	48	35	37
Clerical workers	16,102	16,888	3,152	3,148	11,258	11,950	279	312	1,414	1,477
Stenographers, typists, and secretaries	4,448	4,803	70	90	3,944	4,273	4	4	430	436
Other clerical workers	11,654	12,085	3,082	3,058	7,314	7,677	275	308	984	1,041
Blue-collar workers	31,652	32,843	23,276	23,905	4,863	5,234	3,011	3,147	501	557
Craft and kindred workers	12,398	12,755	11,220	11,467	535	629	593	607	50	53
Carpenters	1,327	1,375	1,205	1,269	6	10	112	96	5	1
Construction craft, except carpenters	2,627	2,752	2,404	2,501	27	42	192	192	5	17
Mechanics and repairers	3,292	3,326	3,048	3,122	56	37	184	166	5	1
Metal craft	1,197	1,168	1,138	1,087	26	35	31	43	3	2
Blue-collar worker supervisors, not elsewhere classified	1,564	1,673	1,438	1,503	117	163	9	6	--	--
All other	2,389	2,460	1,987	1,984	303	341	66	104	33	31
Operatives, except transport	10,496	11,058	5,601	5,874	3,818	4,014	776	840	302	330
Durable goods manufacturing	4,580	4,911	2,826	3,020	1,384	1,490	260	288	110	112
Nondurable goods manufacturing	3,363	3,487	1,267	1,333	1,839	1,886	126	133	131	134
Other industries	2,552	2,660	1,508	1,520	597	638	388	419	60	83
Transport equipment operatives	3,451	3,490	3,066	3,086	183	187	178	205	24	12
Drivers, motor vehicles	2,922	2,956	2,591	2,593	161	176	151	177	19	11
All other	529	534	475	493	22	11	27	29	4	2
Nonfarm laborers	5,307	5,540	3,389	3,478	327	404	1,465	1,495	127	162
Construction	1,027	1,197	715	813	16	20	287	350	9	13
Manufacturing	1,187	1,168	886	829	103	151	188	170	10	19
Other industries	3,093	3,175	1,788	1,836	207	234	989	975	108	130
Service workers	12,706	13,133	3,798	3,848	6,262	6,449	1,079	1,135	1,568	1,701
Private household workers	1,171	1,163	26	11	858	835	15	10	272	307
Service workers, except private household	11,535	11,970	3,771	3,838	5,404	5,614	1,064	1,125	1,296	1,394
Food service workers	4,161	4,432	725	781	2,023	2,089	561	625	852	937
Protective service workers	1,325	1,366	1,207	1,225	90	104	24	31	4	6
All other	6,049	6,172	1,839	1,832	3,291	3,421	479	469	440	451
Farm workers	3,249	3,339	2,149	2,181	571	630	418	417	111	110
Farmers and farm managers	1,563	1,612	1,431	1,430	111	168	21	13	--	1
Farm laborers and supervisors	1,686	1,727	718	752	460	462	397	404	111	109
Paid workers	1,219	1,262	683	706	156	166	308	321	71	68
Unpaid family workers	468	466	35	45	304	296	88	84	40	41

HOUSEHOLD DATA

A-22. Employed persons by occupation, sex, and race

[Percent distribution]

Occupation and race	Total		Males		Females	
	July 1977	July 1978	July 1977	July 1978	July 1977	July 1978
TOTAL						
Total employed (thousands)	92,372	96,202	55,677	57,324	36,696	38,877
Percent	100.0	100.0	100.0	100.0	100.0	100.0
White-collar workers	48.5	48.7	39.4	39.6	62.2	62.2
Professional and technical	14.3	14.3	13.8	14.0	15.1	14.6
Managers and administrators, except farm	10.5	10.6	13.5	13.6	5.9	6.2
Sales workers	6.2	6.3	5.9	5.9	6.7	6.9
Clerical workers	17.4	17.6	6.2	6.0	34.5	34.5
Blue-collar workers	34.3	34.1	47.2	47.2	14.6	14.9
Craft and kindred workers	13.4	13.3	21.2	21.1	1.6	1.8
Operatives, except transport	11.4	11.5	11.5	11.7	11.2	11.2
Transport equipment operatives	3.7	3.6	5.8	5.7	.6	.5
Nonfarm laborers	5.7	5.8	8.7	8.7	1.2	1.5
Service workers	13.8	13.7	8.8	8.7	21.3	21.0
Private household workers	1.3	1.2	.1	(1)	3.1	2.9
Other service workers	12.5	12.4	8.7	8.7	18.3	18.0
Farm workers	3.5	3.5	4.6	4.5	1.9	1.9
Farmers and farm managers	1.7	1.7	2.6	2.5	.3	.4
Farm laborers and supervisors	1.8	1.8	2.0	2.0	1.6	1.5
White						
Total employed (thousands)	82,331	85,410	50,199	51,489	32,132	33,921
Percent	100.0	100.0	100.0	100.0	100.0	100.0
White-collar workers	50.2	50.5	40.9	41.1	64.6	64.7
Professional and technical	14.7	14.7	14.4	14.5	15.3	14.9
Managers and administrators, except farm	11.2	11.4	14.2	14.5	6.3	6.7
Sales workers	6.6	6.7	6.2	6.2	7.3	7.4
Clerical workers	17.6	17.7	6.0	5.8	35.7	35.8
Blue-collar workers	33.8	33.7	46.4	46.4	14.0	14.3
Craft and kindred workers	13.9	13.8	21.8	21.7	1.6	1.8
Operatives, except transport	10.9	11.0	11.1	11.3	10.7	10.6
Transport equipment operatives	3.6	3.4	5.5	5.4	.6	.5
Nonfarm laborers	5.4	5.4	8.0	8.0	1.2	1.4
Service workers	12.4	12.3	8.0	7.9	19.4	19.0
Private household workers .....	.9	.9	.1	(1)	2.2	2.3
Other service workers	11.5	11.4	7.9	7.9	17.2	16.7
Farm workers	3.6	3.6	4.7	4.6	1.9	2.0
Farmers and farm managers	1.9	1.8	2.8	2.7	.3	.5
Farm laborers and supervisors	1.8	1.7	1.9	1.9	1.6	1.5
Black and other						
Total employed (thousands)	10,042	10,791	5,478	5,835	4,563	4,956
Percent	100.0	100.0	100.0	100.0	100.0	100.0
White-collar workers	34.6	35.1	25.7	26.3	45.1	45.5
Professional and technical	11.1	11.1	8.7	9.5	13.8	13.0
Managers and administrators, except farm	4.8	4.6	6.6	5.9	2.5	3.1
Sales workers	2.9	3.2	3.1	3.1	2.7	3.3
Clerical workers	15.8	16.2	7.2	7.8	26.2	26.1
Blue-collar workers	38.5	37.9	55.0	54.3	18.7	18.7
Craft and kindred workers	9.4	9.0	16.1	15.6	1.4	1.2
Operatives, except transport	15.1	15.3	14.9	15.2	15.3	15.4
Transport equipment operatives	5.1	5.1	8.9	9.0	.6	.5
Nonfarm laborers	8.9	8.6	15.0	14.5	1.5	1.6
Service workers	24.5	24.2	15.9	15.5	34.8	34.4
Private household workers	4.2	3.5	.2	(1)	9.0	7.5
Other service workers	20.3	20.7	15.7	15.5	25.8	26.9
Farm workers	2.4	2.7	3.4	3.9	1.3	1.4
Farmers and farm managers .....	.3	.5	.5	.8	.1	.1
Farm laborers and supervisors	2.1	2.3	2.8	3.1	1.3	1.3

¹ Less than 0.05 percent.

HOUSEHOLD DATA

A-23. Employed persons by class of worker, age, and sex

[In thousands]

Age and sex	July 1978								
	Nonagricultural industries						Agriculture		
	Wage and salary workers				Self employed	Unpaid family workers	Wage and salary workers	Self employed	Unpaid family workers
	Total	Private household workers	Government	Other					
Total, 16 years and over	85,327	1,440	14,660	69,228	6,386	491	1,731	1,781	486
16 to 19 years	9,157	440	976	7,742	84	58	473	38	128
16 to 17 years	3,870	346	476	3,048	42	34	290	17	76
18 to 19 years	5,287	94	499	4,694	42	24	182	22	52
20 to 24 years	13,282	117	1,628	11,537	362	27	314	107	54
25 to 34 years	21,950	141	4,031	17,778	1,460	86	353	297	69
35 to 44 years	15,550	116	3,012	12,422	1,465	120	188	296	77
45 to 54 years	13,983	203	2,912	10,868	1,413	119	171	390	95
55 to 64 years	9,394	245	1,823	7,325	1,115	56	152	366	49
55 to 59 years	6,024	126	1,208	4,691	629	40	71	187	28
60 to 64 years	3,369	120	615	2,634	485	16	81	179	21
65 years and over	2,012	178	278	1,556	488	25	80	287	14
Males, 16 years and over	49,578	248	7,630	41,700	4,592	52	1,390	1,584	128
16 to 19 years	4,854	124	487	4,243	58	30	388	31	83
16 to 17 years	2,067	96	253	1,718	24	23	243	11	46
18 to 19 years	2,786	28	234	2,525	33	7	146	20	37
20 to 24 years	7,185	39	706	6,440	250	5	263	99	32
25 to 34 years	13,163	18	2,066	11,079	1,040	1	266	252	8
35 to 44 years	9,256	8	1,595	7,654	1,050	1	140	263	--
45 to 54 years	8,320	7	1,599	6,713	1,036	7	134	348	1
55 to 64 years	5,648	18	1,017	4,613	812	--	126	330	3
55 to 59 years	3,600	7	672	2,920	462	--	56	167	--
60 to 64 years	2,049	11	345	1,693	350	--	70	163	2
65 years and over	1,152	36	159	957	346	7	73	260	1
Females, 16 years and over	35,749	1,192	7,029	27,528	1,794	439	340	197	358
16 to 19 years	4,303	316	488	3,499	26	28	84	7	45
16 to 17 years	1,803	249	223	1,330	17	11	48	5	30
18 to 19 years	2,501	66	265	2,169	9	17	36	2	15
20 to 24 years	6,097	79	922	5,097	112	21	51	9	22
25 to 34 years	8,787	123	1,965	6,699	420	85	87	45	60
35 to 44 years	6,293	108	1,417	4,768	415	119	49	32	77
45 to 54 years	5,663	196	1,312	4,155	376	112	37	42	94
55 to 64 years	3,745	227	806	2,712	303	56	26	36	46
55 to 59 years	2,425	119	536	1,771	167	40	15	20	28
60 to 64 years	1,321	109	271	941	136	16	11	16	18
65 years and over	860	143	118	599	142	18	7	26	13

A-24. Employed persons by industry and occupation

[In thousands]

Industry	July 1978											
	Total employed	White-collar workers				Blue-collar workers				Service workers		Farm workers
		Profes- sional and technical workers	Managers and adminis- trators, except farm	Sales workers	Clerical workers	Craft and kindred workers	Operatives, except transport	Transport equipment operatives	Nonfarm laborers	Private household workers	Other service workers	
Agriculture	3,997	79	37	8	72	51	11	67	321	--	12	3,339
Mining	835	114	65	3	94	203	270	51	29	--	6	--
Construction	6,767	176	735	29	431	3,639	306	204	1,197	--	50	--
Manufacturing	21,621	2,186	1,487	503	2,538	4,076	8,398	842	1,168	--	424	--
Durable goods	12,907	1,450	892	203	1,448	2,670	4,911	423	679	--	232	--
Nondurable goods	8,714	736	595	300	1,090	1,406	3,487	419	490	--	192	--
Transportation and public utilities	6,176	470	614	44	1,430	1,409	178	1,350	523	--	159	--
Wholesale and retail trade	19,881	380	3,780	4,112	3,315	1,543	1,053	722	1,196	--	3,779	--
Wholesale trade	3,729	146	802	830	769	327	209	364	255	--	27	--
Retail trade	16,152	234	2,978	3,282	2,547	1,216	844	358	940	--	3,752	--
Finance, insurance, and real estate	5,470	278	1,044	1,182	2,457	106	9	94	--	--	289	--
Services	26,260	8,990	1,850	172	4,757	1,416	787	196	780	1,163	6,150	--
Private households	1,475	9	--	--	9	5	2	9	226	1,163	53	--
Other service industries	24,785	8,981	1,850	172	4,748	1,411	785	187	554	--	6,097	--
Public administration	5,194	1,038	622	--	1,794	312	45	50	232	--	1,101	--

HOUSEHOLD DATA

A-25. Employed persons with a job but not at work by reason, pay status, and sex

(In thousands)

Reason not working	All industries		Nonagricultural industries					
			Total		Wage and salary workers ¹			
					Paid absences ²		Unpaid absences ²	
	July 1977	July 1978	July 1977	July 1978	July 1977	July 1978	July 1977	July 1978
Total	11,261	11,474	11,115	11,319	6,634	6,837	3,892	3,829
Vacation	8,933	9,236	8,874	9,163	5,987	6,131	2,549	2,641
Illness	1,296	1,388	1,258	1,351	479	540	677	692
Bad weather	48	34	30	19	--	--	--	--
Industrial dispute	138	86	138	86	--	--	--	--
All other reasons	846	731	815	700	168	166	666	496
Males	5,526	5,619	5,398	5,484	3,831	3,798	1,263	1,345
Vacation	4,227	4,363	4,175	4,299	3,408	3,370	598	726
Illness	789	826	756	793	324	335	375	390
All other reasons ³	510	429	468	392	100	93	290	228
Females	5,736	5,854	5,717	5,834	2,803	3,038	2,630	2,482
Vacation	4,706	4,872	4,699	4,865	2,579	2,760	1,951	1,914
Illness	507	561	502	557	155	205	302	302
All other reasons ³	523	420	516	412	68	72	377	267

¹ Excludes private household.

³ Includes bad weather and industrial disputes, not shown separately.

² Pay status not available separately for bad weather and industrial dispute; these categories are included in all other reasons.

A-26. Persons at work by type of industry and hours of work

Hours of work	July 1978					
	Thousands of persons			Percent distribution		
	All industries	Nonagricultural industries	Agriculture	All industries	Nonagricultural industries	Agriculture
Total at work	84,728	80,885	3,842	100.0	100.0	100.0
1-34 hours	18,509	17,493	1,015	21.8	21.6	26.4
1-4 hours	772	711	60	.9	.9	1.6
5-14 hours	3,032	2,817	215	3.6	3.5	5.6
15-29 hours	9,063	8,523	540	10.7	10.5	14.1
30-34 hours	5,642	5,442	200	6.7	6.7	5.2
35 hours and over	66,219	63,391	2,828	78.2	78.4	73.6
35-39 hours	6,121	5,973	148	7.2	7.4	3.9
40 hours	36,373	35,774	599	42.9	44.2	15.6
41 hours and over	23,725	21,644	2,081	28.0	26.8	54.2
41 to 48 hours	9,023	8,753	270	10.6	10.8	7.0
49 to 59 hours	7,747	7,304	443	9.1	9.0	11.5
60 hours and over	6,955	5,587	1,368	8.2	6.9	35.6
Average hours, total at work	39.8	39.4	48.0	--	--	--
Average hours, workers on full-time schedules	43.6	43.0	56.6	--	--	--

HOUSEHOLD DATA

A-27. Persons at work 1 - 34 hours by usual status and reason for working less than 35 hours

[Numbers in thousands]

Reason for working less than 35 hours	July 1978					
	All industries			Nonagricultural industries		
	Total	Usually work full time	Usually work part time	Total	Usually work full time	Usually work part time
Total	18,509	6,096	12,412	17,493	5,828	11,665
Economic reasons	4,190	1,379	2,811	3,918	1,253	2,665
Slack work	1,556	933	623	1,396	827	569
Material shortages or repairs to plant and equipment	99	99	--	98	98	--
New job started during week	248	248	--	238	238	--
Job terminated during week	100	100	--	91	91	--
Could find only part-time work	2,188	--	2,188	2,096	--	2,096
Other reasons	14,318	4,717	9,601	13,573	4,573	9,000
Does not want, or unavailable for, full-time work	7,622	--	7,622	7,143	--	7,143
Vacation	1,521	1,521	--	1,492	1,492	--
Illness	1,429	1,242	187	1,376	1,219	157
Bad weather	253	253	--	202	202	--
Industrial dispute	36	36	--	36	36	--
Legal or religious holiday	82	82	--	82	82	--
Full time for this job	1,216	--	1,216	1,171	--	1,171
All other reasons	2,160	1,583	577	2,074	1,543	531
Average hours:						
Economic reasons	21.2	24.4	19.7	21.4	24.6	19.9
Other reasons	21.7	25.8	19.7	21.9	25.9	19.8
Worked 30 to 34 hours:						
Economic reasons	1,193	589	604	1,138	560	578
Other reasons	4,449	2,449	2,000	4,304	2,405	1,899

A-28. Nonagricultural workers by industry and full- or part-time status

[Numbers in thousands]

Industry	July 1978								
	Total at work	Full- or part-time status						Average hours, total at work	Average hours, workers on full-time schedules
		On part time for economic reasons	On voluntary part time	On full-time schedules					
				Total	40 hours or less	41 to 48 hours	49 hours or more		
Total ¹	80,885	3,918	9,000	67,967	46,323	8,753	12,891	39.4	43.0
Wage and salary workers	74,575	3,626	7,873	63,076	44,288	8,226	10,562	39.1	42.5
Construction	5,289	368	223	4,698	3,310	543	845	40.1	42.4
Manufacturing	18,196	440	453	17,303	11,929	2,673	2,701	41.3	42.4
Durable goods	10,861	136	160	10,565	7,197	1,729	1,639	41.9	42.4
Nondurable goods	7,335	304	293	6,738	4,733	943	1,062	40.5	42.3
Transportation and public utilities	5,234	150	180	4,904	3,333	612	959	42.3	43.7
Wholesale and retail trade	16,475	1,238	3,047	12,190	7,751	2,009	2,430	37.6	43.2
Finance, insurance, and real estate	4,680	105	389	4,186	3,102	491	593	39.3	41.6
Service industries	19,312	1,221	3,375	14,716	10,994	1,394	2,328	36.6	42.0
Private households	1,352	307	599	446	302	54	90	23.5	43.4
All other industries	17,960	914	2,776	14,270	10,692	1,340	2,238	37.6	42.0
Public administration	4,684	90	198	4,396	3,451	389	556	40.5	41.7
Self-employed workers	5,820	278	937	4,605	1,900	494	2,211	43.0	49.8
Unpaid family workers	491	15	191	285	133	34	118	37.2	48.5

¹Includes mining not shown separately.

HOUSEHOLD DATA

A-29. Persons at work in nonagricultural industries by full- or part-time status, sex, age, race, and marital status

[Numbers in thousands]

Sex, age, race, and marital status	July 1978							
	Total at work	On part time for economic reasons	On voluntary part time	On full-time schedules			Average hours, total at work	Average hours, workers on full-time schedules
				Total	40 hours or less	41 hours or more		
TOTAL								
Both sexes, 16 years and over	80,885	3,918	9,000	67,967	46,323	21,644	39.4	43.0
16 to 21 years	14,080	1,888	2,649	9,543	7,271	2,272	34.7	41.3
16 to 19 years	8,850	1,480	2,117	5,253	4,057	1,196	32.7	41.0
16 to 17 years	3,765	844	1,322	1,599	1,242	357	28.4	40.7
18 to 19 years	5,085	636	796	3,653	2,814	839	35.8	41.1
20 years and over	72,036	2,438	6,883	62,715	42,267	20,448	40.2	43.2
20 to 24 years	12,637	761	1,111	10,765	7,821	2,944	38.9	41.9
25 years and over	59,399	1,677	5,773	51,949	34,445	17,504	40.5	43.4
25 to 44 years	35,254	1,011	2,765	31,478	20,561	10,917	41.0	43.5
45 to 64 years	21,943	575	1,922	19,446	13,190	6,256	40.7	43.3
65 years and over	2,201	93	1,086	1,022	691	331	28.7	42.7
Males, 16 years and over	48,737	1,870	2,646	44,221	27,046	17,175	42.2	44.4
16 to 21 years	7,560	953	1,091	5,516	3,882	1,634	36.6	42.4
16 to 19 years	4,737	767	902	3,068	2,226	842	34.5	42.0
16 to 17 years	2,024	440	621	963	722	241	30.1	41.6
18 to 19 years	2,713	327	281	2,105	1,503	602	37.9	42.3
20 years and over	44,000	1,102	1,745	41,153	24,821	16,332	43.1	44.6
20 to 24 years	6,935	344	359	6,232	4,063	2,169	41.0	43.2
25 years and over	37,065	758	1,386	34,921	20,758	14,163	43.4	44.9
25 to 44 years	21,999	499	411	21,089	12,247	8,842	44.2	45.1
45 to 64 years	13,737	214	366	13,157	8,074	5,083	43.6	44.6
65 years and over	1,329	46	609	674	437	237	30.1	43.1
Females, 16 years and over	32,148	2,050	6,354	23,744	19,274	4,470	35.1	40.3
16 to 21 years	6,519	934	1,558	4,027	3,388	639	32.5	39.7
16 to 19 years	4,112	714	1,215	2,183	1,829	354	30.5	39.5
16 to 17 years	1,741	404	701	636	520	116	26.5	39.3
18 to 19 years	2,372	309	515	1,548	1,310	238	33.5	39.6
20 years and over	28,035	1,336	5,139	21,560	17,443	4,117	35.7	40.4
20 to 24 years	5,702	417	752	4,533	3,756	777	36.4	40.1
25 years and over	22,334	920	4,387	17,027	13,687	3,340	35.5	40.5
25 to 44 years	13,256	513	2,354	10,389	8,315	2,074	36.0	40.3
45 to 64 years	8,206	360	1,555	6,291	5,119	1,172	35.7	40.6
65 years and over	872	47	478	347	254	93	26.7	42.0
RACE								
White	71,677	3,195	8,063	60,419	40,212	20,207	39.6	43.2
Males	43,729	1,543	2,315	39,871	23,750	16,121	42.5	44.7
Females	27,948	1,652	5,748	20,548	16,462	4,086	35.0	40.4
Black and other	9,208	724	937	7,547	6,110	1,437	37.6	41.3
Males	5,008	326	331	4,351	3,299	1,052	39.5	42.4
Females	4,200	398	606	3,196	2,812	384	35.3	39.9
MARITAL STATUS								
Males:								
Married, spouse present	32,619	571	1,071	30,977	18,003	12,974	43.7	45.0
Widowed, divorced, or separated	3,629	128	175	3,326	2,103	1,223	42.5	44.7
Single (never married)	12,490	1,171	1,401	9,918	6,940	2,978	38.2	42.7
Females:								
Married, spouse present	16,591	688	3,752	12,151	9,932	2,219	34.7	40.3
Widowed, divorced, or separated	6,090	330	879	4,881	3,801	1,080	36.7	40.8
Single (never married)	9,466	1,031	1,722	6,713	5,544	1,169	34.5	40.1

HOUSEHOLD DATA

A-30. Persons at work in nonfarm occupations by full- or part-time status and sex

(Numbers in thousands)

Occupational group and sex	July 1978								
	Total at work	On part time for economic reasons	On voluntary part time	On full-time schedules				Average hours, total at work	Average hours, workers on full-time schedules
				Total	40 hours or less	41 to 48 hours	49 hours or more		
TOTAL									
White-collar workers	40,776	1,183	4,783	34,810	23,438	3,999	7,373	39.9	43.3
Professional and technical	10,736	224	1,077	9,435	6,459	1,052	1,924	40.2	43.1
Managers and administrators, except farm	9,321	88	340	8,893	4,140	1,171	3,582	46.5	47.8
Sales workers	5,586	309	1,167	4,110	2,488	566	1,056	37.3	43.6
Clerical workers	15,133	563	2,200	12,370	10,349	1,210	811	36.5	40.0
Blue-collar workers	28,947	1,541	1,488	25,918	17,401	3,942	4,575	40.6	42.9
Craft and kindred workers	11,410	447	337	10,626	6,743	1,739	2,144	42.0	43.5
Operatives, except transport	9,276	430	437	8,409	6,134	1,244	1,031	39.7	41.6
Transport equipment operatives	3,092	129	144	2,819	1,503	465	851	44.1	46.4
Nonfarm laborers	5,170	535	571	4,064	3,018	494	552	37.0	41.9
Service workers	11,784	1,242	2,821	7,721	5,757	868	1,096	34.7	42.3
Private household	1,081	225	463	393	267	49	77	24.9	43.2
Other service workers	10,703	1,017	2,359	7,327	5,488	819	1,020	35.7	42.2
Males									
White-collar workers	20,412	336	1,001	19,075	10,645	2,378	6,052	44.0	45.6
Professional and technical	6,896	108	335	6,453	4,116	699	1,638	42.8	44.3
Managers and administrators, except farm	7,190	46	164	6,980	2,916	919	3,145	47.9	48.8
Sales workers	3,176	97	235	2,844	1,521	406	917	42.3	44.9
Clerical workers	3,151	86	267	2,798	2,093	353	352	39.2	41.6
Blue-collar workers	24,235	1,215	1,035	21,985	14,191	3,478	4,316	41.3	43.5
Craft and kindred workers	10,841	415	263	10,163	6,414	1,645	2,104	42.2	43.6
Operatives, except transport	5,802	203	184	5,415	3,616	935	864	41.3	42.7
Transport equipment operatives	2,962	113	110	2,739	1,456	450	833	44.5	46.4
Nonfarm laborers	4,630	484	478	3,668	2,703	448	517	37.2	42.0
Service workers	4,564	357	658	3,549	2,415	439	695	39.2	44.3
Private household	20	7	3	10	5	--	5	34.8	55.0
Other service workers	4,544	350	654	3,540	2,412	439	689	39.2	44.3
Females									
White-collar workers	20,363	846	3,783	15,734	12,791	1,621	1,322	35.8	40.4
Professional and technical	3,841	116	742	2,983	2,344	353	286	35.5	40.4
Managers and administrators, except farm	2,131	42	176	1,913	1,226	251	436	41.5	44.1
Sales workers	2,409	211	932	1,266	967	160	139	30.8	40.6
Clerical workers	11,982	477	1,933	9,572	8,255	857	460	35.8	39.6
Blue-collar workers	4,712	326	453	3,933	3,209	465	259	36.9	40.1
Craft and kindred workers	568	32	73	463	329	94	40	37.0	41.0
Operatives, except transport	3,474	226	253	2,995	2,518	310	167	37.1	39.6
Transport equipment operatives	130	16	34	80	48	15	17	35.9	46.8
Nonfarm laborers	540	52	93	395	314	46	35	35.7	41.2
Service workers	7,220	884	2,164	4,172	3,340	429	403	31.9	40.6
Private household	1,061	218	459	384	263	49	72	24.7	42.8
Other service workers	6,159	667	1,704	3,788	3,077	380	331	33.1	40.4

A-31. Employment status of 14-15 year-olds by sex and race

[Numbers in thousands]

Employment status	July 1978								
	Total			White			Black and other		
	Both sexes	Males	Females	Both sexes	Males	Females	Both sexes	Males	Females
Civilian noninstitutional population	8,157	4,154	4,003	6,841	3,492	3,349	1,316	662	654
Civilian labor force	2,851	1,673	1,178	2,449	1,442	1,007	402	230	172
Employed	2,363	1,381	982	2,116	1,240	876	247	141	107
Agriculture	407	314	94	362	287	75	45	26	19
Nonagricultural industries	1,956	1,067	888	1,753	953	800	202	114	88
Unemployed	488	292	196	333	202	131	155	90	65
Unemployment rate	17.1	17.5	16.6	13.6	14.0	13.0	38.6	39.1	37.8
Not in labor force	5,306	2,481	2,825	4,392	2,050	2,342	914	431	483
Keeping house	341	19	322	251	16	235	90	4	86
Going to school	383	212	171	295	164	130	88	48	40
Unable to work	13	8	5	12	8	4	1	--	1
All other reasons	4,569	2,242	2,328	3,835	1,862	1,973	734	380	355

A-32. Employed 14-15 year-olds by sex, class of worker, and occupation

Characteristics	July 1978					
	Thousands of persons			Percent distribution		
	Both sexes	Males	Females	Both sexes	Males	Females
CLASS OF WORKER						
Total	2,363	1,381	982	100.0	100.0	100.0
Nonagricultural industries	1,956	1,067	888	82.7	77.2	90.4
Wage and salary workers	1,823	978	845	77.1	70.8	86.0
Private household workers	648	224	424	27.4	16.2	43.2
Government workers	261	147	114	11.0	10.6	11.6
Other wage and salary workers	914	607	307	38.7	43.9	31.3
Self-employed workers	106	78	28	4.5	5.6	2.9
Unpaid family workers	27	12	15	1.1	.9	1.5
Agriculture	407	314	94	17.2	22.7	9.6
Wage and salary workers	287	217	70	12.1	15.7	7.1
Self-employed workers	40	34	6	1.7	2.5	.6
Unpaid family workers	81	63	18	3.4	4.6	1.8
OCCUPATION						
Total	2,363	1,381	982	100.0	100.0	100.0
White-collar workers	396	241	155	16.8	17.5	15.8
Professional and technical	20	10	10	.8	.7	1.0
Managers and administrators, except farm	6	4	1	.3	.3	.1
Sales workers	245	187	58	10.4	13.5	5.9
Clerical workers	125	40	85	5.3	2.9	8.7
Blue-collar workers	682	603	79	28.9	43.7	8.0
Craft and kindred workers	48	44	4	2.0	3.2	.4
Operatives, except transport	79	53	26	3.3	3.8	2.6
Transport equipment operatives	12	12	--	.5	.9	--
Nonfarm laborers	544	494	50	23.0	35.8	5.1
Service workers	926	269	657	39.2	19.5	66.9
Private household workers	438	26	412	18.5	1.9	42.0
Other service workers	488	243	245	20.7	17.6	24.9
Farm workers	358	267	91	15.2	19.3	9.3
Farmers and farm managers	7	3	5	.3	.2	.5
Farm laborers and supervisors	351	265	86	14.9	19.2	8.8

**HOUSEHOLD DATA
SEASONALLY ADJUSTED**

A-35. Employment status by race, sex, and age, seasonally adjusted

[Numbers in thousands]

Characteristics	1977						1978						
	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
WHITE													
Total, 16 years and over:													
Civilian labor force	85,962	86,298	86,407	86,812	87,292	87,193	87,425	87,360	87,532	87,945	88,209	88,623	88,521
Employed	80,758	81,032	81,203	81,614	82,181	82,391	82,650	82,697	82,880	83,386	83,590	84,270	83,862
Unemployed	5,204	5,266	5,204	5,198	5,111	4,802	4,775	4,663	4,652	4,559	4,619	4,353	4,659
Unemployment rate	6.1	6.1	6.0	6.0	5.9	5.5	5.5	5.3	5.3	5.2	5.2	4.9	5.3
Males, 20 years and over:													
Civilian labor force	46,906	47,003	47,008	47,278	47,417	47,507	47,440	47,441	47,528	47,555	47,670	47,818	47,727
Employed	44,796	44,925	45,033	45,220	45,452	45,592	45,546	45,599	45,643	45,859	45,942	46,175	46,009
Unemployed	2,110	2,078	1,975	2,058	1,965	1,915	1,894	1,842	1,885	1,696	1,728	1,643	1,718
Unemployment rate	4.5	4.4	4.2	4.4	4.1	4.0	4.0	3.9	4.0	3.6	3.6	3.4	3.6
Females, 20 years and over:													
Civilian labor force	30,827	30,844	31,171	31,162	31,445	31,381	31,612	31,615	31,701	31,985	32,027	32,260	32,348
Employed	28,912	28,895	29,244	29,268	29,536	29,545	29,875	30,021	30,149	30,345	30,307	30,540	30,536
Unemployed	1,915	1,949	1,927	1,894	1,909	1,836	1,737	1,594	1,552	1,640	1,720	1,720	1,812
Unemployment rate	6.2	6.3	6.2	6.1	6.1	5.9	5.5	5.0	4.9	5.1	5.4	5.3	5.6
Both sexes, 16 to 19 years:													
Civilian labor force	8,229	8,451	8,228	8,372	8,430	8,305	8,373	8,304	8,303	8,405	8,512	8,545	8,446
Employed	7,050	7,212	6,926	7,126	7,193	7,254	7,229	7,077	7,088	7,182	7,341	7,555	7,317
Unemployed	1,179	1,239	1,302	1,246	1,237	1,051	1,144	1,227	1,215	1,223	1,171	990	1,129
Unemployment rate	14.3	14.7	15.8	14.9	14.7	12.7	13.7	14.8	14.6	14.6	13.8	11.6	13.4
BLACK AND OTHER													
Total, 16 years and over:													
Civilian labor force	11,241	11,375	11,344	11,398	11,551	11,761	11,725	11,785	11,871	11,816	11,934	11,980	11,997
Employed	9,746	9,752	9,854	9,842	9,966	10,271	10,238	10,391	10,402	10,418	10,467	10,553	10,496
Unemployed	1,495	1,623	1,490	1,556	1,585	1,490	1,487	1,394	1,469	1,398	1,467	1,427	1,501
Unemployment rate	13.3	14.3	13.1	13.7	13.7	12.7	12.7	11.8	12.4	11.8	12.3	11.9	12.5
Males, 20 years and over:													
Civilian labor force	5,482	5,500	5,405	5,522	5,541	5,649	5,678	5,662	5,699	5,673	5,743	5,731	5,684
Employed	4,921	4,856	4,837	4,898	4,985	5,137	5,124	5,173	5,216	5,172	5,238	5,283	5,206
Unemployed	561	644	568	624	556	512	554	489	483	501	505	448	478
Unemployment rate	10.2	11.7	10.5	11.3	10.0	9.1	9.8	8.6	8.5	8.8	8.8	7.8	8.4
Females, 20 years and over:													
Civilian labor force	4,763	4,839	4,966	4,883	4,988	5,065	5,051	5,088	5,145	5,128	5,138	5,187	5,164
Employed	4,235	4,268	4,408	4,328	4,358	4,485	4,503	4,576	4,560	4,589	4,580	4,602	4,566
Unemployed	528	571	558	555	630	580	548	512	585	539	558	585	598
Unemployment rate	11.1	11.8	11.2	11.4	12.6	11.5	10.8	10.1	11.4	10.5	10.9	11.3	11.6
Both sexes, 16 to 19 years:													
Civilian labor force	996	1,036	973	993	1,022	1,047	996	1,035	1,027	1,015	1,053	1,062	1,149
Employed	590	628	609	616	623	649	611	642	626	657	649	668	724
Unemployed	406	408	364	377	399	398	385	393	401	358	404	394	425
Unemployment rate	40.8	39.4	37.4	38.0	39.0	38.0	38.7	38.0	39.0	35.3	38.4	37.1	37.0

**HOUSEHOLD DATA
SEASONALLY ADJUSTED**

A-38. Rates of unemployment by sex and age, seasonally adjusted

Sex and age	1977						1978						
	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
Total, 16 years and over	6.9	7.0	6.8	6.8	6.7	6.4	6.3	6.1	6.2	6.0	6.1	5.7	6.2
16 to 19 years	17.3	17.3	18.3	17.3	17.2	15.6	16.0	17.4	17.3	16.9	16.5	14.2	16.3
16 to 17 years	19.8	20.1	19.8	18.8	19.0	17.8	18.2	20.8	20.4	19.9	19.3	16.7	20.1
18 to 19 years	15.7	15.5	16.7	16.2	15.9	13.7	14.5	15.0	15.2	14.4	14.5	12.9	13.6
20 to 24 years	10.7	11.2	10.7	10.4	10.4	10.2	10.5	10.1	10.3	10.0	9.0	9.2	9.9
25 years and over	4.9	4.9	4.7	4.9	4.7	4.4	4.2	3.9	4.0	3.9	4.2	3.9	4.2
25 to 54 years	5.1	5.2	4.8	5.1	4.8	4.6	4.3	4.1	4.2	4.1	4.5	4.1	4.4
55 years and over	3.9	3.9	4.1	4.2	4.1	4.0	3.5	3.3	3.1	3.2	3.2	3.1	3.2
Males, 16 years and over	6.1	6.1	5.9	6.0	5.8	5.5	5.6	5.6	5.6	5.2	5.1	4.7	5.1
16 to 19 years	16.9	17.4	17.7	16.7	16.4	15.3	14.9	17.2	17.1	16.6	15.3	12.6	15.4
16 to 17 years	20.0	20.8	19.2	18.6	18.2	16.7	17.2	21.1	21.0	19.9	18.4	16.1	18.8
18 to 19 years	14.8	14.9	15.8	15.1	15.0	13.9	13.4	14.3	14.3	12.9	12.9	11.3	13.0
20 to 24 years	10.6	11.4	10.4	9.9	9.8	9.8	10.5	10.3	10.1	9.1	7.9	8.1	8.9
25 years and over	4.2	4.1	3.9	4.3	3.8	3.6	3.5	3.4	3.5	3.3	3.5	3.1	3.3
25 to 54 years	4.3	4.3	3.8	4.3	3.9	3.6	3.6	3.4	3.5	3.3	3.6	3.2	3.3
55 years and over	3.7	3.5	3.9	4.1	3.7	3.7	3.2	3.2	3.2	3.3	3.3	3.0	3.4
Females, 16 years and over	8.1	8.2	8.2	8.0	8.1	7.6	7.3	6.9	7.0	7.0	7.5	7.2	7.7
16 to 19 years	17.8	17.2	18.9	18.0	18.1	16.1	17.4	17.7	17.5	17.2	17.9	16.0	17.4
16 to 17 years	19.6	19.3	20.6	19.1	20.1	19.2	19.5	20.4	19.6	19.9	20.3	17.4	21.6
18 to 19 years	16.6	16.2	17.7	17.4	16.8	13.5	15.8	15.7	16.1	15.6	16.1	14.8	14.4
20 to 24 years	10.9	11.0	11.0	11.0	11.1	10.8	10.5	9.8	10.4	11.0	10.3	10.4	11.0
25 years and over	6.2	6.2	6.0	5.8	6.0	5.7	5.2	4.7	4.7	4.8	5.3	5.2	5.6
25 to 54 years	6.4	6.5	6.4	6.2	6.3	6.0	5.5	5.1	5.2	5.2	5.8	5.6	6.0
55 years and over	4.4	4.5	4.5	4.5	4.8	4.4	3.8	3.3	3.0	3.0	3.1	3.1	2.9

A-39. Unemployed persons by reason for unemployment, seasonally adjusted

[Numbers in thousands]

Reason for unemployment	1977						1978						
	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
NUMBER OF UNEMPLOYED													
Job losers	3,042	3,197	3,055	3,035	2,969	2,748	2,698	2,540	2,493	2,475	2,577	2,340	2,552
On layoff	879	963	847	840	780	687	768	709	660	593	683	606	714
Other job losers	2,163	2,234	2,208	2,195	2,189	2,061	1,930	1,831	1,833	1,882	1,894	1,734	1,838
Job leavers	842	891	869	876	881	877	856	898	862	872	819	849	869
Reentrants	1,860	1,872	1,879	1,906	1,891	1,886	1,821	1,796	1,911	1,734	1,772	1,760	1,883
New entrants	973	947	935	857	901	820	914	868	923	925	901	810	880
PERCENT DISTRIBUTION													
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Job losers	45.3	46.3	45.3	45.5	44.7	43.4	42.9	41.6	40.3	41.2	42.5	40.6	41.3
On layoff	13.1	13.9	12.6	12.6	11.7	10.9	12.2	11.6	10.7	9.9	11.3	10.5	11.5
Other job losers	32.2	32.3	32.8	32.9	33.0	32.6	30.7	30.0	29.6	31.3	31.2	30.1	29.7
Job leavers	12.5	12.9	12.9	13.1	13.3	13.9	13.6	14.7	13.9	14.5	13.5	14.7	14.1
Reentrants	27.7	27.1	27.9	28.6	28.5	29.8	29.0	29.4	30.9	28.9	29.2	30.6	30.4
New entrants	14.5	13.7	13.9	12.8	13.6	13.0	14.5	14.2	14.9	15.4	14.8	14.1	14.2
UNEMPLOYED AS A PERCENT OF THE CIVILIAN LABOR FORCE													
Job losers	3.1	3.3	3.1	3.1	3.0	2.8	2.7	2.6	2.5	2.5	2.6	2.3	2.5
Job leavers .....	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.8	.8	.9
Reentrants	2.0	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.9	1.7	1.8	1.7	1.9
New entrants	1.0	1.0	1.0	.9	.9	.8	.9	.9	.9	.9	.9	.8	.9

**HOUSEHOLD DATA
SEASONALLY ADJUSTED**

A-42. Employed persons by selected social and economic categories, seasonally adjusted

[In thousands]

Selected categories	1977						1978						
	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
CHARACTERISTICS													
Total, 16 years and over	90,588	90,793	91,088	91,383	92,214	92,609	92,881	93,003	93,266	93,801	94,112	94,819	94,425
Married men, spouse present	38,380	38,292	38,338	38,425	38,531	38,682	38,645	38,666	38,465	38,628	38,626	38,711	38,642
Married women, spouse present	20,824	20,810	21,185	21,119	21,278	21,416	21,638	21,738	21,674	21,847	21,694	21,718	21,766
OCCUPATION													
White-collar workers	45,057	45,198	45,493	46,083	46,251	46,316	46,547	46,555	46,835	46,789	46,895	47,209	47,192
Professional and technical	13,758	13,706	13,778	14,042	13,918	13,981	14,057	14,016	14,060	14,158	14,399	14,365	14,239
Managers and administrators, except farm	9,614	9,699	9,747	9,911	9,894	9,939	10,067	10,134	10,169	10,212	9,933	10,107	10,182
Sales workers	5,715	5,726	5,741	5,718	5,804	5,796	5,913	5,811	5,985	5,861	5,911	5,931	6,017
Clerical workers	15,970	16,067	16,227	16,412	16,635	16,600	16,510	16,594	16,621	16,558	16,652	16,806	16,754
Blue-collar workers	30,086	30,229	30,324	30,247	30,603	30,807	30,942	31,198	31,039	31,655	31,544	31,683	31,225
Craft and kindred workers	11,884	11,903	11,992	11,860	12,116	12,153	12,111	12,220	12,169	12,302	12,218	12,467	12,229
Operatives, except transport Transport equipment operatives	10,285	10,295	10,239	10,320	10,423	10,424	10,755	10,738	10,766	10,974	10,846	11,006	10,841
Nonfarm laborers	3,413	3,453	3,533	3,457	3,525	3,555	3,432	3,643	3,541	3,560	3,534	3,512	3,452
Service workers	4,504	4,578	4,560	4,610	4,539	4,675	4,644	4,597	4,563	4,819	4,946	4,698	4,703
Farm workers	12,426	12,520	12,556	12,473	12,590	12,617	12,704	12,703	12,572	12,830	12,883	12,993	12,838
Unpaid family workers	2,725	2,741	2,695	2,755	2,809	2,805	2,872	2,769	2,788	2,687	2,698	2,895	2,802
MAJOR INDUSTRY AND CLASS OF WORKER													
Agriculture:													
Wage and salary workers	1,276	1,314	1,339	1,387	1,405	1,405	1,387	1,345	1,389	1,408	1,434	1,482	1,364
Self-employed workers	1,552	1,578	1,572	1,577	1,590	1,605	1,604	1,587	1,527	1,539	1,573	1,669	1,652
Unpaid family workers	357	318	272	305	368	346	342	314	389	283	255	336	348
Nonagricultural industries:													
Wage and salary workers	80,773	80,918	81,363	81,727	82,281	82,692	82,915	83,078	83,124	83,648	84,049	84,513	84,016
Government	15,130	15,210	15,304	15,463	15,415	15,422	15,267	15,237	15,154	15,305	15,203	15,224	15,129
Private industries	65,643	65,708	66,059	66,264	66,866	67,270	67,648	67,841	67,970	68,343	68,846	69,289	68,887
Private households	1,419	1,388	1,403	1,358	1,403	1,436	1,421	1,383	1,293	1,388	1,393	1,368	1,394
Other industries	64,224	64,320	64,656	64,906	65,463	65,834	66,227	66,458	66,677	66,955	67,453	67,921	67,493
Self-employed workers	5,899	6,140	6,084	6,080	6,082	6,182	6,259	6,268	6,427	6,467	6,288	6,198	6,206
Unpaid family workers	527	483	505	460	467	442	439	488	500	506	520	468	496
PERSONS AT WORK¹													
Nonagricultural industries	82,479	82,642	82,783	82,788	83,347	83,662	83,304	84,054	84,285	86,043	85,528	86,051	86,205
Full-time schedules	67,693	67,839	67,817	67,827	68,240	68,574	68,812	69,215	69,417	70,550	70,157	70,861	71,095
Part-time for economic reasons	3,464	3,253	3,306	3,263	3,285	3,220	2,986	3,193	3,164	3,327	3,243	3,458	3,330
Usually work full time	1,446	1,220	1,244	1,237	1,255	1,247	1,043	1,128	1,226	1,224	1,211	1,433	1,385
Usually work part time	2,018	2,033	2,062	2,026	2,030	1,973	1,943	2,065	1,938	2,103	2,032	2,025	1,945
Part time for noneconomic reasons	11,322	11,550	11,660	11,698	11,822	11,868	11,506	11,646	11,704	12,166	12,128	11,732	11,780

¹ Excludes persons "with a job but not at work" during the survey period for such reasons as vacation, illness, or industrial dispute.

HOUSEHOLD DATA

A-43. Employment status of male Vietnam-Era veterans and nonveterans 20 to 39 years of age

[Numbers in thousands]

Employment status	Not seasonally adjusted			Seasonally adjusted					
	July 1977	June 1978	July 1978	July 1977	Mar. 1978	Apr. 1978	May 1978	June 1978	July 1978
VETERANS¹									
Total, 20 to 34 years:									
Civilian noninstitutional population ²	6,817	6,505	6,482	6,817	6,572	6,551	6,528	6,505	6,482
Civilian labor force	6,541	6,214	6,177	6,520	6,295	6,247	6,160	6,191	6,148
Employed	6,067	5,951	5,883	6,012	5,978	5,968	5,912	5,923	5,834
Unemployed	474	263	294	508	317	279	248	268	314
Unemployment rate	7.2	4.2	4.8	7.8	5.0	4.5	4.0	4.3	5.1
20 to 24 years:									
Civilian noninstitutional population ²	1,050	768	751	1,050	813	800	784	768	751
Civilian labor force	953	696	697	945	725	723	681	684	686
Employed	814	631	629	786	629	646	634	620	608
Unemployed	139	65	68	159	96	77	47	64	78
Unemployment rate	14.6	9.3	9.8	16.8	13.2	10.7	6.9	9.4	11.4
25 to 29 years:									
Civilian noninstitutional population ²	3,028	2,377	2,337	3,028	2,499	2,458	2,417	2,377	2,337
Civilian labor force	2,916	2,273	2,197	2,901	2,371	2,332	2,281	2,262	2,185
Employed	2,709	2,154	2,057	2,694	2,261	2,228	2,155	2,143	2,045
Unemployed	207	119	140	207	110	104	126	119	140
Unemployment rate	7.1	5.2	6.4	7.1	4.6	4.5	5.5	5.3	6.4
30 to 34 years:									
Civilian noninstitutional population ²	2,739	3,360	3,394	2,739	3,260	3,293	3,327	3,360	3,394
Civilian labor force	2,672	3,245	3,283	2,674	3,199	3,192	3,198	3,245	3,277
Employed	2,544	3,166	3,197	2,532	3,088	3,094	3,123	3,160	3,181
Unemployed	128	79	86	142	111	98	75	85	96
Unemployment rate	4.8	2.4	2.6	5.3	3.5	3.1	2.3	2.6	2.9
35 to 39 years:									
Civilian noninstitutional population ²	638	1,104	1,135	638	1,010	1,041	1,081	1,104	1,135
Civilian labor force	617	1,066	1,095	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Employed	601	1,035	1,063	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Unemployed	16	31	32	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Unemployment rate	2.6	2.9	2.9	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
NONVETERANS									
Total, 20 to 34 years:									
Civilian noninstitutional population ²	17,640	18,459	18,518	17,640	18,234	18,308	18,387	18,459	18,518
Civilian labor force	16,431	17,164	17,305	15,916	16,566	16,655	16,687	16,714	16,753
Employed	15,265	16,204	16,343	14,722	15,430	15,569	15,710	15,789	15,772
Unemployed	1,166	960	962	1,194	1,136	1,086	977	925	981
Unemployment rate	7.1	5.6	5.6	7.5	6.9	6.5	5.9	5.5	5.9
20 to 24 years:									
Civilian noninstitutional population ²	8,158	8,398	8,413	8,158	8,334	8,356	8,381	8,398	8,413
Civilian labor force	7,428	7,600	7,647	6,911	7,162	7,182	7,148	7,176	7,111
Employed	6,738	6,975	7,039	6,231	6,482	6,550	6,596	6,611	6,512
Unemployed	690	625	608	680	680	632	552	565	599
Unemployment rate	9.3	8.2	8.0	9.8	9.5	8.8	7.7	7.9	8.4
25 to 29 years:									
Civilian noninstitutional population ²	5,307	6,069	6,116	5,307	5,910	5,962	6,015	6,069	6,116
Civilian labor force	5,009	5,753	5,848	5,008	5,582	5,642	5,679	5,729	5,834
Employed	4,702	5,544	5,612	4,676	5,260	5,298	5,404	5,511	5,579
Unemployed	307	209	236	332	322	344	275	218	255
Unemployment rate	6.1	3.6	4.0	6.6	5.8	6.1	4.8	3.8	4.4
30 to 34 years:									
Civilian noninstitutional population ²	4,175	3,992	3,989	4,175	3,990	3,990	3,991	3,992	3,989
Civilian labor force	3,994	3,811	3,810	3,997	3,822	3,831	3,860	3,809	3,808
Employed	3,825	3,685	3,692	3,815	3,688	3,721	3,710	3,667	3,681
Unemployed	169	126	118	182	134	110	150	142	127
Unemployment rate	4.2	3.3	3.1	4.6	3.5	2.9	3.9	3.7	3.3
35 to 39 years:									
Civilian noninstitutional population ²	3,483	3,605	3,623	3,483	3,546	3,566	3,559	3,605	3,623
Civilian labor force	3,330	3,465	3,474	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Employed	3,211	3,371	3,378	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Unemployed	119	94	96	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Unemployment rate	3.6	2.7	2.8	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.

¹ Vietnam-Era veterans are those who served between August 5, 1964, and May 7, 1975.

² Since seasonal variations are not present in the population figures, identical numbers

appear in the unadjusted and seasonally adjusted columns.

N.A. = not available.

ESTABLISHMENT DATA EMPLOYMENT

B-2. Employees on nonagricultural payrolls, by industry

[In thousands]

SIC Code	Industry	All employees					Production workers ¹				
		June 1977	July 1977	May 1978	June 1978 ^P	July 1978 ^P	June 1977	July 1977	May 1978	June 1978 ^P	July 1978 ^P
-	TOTAL	82,930	82,167	85,673	86,587	85,810	-	-	-	-	-
-	PRIVATE SECTOR	67,642	67,567	69,750	70,800	70,750	55,593	55,428	57,156	58,034	57,913
-	MINING	870	848	902	928	938	658	635	684	703	711
10	METAL MINING	99.5	88.3	95.6	98.3	-	76.7	65.0	74.0	75.8	-
101	Iron ores	26.8	26.1	25.7	26.2	-	21.6	20.8	20.5	21.0	-
102	Copper ores	37.3	26.6	35.3	35.7	-	28.8	18.1	27.4	27.5	-
11,12	COAL MINING	236.0	220.0	236.3	241.1	-	196.7	180.9	198.3	202.4	-
12	Bituminous coal and lignite mining	231.9	215.8	232.7	237.3	-	193.1	177.2	195.1	199.2	-
13	OIL AND GAS EXTRACTION	409.5	414.6	443.4	458.2	-	285.4	288.8	310.9	320.6	-
131,2	Crude petroleum and natural gas fields	176.7	179.9	184.2	192.4	-	87.8	89.7	90.5	95.1	-
138	Oil and gas field services	232.8	234.7	259.2	265.8	-	197.6	199.1	220.4	225.5	-
14	NONMETALLIC MINERALS, EXCEPT FUELS	124.6	125.3	126.3	130.1	-	99.5	100.0	100.9	104.2	-
142	Crushed and broken stone	44.0	44.1	45.4	47.0	-	36.7	37.1	38.0	39.5	-
144	Sand and gravel	39.2	39.6	39.4	41.0	-	-	-	-	-	-
-	CONTRACT CONSTRUCTION	4,047	4,148	4,268	4,536	4,672	3,243	3,337	3,438	3,686	3,818
15	GENERAL BUILDING CONTRACTORS	1,198.3	1,231.6	1,235.8	1,319.4	-	951.2	983.6	971.0	1,046.0	-
16	HEAVY CONSTRUCTION CONTRACTORS	858.5	882.5	908.4	984.7	-	705.4	728.2	766.9	840.1	-
161	Highway and street construction	394.9	410.0	408.5	458.2	-	335.1	348.7	347.4	395.7	-
162	Heavy construction, nec	463.6	472.5	499.9	526.5	-	370.3	379.5	419.5	444.4	-
17	SPECIAL TRADE CONTRACTORS	1,990.4	2,033.6	2,124.1	2,232.1	-	1,586.3	1,624.9	1,700.5	1,800.3	-
171	Plumbing, heating, air conditioning	458.8	468.1	474.3	491.7	-	346.9	355.3	359.1	374.6	-
172	Painting, paper hanging, decorating	159.4	166.4	166.7	182.9	-	133.0	138.9	140.0	156.2	-
173	Electrical work	333.4	340.4	345.8	356.9	-	260.8	266.9	271.3	281.1	-
174	Masonry, stonework, and plastering	234.1	238.8	270.2	285.6	-	202.2	206.8	235.1	250.0	-
176	Roofing and sheet metal work	141.5	146.5	165.7	173.0	-	114.5	118.9	135.8	142.8	-
-	MANUFACTURING	19,762	19,555	20,162	20,438	20,197	14,258	14,024	14,533	14,751	14,483
19,24,25, 32-39	DURABLE GOODS	11,598	11,485	12,018	12,165	12,028	8,334	8,202	8,649	8,759	8,601
20-23, 26-31	NONDURABLE GOODS	8,164	8,070	8,144	8,273	8,169	5,924	5,822	5,884	5,992	5,882
	DURABLE GOODS										
19	ORDNANCE AND ACCESSORIES	156.5	156.3	156.8	158.4	160.7	71.9	72.1	72.2	73.2	74.1
192	Ammunition, except for small arms	99.8	99.5	98.5	99.1	101.3	35.6	35.9	35.1	35.6	36.2
1925	Complete guided missiles	81.4	80.8	79.7	80.2	-	22.2	22.2	21.8	22.2	-
1929	Ammunition, exc. for small arms, nec	18.4	18.7	18.8	18.9	-	13.4	13.7	13.3	13.4	-
24	LUMBER AND WOOD PRODUCTS	659.9	659.2	671.1	693.5	691.7	564.5	562.8	571.2	593.8	591.2
241	Logging camps and logging contractors	76.6	76.7	74.0	80.9	83.5	-	-	-	-	-
242	Sawmills and planing mills	223.0	221.1	218.3	225.0	224.1	199.2	196.9	194.8	201.7	200.6
2421	Sawmills and planing mills, general	189.5	188.2	184.8	190.7	-	169.4	167.6	165.2	171.3	-
243	Millwork, plywood and related products	232.2	234.7	250.1	257.1	256.2	194.8	196.7	207.2	214.5	213.6
2431	Millwork	104.2	105.1	113.7	116.5	-	85.8	86.8	93.3	96.2	-
2432	Veneer and plywood	79.0	78.9	82.1	84.0	-	70.5	70.3	72.1	74.3	-
244	Wooden containers	22.4	22.1	21.5	21.9	21.7	19.9	19.5	18.9	19.3	19.1
2441,2	Wooden boxes, shooks, and crates	18.2	17.9	17.1	17.4	-	16.3	15.9	15.2	15.5	-
249	Miscellaneous wood products	105.7	104.6	107.2	108.6	106.2	87.7	86.4	90.3	91.9	89.8

See footnotes at end of table.

**ESTABLISHMENT DATA
EMPLOYMENT**

B-2. Employees on nonagricultural payrolls, by industry—Continued

[In thousands]

SIC Code	Industry	All employees					Production workers ¹				
		June 1977	July 1977	May 1978	June 1978 ^P	July 1978 ^P	June 1977	July 1977	May 1978	June 1978 ^P	July 1978 ^P
NONDURABLE GOODS—Continued											
30	RUBBER AND PLASTICS PRODUCTS, NEC...	684.3	675.2	701.9	713.9	704.3	538.4	528.6	551.5	562.1	551.0
301	Tires and inner tubes	124.4	123.8	118.0	119.7	119.6	92.4	91.9	86.1	87.7	87.5
302,3,6	Other rubber products	174.7	171.5	172.5	174.6	172.3	137.6	134.5	136.0	137.8	135.0
302	Rubber footwear	20.9	19.9	18.7	19.6	—	18.1	17.2	16.4	17.2	—
307	Miscellaneous plastics products	385.2	379.9	411.4	419.6	412.4	308.4	302.2	329.4	336.6	328.5
31	LEATHER AND LEATHER PRODUCTS	272.1	251.7	267.6	271.4	259.5	233.5	215.3	228.5	232.5	221.2
311	Leather tanning and finishing	24.2	22.2	23.7	24.0	22.0	20.8	19.0	20.4	20.6	18.8
314	Footwear, except rubber	168.5	155.5	167.1	169.9	163.0	147.4	136.3	145.9	148.7	142.3
312,3,5-7,9	Other leather products	79.4	74.0	76.8	77.5	74.5	65.3	60.0	62.2	63.2	60.1
316	Luggage	18.7	17.8	17.9	18.1	—	14.7	13.7	13.8	14.0	—
317	Handbags and personal leather goods	35.6	33.9	33.6	34.0	—	29.3	27.8	27.6	28.2	—
—	TRANSPORTATION AND PUBLIC UTILITIES	4,629	4,604	4,705	4,767	4,730	3,942	3,916	3,954	4,007	3,972
40	RAILROAD TRANSPORTATION	547.4	547.2	533.1	542.4	—	—	—	—	—	—
4011	Class I railroads ²	508.5	509.2	489.5	498.4	—	—	—	—	—	—
41	LOCAL AND INTERURBAN PASSENGER TRANSIT	263.3	226.9	263.1	258.5	—	—	—	—	—	—
411	Local and suburban transportation	67.0	66.9	66.6	67.5	—	61.9	61.7	60.5	61.4	—
412	Taxis	71.8	70.2	67.8	67.0	—	—	—	—	—	—
413	Intercity highway transportation	39.9	41.2	37.6	39.2	—	36.3	37.7	34.4	35.8	—
42	TRUCKING AND WAREHOUSING	1,140.7	1,138.5	1,166.5	1,188.3	—	1,010.8	1,008.2	1,031.6	1,051.7	—
421,3	Trucking and trucking terminals	1,051.7	1,048.0	1,070.9	1,092.1	—	935.2	931.1	949.0	968.6	—
422	Public warehousing	89.0	90.5	95.6	96.2	—	75.6	77.1	82.6	83.1	—
45	TRANSPORTATION BY AIR	380.6	384.5	387.4	392.2	—	—	—	—	—	—
451,2	Air transportation	344.2	347.9	349.5	353.4	—	—	—	—	—	—
46	PIPELINE TRANSPORTATION	16.9	17.1	16.0	16.8	—	12.3	12.4	11.6	12.3	—
44,47	OTHER TRANSPORTATION AND SERVICES	358.3	361.4	375.6	380.2	—	—	—	—	—	—
44	WATER TRANSPORTATION	199.0	200.6	210.0	209.6	—	—	—	—	—	—
47	TRANSPORTATION SERVICES	159.3	160.8	165.6	170.6	—	—	—	—	—	—
48	COMMUNICATION	1,167.7	1,172.0	1,201.4	1,210.0	—	891.8	896.8	909.0	914.3	—
481	Telephone communication	951.4	955.7	975.5	983.6	—	717.7	722.7	727.5	732.5	—
482	Telegraph communication ³	17.9	18.1	18.7	18.7	—	14.8	14.7	15.0	15.1	—
483	Radio and television broadcasting	162.4	162.0	167.5	169.0	—	127.9	127.6	131.2	132.2	—
49	ELECTRIC, GAS, AND SANITARY SERVICES	754.1	756.4	762.3	778.4	—	624.3	625.3	622.4	636.8	—
491	Electric companies and systems	322.4	324.0	330.8	336.9	—	264.2	265.4	268.5	273.5	—
492	Gas companies and systems	160.7	160.7	158.9	163.9	—	133.1	132.7	129.9	134.8	—
493	Combination companies and systems	198.4	197.8	197.2	199.7	—	164.5	163.7	159.8	162.2	—
494-7	Water, steam, and sanitary systems	72.6	73.9	75.4	77.9	—	62.5	63.5	64.2	66.3	—
—	WHOLESALE AND RETAIL TRADE	18,342	18,306	18,940	19,128	19,092	16,186	16,140	16,663	16,817	16,777
50	WHOLESALE TRADE	4,409	4,420	4,541	4,601	4,605	3,645	3,652	3,734	3,785	3,792
501	Motor vehicles and automotive equipment	399.0	399.3	412.2	415.7	—	327.0	327.5	338.7	341.1	—
502	Drugs, chemicals, and allied products	247.6	247.5	255.0	257.9	—	196.4	195.7	203.7	205.9	—
503	Dry goods and apparel	160.0	157.3	160.2	162.0	—	123.1	121.0	124.1	125.8	—
504	Groceries and related products	628.5	630.1	631.9	647.2	—	546.6	547.1	548.4	562.5	—
506	Electrical goods	328.8	330.4	347.5	350.7	—	276.0	275.7	286.5	288.2	—
507	Hardware, plumbing and heating equipment	195.7	198.1	202.5	204.6	—	162.7	164.5	167.4	169.4	—
508	Machinery, equipment, and supplies	931.7	938.4	978.5	990.3	—	770.4	777.9	803.0	813.6	—
509	Miscellaneous wholesalers	1,409.1	1,410.2	1,436.8	1,455.1	—	1,155.6	1,155.5	1,167.9	1,184.6	—
52-59	RETAIL TRADE	13,933	13,886	14,399	14,527	14,487	12,541	12,488	12,929	13,032	12,985
53	Retail General Merchandise	2,477.6	2,462.9	2,562.9	2,577.6	—	2,278.4	2,263.7	2,368.3	2,379.5	—
531	Department stores	1,694.8	1,694.0	1,773.9	1,782.5	—	1,571.6	1,570.5	1,656.2	1,663.8	—
532	Mail order houses	104.9	104.4	108.6	109.2	—	99.5	99.1	103.5	103.9	—
533	Variety stores	303.0	295.0	301.0	300.7	—	281.6	274.5	281.9	280.0	—
54	FOOD STORES	2,106.2	2,102.1	2,190.9	2,201.3	—	1,944.7	1,939.6	2,024.4	2,032.1	—
541-3	Grocery, meat, and vegetable stores	1,910.0	1,909.6	1,993.1	2,001.0	—	1,763.6	1,762.0	1,843.7	1,849.1	—

See footnotes at end of table.

**ESTABLISHMENT DATA
EMPLOYMENT**

B-2. Employees on nonagricultural payrolls, by industry—Continued

(In thousands)

SIC Code	Industry	All employees					Production workers ¹				
		June 1977	July 1977	May 1978	June 1978 ^p	July 1978 ^p	June 1977	July 1977	May 1978	June 1978 ^p	July 1978 ^p
—	GOVERNMENT	15,288	14,600	15,923	15,787	15,060	—	—	—	—	—
91	FEDERAL GOVERNMENT⁶	2,765	2,773	2,756	2,802	2,820	—	—	—	—	—
	Executive	2,712.3	2,720.5	2,702.9	2,747.5	—	—	—	—	—	—
	Department of Defense	932.0	931.6	911.3	924.8	—	—	—	—	—	—
	Postal Service	655.6	657.5	648.3	648.3	—	—	—	—	—	—
	Other agencies	1,124.7	1,131.4	1,143.3	1,174.4	—	—	—	—	—	—
	Legislative	40.4	40.5	40.0	41.4	—	—	—	—	—	—
	Judicial	12.3	12.3	12.8	12.9	—	—	—	—	—	—
92,93	STATE AND LOCAL GOVERNMENT	12,523	11,827	13,167	12,985	12,240	—	—	—	—	—
92	State government	3,275.2	3,151.9	3,423.5	3,288.5	—	—	—	—	—	—
	State education	1,315.8	1,187.1	1,423.6	1,250.4	—	—	—	—	—	—
	Other State government	1,959.4	1,964.8	1,999.9	2,038.1	—	—	—	—	—	—
93	Local government	9,248.2	8,675.2	9,743.6	9,696.1	—	—	—	—	—	—
	Local education	5,187.9	4,363.7	5,556.2	5,362.7	—	—	—	—	—	—
	Other local government	4,060.3	4,311.5	4,187.4	4,333.4	—	—	—	—	—	—

¹ Data relate to production and related workers in mining and manufacturing; to construction workers in contract construction; and to nonsupervisory workers in transportation and public utilities; wholesale and retail trade; finance, insurance, and real estate; and services.

² Beginning January 1976, data relate to line haul railroads with operating revenues of \$10,000,000 or more.

³ Data for nonsupervisory workers exclude messengers.

⁴ Data for nonoffice sales agents excluded from nonsupervisory count for all series in this division.

⁵ Prepared by the U.S. Civil Service Commission. Data relate to civilian employment only and exclude Central Intelligence and National Security Agencies.

⁶ Not available.
^p preliminary.

**ESTABLISHMENT DATA
WOMEN EMPLOYEES**

B-3. Women employees on nonagricultural payrolls, by industry

SIC Code	Industry	April 1977	May 1977	March 1978	April 1978	May 1978
-	TOTAL	32,723	32,958	34,200	34,525	34,817
-	PRIVATE SECTOR	25,627	25,841	26,762	27,052	27,318
-	MINING	62	63	68	72	74
10	METAL MINING	5.7	5.6	6.2	6.3	6.5
11,12	COAL MINING	5.3	5.3	3.3	6.0	6.4
13	OIL AND GAS EXTRACTION	44.0	45.0	51.1	51.8	52.6
131,2	Crude petroleum and natural gas fields	28.6	29.4	33.7	34.1	34.7
138	Oil and gas field services	15.4	15.6	17.4	17.7	17.9
14	NONMETALLIC MINERALS, EXCEPT FUELS	7.3	7.5	7.6	7.9	8.0
142	Crushed and broken stone	2.2	2.2	2.4	2.5	2.6
144	Sand and gravel	2.3	2.4	2.3	2.5	2.5
-	CONTRACT CONSTRUCTION	258	262	285	288	294
15	GENERAL BUILDING CONTRACTORS	81.3	81.4	90.5	91.2	92.2
16	HEAVY CONSTRUCTION CONTRACTORS	43.7	46.2	45.3	47.3	49.5
161	Highway and street construction	15.9	17.5	17.2	18.6	20.2
162	Heavy construction, nec	27.8	28.7	28.1	28.7	29.3
17	SPECIAL TRADE CONTRACTORS	132.8	134.5	149.3	149.9	151.8
171	Plumbing, heating, air conditioning	38.0	38.3	42.0	41.8	41.9
172	Painting, paper hanging, decorating	9.4	9.5	12.0	11.5	11.8
173	Electrical work	22.0	22.5	25.1	25.2	25.2
174	Masonry, stonework, and plastering	11.2	11.1	12.5	12.7	13.1
176	Roofing and sheet metal work	9.4	9.5	11.2	11.6	11.5
-	MANUFACTURING	5,730	5,778	5,978	6,021	6,074
19,24,25,32-39	DURABLE GOODS	2,569	2,595	2,743	2,772	2,802
20-23,26-31	NONDURABLE GOODS	3,161	3,183	3,235	3,249	3,272
	DURABLE GOODS					
19	ORDNANCE AND ACCESSORIES	35.2	35.0	35.3	35.5	35.5
192	Ammunition, except for small arms	23.1	23.0	22.9	22.9	22.8
1925	Complete guided missiles	17.1	17.0	16.5	16.5	16.5
1929	Ammunition, except for small arms, nec	6.0	6.0	6.4	6.4	6.3
24	LUMBER AND WOOD PRODUCTS	82.5	83.7	88.8	91.4	92.8
241	Logging camps, and logging contractors	3.6	3.6	4.0	4.0	4.3
242	Sawmills and planing mills	17.8	18.0	18.5	18.9	19.3
2421	Sawmills and planing mills, general	13.2	13.4	13.3	13.5	13.9
243	Millwork, plywood and related products	31.9	32.6	36.7	38.4	39.4
2431	Millwork	17.8	18.0	20.5	21.3	22.0
2432	Veneer and plywood	10.2	10.5	11.6	11.9	12.2
244	Wooden containers	4.8	4.8	4.0	4.3	4.4
2441,2	Wooden boxes, shooks, and crates	3.7	3.8	3.1	3.4	3.5
249	Miscellaneous wood products	24.4	24.7	25.6	25.8	25.4
25	FURNITURE AND FIXTURES	142.5	143.6	154.1	154.2	155.4
251	Household furniture	114.3	114.8	123.2	123.1	124.1
2511	Wood household furniture	54.1	55.5	59.9	60.0	60.7
2512	Upholstered household furniture	36.7	36.4	39.8	40.0	40.3
2515	Mattresses and bedsprings	9.3	9.3	9.7	9.8	9.9
252	Office furniture	8.1	8.5	9.3	9.3	9.3
254	Partitions and fixtures	8.1	8.1	9.1	9.3	9.4
253,9	Other furniture and fixtures	12.0	12.2	12.5	12.5	12.6
32	STONE, CLAY, AND GLASS PRODUCTS	114.8	116.9	119.3	120.2	121.9
321	Flat glass	1.3	1.4	1.5	1.6	1.7
322	Glass and glassware, pressed or blown	46.3	46.4	45.1	45.4	45.7
3221	Glass containers	28.2	28.2	26.5	26.7	27.2
3229	Pressed and blown glass nec	18.1	18.2	18.6	18.7	18.5
324	Cement, hydraulic	1.3	1.3	1.5	1.5	1.5
325	Structural clay products	6.1	6.2	6.5	6.5	6.5
3251	Brick and structural clay tile	1.3	1.3	1.4	1.4	1.4
326	Pottery and related products	13.3	13.8	13.8	13.5	13.8
327	Concrete, gypsum, and plaster products	12.7	13.0	14.2	14.6	15.0
328,9	Other stone and nonmetallic mineral products	23.3	24.0	25.7	26.3	26.5
3291	Abrasive products	5.3	5.4	5.8	5.8	5.9

**ESTABLISHMENT DATA
WOMEN EMPLOYEES**

B-3. Women employees on nonagricultural payrolls, by industry—Continued

SIC Code	Industry	April 1977	May 1977	March 1978	April 1978	May 1978
DURABLE GOODS—Continued						
33	PRIMARY METAL INDUSTRIES	106.3	108.9	112.6	114.2	116.7
331	Blast furnaces and basic steel products	30.8	32.1	33.6	34.3	35.9
3312	Blast furnaces and steel mills	24.7	25.8	27.0	27.6	29.1
332	Iron and steel foundries	14.4	14.8	16.2	16.2	16.7
3321	Gray iron foundries	7.6	7.9	8.6	8.6	8.9
3322	Malleable iron foundries	1.4	1.3	1.4	1.4	1.4
3323	Steel foundries	5.4	5.6	6.2	6.2	6.4
333,4	Nonferrous metals	4.9	5.0	5.2	5.1	5.2
3334	Primary aluminum	1.4	1.4	1.6	1.6	1.7
335	Nonferrous rolling and drawing	37.2	37.8	36.9	37.9	37.9
3351	Copper rolling and drawing	3.5	3.7	3.6	3.8	3.9
3352	Aluminum rolling and drawing	7.5	7.8	9.0	9.1	9.2
3357	Nonferrous wire drawing and insulating	22.6	22.8	21.5	22.2	22.0
336	Nonferrous foundries	12.7	12.7	13.6	13.6	13.6
3361	Aluminum castings	6.1	6.1	6.7	6.7	6.6
3362,9	Other nonferrous castings	6.6	6.6	6.9	6.9	7.0
339	Miscellaneous primary metal products	6.3	6.5	7.1	7.1	7.4
3391	Iron and steel forgings	3.2	3.2	3.5	3.5	3.8
34	FABRICATED METAL PRODUCTS	287.3	291.6	305.3	309.6	312.6
341	Metal cans	10.2	10.4	10.3	10.7	10.9
342	Cutlery, hand tools, and hardware	58.4	59.2	62.7	63.0	63.3
3421,3,5	Cutlery and hand tools, including saws	21.6	22.0	23.5	23.6	23.9
3429	Hardware, nec	36.8	37.2	39.2	39.4	39.4
343	Plumbing and heating, except electric	15.0	15.2	17.3	17.6	17.7
3431,2	Sanitary ware and plumbers' brass goods	7.2	7.4	8.0	8.3	8.3
3433	Heating equipment, except electric	7.8	7.8	9.3	9.3	9.4
344	Fabricated structural metal products	62.1	63.5	66.2	67.4	68.5
3441	Fabricated structural steel	6.6	6.6	6.7	6.7	6.8
3442	Metal doors, sash, and trim	22.0	22.8	22.0	22.6	23.1
3443	Fabricated plate work (boiler shops)	13.3	13.4	14.4	14.4	14.5
3444	Sheet metal work	12.9	13.3	14.8	15.2	15.4
3446,9	Architectural and miscellaneous metal work	7.3	7.4	8.3	8.5	8.7
345	Screw machine products, bolts, etc.	22.4	22.5	24.1	24.2	24.3
3451	Screw machine products	12.1	12.2	13.3	13.3	13.4
3452	Bolts, nuts, rivets, and washers	10.3	10.3	10.8	10.9	10.9
346	Metal stampings	48.8	49.3	49.1	50.5	51.0
347	Metal services, nec	20.8	21.1	22.8	23.2	23.1
348	Misc. fabricated wire products	15.3	15.4	16.4	16.5	16.8
34J	Misc. fabricated metal products	34.3	35.0	36.4	36.5	37.0
3494,8	Valves, pipe, and pipe fittings	21.6	21.9	23.1	23.1	23.5
35	MACHINERY, EXCEPT ELECTRICAL	369.1	371.3	411.5	416.4	419.2
351	Engines and turbines	19.1	17.9	20.0	20.3	19.9
3511	Steam engines and turbines	5.4	5.4	5.7	5.8	5.8
3519	Internal combustion engines, nec	13.7	12.5	14.3	14.5	14.1
352	Farm machinery	18.9	18.9	19.7	19.9	19.3
353	Construction and related machinery	35.3	35.3	37.9	38.6	38.9
3531,2	Construction and mining machinery	16.0	15.7	15.7	16.0	15.9
3533	Oil field machinery	7.7	7.9	9.0	9.2	9.4
3535,6	Conveyors, hoists, cranes, monorails	5.7	5.7	6.1	6.2	6.2
3537	Industrial trucks and tractors	3.8	3.9	4.9	5.0	5.1
354	Metal working machinery	46.2	46.6	50.9	51.4	51.6
3541	Machine tools, metal cutting types	6.8	6.7	7.6	7.8	7.8
3544	Special dies, tools, jigs and fixtures	12.6	13.0	14.0	14.1	14.1
3545	Machine tool accessories	10.8	11.0	12.0	12.2	12.3
3542,8	Miscellaneous metal working machinery	16.0	15.9	17.3	17.3	17.4
355	Special industry machinery	24.4	24.5	26.2	26.6	26.7
3551	Food products machinery	5.0	5.0	5.6	5.5	5.5
3552	Textile machinery	5.5	5.6	5.8	5.9	5.9
3555	Printing trades machinery	3.9	3.9	4.6	4.9	5.0
356	General industrial machinery	52.9	53.5	57.3	57.7	58.1
3561	Pumps and compressors	13.3	13.4	13.8	13.9	14.0
3562	Ball and roller bearings	12.9	13.2	14.1	14.1	14.1
3564	Blowers and fans	6.9	6.9	8.0	8.1	8.3
3566	Power transmission equipment	7.3	7.4	8.1	8.2	8.2
357	Office and computing machines	93.9	95.2	114.0	116.0	117.9
3573	Electronic computing equipment	70.0	70.9	87.3	88.4	89.6
358	Service industry machines	32.6	33.1	36.2	35.9	36.2
3585	Refrigeration machinery	22.0	22.2	25.2	24.8	25.0
359	Miscellaneous machinery, except electrical	45.8	46.3	49.3	50.0	50.6

**ESTABLISHMENT DATA
WOMEN EMPLOYEES**

B-3. Women employees on nonagricultural payrolls, by industry—Continued

SIC Code	Industry	April 1977	May 1977	March 1978	April 1978	May 1978
DURABLE GOODS — CONTINUED						
36	ELECTRICAL EQUIPMENT AND SUPPLIES	792.2	799.4	847.0	854.2	860.8
361	Electrical test and distributing equipment	76.0	76.3	83.1	83.9	85.3
3611	Electric measuring instruments	33.5	33.9	38.9	40.0	40.8
3612	Transformers	16.6	16.2	16.8	16.5	16.7
3613	Switchgear and switchboard apparatus	25.9	26.2	27.4	27.4	27.8
362	Electrical industrial apparatus	84.1	85.0	90.2	90.6	90.6
3621	Motors and generators	40.2	41.0	44.4	44.6	44.5
3622	Industrial controls	31.8	32.0	32.7	32.8	33.0
363	Household appliances	60.2	60.0	62.6	65.2	65.1
3632	Household refrigerators and freezers	9.0	9.5	11.4	12.6	12.8
3633	Household laundry equipment	6.0	6.2	5.9	6.2	6.2
3634	Electric housewares and fans	28.7	28.8	28.3	28.4	28.2
364	Electric lighting and wiring equipment	92.7	92.9	97.9	98.3	98.5
3641	Electric lamps	24.2	24.1	24.5	24.4	24.2
3642	Lighting fixtures	24.1	24.2	25.1	25.8	25.5
3643,4	Wiring devices	44.4	44.6	48.3	48.1	48.8
365	Radio and TV receiving equipment	67.6	70.5	69.8	69.3	69.7
366	Communication equipment	154.4	156.6	168.5	167.8	169.1
3661	Telephone and telegraph apparatus	65.7	66.4	71.9	70.8	70.9
3662	Radio and TV communication equipment	88.7	90.2	96.6	97.0	98.2
367	Electronic components and accessories	205.0	205.6	216.7	219.6	221.4
3671-3	Electron tubes	16.1	16.3	16.7	16.9	17.0
3674,9	Other electronic components	188.9	189.3	200.0	202.7	204.4
369	Miscellaneous electrical equipment and supplies	52.2	52.5	58.2	59.5	61.1
3694	Engine electrical equipment	27.9	28.0	30.8	31.5	32.3
37	TRANSPORTATION EQUIPMENT	238.3	239.1	255.7	259.7	266.9
371	Motor vehicles and equipment	104.6	106.4	116.0	117.0	119.0
3711	Motor vehicles	35.2	35.8	41.4	41.9	42.9
3712	Passenger car bodies	5.6	5.6	5.6	5.8	5.9
3713	Truck and bus bodies	4.6	4.7	5.0	5.0	5.1
3714	Motor vehicle parts and accessories	57.5	58.5	62.1	62.4	63.1
3715	Truck trailers	1.7	1.8	1.9	1.9	2.0
372	Aircraft and parts	77.8	77.4	83.3	83.7	87.5
3721	Aircraft	43.6	43.2	45.4	45.3	48.4
3722	Aircraft engines and engine parts	18.9	18.7	20.9	21.2	21.5
3723,9	Other aircraft parts and equipment	15.3	15.5	17.0	17.2	17.6
373	Ship and boat building and repairing	22.2	22.2	22.0	22.1	22.3
3731	Ship building and repairing	13.8	14.0	14.1	14.2	14.1
3732	Boat building and repairing	8.4	8.2	7.9	7.9	8.2
374	Railroad equipment	4.7	4.8	3.9	4.6	4.6
375,9	Other transportation equipment	29.0	28.3	30.5	32.3	33.5
38	INSTRUMENTS AND RELATED PRODUCTS	209.7	212.2	221.5	223.6	225.2
381	Engineering and scientific instruments	17.0	17.2	18.2	18.6	18.4
382	Mechanical measuring and control devices	48.0	48.8	52.1	52.3	52.0
3821	Mechanical measuring devices	28.5	28.3	30.0	30.2	30.2
3822	Automatic temperature controls	19.5	20.5	22.1	22.1	21.8
383,5	Optical and ophthalmic goods	30.7	31.4	33.1	33.6	34.1
385	Ophthalmic goods	22.6	23.2	24.1	24.5	24.9
384	Medical instruments and supplies	59.2	60.0	63.8	64.5	65.0
386	Photographic equipment and supplies	35.3	35.4	35.8	35.9	36.8
387	Watches, clocks, and watchcases	19.5	19.4	18.5	18.7	18.9
39	MISCELLANEOUS MANUFACTURING INDUSTRIES	191.1	193.2	191.5	193.4	195.4
391	Jewelry, silverware, and plated ware	23.9	24.0	25.8	26.1	26.4
394	Toys and sporting goods	62.7	64.3	56.8	59.0	60.3
3941-3	Games, toys, dolls, and play vehicles	33.4	35.3	30.2	32.4	33.4
3949	Sporting and athletic goods, n e c	29.3	29.0	26.6	26.6	26.9
395	Pens, pencils, office and art supplies	18.9	19.4	19.0	19.0	19.1
396	Costume jewelry and notions	27.2	27.2	29.1	28.6	28.7
393,9	Other manufacturing industries	58.4	58.3	60.8	60.7	60.9
393	Musical instruments and parts	9.7	9.7	10.6	10.6	11.0
NONDURABLE GOODS						
20	FOOD AND KINDRED PRODUCTS	450.6	451.8	455.2	453.3	457.0
201	Meat products	107.6	108.4	110.4	110.8	113.2
2011	Meat packing plants	25.7	25.7	26.4	26.4	27.0
2013	Sausages and other prepared meats	19.0	19.1	19.3	19.2	19.7
2015	Poultry dressing plants	62.9	63.6	64.7	65.2	66.5
202	Dairy products	36.9	37.4	37.2	37.7	38.9
2024	Ice cream and frozen desserts	5.6	5.8	5.6	6.2	6.5

**ESTABLISHMENT DATA
WOMEN EMPLOYEES**

B-3. Women employees on nonagricultural payrolls, by industry—Continued

SIC Code	Industry	April 1977	May 1977	March 1978	April 1978	May 1978
NONDURABLE GOODS — CONTINUED						
FOOD AND KINDRED PRODUCTS — Continued						
2026	Fluid milk	20.0	20.2	20.0	20.1	20.7
203	Canned, cured, and frozen foods	106.5	106.1	102.6	99.2	100.1
2031,6	Canned, cured, and frozen sea foods	24.3	23.6	22.9	23.2	23.9
2032,3	Canned food, except sea foods	34.2	35.3	35.1	34.3	34.8
2037	Frozen fruits and vegetables	32.1	31.2	29.5	27.0	26.7
204	Grain mill products	25.6	25.7	26.9	26.8	27.0
2041	Flour and other grain mill products	4.7	4.5	4.9	4.9	4.9
2042	Prepared feeds for animals and fowls	11.7	11.9	12.7	12.5	12.5
205	Bakery products	61.8	61.4	62.8	63.5	62.8
2051	Bread, cake, and related products	42.5	42.9	43.8	44.2	44.5
2052	Cookies and crackers	19.3	18.5	19.0	19.3	18.3
206	Sugar	3.1	3.1	3.4	3.4	3.2
207	Confectionery and related products	34.1	33.4	34.6	33.8	33.4
2071	Confectionery products	26.1	25.6	27.5	26.5	25.9
208	Beverages	34.3	34.7	35.5	36.2	36.3
2082	Malt liquors	5.0	5.3	5.3	5.4	5.3
2086	Bottled and canned soft drinks	15.1	15.4	16.3	16.7	17.0
209	Miscellaneous foods and kindred products	40.7	41.6	41.8	41.9	42.1
21	TOBACCO MANUFACTURES	24.0	22.5	24.0	22.4	22.1
211	Cigarettes	13.9	13.2	13.7	13.5	13.5
212	Cigars	6.5	6.5	6.5	6.3	6.2
22	TEXTILE MILL PRODUCTS	458.9	462.2	469.8	470.9	473.6
221	Weaving mills, cotton	72.9	73.1	71.2	70.5	69.3
222	Weaving mills, synthetics	48.6	48.7	47.5	47.4	47.2
223	Weaving and finishing mills, wool	9.0	9.2	8.8	8.8	8.9
224	Narrow fabric mills	15.1	15.2	16.2	16.3	16.3
225	Knitting mills	170.3	172.3	179.3	181.3	185.0
2251	Women's hosiery, except socks	28.8	28.8	30.7	30.1	31.0
2252	Hosiery, n e c	25.4	25.6	27.5	28.0	28.1
2253	Knit outerwear mills	58.1	59.1	60.7	62.4	63.3
2254	Knit underwear mills	28.8	29.3	31.4	31.9	33.0
226	Textile finishing, except wool	24.1	24.1	23.7	23.4	24.0
227	Floor covering mills	23.6	23.6	25.3	25.7	25.5
228	Yarn and thread mills	75.6	76.1	77.9	77.9	77.6
229	Miscellaneous textile goods	19.7	19.9	19.9	19.7	19.8
23	APPAREL AND OTHER TEXTILE PRODUCTS	1,039.9	1,047.0	1,046.3	1,051.1	1,053.3
231	Men's and boys' suits and coats	67.4	68.3	66.1	67.4	69.0
232	Men's and boys' furnishings	319.3	323.5	319.6	321.7	322.8
2321	Men's and boys' shirts and nightwear	99.7	101.8	94.9	95.5	96.8
2327	Men's and boys' separate trousers	70.3	70.6	69.4	70.2	69.8
2328	Men's and boys' work clothing	79.7	80.4	82.4	82.5	81.8
233	Women's and misses' outerwear	325.0	323.0	322.1	322.2	319.6
2331	Women's and misses' blouses and waists	43.2	43.0	42.5	42.5	42.5
2335	Women's and misses' dresses	148.2	143.8	141.8	142.1	138.9
2337	Women's and misses' suits and coats	37.3	40.4	39.6	39.5	40.7
2339	Women's and misses' outerwear, n e c	96.3	95.8	98.2	98.1	97.5
234	Women's and children's undergarments	86.4	86.9	88.5	87.6	87.3
2341	Women's and children's underwear	67.2	67.4	69.1	68.5	68.3
2342	Corsets and allied garments	19.2	19.5	19.4	19.1	19.0
235	Hats, caps, and millinery	12.3	12.3	13.0	12.7	12.7
236	Children's outerwear	65.4	66.5	64.9	65.8	67.7
2361	Children's dresses and blouses	27.2	27.9	26.1	26.0	26.0
237,8	Fur goods and miscellaneous apparel	51.1	51.8	53.0	53.3	53.9
239	Miscellaneous fabricated textile products	113.0	114.7	119.1	120.4	120.3
2391,2	Housefurnishings	52.1	52.6	57.2	56.6	56.4
26	PAPER AND ALLIED PRODUCTS	146.3	148.9	154.6	158.1	161.1
261,2,6	Paper and pulp mills	23.5	23.9	24.3	24.6	25.2
263	Paperboard mills	5.6	5.6	5.9	5.8	5.9
264	Miscellaneous converted paper products	67.9	68.8	71.8	74.2	76.0
2643	Bags, except textile bags	14.7	14.7	15.8	15.9	15.9
265	Paperboard containers and boxes	49.3	50.6	52.6	53.5	54.0
2651,2	Folding and setup paperboard boxes	18.0	18.2	17.5	18.1	18.3
2653	Corrugated and solid fiber boxes	15.3	15.6	17.1	17.3	17.4
2654	Sanitary food containers	10.6	11.3	12.6	12.7	12.8

**ESTABLISHMENT DATA
WOMEN EMPLOYEES**

B-3. Women employees on nonagricultural payrolls, by industry—Continued

SIC Code	Industry	April 1977	May 1977	March 1978	April 1978	May 1978
NONDURABLE GOODS — CONTINUED						
27	PRINTING AND PUBLISHING	395.1	398.1	417.8	420.4	422.6
271	Newspapers	127.6	128.3	134.9	135.2	136.6
272	Periodicals	36.9	37.1	41.0	41.2	41.1
273	Books	47.5	47.5	49.6	49.9	49.0
275	Commercial printing	107.5	108.5	112.5	113.5	114.3
2751	Commercial printing, ex. lithographic	60.7	61.6	63.9	64.9	65.5
2752	Commercial printing, lithographic	43.0	43.3	44.2	44.3	44.7
278	Blankbooks and bookbinding	26.2	26.5	27.5	27.6	27.8
274,6,7,9	Other publishing and printing ind.	49.4	50.2	52.3	53.0	53.8
28	CHEMICALS AND ALLIED PRODUCTS	235.0	236.1	244.1	244.9	248.0
281	Industrial chemicals	46.9	47.5	49.8	50.4	50.8
2812	Alkalies and chlorines	2.0	1.9	2.0	2.0	2.1
2818	Industrial organic chemicals, n e c	21.2	21.6	22.4	22.6	22.0
2819	Industrial inorganic chemicals, n e c	16.1	16.3	17.2	17.4	17.4
282	Plastics materials and synthetics	38.6	38.9	38.6	38.5	39.3
2821	Plastics materials and resins	9.9	10.1	10.8	10.8	11.1
2823,4	Synthetic fibers	27.6	27.7	26.5	26.4	26.9
283	Drugs	70.8	70.9	71.2	70.7	71.6
2834	Pharmaceutical preparations	58.9	59.3	59.7	59.3	60.0
284	Soap, cleaners, and toilet goods	45.9	45.5	50.3	50.4	50.9
2841	Soap and other detergents	8.3	8.2	8.8	8.7	8.9
2844	Toilet preparations	27.6	27.4	30.8	30.8	31.2
285	Paints and allied products	11.3	11.4	12.1	12.4	12.6
287	Agricultural chemicals	6.9	7.2	7.0	7.4	7.4
2871,2	Fertilizers, complete and mixing only	3.2	3.4	3.3	3.5	3.5
286,9	Other chemical products	14.6	14.7	15.1	15.1	15.4
2892	Explosives	2.3	2.3	2.3	2.3	2.4
29	PETROLEUM AND COAL PRODUCTS	23.0	23.6	25.0	25.5	25.9
291	Petroleum refining	17.6	18.1	19.3	19.6	19.9
295,9	Other petroleum and coal products	5.4	5.5	5.7	5.9	6.0
30	RUBBER AND PLASTICS PRODUCTS, NEC	227.5	230.6	241.1	244.0	247.0
301	Tires and inner tubes	11.1	11.3	10.9	10.9	11.0
302,3,6	Other rubber products	62.7	63.4	62.5	62.9	62.6
302	Rubber footwear	13.0	13.3	12.2	12.2	11.5
307	Miscellaneous plastics products	153.7	155.9	167.7	170.2	173.4
31	LEATHER AND LEATHER PRODUCTS	160.4	162.5	156.9	158.7	161.1
311	Leather tanning and finishing	3.3	3.4	3.2	3.3	3.3
314	Footwear, except rubber	108.2	110.3	106.6	108.3	110.5
312,3,5-7,9	Other leather products	48.9	48.8	47.1	47.1	47.3
316	Luggage	10.9	10.5	9.5	9.5	9.7
317	Handbags and personal leather goods	24.4	24.4	24.2	24.0	23.7
-	TRANSPORTATION AND PUBLIC UTILITIES.	1,023	1,035	1,062	1,069	1,075
41	LOCAL AND INTERURBAN PASSENGER TRANSIT	54.3	55.4	57.2	56.3	55.7
411	Local and suburban transportation	8.7	7.8	10.8	8.9	8.6
412	Taxicabs	6.0	6.1	6.7	6.9	6.8
413	Intercity highway transportation	4.3	4.3	4.0	4.2	4.3
42	TRUCKING AND WAREHOUSING	115.8	118.0	123.0	124.5	126.3
421,3	Trucking and trucking terminals	100.3	102.2	106.6	107.7	109.5
422	Public warehousing	15.5	15.8	16.4	16.8	16.8
45	TRANSPORTATION BY AIR	109.8	111.1	118.8	119.7	119.5
451,2	Air transportation	104.3	105.7	112.8	113.7	113.4
46	PIPE LINE TRANSPORTATION	1.5	1.5	1.5	1.5	1.5
44	WATER TRANSPORTATION	18.2	18.8	18.1	19.1	19.2
47	TRANSPORTATION SERVICES	45.4	46.7	55.0	55.9	56.4
48	COMMUNICATION	520.3	523.2	541.0	543.4	546.9
481	Telephone communication	459.7	462.9	478.2	480.4	483.3
483	Radio and television broadcasting	46.9	47.0	49.7	50.1	50.4
49	ELECTRIC, GAS, AND SANITARY SERVICES	123.5	123.7	129.5	130.2	130.9
491	Electric companies and systems	51.7	51.7	54.5	54.7	55.1
492	Gas companies and systems	30.5	30.6	31.3	31.5	31.5

**ESTABLISHMENT DATA
WOMEN EMPLOYEES**

B-3. Women employees on nonagricultural payrolls, by industry—Continued

SIC Code	Industry	April 1977	May 1977	March 1978	April 1978	May 1978
NONDURABLE GOODS — CONTINUED						
ELECTRIC, GAS, AND SANITARY SERVICES — Cont'd						
493	Combination companies and systems	31.5	31.4	32.4	32.6	32.9
494-7	Water, steam, and sanitary systems	9.8	10.0	11.3	11.4	11.4
—	WHOLESALE AND RETAIL TRADE	7,523	7,592	7,754	7,862	7,976
50	WHOLESALE TRADE	1,062	1,065	1,123	1,130	1,139
501	Motor vehicles and automotive equipment	83.6	84.6	87.4	88.5	89.6
502	Drugs, chemicals, and allied products	83.3	84.0	86.9	88.3	89.3
503	Dry goods and apparel	77.9	77.4	79.1	80.2	80.3
504	Groceries and related products	138.2	137.1	137.9	139.1	141.3
506	Electrical goods	88.8	89.1	94.9	95.7	96.4
507	Hardware; plumbing and heating equipment	49.9	50.2	53.6	53.6	54.3
508	Machinery, equipment, and supplies	195.4	196.6	214.8	216.2	218.1
509	Miscellaneous wholesalers	318.1	319.8	337.3	339.6	341.2
52-59	RETAIL TRADE	6,461	6,527	6,631	6,732	6,837
53	Retail general merchandise	1,641.3	1,647.9	1,667.3	1,678.5	1,692.9
531	Department stores	1,124.9	1,130.4	1,148.5	1,158.3	1,168.0
532	Mail order houses	66.2	64.4	64.5	64.2	63.0
533	Variety stores	222.9	225.1	224.6	225.3	229.3
54	Food stores	835.2	842.3	873.6	876.3	885.8
541-3	Grocery, meat, and vegetable stores	717.1	724.6	756.9	763.2	770.3
56	Apparel and accessory stores	536.4	537.4	537.4	539.9	542.8
561	Men's and boys' clothing and furnishings	60.2	59.9	60.2	60.3	60.8
562	Women's ready-to-wear stores	256.5	256.6	253.7	255.8	256.9
565	Family clothing stores	91.0	92.9	92.6	93.4	95.3
566	Shoe stores	67.2	66.8	69.5	70.4	69.7
57	Furniture and home furnishings stores	166.2	166.2	172.8	173.6	174.8
571	Furniture and home furnishings	108.2	107.9	111.9	112.6	113.5
58	Eating and drinking places	2,164.7	2,203.5	2,213.3	2,283.3	2,342.1
52,55,59	Other retail trade	1,116.7	1,129.9	1,166.8	1,180.1	1,199.0
52	Building materials and farm equipment	123.9	126.7	130.7	133.4	136.3
55	Automotive dealers and service stations	258.8	262.7	269.6	275.0	276.0
551,2	Motor vehicle dealers	103.6	103.6	108.1	109.4	110.1
553,9	Other automotive and accessory dealers	54.1	55.1	56.8	59.1	58.4
59	Miscellaneous retail stores	734.0	740.5	766.5	771.7	786.7
591	Drug stores and proprietary stores	287.5	289.3	303.1	303.4	303.6
594	Book and stationery stores	40.6	40.0	41.7	40.4	40.4
596	Farm and garden supply stores	34.5	33.5	35.7	38.4	37.2
598	Fuel and ice dealers	20.0	19.9	21.7	21.4	20.7
—	FINANCE, INSURANCE, AND REAL ESTATE	2,481	2,492	2,632	2,646	2,667
60	Banking	901.1	906.9	953.9	957.7	964.6
61	Credit agencies other than banks	304.8	307.4	338.1	340.6	344.5
612	Savings and loan associations	143.1	145.0	160.0	161.3	162.6
614	Personal credit institutions	108.2	108.8	119.1	120.3	122.6
62	Security, commodity brokers and services	65.2	64.7	67.1	67.5	68.2
63	Insurance carriers	639.4	641.2	670.4	673.2	676.9
631	Life insurance	246.6	246.4	250.0	249.9	251.2
632	Accident and health insurance	88.9	89.1	90.4	90.7	90.7
633	Fire, marine, and casualty insurance	260.7	261.5	281.8	284.1	285.9
64	Insurance agents, brokers, and service	207.6	208.7	223.5	224.7	226.7
65	Real estate	303.5	304.5	318.5	321.3	325.6
655	Subdividers and developers	30.3	31.3	30.9	32.2	32.4
656	Operative builders	12.5	12.9	14.9	14.7	14.7
66,67	Other finance, insurance, and real estate	58.9	58.9	60.4	60.5	60.8
—	SERVICES	8,550	8,619	8,983	9,094	9,158
Hotels and other lodging places:						
701	Hotels, tourist courts, and motels	453.5	466.0	451.7	473.5	487.2
72	Personal services	506.2	508.9	504.1	505.8	507.4
721	Laundries and dry cleaning plants	215.1	216.5	212.6	213.5	214.8
722	Photographic studios	22.8	23.0	22.8	22.3	22.3
73	Miscellaneous business services	824.9	836.6	899.1	905.9	914.4
731	Advertising	60.5	60.6	66.7	67.3	67.9
732	Credit reporting and collection	60.1	61.0	63.9	64.8	65.2
734	Services to buildings	164.5	165.6	167.8	168.8	170.9
76	Miscellaneous repair services	38.8	40.0	44.1	44.0	44.3
78	Motion pictures	74.8	76.3	70.9	72.0	72.1
781	Motion picture filming and distributing	23.2	23.4	22.7	21.4	21.2
782,3	Motion picture theaters and services	51.6	52.9	48.2	50.6	50.9

**ESTABLISHMENT DATA
WOMEN EMPLOYEES**

B-3. Women employees on nonagricultural payrolls, by industry—Continued

SIC Code	Industry	April 1977	May 1977	March 1978	April 1978	May 1978
	SERVICES — Continued					
80	Medical and other health services	3,763.5	3,788.4	4,010.3	4,028.9	4,052.5
806	Hospitals	1,977.2	1,983.1	2,070.9	2,076.9	2,082.2
81	Legal services	253.7	256.7	279.8	280.4	282.4
82	Educational services	710.1	702.1	773.9	778.5	762.8
821	Elementary and secondary schools	276.4	278.9	300.0	300.5	301.5
822	Colleges and universities	335.7	325.1	358.2	359.7	343.3
89	Miscellaneous services	279.4	274.6	325.0	327.5	323.9
891	Engineering and architectural services	79.1	80.4	90.9	92.7	93.8
892	Nonprofit research agencies	57.9	58.8	66.8	68.1	68.8
—	GOVERNMENT	7,096	7,117	7,438	7,473	7,499
91	FEDERAL GOVERNMENT	866	849	859	868	878
92,93	STATE AND LOCAL GOVERNMENT	6,230	6,268	6,579	6,605	6,621
92	State government	1,524.2	1,515.5	1,549.4	1,549.2	1,525.3
	State education	653.0	640.1	650.7	648.9	627.8
	Other State government	871.2	875.4	898.7	900.3	897.5
93	Local government	4,705.0	4,752.4	5,030.0	5,055.5	5,095.9
	Local education	3,288.5	3,327.1	3,485.3	3,493.9	3,521.3
	Other local government	1,417.1	1,425.3	1,544.7	1,561.6	1,574.6

ESTABLISHMENT DATA
SEASONALLY ADJUSTED EMPLOYMENT

B-4. Employees on nonagricultural payrolls, by industry division and major manufacturing group, seasonally adjusted

(In thousands)

Industry division and group	1977						1978						
	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June ^P	July ^P
TOTAL	82,407	82,474	82,763	82,902	83,245	83,429	83,719	84,046	85,555	85,223	85,466	85,767	86,031
GOODS-PRODUCING	24,412	24,305	24,360	24,436	24,528	24,526	24,593	24,733	24,945	25,351	25,429	25,552	25,637
MINING	833	818	856	859	863	711	705	711	728	898	903	912	921
CONTRACT CONSTRUCTION	3,913	3,893	3,892	3,911	3,950	3,947	3,916	3,947	4,053	4,237	4,268	4,357	4,408
MANUFACTURING	19,666	19,594	19,612	19,666	19,715	19,868	19,972	20,075	20,164	20,216	20,258	20,283	20,308
DURABLE GOODS	11,548	11,527	11,545	11,604	11,625	11,748	11,828	11,909	11,965	11,992	12,029	12,048	12,093
Ordnance and accessories	156	156	155	150	152	155	156	157	157	157	158	159	161
Lumber and wood products	640	642	648	653	662	666	667	664	670	669	672	671	672
Furniture and fixtures	515	508	510	517	521	530	532	537	540	538	537	536	540
Stone, clay, and glass products	659	656	658	657	667	671	675	676	680	687	689	691	688
Primary metal industries	1,204	1,202	1,211	1,208	1,206	1,204	1,212	1,217	1,215	1,216	1,224	1,222	1,213
Fabricated metal products	1,459	1,460	1,456	1,473	1,479	1,492	1,499	1,515	1,515	1,520	1,524	1,523	1,528
Machinery, except electrical	2,202	2,210	2,217	2,243	2,237	2,257	2,265	2,279	2,295	2,311	2,319	2,334	2,357
Electrical equipment and supplies	1,959	1,951	1,944	1,961	1,974	1,987	1,998	2,017	2,035	2,041	2,045	2,055	2,079
Transportation equipment	1,813	1,802	1,809	1,801	1,782	1,830	1,862	1,879	1,885	1,876	1,882	1,876	1,885
Instruments and related products	527	526	528	530	532	536	539	541	545	548	551	555	552
Miscellaneous manufacturing	414	414	409	411	413	420	423	427	428	429	428	426	418
NONDURABLE GOODS	8,118	8,067	8,067	8,062	8,090	8,120	8,144	8,166	8,199	8,224	8,229	8,235	8,215
Food and kindred products	1,728	1,710	1,711	1,696	1,703	1,714	1,728	1,729	1,739	1,740	1,731	1,732	1,724
Tobacco manufactures	72	68	67	67	66	69	69	69	70	68	69	70	68
Textile mill products	992	982	985	987	993	990	991	995	995	991	995	993	1,000
Apparel and other textile products	1,292	1,286	1,285	1,285	1,291	1,291	1,289	1,283	1,292	1,303	1,299	1,301	1,286
Paper and allied products	705	704	702	702	700	705	707	710	714	718	722	724	727
Printing and publishing	1,114	1,114	1,116	1,117	1,120	1,123	1,125	1,129	1,133	1,137	1,141	1,148	1,143
Chemicals and allied products	1,064	1,061	1,058	1,058	1,059	1,064	1,066	1,070	1,071	1,074	1,080	1,078	1,075
Petroleum and coal products	210	210	210	211	212	212	214	217	217	216	215	215	214
Rubber and plastics products, nec	683	671	671	673	681	689	693	701	705	713	712	710	712
Leather and leather products	258	261	262	266	265	263	262	263	263	264	265	264	266
SERVICE-PRODUCING	57,995	58,169	58,403	58,466	58,717	58,903	59,126	59,313	59,610	59,872	60,037	60,215	60,394
TRANSPORTATION AND PUBLIC UTILITIES	4,572	4,581	4,616	4,610	4,634	4,652	4,628	4,651	4,672	4,709	4,714	4,724	4,697
WHOLESALE AND RETAIL TRADE ..	18,322	18,377	18,431	18,414	18,512	18,610	18,744	18,744	18,849	18,891	18,967	19,047	19,109
WHOLESALE TRADE	4,394	4,398	4,410	4,415	4,438	4,460	4,482	4,510	4,540	4,555	4,568	4,578	4,578
RETAIL TRADE	13,928	13,979	14,021	13,999	14,074	14,150	14,262	14,234	14,309	14,336	14,399	14,469	14,531
FINANCE, INSURANCE, AND REAL ESTATE	4,506	4,524	4,545	4,572	4,597	4,611	4,630	4,647	4,670	4,683	4,712	4,738	4,758
SERVICES	15,372	15,448	15,482	15,533	15,608	15,663	15,693	15,791	15,875	15,962	15,970	16,014	16,124
Hotels and other lodging places	1,082	1,081	1,073	1,074	1,077	1,058	1,053	1,059	1,076	1,081	1,072	1,063	-
Personal services	802	803	801	799	800	799	801	801	802	799	795	792	-
Medical and other health services	4,747	4,778	4,801	4,827	4,850	4,877	4,898	4,925	4,942	4,966	4,984	5,023	-
Educational services	1,314	1,327	1,356	1,342	1,346	1,338	1,342	1,345	1,343	1,359	1,356	1,317	-
GOVERNMENT	15,223	15,239	15,329	15,337	15,366	15,367	15,431	15,480	15,544	15,627	15,674	15,692	15,706
FEDERAL	2,721	2,732	2,728	2,730	2,727	2,718	2,736	2,736	2,736	2,744	2,753	2,772	2,767
STATE AND LOCAL	12,502	12,507	12,601	12,607	12,639	12,649	12,695	12,744	12,808	12,883	12,921	12,920	12,939

p = preliminary.

**ESTABLISHMENT DATA
SEASONALLY ADJUSTED EMPLOYMENT**

B-5. Women employees on nonagricultural payrolls, by industry division and major manufacturing group, seasonally adjusted

(In thousands)

Industry division and group	1977								1978				
	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May
TOTAL	32,813	33,003	33,162	33,261	33,360	33,414	33,552	33,707	33,931	34,034	34,248	34,462	34,663
GOODS-PRODUCING	6,145	6,176	6,187	6,165	6,182	6,203	6,239	6,289	6,332	6,365	6,411	6,457	6,488
MINING	64	65	66	66	68	68	69	66	66	68	69	73	75
CONTRACT CONSTRUCTION	263	267	270	275	274	276	277	277	281	287	289	291	295
MANUFACTURING	5,818	5,844	5,851	5,824	5,840	5,859	5,893	5,946	5,985	6,010	6,053	6,093	6,118
DURABLE GOODS	2,601	2,618	2,629	2,622	2,635	2,652	2,666	2,709	2,733	2,751	2,774	2,795	2,811
Ordnance and accessories	35	35	35	35	35	34	34	35	35	35	35	36	36
Lumber and wood products	83	84	84	85	85	86	88	89	91	90	91	92	92
Furniture and fixtures	144	145	146	145	146	148	148	152	154	155	156	155	156
Stone, clay, and glass products	117	118	118	117	118	118	120	121	122	123	122	122	122
Primary metal industries	109	111	111	109	111	111	111	112	112	112	113	114	117
Fabricated metal products	292	293	293	294	296	296	299	303	307	310	310	312	313
Machinery, except electrical	372	375	381	385	385	391	393	400	404	406	412	418	420
Electrical equipment and supplies	805	807	815	812	808	818	823	837	842	853	859	863	867
Transportation equipment	239	245	242	238	250	248	247	250	252	249	256	260	267
Instruments and related products	212	213	214	213	214	214	215	217	220	222	223	225	225
Miscellaneous manufacturing	193	192	190	189	187	188	188	193	194	196	197	198	196
NONDURABLE GOODS	3,217	3,226	3,222	3,202	3,205	3,207	3,227	3,237	3,252	3,259	3,279	3,298	3,307
Food and kindred products	480	482	479	471	472	467	472	476	484	485	487	488	486
Tobacco manufactures	27	27	27	25	25	25	25	27	26	26	27	26	26
Textile mill products	463	463	466	463	464	467	471	468	470	471	473	472	475
Apparel and other textile products	1,043	1,047	1,043	1,038	1,038	1,037	1,039	1,041	1,039	1,036	1,042	1,052	1,049
Paper and allied products	150	151	151	151	151	152	153	154	155	156	157	160	163
Printing and publishing	399	402	404	404	406	407	408	409	412	414	419	420	423
Chemicals and allied products	237	238	238	238	239	238	240	241	243	244	247	248	249
Petroleum and coal products	24	24	25	25	25	24	25	25	25	25	25	26	26
Rubber and plastics products, nec	233	233	234	229	227	230	234	239	241	243	244	247	250
Leather and leather products	161	159	155	158	158	160	160	157	157	159	158	159	160
SERVICE-PRODUCING	26,668	26,827	26,975	27,096	27,178	27,211	27,313	27,418	27,599	27,669	27,837	28,005	28,175
TRANSPORTATION AND PUBLIC UTILITIES	1,032	1,039	1,038	1,042	1,048	1,034	1,041	1,053	1,049	1,059	1,068	1,073	1,072
WHOLESALE AND RETAIL TRADE ..	7,636	7,667	7,689	7,719	7,734	7,760	7,778	7,823	7,908	7,885	7,929	7,957	8,022
WHOLESALE TRADE	1,076	1,079	1,080	1,084	1,088	1,083	1,094	1,098	1,108	1,121	1,135	1,143	1,151
RETAIL TRADE	6,560	6,588	6,609	6,635	6,646	6,677	6,684	6,725	6,800	6,764	6,794	6,814	6,871
FINANCE, INSURANCE, AND REAL ESTATE	2,500	2,515	2,532	2,543	2,557	2,568	2,582	2,596	2,614	2,625	2,640	2,654	2,675
SERVICES	8,576	8,625	8,698	8,744	8,763	8,788	8,827	8,856	8,903	8,971	9,019	9,085	9,112
GOVERNMENT	6,924	6,981	7,018	7,048	7,076	7,061	7,085	7,090	7,125	7,129	7,181	7,236	7,294
FEDERAL	862	867	870	870	872	857	856	840	854	852	855	867	891
STATE AND LOCAL	6,062	6,114	6,148	6,178	6,204	6,204	6,229	6,250	6,271	6,277	6,326	6,369	6,403

¹ The unadjusted data are shown because the seasonal component is small relative to the trend-cycle and/or irregular components and consequently cannot be separated with sufficient precision.
r=revised.

**ESTABLISHMENT DATA
SEASONALLY ADJUSTED EMPLOMENT**

**B-6. Production or nonsupervisory workers¹ on private nonagricultural payrolls,
by industry division and major manufacturing group, seasonally adjusted**

[In thousands]

Industry division and group	1977						1978						
	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June ^P	July ^P
TOTAL	55,122	55,117	55,267	55,337	55,644	55,790	55,928	56,132	56,515	57,017	57,191	57,367	57,554
GOODS-PRODUCING	17,888	17,784	17,829	17,890	17,985	17,970	18,002	18,118	18,318	18,677	18,737	18,830	18,873
MINING	624	609	643	645	649	518	512	516	532	679	685	689	698
CONTRACT CONSTRUCTION	3,119	3,097	3,095	3,113	3,152	3,146	3,087	3,114	3,230	3,410	3,438	3,524	3,568
MANUFACTURING	14,145	14,078	14,091	14,132	14,184	14,306	14,403	14,488	14,556	14,588	14,614	14,617	14,607
DURABLE GOODS	8,271	8,252	8,266	8,313	8,337	8,438	8,512	8,575	8,614	8,632	8,653	8,655	8,673
Ordnance and accessories	73	71	70	68	69	71	72	73	73	73	73	74	75
Lumber and wood products	544	548	553	556	567	570	570	566	572	570	571	572	572
Furniture and fixtures	423	416	418	424	429	436	439	443	446	445	443	441	444
Stone, clay, and glass products	527	523	524	522	531	535	538	536	540	547	549	549	547
Primary metal industries	943	937	948	946	944	943	951	957	954	955	963	961	953
Fabricated metal products	1,106	1,104	1,102	1,117	1,124	1,134	1,142	1,156	1,155	1,158	1,161	1,159	1,158
Machinery, except electrical	1,438	1,443	1,444	1,464	1,459	1,474	1,482	1,495	1,506	1,518	1,522	1,533	1,559
Electrical equipment and supplies	1,299	1,296	1,289	1,303	1,314	1,324	1,331	1,346	1,360	1,359	1,362	1,366	1,374
Transportation equipment	1,281	1,279	1,285	1,278	1,261	1,300	1,332	1,345	1,347	1,342	1,345	1,333	1,333
Instruments and related products	322	321	324	324	326	329	331	331	333	336	337	341	339
Miscellaneous manufacturing	315	314	309	311	313	322	324	327	328	329	327	326	319
NONDURABLE GOODS	5,874	5,826	5,825	5,819	5,847	5,868	5,891	5,913	5,942	5,956	5,961	5,962	5,934
Food and kindred products	1,170	1,156	1,157	1,141	1,149	1,157	1,172	1,177	1,185	1,184	1,175	1,174	1,163
Tobacco manufactures	57	54	54	54	53	55	55	55	56	54	55	55	54
Textile mill products	866	855	857	860	866	863	863	866	867	864	867	866	872
Apparel and other textile products	1,105	1,102	1,100	1,099	1,105	1,107	1,107	1,103	1,109	1,120	1,118	1,119	1,103
Paper and allied products	529	528	526	527	525	529	530	532	535	538	543	545	545
Printing and publishing	642	640	639	641	642	642	642	645	649	650	652	654	652
Chemicals and allied products	612	609	608	607	608	611	614	617	617	618	625	625	622
Petroleum and coal products	137	137	138	139	141	140	142	144	143	142	140	140	138
Rubber and plastics products, nec	536	522	522	524	532	540	542	550	556	560	560	558	55
Leather and leather products	220	223	224	227	226	224	224	224	225	226	226	226	226
SERVICE-PRODUCING	37,234	37,333	37,438	37,447	37,659	37,820	37,926	38,014	38,197	38,340	38,454	38,537	38,681
TRANSPORTATION AND PUBLIC UTILITIES	3,885	3,890	3,918	3,899	3,922	3,951	3,909	3,922	3,937	3,962	3,962	3,967	3,940
WHOLESALE AND RETAIL TRADE	16,165	16,208	16,234	16,202	16,293	16,383	16,511	16,490	16,582	16,603	16,689	16,742	16,790
WHOLESALE TRADE	3,627	3,629	3,639	3,637	3,659	3,673	3,692	3,714	3,738	3,748	3,760	3,762	3,766
RETAIL TRADE	12,538	12,579	12,595	12,565	12,634	12,710	12,819	12,776	12,844	12,855	12,929	12,980	13,024
FINANCE, INSURANCE, AND REAL ESTATE	3,437	3,439	3,459	3,476	3,496	3,505	3,527	3,539	3,551	3,566	3,583	3,606	3,628
SERVICES	13,747	13,796	13,827	13,870	13,948	13,981	13,979	14,063	14,127	14,209	14,220	14,222	14,323

¹ For coverage of series, see footnote 1, table B-2.

^P preliminary.

**ESTABLISHMENT DATA
SEASONALLY ADJUSTED EMPLOYMENT**

B-7. Indexes of diffusion: Percent of industries in which employment¹ increased

Year and month	Over 1-month span	Over 3-month span	Over 6-month span	Over 12-month span
1975				
January.....	15.1	12.8	12.8	16.6
February.....	15.7	12.8	11.9	17.4
March.....	25.6	18.6	17.7	17.7
April.....	39.0	32.3	28.2	20.6
May.....	51.2	43.9	41.6	27.0
June.....	40.7	52.3	56.7	40.7
July.....	58.1	57.0	67.2	50.6
August.....	73.0	76.2	70.1	63.1
September.....	80.8	81.7	75.3	72.4
October.....	66.9	74.1	82.3	77.3
November.....	62.2	72.4	83.4	80.2
December.....	74.1	74.7	81.7	82.6
1976				
January.....	78.5	82.0	83.1	86.0
February.....	77.9	84.3	81.7	84.6
March.....	74.1	85.2	79.9	81.1
April.....	79.4	77.9	79.4	74.4
May.....	66.6	71.5	70.9	79.7
June.....	54.1	61.0	68.6	79.1
July.....	57.3	52.9	57.0	74.1
August.....	47.1	62.5	57.3	74.7
September.....	69.8	56.7	63.7	78.5
October.....	42.4	62.8	69.8	76.5
November.....	69.5	58.7	73.5	75.0
December.....	73.0	79.9	78.5	74.7
1977				
January.....	75.0	79.7	89.0	75.9
February.....	73.5	86.0	86.6	75.6
March.....	82.3	85.8	83.1	78.2
April.....	77.6	84.0	80.5	78.2
May.....	68.6	73.3	71.5	79.1
June.....	63.7	70.1	68.0	77.6
July.....	65.7	56.1	68.3	78.8
August.....	50.0	62.5	68.3	78.8
September.....	61.3	57.0	72.1	75.6
October.....	59.9	73.3	75.0	77.9
November.....	75.9	76.2	80.5	75.6
December.....	73.8	77.9	83.7	77.9p
1978				
January.....	66.9	80.5	85.2	79.4p
February.....	70.1	81.7	84.0	
March.....	74.4	77.6	77.6p	
April.....	68.9	74.4	73.0p	
May.....	62.8	66.3p		
June.....	62.2p	61.3p		
July.....	60.2p			
August.....				
September.....				
October.....				
November.....				
December.....				

¹ Number of employees, seasonally adjusted, on payrolls of 172 private nonagricultural industries.
p = preliminary.

ESTABLISHMENT DATA STATE AND AREA EMPLOYMENT

B-8. Employees on nonagricultural payrolls for States and selected areas, by industry division

(In thousands)

	State and area	Total			Mining			Construction			Manufacturing		
		JUNE 1977	MAY 1978	JUNE 1978P	JUNE 1977	MAY 1978	JUNE 1978P	JUNE 1977	MAY 1978	JUNE 1978P	JUNE 1977	MAY 1978	JUNE 1978P
1	ALABAMA	1,280.8	1,291.4	1,300.1	15.0	15.9	16.0	81.3	78.8	81.5	359.6	355.8	358.9
2	Birmingham	334.3	339.6	341.3	9.4	9.2	9.3	23.2	23.5	25.0	67.9	66.6	67.0
3	Huntsville	109.8	112.3	111.9	(1)	(1)	(1)	4.2	4.0	4.2	31.6	33.8	33.3
4	Mobile	140.7	142.6	144.4	(1)	(1)	(1)	11.7	11.8	11.9	28.7	29.6	30.1
5	Montgomery	95.1	98.2	100.5	(1)	(1)	(1)	6.7	6.4	6.7	15.0	15.5	15.7
6	Tuscaloosa	48.9	48.3	47.3	.9	.9	1.0	3.6	3.6	3.8	10.6	9.0	8.9
7	ALASKA	172.6	158.3	163.2	4.8	5.0	5.1	23.5	15.5	16.4	13.4	10.1	12.6
8	ARIZONA	785.8	837.1	831.6	24.8	19.7	19.9	48.3	61.0	62.5	112.4	117.4	119.2
9	Phoenix	475.1	510.9	510.6	.6	.6	.6	29.2	37.5	38.4	83.0	87.2	88.5
10	Tucson	149.7	156.3	153.4	8.2	5.8	5.9	9.3	11.5	11.6	13.2	14.0	14.1
11	ARKANSAS	699.8	728.0	730.1	4.6	5.0	5.1	39.2	42.0	43.0	213.1	218.4	221.5
12	Fayetteville--Springdale	53.9	57.0	57.4	(1)	(1)	(1)	2.9	3.4	3.5	17.6	17.9	17.9
13	Fort Smith	63.2	65.6	66.4	.6	.7	.8	2.9	2.7	2.9	24.1	24.9	25.2
14	Little Rock--North Little Rock	165.3	170.3	171.2	(1)	(1)	(1)	9.2	9.8	10.1	30.8	31.6	31.5
15	Pine Bluff	27.6	29.7	28.6	(1)	(1)	(1)	1.1	1.1	1.1	6.2	6.3	6.3
16	CALIFORNIA	8,589.3	8,937.1	9,051.8	35.1	35.9	36.2	369.4	388.2	403.5	1,719.1	1,775.1	1,792.4
17	Anaheim--Santa Ana--Garden Grove	679.2	719.6	728.8	2.1	2.4	2.4	41.1	42.6	44.6	173.2	184.7	186.0
18	Bakersfield	114.3	115.8	117.9	9.4	9.6	9.8	5.5	5.5	5.7	8.9	9.1	9.2
19	Fresno	166.3	170.5	172.6	.7	.8	.8	9.0	9.4	9.9	22.0	22.2	22.7
20	Los Angeles--Long Beach	3,230.4	3,326.6	3,354.7	11.3	11.4	11.6	99.5	103.1	105.6	824.8	842.1	847.2
21	Modesto	76.7	79.5	81.3	.1	.1	.1	5.3	5.6	5.9	16.2	16.3	17.3
22	Oxnard--Simi Valley--Ventra	128.1	131.0	130.8	2.2	2.3	2.3	6.2	5.6	5.5	20.0	19.7	19.7
23	Riverside--San Bernardino--Ontario	371.7	388.9	390.7	2.3	2.5	2.5	18.1	19.3	19.8	57.5	59.7	60.4
24	Sacramento	352.5	366.9	371.0	.4	.4	.4	18.4	19.7	21.2	24.1	24.8	25.4
25	Salinas--Seaside--Monterey	82.4	82.8	85.0	.7	.6	.7	3.3	3.3	3.5	9.8	9.7	10.2
26	San Diego	537.7	566.1	571.3	.8	.8	.8	32.4	34.2	35.7	76.3	83.2	84.0
27	San Francisco--Oakland	1,400.6	1,429.0	1,436.9	1.8	1.8	1.8	61.6	61.4	63.3	189.4	191.2	191.9
28	San Jose	530.5	564.2	567.5	.1	.1	.1	22.0	23.0	23.4	171.1	182.9	185.2
29	Santa Barbara--Santa Maria--Lompoc	107.2	107.0	107.9	1.0	1.0	1.1	4.2	4.2	4.3	14.4	13.9	14.1
30	Santa Rosa	75.1	78.4	79.3	.3	.3	.3	4.4	4.3	4.5	10.5	11.3	11.5
31	Stockton	107.8	110.6	111.6	.1	.1	.1	4.8	4.8	5.2	18.8	18.9	19.2
32	Vallejo--Fairfield--Napa	90.5	93.4	95.2	.2	.2	.2	3.9	4.0	4.2	8.9	9.2	9.9
33	COLORADO ²	(*)	1,017.5	1,029.2	(*)	23.3	24.0	(*)	61.0	66.1	(*)	146.8	148.8
34	Denver--Boulder ²	(*)	647.0	648.3	(*)	10.7	10.8	(*)	40.1	42.4	(*)	100.7	102.0
35	CONNECTICUT	1,302.2	1,320.8	1,335.9	(3)	(3)	(3)	46.7	44.1	46.5	413.1	411.6	417.7
36	Bridgeport	155.7	156.8	157.4	(3)	(3)	(3)	4.5	4.6	4.8	61.9	62.8	63.3
37	Hartford	352.5	360.5	363.3	(3)	(3)	(3)	11.2	10.0	10.5	84.9	86.4	87.4
38	New Britain	56.6	57.8	57.8	(3)	(3)	(3)	2.0	1.7	1.8	27.5	28.2	28.5
39	New Haven--West Haven	178.8	178.3	179.9	(3)	(3)	(3)	6.4	5.8	6.1	44.7	44.5	45.3
40	Stamford	99.5	101.6	103.2	(3)	(3)	(3)	4.5	4.5	4.7	29.4	29.6	29.9
41	Waterbury	86.4	85.7	86.7	(3)	(3)	(3)	3.1	2.6	2.8	34.5	32.7	33.0
42	DELAWARE	238.6	242.2	243.8	(1)	(1)	(1)	15.0	15.4	15.8	68.8	68.9	69.8
43	Wilmington	211.3	215.7	216.3	(1)	(1)	(1)	13.8	14.7	14.9	64.7	65.7	66.1
44	DISTRICT OF COLUMBIA	581.5	577.2	581.8	(1)	(1)	(1)	14.7	14.6	14.9	14.9	14.9	15.0
45	Washington SMSA	1,401.2	1,414.9	1,430.7	(1)	(1)	(1)	74.5	72.6	76.6	49.7	50.8	51.2
46	FLORIDA	2,856.1	2,999.3	2,999.9	9.0	8.7	8.9	172.2	193.6	199.3	375.0	399.6	403.7
47	Fort Lauderdale--Hollywood	253.4	267.7	265.5	(1)	(1)	(1)	19.4	19.5	19.7	30.1	33.0	33.2
48	Jacksonville	263.3	267.1	269.6	(1)	(1)	(1)	14.9	13.9	14.8	31.7	33.2	33.6
49	Miami	607.5	627.6	629.2	(1)	(1)	(1)	27.1	29.5	30.5	87.0	92.2	93.0
50	Orlando	223.7	232.1	234.9	(1)	(1)	(1)	12.6	13.2	13.4	26.8	30.0	30.4
51	Pensacola	88.1	91.6	91.6	(1)	(1)	(1)	6.4	6.8	6.7	13.5	12.9	12.9
52	Tampa--St. Petersburg	434.9	457.1	456.0	(1)	(1)	(1)	26.5	30.8	31.2	60.3	63.5	63.6
53	West Palm Beach--Boca Raton	150.4	158.8	158.0	(1)	(1)	(1)	10.9	11.7	12.1	20.1	21.6	21.6
54	GEORGIA	1,895.7	1,943.7	1,952.4	7.2	7.2	7.4	90.7	97.5	100.2	493.2	500.3	503.5
55	Albany	37.8	38.7	38.4	(1)	(1)	(1)	2.6	3.5	3.2	9.6	9.7	9.8
56	Atlanta	791.5	802.7	803.9	(1)	(1)	(1)	33.9	34.2	34.9	130.6	132.3	132.7
57	Augusta	112.0	115.6	116.1	(1)	(1)	(1)	7.3	6.9	6.7	35.6	35.7	35.9
58	Columbus	78.5	80.4	80.9	(1)	(1)	(1)	5.3	4.8	5.1	20.4	20.3	20.5
59	Macon	94.3	94.5	95.0	(1)	(1)	(1)	4.8	4.1	4.2	16.5	15.6	15.8
60	Savannah	78.9	79.8	79.9	(1)	(1)	(1)	5.1	4.8	4.8	16.6	16.6	16.8

See footnotes at end of table.

ESTABLISHMENT DATA STATE AND AREA EMPLOYMENT

B-8. Employees on nonagricultural payrolls for States and selected areas, by industry division—Continued

Transportation and public utilities			Wholesale and retail trade			Finance, insurance, and real estate			Services			Government			
JUNE 1977	MAY 1978	JUNE 1978P	JUNE 1977	MAY 1978	JUNE 1978P	JUNE 1977	MAY 1978	JUNE 1978P	JUNE 1977	MAY 1978	JUNE 1978P	JUNE 1977	MAY 1978	JUNE 1978P	
65.6	68.3	68.6	260.2	262.8	263.9	56.6	57.3	57.8	179.0	181.5	182.1	263.5	271.0	271.3	1
24.9	26.2	26.4	81.3	81.9	81.9	22.5	23.2	23.5	57.3	58.6	58.8	47.8	50.4	49.4	2
2.6	2.6	2.5	20.8	21.2	21.3	3.1	3.2	3.2	16.5	16.3	16.7	31.0	31.2	30.7	3
10.6	11.0	10.8	34.8	34.7	35.3	6.5	6.6	6.6	26.0	26.1	26.5	22.4	22.8	23.2	4
4.5	4.7	4.8	22.3	24.2	24.5	5.5	5.7	5.7	17.3	17.6	17.8	23.8	24.1	25.3	5
1.8	1.9	1.8	9.4	9.3	9.3	1.6	1.7	1.7	5.4	5.0	5.1	15.6	17.0	15.7	6
15.5	15.3	15.9	29.9	27.9	28.3	8.0	7.9	8.2	29.1	23.9	25.3	48.4	52.7	51.4	7
41.1	43.6	44.1	191.4	202.9	203.3	45.1	46.9	47.1	150.2	154.5	155.3	172.5	191.1	180.2	8
24.9	26.6	26.9	125.2	132.6	133.0	34.5	35.8	36.0	91.5	95.9	96.0	86.2	94.7	91.2	9
7.8	7.8	7.9	33.9	35.7	35.6	6.7	7.0	7.0	30.0	31.6	31.4	40.6	42.9	40.0	10
38.6	39.4	40.0	149.9	156.7	158.1	29.4	30.5	30.8	99.3	101.0	102.8	125.7	135.0	128.8	11
2.9	2.9	3.0	13.1	13.9	14.1	2.0	2.1	2.1	7.0	7.3	7.4	8.4	9.5	9.4	12
3.0	3.2	3.2	13.3	13.9	14.0	2.2	2.3	2.3	10.6	10.7	10.8	6.5	7.2	7.2	13
11.2	11.5	11.5	38.4	39.3	39.6	11.9	12.2	12.3	29.9	30.4	30.9	33.9	35.5	35.3	14
3.5	3.5	3.5	5.8	5.8	5.8	1.2	1.2	1.3	4.6	4.8	4.8	5.2	7.0	5.8	15
477.3	485.8	495.7	1,978.6	2,082.6	2,120.1	500.5	520.2	523.9	1,742.7	1,831.2	1,858.7	1,766.6	1,818.1	1,821.3	16
20.7	22.0	22.3	163.3	175.3	177.7	39.1	42.6	43.0	134.9	142.1	145.2	104.8	107.9	107.6	17
6.8	6.9	7.1	29.8	29.5	30.4	4.1	4.1	4.2	18.3	18.8	18.9	31.5	32.3	32.6	18
9.9	9.1	9.3	44.6	44.4	46.7	8.9	9.3	9.3	31.0	31.2	31.3	41.3	44.1	42.6	19
177.0	180.3	185.3	741.1	765.1	775.4	196.7	201.5	202.5	689.1	715.0	719.6	490.9	508.1	507.5	20
3.3	3.4	3.4	18.9	19.6	20.0	2.6	2.6	2.7	14.4	14.9	15.0	15.9	17.0	16.9	21
5.3	5.4	5.4	29.7	32.2	32.5	5.1	5.1	5.1	21.9	22.3	22.2	37.7	38.4	38.1	22
20.1	20.7	21.0	89.3	93.3	93.6	14.6	15.1	15.2	74.4	79.0	78.6	95.4	99.3	99.6	23
13.5	18.8	19.2	77.8	81.3	82.1	16.9	17.9	18.1	60.4	63.2	64.2	136.0	140.8	140.4	24
4.9	4.8	4.9	21.3	21.4	22.1	3.5	3.7	3.7	15.9	16.4	16.7	23.0	22.9	23.2	25
24.4	25.2	25.5	123.1	131.1	132.4	30.2	31.7	32.0	114.2	117.7	118.9	136.3	142.2	142.0	26
129.7	120.6	121.8	319.8	327.0	329.9	121.6	125.1	125.8	290.9	301.9	302.9	294.8	300.0	299.5	27
18.5	18.8	19.2	101.2	108.3	109.4	21.4	22.0	22.2	115.9	122.1	123.0	80.3	87.0	85.0	28
3.8	3.8	3.9	25.7	26.2	26.4	4.6	4.5	4.5	26.7	27.0	27.0	26.8	26.4	26.7	29
3.9	4.1	4.2	17.6	18.7	18.9	4.1	4.3	4.3	14.5	14.9	15.2	19.8	20.5	20.4	30
7.7	7.6	7.7	24.8	25.3	26.0	4.4	4.6	4.6	19.6	20.9	20.5	27.6	28.4	28.3	31
3.9	3.8	4.0	17.2	18.6	19.2	2.9	3.1	3.1	15.5	16.9	16.3	38.0	37.6	38.3	32
(*)	66.6	67.2	(*)	239.5	241.9	(*)	62.3	62.8	(*)	193.6	197.5	(*)	224.3	220.8	33
(*)	45.0	45.4	(*)	158.1	158.6	(*)	46.2	46.7	(*)	125.2	125.3	(*)	121.0	117.1	34
56.8	56.7	57.5	270.6	278.3	280.0	91.2	93.7	94.7	245.7	257.3	260.1	178.2	179.2	179.4	35
5.7	5.7	5.7	31.6	32.0	32.0	6.5	6.4	6.5	28.1	28.5	28.3	17.5	16.8	16.8	36
14.6	15.0	15.0	73.8	74.7	75.0	52.2	54.6	55.0	65.2	67.5	67.9	50.7	52.4	52.4	37
1.3	1.4	1.4	9.5	9.8	9.8	1.5	1.5	1.6	8.4	8.5	8.6	6.3	6.6	6.1	38
14.4	14.3	14.4	37.4	37.0	37.5	9.7	10.0	10.0	43.2	43.0	43.0	23.2	24.0	23.8	39
3.4	3.5	3.5	22.7	23.3	23.6	6.6	6.8	6.9	22.8	23.2	23.7	10.0	10.8	10.8	40
3.0	3.0	3.1	15.4	15.8	16.0	2.9	3.1	3.1	16.2	17.0	17.1	11.2	11.6	11.7	41
12.1	12.3	12.3	51.5	52.3	52.5	11.2	11.2	11.3	39.8	40.1	41.0	40.2	42.0	41.1	42
11.3	11.4	11.4	42.3	42.9	43.0	10.0	10.0	10.1	35.1	35.7	36.5	34.1	35.3	34.3	43
25.6	25.7	25.8	64.4	65.2	65.4	33.7	32.7	33.0	151.0	151.2	151.1	277.2	272.9	276.6	44
64.3	64.0	65.1	266.6	273.4	275.2	82.3	82.1	83.5	334.9	339.1	342.2	528.9	532.9	536.9	45
183.6	183.1	178.3	739.7	773.3	767.0	199.7	206.2	209.1	617.2	653.7	651.8	559.7	581.1	581.8	46
13.1	13.9	13.6	71.6	77.0	74.8	21.2	22.3	22.4	58.5	60.4	60.2	39.5	41.6	41.6	47
21.7	21.7	21.9	68.4	68.9	69.3	27.6	28.0	28.1	48.2	48.8	48.9	50.8	52.6	53.0	48
58.6	60.2	60.5	158.3	159.8	157.7	44.7	45.7	45.7	142.4	149.0	146.5	89.4	91.2	95.3	49
11.3	11.4	11.3	62.0	62.7	63.3	15.4	15.7	16.0	58.2	60.2	61.6	37.4	38.9	38.9	50
4.3	4.5	4.4	20.6	20.4	20.5	3.7	3.7	3.7	16.1	17.4	17.5	23.5	25.9	25.9	51
25.9	25.8	26.0	123.3	127.2	125.1	31.6	33.8	34.1	95.2	97.5	96.8	72.1	78.5	79.2	52
6.8	6.8	6.9	39.1	41.2	40.6	11.8	12.7	12.9	35.7	38.0	37.2	26.0	26.8	26.7	53
118.9	124.0	124.6	431.4	442.4	444.1	99.8	101.1	101.3	284.7	285.6	287.6	369.8	385.7	383.8	54
1.8	1.9	1.9	8.5	8.6	8.5	1.8	1.8	1.8	5.0	4.8	4.8	8.5	8.4	8.4	55
70.9	73.4	73.6	221.8	224.8	225.0	56.7	57.2	57.2	147.3	147.4	149.2	130.3	133.5	131.3	56
3.9	3.9	3.9	19.0	21.0	21.4	4.1	4.2	4.2	14.2	14.9	14.9	27.9	29.1	29.2	57
3.1	3.2	3.2	16.2	17.4	17.4	4.7	5.0	5.0	11.0	10.9	11.2	17.9	18.7	18.6	58
4.4	4.4	4.4	18.5	18.9	19.1	5.5	5.8	5.7	15.0	15.5	15.5	29.5	30.2	30.3	59
7.8	7.8	7.6	18.0	18.5	18.6	3.7	3.9	3.9	13.2	12.9	12.9	14.5	15.4	15.3	60

**ESTABLISHMENT DATA
STATE AND AREA EMPLOYMENT**

B-8. Employees on nonagricultural payrolls for States and selected areas, by industry division—Continued

(In thousands)

State and area	Total			Mining			Construction			Manufacturing		
	JUNE 1977	MAY 1978	JUNE 1978P	JUNE 1977	MAY 1978	JUNE 1978P	JUNE 1977	MAY 1978	JUNE 1978P	JUNE 1977	MAY 1978	JUNE 1978P
1 HAWAII	362.5	364.0	369.5	(1)	(1)	(1)	21.0	19.6	20.1	26.0	23.9	27.2
2 Honolulu	301.7	302.7	307.5	(1)	(1)	(1)	17.6	16.7	17.2	19.7	17.8	20.5
3 IDAHO	309.5	313.7	320.4	3.4	3.9	4.1	20.6	21.0	22.2	55.4	54.0	56.5
4 Boise City	70.8	75.5	75.9	(1)	(1)	(1)	5.9	7.1	7.5	7.4	8.0	8.2
5 ILLINOIS	4,649.3	4,696.5	4,730.0	28.2	26.2	26.8	185.6	179.2	191.0	1,251.2	1,231.4	1,242.0
6 Bloomington—Normal	47.6	50.2	47.9	(3)	(3)	(3)	1.6	1.3	1.4	7.5	8.0	8.2
7 Champaign—Urbana—Rantoul	63.7	68.3	64.1	(3)	(3)	(3)	2.8	2.9	3.2	6.4	6.5	6.5
8 Chicago—Gary	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
9 Chicago SMSA *	3,140.0	3,171.9	3,200.8	4.6	4.4	4.4	117.5	128.4	137.0	849.1	847.4	855.4
10 Davenport—Rock Island—Moline	156.9	151.3	158.0	(3)	(3)	(3)	6.9	6.7	7.1	48.0	41.8	47.7
11 Decatur	54.8	56.6	56.4	(3)	(3)	(3)	3.6	3.8	4.0	18.0	18.5	18.8
12 Peoria	147.1	151.9	152.5	(3)	(3)	(3)	8.8	8.9	9.4	49.9	52.8	52.9
13 Rockford	117.2	119.1	120.4	(3)	(3)	(3)	3.6	3.5	3.9	52.7	54.0	54.8
14 Springfield	84.1	85.5	86.1	(3)	(3)	(3)	4.8	4.7	5.0	9.3	9.3	9.2
15 INDIANA	2,120.4	2,169.1	2,184.8	9.0	9.1	9.2	94.7	94.7	100.0	717.0	730.*	734.1
16 Anderson	51.8	53.4	53.2	(1)	(1)	(1)	1.2	1.2	1.3	25.4	26.2	25.7
17 Evansville	118.9	122.0	122.6	2.4	2.4	2.4	6.5	6.6	6.9	38.0	40.1	40.2
18 Fort Wayne	164.9	167.3	168.5	(1)	(1)	(1)	6.7	6.9	7.2	60.1	60.5	60.7
19 Gary—Hammond—East Chicago *	254.0	252.3	254.0	(1)	(1)	(1)	15.4	14.9	14.6	102.5	101.8	103.1
20 Indianapolis	485.2	496.9	497.9	(1)	(1)	(1)	19.8	20.2	20.8	124.9	126.7	127.3
21 Lafayette—West Lafayette	50.9	53.3	52.8	(1)	(1)	(1)	2.4	2.0	2.1	11.7	12.6	13.0
22 Muncie	50.0	50.1	48.3	(1)	(1)	(1)	2.2	2.1	2.2	15.2	14.1	13.6
23 South Bend	105.5	107.5	107.0	(1)	(1)	(1)	4.2	4.5	4.7	33.3	32.9	32.7
24 Terre Haute	59.1	61.0	61.5	1.2	1.2	1.2	2.5	2.4	2.5	15.9	16.4	16.7
25 IOWA	1,065.7	1,097.2	1,096.2	2.5	2.4	2.5	56.0	55.8	59.1	243.7	243.0	244.4
26 Cedar Rapids	79.4	80.9	81.4	(1)	(1)	(1)	3.2	3.8	4.0	27.6	28.3	28.5
27 Des Moines	167.3	172.3	173.2	(1)	(1)	(1)	4.5	7.5	7.8	25.3	24.1	24.2
28 Dubuque	43.0	43.7	43.6	(1)	(1)	(1)	1.8	1.9	2.0	16.9	16.4	16.4
29 Sioux City	53.4	52.8	52.5	(1)	(1)	(1)	4.4	4.1	4.0	11.9	10.3	10.5
30 Waterloo—Cedar Falls	62.7	63.4	62.3	(1)	(1)	(1)	2.9	2.6	2.7	21.7	21.5	21.1
31 KANSAS	872.8	896.1	900.2	12.0	12.7	13.1	48.0	43.9	47.2	172.9	181.0	184.6
32 Topeka	82.5	84.6	85.6	.2	.2	.2	3.6	3.6	3.8	11.6	11.9	12.1
33 Wichita	179.3	185.2	188.6	1.7	2.2	2.2	10.0	9.2	10.2	51.5	57.1	58.4
34 KENTUCKY	1,174.3	1,220.5	1,230.5	52.8	58.2	59.0	62.9	71.8	77.0	286.3	289.3	292.7
35 Lexington—Fayette	131.9	139.2	140.2	(1)	(1)	(1)	7.0	8.4	8.9	29.0	30.6	31.4
36 Louisville	376.6	392.7	396.3	(1)	(1)	(1)	18.8	20.8	21.3	108.6	107.6	109.0
37 Owensboro	28.9	29.9	30.0	.6	.7	.8	1.8	2.2	2.3	7.5	6.9	6.9
38 LOUISIANA	1,331.6	1,354.0	1,350.0	65.6	66.7	67.8	105.9	103.2	103.4	204.5	200.5	202.8
39 Alexandria	45.9	47.3	46.5	(1)	(1)	(1)	3.2	3.1	3.3	6.0	5.9	6.0
40 Baton Rouge	174.7	179.5	179.0	1.0	.7	.7	24.3	22.6	23.1	24.1	24.2	24.3
41 Lafayette	57.3	57.3	58.1	9.1	9.6	9.6	4.9	5.1	5.3	3.1	3.2	3.3
42 Lake Charles	53.1	52.4	53.1	1.5	1.5	1.5	6.1	4.3	4.4	11.6	11.8	12.0
43 Monroe	45.2	47.7	47.1	.4	.3	.3	4.7	5.4	5.7	7.9	8.0	8.1
44 New Orleans	448.4	456.9	458.2	14.5	14.2	14.3	26.7	26.2	26.5	52.5	51.2	52.0
45 Shreveport	133.2	136.9	138.2	4.8	4.6	4.6	8.4	9.2	9.3	28.1	28.3	28.5
46 MAINE	397.8	400.7	414.8	(1)	(1)	(1)	22.0	20.2	21.6	108.4	108.8	113.9
47 Lewiston—Auburn	33.4	34.0	34.2	(1)	(1)	(1)	1.4	1.4	1.5	12.7	12.4	12.5
48 Portland	83.3	85.3	87.7	(1)	(1)	(1)	4.3	4.0	4.4	14.9	16.9	17.1
49 MARYLAND	1,545.0	1,569.7	1,586.2	1.6	1.6	1.6	96.6	90.9	95.3	239.4	241.3	242.2
50 Baltimore	871.6	892.4	898.5	(1)	(1)	(1)	45.5	43.9	45.8	165.3	165.9	166.1
51 MASSACHUSETTS	(*)	2,494.4	2,516.5	(*)	(1)	(1)	(*)	74.7	78.9	(*)	644.2	651.7
52 Boston	1,278.3	1,306.8	1,316.6	(1)	(1)	(1)	41.7	41.0	42.9	261.6	266.5	269.4
53 Brockton	51.3	53.3	53.6	-	-	-	1.6	1.5	1.6	12.1	12.4	12.5
54 Fall River	52.2	54.0	54.4	(1)	(1)	(1)	1.4	1.3	1.3	20.9	21.0	21.1
55 Lawrence—Haverhill	96.9	104.6	105.0	(1)	(1)	(1)	2.6	2.7	2.8	37.8	40.1	40.3
56 Lowell	63.7	65.1	65.5	(1)	(1)	(1)	2.5	2.4	2.5	22.1	23.1	23.1
57 New Bedford	62.2	63.2	63.9	(1)	(1)	(1)	1.6	1.7	1.7	25.4	25.5	25.9
58 Springfield—Chicopee—Holyoke	215.4	220.4	217.9	(1)	(1)	(1)	5.6	5.3	5.7	65.0	65.4	66.6
59 Worcester	149.6	153.0	153.7	(1)	(1)	(1)	3.9	3.5	3.6	45.6	46.0	46.3
60 MICHIGAN	3,447.8	3,541.4	(*)	14.3	13.7	(*)	131.8	140.5	(*)	1,117.9	1,141.4	(*)
61 Ann Arbor	121.8	128.0	(*)	(1)	(1)	(*)	2.8	2.9	(*)	40.2	42.6	(*)
62 Battle Creek	65.3	66.6	(*)	(1)	(1)	(*)	1.7	1.6	(*)	23.7	23.6	(*)

**ESTABLISHMENT DATA
STATE AND AREA EMPLOYMENT**

B-8. Employees on nonagricultural payrolls for States and selected areas, by industry division—Continued

(In thousands)

State and area	Total			Mining			Construction			Manufacturing		
	JUNE 1977	MAY 1978	JUNE 1978P	JUNE 1977	MAY 1978	JUNE 1978P	JUNE 1977	MAY 1978	JUNE 1978P	JUNE 1977	MAY 1978	JUNE 1978P
TEXAS—Continued												
1 Houston	1,167.2	1,228.6	1,237.8	50.8	52.3	53.3	127.9	136.3	138.7	193.6	201.2	202.7
2 Lubbock	79.2	85.0	82.2	(1)	(1)	(1)	5.3	5.1	5.3	11.9	13.0	13.0
3 San Antonio	342.4	354.0	356.7	1.7	1.8	1.8	21.2	24.4	25.3	41.9	44.7	45.3
4 Waco	63.4	65.3	65.1	(1)	(1)	(1)	3.3	3.8	3.9	15.4	15.9	15.9
5 Wichita Falls	48.0	49.2	49.2	2.5	2.5	2.5	2.5	2.6	2.6	8.3	9.0	9.2
6 UTAH	483.3	512.7	515.7	15.0	16.5	16.5	30.7	34.6	37.4	74.8	78.0	79.1
7 Salt Lake City—Ogden	350.2	367.1	368.6	7.1	7.3	7.3	23.1	23.6	25.4	50.3	52.5	53.4
8 VERMONT	176.1	181.2	183.5	.8	.8	.7	9.7	8.4	9.6	44.0	46.9	47.7
9 Burlington ¹⁴	45.2	49.2	48.7	-	-	-	-	-	-	10.7	11.8	12.2
10 Springfield ¹⁴	13.1	13.5	14.0	-	-	-	-	-	-	5.5	6.0	6.0
11 VIRGINIA	1,928.4	1,992.3	2,020.9	23.0	22.4	22.5	119.5	121.2	127.7	400.7	405.0	407.5
12 Bristol	24.9	25.6	25.4	(1)	(1)	(1)	1.1	1.2	1.2	8.5	8.9	8.7
13 Lynchburg	63.7	65.0	65.5	(1)	(1)	(1)	3.1	3.4	3.7	27.8	28.6	28.7
14 Newport News—Hampton	136.1	141.5	144.0	(1)	(1)	(1)	5.8	6.3	6.6	34.3	34.6	34.7
15 Norfolk—Virginia Beach—Portsmouth	261.7	267.2	271.1	(1)	(1)	(1)	16.9	16.8	17.9	27.8	28.4	28.3
16 Northern Virginia ¹⁵	380.6	390.8	399.2	.4	.4	.4	26.6	26.6	28.3	14.2	14.7	14.8
17 Petersburg-Colonial Heights-Hopewell	44.8	45.0	45.4	(1)	(1)	(1)	2.4	2.1	2.2	12.5	12.6	12.6
18 Richmond	297.3	306.2	308.0	.3	.4	.4	18.0	18.6	19.0	51.7	53.0	53.3
19 Roanoke	99.4	102.4	103.5	.2	.2	.2	5.8	5.5	5.9	21.4	21.3	21.5
20 WASHINGTON	1,362.4	1,445.6	1,471.3	2.1	2.3	2.4	75.9	84.8	88.4	265.4	287.8	294.4
21 Seattle—Everett	635.6	680.1	690.7	(1)	(1)	(1)	31.8	37.3	39.3	130.1	141.9	145.1
22 Spokane	113.0	119.1	119.7	(1)	(1)	(1)	6.2	8.0	8.2	15.4	16.4	16.5
23 Tacoma	125.2	131.3	131.4	(1)	(1)	(1)	6.8	7.0	7.3	20.9	22.1	21.8
24 WEST VIRGINIA	621.7	623.5	627.6	73.1	74.8	75.0	40.6	37.6	38.5	126.6	123.3	125.2
25 Charleston	108.9	106.7	107.4	6.6	6.6	6.6	7.9	6.1	6.4	19.8	19.2	19.4
26 Huntington—Ashland	100.1	99.1	99.4	1.0	1.0	1.0	6.6	5.9	6.1	28.8	28.1	28.7
27 Parkersburg—Marietta	53.3	53.2	53.4	.5	.5	.5	3.0	2.6	2.8	17.1	16.7	16.8
28 Wheeling	64.6	63.3	63.7	7.4	7.1	7.1	3.3	2.6	2.9	14.2	13.2	13.6
29 WISCONSIN	1,811.1	1,863.9	1,901.4	2.7	2.5	2.7	79.6	88.7	91.9	541.7	546.2	560.0
30 Appleton—Oshkosh	112.9	114.1	115.8	(1)	(1)	(1)	5.5	5.0	5.5	43.8	45.4	46.2
31 Eau Claire	40.8	42.0	42.6	(1)	(1)	(1)	1.6	1.6	1.7	9.0	8.6	8.8
32 Green Bay	70.8	71.1	72.9	(1)	(1)	(1)	3.8	3.6	3.9	20.6	20.2	21.1
33 Kenosha	41.9	39.9	41.2	(1)	(1)	(1)	1.3	1.3	1.3	17.5	15.3	16.3
34 La Crosse	39.9	41.1	40.9	(1)	(1)	(1)	2.1	1.9	2.0	10.1	10.3	10.5
35 Madison	147.3	154.5	154.1	(1)	(1)	(1)	7.7	7.8	7.9	18.6	18.5	18.9
36 Milwaukee	618.4	630.9	638.1	(1)	(1)	(1)	22.5	24.1	24.5	200.6	203.2	206.7
37 Racine	67.3	68.8	70.2	(1)	(1)	(1)	2.5	2.6	2.8	28.5	29.4	30.0
38 WYOMING	174.9	179.8	189.2	25.1	28.2	29.2	18.1	18.3	20.1	9.2	8.8	9.4
39 Casper	31.0	33.9	34.9	5.9	6.8	7.2	3.1	3.4	3.7	1.7	1.8	1.8
40 Cheyenne	24.6	25.5	26.0	(1)	(1)	(1)	1.9	1.9	2.0	1.5	1.5	1.6

¹ Combined with services.

² Based on the 1967 Standard Industrial Classification Manual.

³ Combined with construction.

⁴ Area included in Chicago—Gary Standard Consolidated Statistical Area.

⁵ Subarea of Philadelphia, Pennsylvania Standard Metropolitan Statistical Area: Burlington, Camden, and Gloucester Counties, New Jersey.

⁶ Subarea of New York—Northeastern New Jersey.

⁷ Subarea of Rochester Standard Metropolitan Statistical Area.

⁸ Area included in New York and Nassau—Suffolk combined SMSA's.

⁹ Subarea of New York Standard Metropolitan Statistical Area.

¹⁰ Subarea of Philadelphia, Pennsylvania Standard Metropolitan Statistical Area: Bucks, Chester, Delaware, Montgomery and Philadelphia Counties, Pennsylvania.

¹¹ Subarea of Philadelphia, Pennsylvania Standard Metropolitan Statistical Area: Philadelphia County.

¹² Subarea of Northeast Pennsylvania Standard Metropolitan Statistical Area: Lackawanna County.

¹³ Subarea of Northeast Pennsylvania Standard Metropolitan Statistical Area: Luzerne County.

¹⁴ Total includes data for industry divisions not shown separately.

¹⁵ Subarea of Washington, D.C. Standard Metropolitan Statistical Area: Alexandria, Fairfax, Falls Church, Manassas, and Manassas Park cities, and Arlington, Fairfax, Loudoun, and Prince William Counties, Virginia.

p=preliminary.

* Not available.

SOURCE: Cooperating State agencies listed on inside back cover.

**ESTABLISHMENT DATA
STATE AND AREA EMPLOYMENT**

B-8. Employees on nonagricultural payrolls for States and selected areas, by industry division—Continued

(In thousands)

Transportation and public utilities			Wholesale and retail trade			Finance, insurance, and real estate			Services			Government			
JUNE 1977	MAY 1978	JUNP 1978P	JUNE 1977	MAY 1978	JUNE 1978P	JUNE 1977	MAY 1978	JUNE 1978P	JUNE 1977	MAY 1978	JUNE 1978P	JUNE 1977	MAY 1978	JUNE 1978P	
86.5	90.3	91.4	284.9	300.9	304.0	69.4	73.5	74.7	225.4	237.0	238.3	128.8	137.1	134.7	1
4.7	4.9	4.8	25.0	26.0	25.9	3.9	4.1	4.1	13.7	13.7	13.7	14.7	18.2	15.4	2
15.2	15.6	15.8	86.5	86.9	87.7	23.2	24.0	24.5	63.8	66.3	66.0	88.9	90.3	90.3	3
3.1	3.2	3.2	14.7	14.8	14.9	3.7	3.7	3.8	12.1	13.0	12.2	11.1	10.9	11.2	4
2.4	2.5	2.5	12.3	12.4	12.4	2.2	2.3	2.3	7.3	7.4	7.4	10.5	10.5	10.3	5
29.8	30.7	31.3	117.4	123.5	124.8	21.9	23.7	24.3	80.2	86.4	87.5	113.5	119.5	114.6	6
23.2	24.4	24.6	87.7	91.9	92.5	18.9	19.5	19.9	57.4	60.5	61.6	82.5	87.5	83.8	7
9.5	8.6	8.7	36.6	37.9	38.6	7.2	7.3	7.5	39.8	39.2	39.8	30.9	32.3	31.2	8
2.1	2.2	2.2	9.6	10.3	10.1	-	-	-	9.8	10.8	10.4	-	-	-	9
.7	.8	.8	2.2	2.2	2.3	-	-	-	2.3	2.4	2.5	-	-	-	10
107.7	108.4	110.2	398.1	410.7	413.7	91.2	92.7	94.0	331.4	339.8	346.1	456.8	492.1	499.2	11
.9	.9	.9	6.0	6.0	6.0	.8	.8	.9	2.9	3.0	3.0	4.7	4.8	4.7	12
2.7	2.4	2.4	10.4	10.5	10.6	2.9	2.9	2.9	8.3	8.7	8.7	8.5	8.5	8.5	13
4.4	4.8	5.0	24.4	25.4	25.7	4.3	4.6	4.6	25.3	26.9	28.0	37.6	38.9	39.4	14
19.5	17.5	17.6	63.3	63.9	65.1	12.9	13.1	13.0	46.9	46.8	47.6	75.4	80.7	81.6	15
27.3	27.1	28.0	89.1	93.3	94.5	24.2	25.1	25.7	88.5	91.6	93.9	110.3	112.0	113.6	16
1.3	1.4	1.3	8.1	8.0	8.2	1.1	1.1	1.1	5.1	5.2	5.2	14.3	14.6	14.8	17
19.1	18.2	18.3	67.8	69.4	69.5	23.0	23.0	23.2	51.9	52.2	52.7	66.5	71.4	71.6	18
10.0	10.1	10.2	23.4	24.1	24.4	5.4	5.7	5.7	17.9	17.9	18.1	15.3	17.6	17.5	19
78.2	80.3	82.1	330.1	351.5	359.2	75.0	80.8	82.2	249.6	265.7	270.0	286.1	292.4	292.6	20
44.9	44.6	45.6	155.5	165.6	168.1	44.1	47.3	47.8	119.8	129.3	130.8	109.4	114.1	114.0	21
7.6	7.7	7.9	31.7	32.3	32.7	7.2	7.6	8.0	24.4	26.2	25.6	20.5	20.9	20.8	22
6.0	6.2	6.4	29.7	31.0	31.2	6.2	6.3	6.4	25.2	27.5	27.0	30.4	31.2	31.3	23
41.5	41.4	41.7	122.4	123.0	123.9	19.7	20.1	20.2	86.6	88.7	88.6	111.2	114.6	114.5	24
9.0	9.0	9.1	24.0	24.1	24.1	4.6	4.7	4.7	18.2	18.1	18.4	18.6	18.8	18.8	25
9.6	9.8	8.9	20.4	20.6	20.6	3.6	3.6	3.6	14.1	13.9	13.9	16.1	17.2	16.6	26
2.4	2.4	2.4	11.3	11.6	11.6	1.8	1.9	1.9	7.8	8.1	7.9	9.4	9.6	9.5	27
3.7	3.7	3.7	14.1	14.3	14.4	2.4	2.4	2.4	12.2	12.2	12.2	7.3	7.8	7.4	28
85.9	86.3	88.4	408.9	423.8	430.3	80.3	82.6	84.7	324.0	333.7	339.7	287.9	300.2	303.8	29
4.1	3.9	4.0	22.3	22.5	22.6	4.3	4.5	4.5	18.0	17.9	18.2	15.0	15.0	14.9	30
2.3	2.3	2.4	10.2	10.6	10.7	1.3	1.3	1.4	8.1	8.3	8.3	8.3	9.3	9.3	31
4.5	4.3	4.5	17.0	17.0	17.3	2.3	2.6	2.6	12.6	13.1	13.0	10.1	10.3	10.5	32
1.5	1.4	1.5	7.8	7.8	8.0	.8	.8	.8	6.8	7.3	7.1	6.0	6.0	6.3	33
2.1	2.2	2.2	9.9	10.8	10.3	.9	.9	.9	8.1	8.6	8.7	5.7	6.4	6.3	34
5.2	5.1	5.2	32.1	34.0	33.8	10.1	10.9	11.5	24.6	24.9	25.0	48.9	53.4	51.9	35
31.9	31.3	32.7	134.8	137.3	138.3	32.5	32.9	33.4	120.5	126.0	127.0	75.8	76.1	75.5	36
2.7	2.5	2.6	12.2	12.6	12.8	2.1	2.2	2.3	10.2	10.4	10.5	9.2	9.0	9.2	37
13.4	13.5	14.1	39.3	40.6	42.6	5.6	6.0	6.1	26.7	25.1	28.0	37.5	39.3	39.7	38
2.2	2.2	2.3	7.9	8.8	9.0	1.3	1.3	1.3	4.4	4.7	4.9	4.5	4.9	4.7	39
3.2	3.5	3.6	5.7	6.1	6.2	1.4	1.4	1.4	4.0	4.5	4.5	6.9	6.6	6.7	40

**ESTABLISHMENT DATA
HOURS AND EARNINGS**

**C-2. Gross hours and earnings of production or nonsupervisory workers¹
on private nonagricultural payrolls, by industry—Continued**

SIC Code	Industry	Average weekly hours					Average overtime hours				
		June 1977	July 1977	May 1978	June ^P 1978	July ^P 1978	June 1977	July 1977	May 1978	June ^P 1978	July ^P 1978
—	TOTAL PRIVATE	36.4	36.5	35.9	36.3	36.5	—	—	—	—	—
—	MINING	44.6	44.9	43.9	44.2	43.7	—	—	—	—	—
10	METAL MINING	41.6	41.3	40.9	40.9	—	—	—	—	—	—
101	Iron ores	43.9	41.6	43.4	43.8	—	—	—	—	—	—
102	Copper ores	38.2	38.5	39.4	39.1	—	—	—	—	—	—
11,12	COAL MINING	42.1	43.9	42.1	42.0	—	—	—	—	—	—
12	Bituminous coal and lignite mining	42.1	44.0	42.2	42.0	—	—	—	—	—	—
13	OIL AND GAS EXTRACTION	46.6	46.1	45.4	45.7	—	—	—	—	—	—
131,2	Crude petroleum and natural gas fields	42.4	42.3	41.3	41.5	—	—	—	—	—	—
138	Oil and gas field services	48.4	47.8	47.0	47.4	—	—	—	—	—	—
14	NONMETALLIC MINERALS, EXCEPT FUELS	45.8	45.5	44.9	46.5	—	—	—	—	—	—
142	Crushed and broken stone	46.5	46.3	46.2	48.0	—	—	—	—	—	—
—	CONTRACT CONSTRUCTION	37.4	37.8	36.8	38.0	38.6	—	—	—	—	—
15	GENERAL BUILDING CONTRACTORS	37.0	37.0	35.9	36.7	—	—	—	—	—	—
16	HEAVY CONSTRUCTION CONTRACTORS	40.5	41.6	39.6	42.3	—	—	—	—	—	—
161	Highway and street construction	41.1	42.9	39.7	43.8	—	—	—	—	—	—
162	Heavy construction, nec	40.0	40.5	39.5	40.9	—	—	—	—	—	—
17	SPECIAL TRADE CONTRACTORS	36.4	36.6	36.0	36.8	—	—	—	—	—	—
171	Plumbing, heating, air conditioning	38.3	38.5	37.7	37.9	—	—	—	—	—	—
172	Painting, paper hanging, decorating	34.8	35.0	34.0	34.8	—	—	—	—	—	—
173	Electrical work	37.3	37.7	38.3	38.2	—	—	—	—	—	—
174	Masonry, stonework, and plastering	33.2	33.9	33.2	34.3	—	—	—	—	—	—
176	Roofing and sheet metal work	33.0	33.0	31.8	33.8	—	—	—	—	—	—
—	MANUFACTURING	40.8	40.1	40.3	40.7	40.3	3.5	3.3	3.4	3.5	3.4
19,24,25,32-39	DURABLE GOODS	41.5	40.6	40.9	41.3	40.8	3.7	3.5	3.6	3.8	3.6
20-23,26-31	NONDURABLE GOODS	39.8	39.3	39.3	39.6	39.5	3.2	3.1	3.0	3.2	3.2
	DURABLE GOODS										
19	ORDNANCE AND ACCESSORIES	41.0	40.0	40.6	41.2	40.9	2.6	2.7	2.7	3.2	—
192	Ammunition, except for small arms	40.6	38.8	39.9	40.3	39.7	2.5	2.4	2.2	2.5	—
1925	Complete guided missiles	41.1	39.3	40.2	40.9	—	—	—	—	—	—
1929	Ammunition, exc. for small arms, nec	39.8	38.1	39.3	39.2	—	—	—	—	—	—
24	LUMBER AND WOOD PRODUCTS	40.7	40.2	39.7	40.6	39.9	4.0	3.9	3.7	3.9	—
242	Sawmills and planing mills	41.5	40.9	40.5	41.3	40.7	4.5	4.4	4.3	4.5	—
2421	Sawmills and planing mills, general	41.5	41.0	40.6	41.5	—	—	—	—	—	—
243	Millwork, plywood and related products	40.7	40.2	39.9	41.0	(*)	3.8	3.9	3.3	3.5	—
2431	Millwork	40.0	39.3	39.4	39.7	—	—	—	—	—	—
2432	Veneer and plywood	42.1	41.2	41.3	43.5	—	—	—	—	—	—
244	Wooden containers	39.9	38.4	38.9	38.7	(*)	3.1	2.6	3.2	3.1	—
2441,2	Wooden boxes, shooks, and crates	39.7	38.2	38.7	38.4	—	—	—	—	—	—
249	Miscellaneous wood products	40.2	39.9	39.6	40.0	39.8	3.6	3.4	3.5	3.4	—
25	FURNITURE AND FIXTURES	39.2	38.5	39.1	39.7	39.0	2.5	2.1	2.4	2.7	—
251	Household furniture	38.7	38.1	38.8	39.5	38.9	2.3	1.9	2.3	2.6	—
2511	Wood household furniture	39.4	38.8	39.4	40.0	—	2.8	2.3	2.9	3.1	—
2512	Upholstered household furniture	37.4	37.1	37.9	38.6	—	—	—	—	—	—
2515	Mattresses and bedsprings	37.6	37.4	38.9	40.0	—	—	—	—	—	—
252	Office furniture	42.7	41.3	40.0	40.5	—	4.0	3.4	2.8	3.2	—
254	Partitions and fixtures	39.7	39.1	40.0	40.9	—	2.5	2.6	2.5	3.2	—
253,9	Other furniture and fixtures	39.9	38.7	39.1	39.3	38.7	2.2	1.5	2.1	2.1	—
32	STONE, CLAY, AND GLASS PRODUCTS	42.0	41.6	41.8	42.3	42.2	4.8	4.9	5.1	5.3	—
321	Flat glass	42.5	41.1	41.0	42.7	—	7.1	6.9	5.9	6.3	—
322	Glass and glassware, pressed or blown	40.6	40.2	40.4	40.4	(*)	3.9	4.2	4.0	3.9	—
3221	Glass containers	40.9	40.8	40.6	40.8	—	—	—	—	—	—
3229	Pressed and blown glass, nec	40.2	39.4	40.2	39.9	—	2.8	3.1	3.3	3.0	—
324	Cement, hydraulic	42.9	42.9	41.5	41.6	(*)	4.2	4.3	4.1	4.1	—
325	Structural clay products	41.3	41.0	41.4	42.0	(*)	4.2	4.3	4.5	4.4	—
3251	Brick and structural clay tile	41.3	41.7	41.8	41.9	—	—	—	—	—	—
326	Pottery and related products	39.2	38.3	39.3	39.7	—	2.2	2.0	2.3	2.5	—
327	Concrete, gypsum and plaster products	44.2	44.1	43.5	44.7	44.3	6.8	7.1	7.2	7.7	—
328,9	Other stone and nonmetallic mineral products	41.5	40.9	42.0	42.2	41.8	3.8	3.8	3.9	4.1	—
3291	Abrasive products	40.5	39.7	40.9	41.2	—	—	—	—	—	—

See footnotes at end of table.

**ESTABLISHMENT DATA
HOURS AND EARNINGS**

**C-2. Gross hours and earnings of production or nonsupervisory workers¹
on private nonagricultural payroll, by industry—Continued**

SIC Code	Industry	Average weekly hours					Average overtime hours				
		June 1977	July 1977	May 1978	June 1978 ^p	July 1978 ^p	June 1977	July 1977	May 1978	June 1978 ^p	July 1978 ^p
	NONDURABLE GOODS—Continued										
	FOOD AND KINDRED PRODUCTS—Continued										
202	Dairy products	43.1	43.3	41.0	41.9	(*)	4.7	5.1	4.2	4.7	—
2024	Ice cream and frozen desserts	42.3	42.4	40.8	42.8	—	—	—	—	—	—
2026	Fluid milk	44.2	44.7	41.6	42.0	—	—	—	—	—	—
203	Canned, cured, and frozen foods	37.0	37.7	37.2	36.8	—	2.9	3.5	2.7	2.9	—
2031,6	Canned, cured, and frozen sea foods	33.6	34.8	35.1	33.9	—	—	—	—	—	—
2032,3	Canned food, except sea foods	37.3	38.8	37.8	37.2	—	—	—	—	—	—
2037	Frozen fruits and vegetables	37.1	35.8	37.7	37.8	—	—	—	—	—	—
204	Grain mill products	44.0	43.8	42.0	43.2	44.2	5.7	5.9	5.1	5.6	—
2041	Flour and other grain mill products	45.9	46.0	43.7	44.1	—	—	—	—	—	—
2042	Prepared feeds for animals and fowls	43.7	43.3	41.8	43.8	—	—	—	—	—	—
205	Bakery products	39.4	39.5	39.0	39.1	39.0	3.4	3.7	3.7	3.5	—
2051	Bread, cake, and related products	39.4	39.5	39.0	39.1	—	—	—	—	—	—
2052	Cookies and crackers	39.6	39.7	39.1	39.1	—	—	—	—	—	—
206	Sugar	40.0	40.4	40.6	40.8	—	2.6	3.5	3.3	3.6	—
207	Confectionery and related products	39.4	38.7	38.8	38.5	(*)	2.2	2.1	2.5	2.1	—
2071	Confectionery products	38.6	38.4	38.5	37.6	—	—	—	—	—	—
208	Beverages	41.2	41.4	39.4	40.8	41.2	4.7	5.0	3.7	4.7	—
2082	Malt liquors	43.7	43.5	41.3	41.9	—	—	—	—	—	—
2086	Bottled and canned soft drinks	40.5	41.2	38.8	41.1	—	—	—	—	—	—
209	Miscellaneous foods and kindred products	41.6	40.7	41.0	41.1	41.0	4.2	3.8	4.2	4.3	—
21	TOBACCO MANUFACTURES	38.9	36.2	38.7	40.7	36.6	1.6	1.1	2.1	2.7	—
211	Cigarettes	39.5	35.6	39.0	41.8	—	1.9	1.2	2.5	3.2	—
212	Cigars	36.9	38.7	37.8	37.5	—	.4	.4	1.0	.9	—
22	TEXTILE MILL PRODUCTS	40.9	40.1	40.4	40.7	40.1	3.7	3.3	3.6	3.8	—
221	Weaving mills, cotton	40.8	40.3	40.2	40.8	(*)	3.8	3.5	3.6	3.7	—
222	Weaving mills, synthetics	41.6	41.2	41.9	41.9	(*)	3.6	3.2	3.9	3.9	—
223	Weaving and finishing mills, wool	40.9	39.9	41.3	41.2	40.8	3.4	2.9	3.8	3.8	—
224	Narrow fabric mills	40.2	40.0	40.2	40.1	39.3	3.0	2.3	3.3	3.0	—
225	Knitting mills	39.6	38.5	38.7	39.2	(*)	3.2	2.8	2.9	3.2	—
2251	Women's hosiery, except socks	38.1	37.1	37.8	39.2	—	—	—	—	—	—
2252	Hosiery, nec	39.0	38.3	37.9	38.2	—	—	—	—	—	—
2253	Knit outerwear mills	38.5	37.4	37.6	37.7	—	—	—	—	—	—
2254	Knit underwear mills	38.5	37.2	38.2	39.0	—	—	—	—	—	—
226	Textile finishing, except wool	41.9	39.4	41.6	42.1	(*)	4.3	3.1	4.2	4.5	—
227	Floor covering mills	42.1	42.2	41.8	42.2	—	4.6	4.4	4.1	5.1	—
228	Yarn and thread mills	41.6	41.0	41.0	41.1	(*)	4.1	3.6	3.8	3.9	—
229	Miscellaneous textile goods	41.8	40.7	40.8	41.4	(*)	4.2	3.6	3.8	3.8	—
23	APPAREL AND OTHER TEXTILE PRODUCTS	36.0	35.4	35.7	36.0	36.0	1.3	1.0	1.2	1.3	—
231	Men's and boys' suits and coats	35.9	35.8	36.0	35.6	36.4	.7	.4	.7	.8	—
232	Men's and boys' furnishings	36.4	36.1	35.9	36.4	36.4	1.1	.8	.9	1.0	—
2321	Men's and boys' shirts and nightwear	36.2	35.8	36.4	37.3	—	1.0	.6	.8	1.1	—
2327	Men's and boys' separate trousers	35.9	36.2	34.9	36.0	—	1.1	.9	.9	1.1	—
2328	Men's and boys' work clothing	37.4	36.5	35.3	35.4	—	1.4	1.0	.7	.8	—
233	Women's and misses' outerwear	33.8	33.5	34.0	34.2	34.1	1.0	.9	1.1	1.2	—
2331	Women's and misses' blouses and waists	34.1	34.3	34.6	35.6	—	—	—	—	—	—
2335	Women's and misses' dresses	32.6	32.5	32.9	32.9	—	.8	.8	1.0	1.1	—
2337	Women's and misses' suits and coats	33.9	33.0	33.9	35.0	—	1.2	1.1	1.3	1.5	—
2339	Women's and misses' outerwear, nec	35.4	35.1	35.3	35.1	—	1.3	1.1	1.1	1.2	—
234	Women's and children's undergarments	37.4	35.8	36.1	36.8	(*)	1.5	1.0	.9	1.3	—
2341	Women's and children's underwear	37.4	36.1	35.9	36.6	—	—	—	—	—	—
2342	Corsets and allied garments	37.2	34.7	36.7	37.6	—	—	—	—	—	—
235	Hats, caps, and millinery	37.6	36.0	36.4	36.4	—	1.4	.8	1.1	1.3	—
236	Children's outerwear	36.3	35.3	35.8	36.8	36.8	1.6	1.4	1.4	1.9	—
2361	Children's dresses and blouses	36.2	35.5	35.2	35.9	—	—	—	—	—	—
237,8	Fur goods and miscellaneous apparel	36.5	35.9	37.3	37.4	—	1.0	.7	1.4	1.4	—
239	Miscellaneous fabricated textile products	38.7	37.7	38.0	37.9	37.9	2.3	1.9	2.0	2.0	—
2391,2	Housefurnishings	37.9	36.9	37.4	38.0	—	—	—	—	—	—
26	PAPER AND ALLIED PRODUCTS	43.3	42.7	42.7	43.1	42.8	4.8	4.8	4.8	5.0	—
261,2,6	Paper and pulp mills	44.9	44.8	44.6	44.6	45.2	6.1	6.4	6.1	6.1	—
263	Paperboard mills	45.1	44.8	44.6	44.9	45.5	7.0	7.4	7.1	7.5	—
264	Miscellaneous converted paper products	41.4	40.9	40.9	41.6	40.8	3.5	3.4	3.5	3.7	—
2643	Bags, except textile bags	41.9	41.8	40.7	41.3	—	—	—	—	—	—
265	Paperboard containers and boxes	42.8	41.6	42.1	42.4	41.6	4.0	3.7	3.9	4.3	—
2651,2	Folding and setup paperboard boxes	41.6	40.2	41.4	42.3	—	—	—	—	—	—
2653	Corrugated and solid fiber boxes	43.6	42.2	42.7	42.9	—	4.5	4.2	4.3	4.6	—
2654	Sanitary food containers	42.9	42.4	41.6	41.8	—	—	—	—	—	—

See footnotes at end of table.

**ESTABLISHMENT DATA
HOURS AND EARNINGS**

**C-2. Gross hours and earnings of production or nonsupervisory workers¹
on private nonagricultural payrolls, by industry—Continued**

SIC Code	Industry	Average weekly hours					Average overtime hours				
		June 1977	July 1977	May 1978	June 1978 ^P	July 1978 ^P	June 1977	July 1977	May 1978	June 1978 ^P	July 1978 ^P
NONDURABLE GOODS—Continued											
27	PRINTING AND PUBLISHING	37.7	37.7	37.3	37.5	37.6	2.6	2.7	2.7	2.8	--
271	Newspapers	34.2	34.2	34.0	34.1	34.2	1.7	1.7	2.0	1.9	--
272	Periodicals	37.6	37.7	36.8	37.6	--	1.8	2.6	2.0	2.4	--
273	Books	39.6	39.4	40.0	39.4	--	4.0	4.2	3.8	3.5	--
275	Commercial printing	38.7	38.7	38.2	38.5	38.6	3.0	3.1	3.2	3.2	--
2751	Commercial printing, except lithographic	38.6	38.8	37.7	38.1	--	2.9	3.0	2.9	3.1	--
2752	Commercial printing, lithographic	38.8	38.5	38.5	38.8	--	3.1	3.1	3.4	3.4	--
278	Blankbooks and bookbinding	39.3	39.2	38.8	39.5	39.2	2.3	2.3	2.4	2.4	--
274,6,7,9	Other publishing and printing ind	39.4	39.1	38.1	38.7	38.6	2.7	2.9	2.5	3.0	--
28	CHEMICALS AND ALLIED PRODUCTS	42.0	41.6	41.8	42.0	41.8	3.6	3.5	3.5	3.4	--
281	Industrial chemicals	42.9	42.8	42.4	42.5	(*)	4.0	4.0	3.7	3.9	--
2812	Alkalies and chlorine	43.6	43.7	43.3	43.9	--	--	--	--	--	--
2818	Industrial organic chemicals, nec	43.3	42.9	42.9	42.6	--	4.0	4.2	3.6	4.0	--
2819	Industrial inorganic chemicals, nec	42.2	42.4	41.8	42.0	--	3.5	3.6	3.2	3.5	--
282	Plastics materials and synthetics	42.2	41.9	42.3	42.7	(*)	3.5	3.5	3.4	3.4	--
2821	Plastics materials and resins	43.5	43.2	43.2	44.3	--	4.7	4.7	4.6	4.6	--
2823,4	Synthetic fibers	41.1	41.0	41.6	41.6	--	2.7	2.7	2.5	2.5	--
283	Drugs	40.5	39.7	40.6	41.4	41.3	2.6	2.5	2.6	2.6	--
2834	Pharmaceutical preparations	40.3	39.3	40.8	41.0	--	--	--	--	--	--
284	Soap, cleaners, and toilet goods	40.8	40.6	40.6	40.6	(*)	2.8	2.7	3.0	2.9	--
2841	Soap and other detergents	42.3	42.5	42.2	42.7	--	--	--	--	--	--
2844	Toilet preparations	39.3	39.2	39.5	39.2	--	--	--	--	--	--
285	Paints and allied products	41.9	41.2	41.6	41.1	40.4	3.9	3.7	3.7	3.4	--
287	Agricultural chemicals	43.1	42.4	42.9	43.1	(*)	4.9	4.8	5.3	4.3	--
2871,2	Fertilizers, complete and mixing only	43.2	42.4	43.4	42.7	--	--	--	--	--	--
286,9	Other chemical products	41.9	41.1	41.2	41.2	(*)	3.8	3.2	3.3	3.4	--
2892	Explosives	41.2	40.7	39.5	39.6	--	--	--	--	--	--
29	PETROLEUM AND COAL PRODUCTS	43.2	43.3	43.5	43.8	45.0	4.2	4.1	4.1	4.3	--
291	Petroleum refining	42.6	42.9	43.1	43.2	(*)	3.5	3.4	3.4	3.3	--
295,9	Other petroleum and coal products	44.6	44.4	44.5	45.2	(*)	6.1	5.8	6.1	6.9	--
30	RUBBER AND PLASTICS PRODUCTS, NEC	41.3	40.2	40.6	41.0	40.3	3.8	3.3	3.4	3.6	--
301	Tires and inner tubes	44.6	43.1	42.7	43.2	43.0	5.6	5.0	4.7	5.2	--
302,3,6	Other rubber products	41.2	39.7	40.5	40.5	39.5	3.6	2.9	3.3	3.4	--
302	Rubber footwear	37.1	36.0	38.3	37.5	--	1.5	1.0	2.4	2.0	--
307	Miscellaneous plastics products	40.4	39.5	40.0	40.6	39.9	3.3	2.9	3.1	3.3	--
31	LEATHER AND LEATHER PRODUCTS	38.0	37.2	37.9	38.4	37.5	2.0	1.6	1.9	2.1	--
311	Leather tanning and finishing	40.0	38.5	40.1	40.0	(*)	2.9	2.5	3.2	3.1	--
314	Footwear, except rubber	37.8	37.2	38.0	38.5	37.6	1.8	1.5	2.0	2.1	--
312,3,5-7,9	Other leather products	37.8	36.7	37.1	37.6	(*)	2.0	1.7	1.4	1.8	--
316	Luggage	37.3	36.5	37.3	37.6	--	2.4	2.4	1.8	1.7	--
317	Handbags and personal leather goods	37.9	36.6	36.3	37.3	--	2.2	1.7	1.2	1.9	--
--	TRANSPORTATION AND PUBLIC UTILITIES	40.3	40.3	40.0	40.3	40.8	--	--	--	--	--
4011	RAILROAD TRANSPORTATION: Class 1 railroads ²	44.3	42.4	45.1	(*)	--	--	--	--	--	--
411	LOCAL AND INTERURBAN PASSENGER TRANSIT: Local and suburban transportation	50.3	41.2	39.6	40.1	--	--	--	--	--	--
413	Intercity highway transportation	38.3	39.3	36.7	37.8	--	--	--	--	--	--
42	TRUCKING AND WAREHOUSING	41.1	40.7	40.2	40.8	--	--	--	--	--	--
421,3	Trucking and trucking terminals	41.3	40.9	40.3	40.9	--	--	--	--	--	--
422	Public warehousing	38.8	38.7	39.2	39.3	--	--	--	--	--	--
46	PIPE LINE TRANSPORTATION	42.6	41.8	41.5	42.0	--	--	--	--	--	--
48	COMMUNICATION	39.9	40.5	40.0	40.3	--	--	--	--	--	--
481	Telephone communication	40.0	40.8	40.1	40.4	--	--	--	--	--	--
4817	Switchboard operating employees ³	34.8	36.6	34.7	34.8	--	--	--	--	--	--
4818	Line construction employees ⁴	43.7	44.8	44.8	45.1	--	--	--	--	--	--
482	Telegraph communication ⁵	42.7	43.1	(*)	(*)	--	--	--	--	--	--
483	Radio and television broadcasting	38.9	39.0	39.2	39.4	--	--	--	--	--	--

See footnotes at end of table.

**ESTABLISHMENT DATA
HOURS AND EARNINGS**

**C-2. Gross hours and earnings of production or nonsupervisory workers¹
on private nonagricultural payrolls, by industry—Continued**

SIC Code	Industry	Average weekly earnings					Average hourly earnings				
		June 1977	July 1977	May 1978	June ^p 1978	July ^p 1978	June 1977	July 1977	May 1978	June ^p 1978	July ^p 1978
—	TRANSPORTATION AND PUBLIC UTILITIES—Continued										
49	ELECTRIC, GAS, AND SANITARY SERVICES										
	Electric companies and systems	\$285.93	\$294.11	\$309.59	\$309.50	—	\$6.94	\$7.07	\$7.46	\$7.44	—
491	Gas companies and systems	294.69	304.73	320.38	319.03	—	7.05	7.17	7.61	7.56	—
492	Combination companies and systems	264.96	268.21	285.42	284.61	—	6.51	6.59	7.03	7.01	—
493	Water, steam, and sanitary systems	308.97	319.09	338.62	339.46	—	7.61	7.84	8.14	8.16	—
494-7		232.40	236.44	247.83	249.67	—	5.60	5.67	6.03	6.06	—
—	WHOLESALE AND RETAIL TRADE	143.14	145.95	151.86	155.31	\$157.51	4.26	4.28	4.63	4.65	\$4.66
50	WHOLESALE TRADE	214.34	216.84	232.02	235.38	237.73	5.51	5.56	5.98	6.02	6.08
501	Motor vehicles and automotive equipment	193.45	193.83	210.53	215.91	—	4.91	4.97	5.44	5.48	—
502	Drugs, chemicals, and allied products	227.12	229.03	241.42	244.61	—	5.93	5.98	6.32	6.37	—
503	Dry goods and apparel	182.59	180.64	194.93	194.74	—	5.03	5.06	5.37	5.35	—
504	Groceries and related products	211.75	218.74	232.32	234.69	—	5.50	5.58	6.05	6.08	—
506	Electrical goods	221.48	224.83	245.30	247.20	—	5.65	5.75	6.21	6.18	—
507	Hardware; plumbing and heating equipment	204.36	207.09	215.56	218.62	—	5.24	5.31	5.57	5.62	—
508	Machinery, equipment, and supplies	236.16	237.58	255.44	256.88	—	5.86	5.31	6.37	6.39	—
509	Miscellaneous wholesalers	211.42	213.12	227.67	231.99	—	5.52	5.55	5.96	6.01	—
52-59	RETAIL TRADE[†]	122.62	125.57	128.34	131.56	134.37	3.82	3.84	4.14	4.15	4.16
53	Retail general merchandise [†]	115.50	119.45	121.80	124.64	—	3.75	3.78	4.06	4.06	—
531	Department stores	119.56	123.64	124.91	127.87	—	3.92	3.95	4.22	4.22	—
532	Mail order houses	154.98	157.64	166.32	167.99	—	4.64	4.65	5.04	5.06	—
533	Variety stores	89.98	93.02	99.27	100.60	—	3.04	3.07	3.32	3.32	—
54	Food stores	155.04	157.72	160.21	166.44	—	4.67	4.68	5.07	5.09	—
541-3	Grocery, meat, and vegetable stores	159.80	162.52	164.72	171.27	—	4.77	4.78	5.18	5.19	—
56	Apparel and accessory stores	101.14	104.07	108.19	111.87	—	3.36	3.39	3.68	3.68	—
561	Men's and boys' clothing and furnishings	126.49	131.20	136.08	138.86	—	3.88	3.94	4.20	4.17	—
562	Women's ready-to-wear stores	88.48	91.20	95.03	97.15	—	3.03	3.05	3.37	3.35	—
565	Family clothing stores	104.16	105.88	108.17	113.04	—	3.36	3.34	3.57	3.60	—
566	Shoe stores	101.96	103.01	110.76	116.31	—	3.48	3.54	3.90	3.89	—
57	Furniture and home furnishings stores	158.12	159.20	163.21	166.97	—	4.38	4.41	4.69	4.73	—
571	Furniture and home furnishings	162.45	163.17	170.63	173.37	—	4.50	4.52	4.82	4.87	—
58	Eating and drinking places ⁶	80.34	82.65	84.74	86.27	—	2.89	2.89	3.15	3.16	—
52,55,59	Other retail trade	152.67	156.61	161.46	164.80	—	4.16	4.21	4.51	4.54	—
52	Building materials and farm equipment	174.96	177.02	180.64	185.60	—	4.32	4.36	4.62	4.64	—
551,2	Motor vehicle dealers	210.00	211.29	225.81	229.70	—	5.33	5.39	5.85	5.92	—
553,9	Other automotive and accessory dealers	174.90	183.23	186.42	189.51	—	4.34	4.48	4.78	4.81	—
591	Drug stores and proprietary stores	111.20	114.99	113.85	115.86	—	3.53	3.56	3.77	3.76	—
594	Book and stationery stores	129.26	132.26	129.56	132.28	—	3.87	3.89	4.10	4.07	—
598	Fuel and ice dealers	185.89	187.23	195.33	198.00	—	4.73	4.74	5.10	5.09	—
—	FINANCE, INSURANCE, AND REAL ESTATE⁷	166.16	168.45	179.09	181.04	184.74	4.54	4.59	4.92	4.96	5.02
60	Banking	139.39	141.99	148.73	150.70	—	3.84	3.89	4.12	4.14	—
61	Credit agencies other than banks	150.42	153.44	162.32	162.32	—	3.99	4.07	4.34	4.34	—
612	Savings and loan associations	144.69	147.31	154.03	154.14	—	3.90	3.96	4.22	4.20	—
62	Security, commodity brokers and services	286.52	291.04	307.68	(*)	—	7.56	7.72	7.93	(*)	—
63	Insurance carriers	178.29	180.05	190.09	189.58	—	4.78	4.84	5.11	5.11	—
631	Life insurance	174.27	176.01	183.13	183.73	—	4.71	4.77	4.99	5.02	—
632	Accident and health insurance	173.50	174.84	185.48	183.71	—	4.59	4.65	4.92	4.86	—
633	Fire, marine, and casualty insurance	181.76	183.14	193.44	192.92	—	4.86	4.91	5.20	5.20	—

See footnotes at end of table.

**ESTABLISHMENT DATA
HOURS AND EARNINGS**

**C-2. Gross hours and earnings of production or nonsupervisory workers¹
on private nonagricultural payrolls, by industry—Continued**

SIC Code	Industry	Average weekly hours					Average overtime hours				
		June 1977	July 1977	May 1978	June 1978 ^P	July 1978 ^P	June 1977	July 1977	May 1978	June 1978 ^P	July 1978 ^P
—	TRANSPORTATION AND PUBLIC UTILITIES—Continued										
49	ELECTRIC, GAS, AND SANITARY SERVICES	41.2	41.6	41.5	41.6	—	—	—	—	—	—
491	Electric companies and systems	41.8	42.5	42.1	42.2	—	—	—	—	—	—
492	Gas companies and systems	40.7	40.7	40.6	40.6	—	—	—	—	—	—
493	Combination companies and systems	40.6	40.7	41.6	41.6	—	—	—	—	—	—
494-7	Water, steam, and sanitary systems	41.5	41.7	41.1	41.2	—	—	—	—	—	—
—	WHOLESALE AND RETAIL TRADE	33.6	34.1	32.8	33.4	33.8	—	—	—	—	—
50	WHOLESALE TRADE	38.9	39.0	38.8	39.1	39.1	—	—	—	—	—
501	Motor vehicles and automotive equipment	39.4	39.0	38.7	39.4	—	—	—	—	—	—
502	Drugs, chemicals, and allied products	38.3	38.3	38.2	38.4	—	—	—	—	—	—
503	Dry goods and apparel	36.3	35.7	36.3	36.4	—	—	—	—	—	—
504	Groceries and related products	38.5	39.2	38.4	38.6	—	—	—	—	—	—
506	Electrical goods	39.2	39.1	39.5	40.0	—	—	—	—	—	—
507	Hardware; plumbing and heating equipment	39.0	39.0	38.7	38.9	—	—	—	—	—	—
508	Machinery, equipment, and supplies	40.3	40.2	40.1	40.2	—	—	—	—	—	—
509	Miscellaneous wholesalers	38.3	38.4	38.2	38.6	—	—	—	—	—	—
52-59	RETAIL TRADE	32.1	32.7	31.0	31.7	32.3	—	—	—	—	—
53	Retail general merchandise	30.8	31.6	30.0	30.7	—	—	—	—	—	—
531	Department stores	30.5	31.3	29.6	30.3	—	—	—	—	—	—
532	Mail order houses	33.4	33.9	33.0	33.2	—	—	—	—	—	—
533	Variety stores	29.6	30.3	29.9	30.3	—	—	—	—	—	—
54	Food stores	33.2	33.7	31.6	32.7	—	—	—	—	—	—
541-3	Grocery, meat, and vegetable stores	33.5	34.0	31.8	33.0	—	—	—	—	—	—
56	Apparel and accessory stores	30.1	30.7	29.4	30.4	—	—	—	—	—	—
561	Men's and boys' clothing and furnishings	32.6	33.3	32.4	33.3	—	—	—	—	—	—
562	Women's ready-to-wear stores	29.2	29.9	28.2	29.0	—	—	—	—	—	—
565	Family clothing stores	31.0	31.7	30.3	31.4	—	—	—	—	—	—
566	Shoe stores	29.3	29.1	28.4	29.9	—	—	—	—	—	—
57	Furniture and home furnishings stores	36.1	36.1	34.8	35.3	—	—	—	—	—	—
571	Furniture and home furnishings	36.1	36.1	35.4	35.6	—	—	—	—	—	—
58	Eating and drinking places ⁶	27.8	28.6	26.9	27.3	—	—	—	—	—	—
52,55,59	Other retail trade	36.7	37.2	35.8	36.3	—	—	—	—	—	—
52	Building materials and farm equipment	40.5	40.6	39.1	40.0	—	—	—	—	—	—
551,2	Motor vehicle dealers	39.4	39.2	38.6	38.8	—	—	—	—	—	—
553,9	Other automotive and accessory dealers	40.3	40.9	39.0	39.4	—	—	—	—	—	—
591	Drug stores and proprietary stores	31.5	32.3	30.2	30.8	—	—	—	—	—	—
594	Book and stationery stores	33.4	34.0	31.6	32.5	—	—	—	—	—	—
598	Fuel and ice dealers	39.3	39.5	38.3	38.9	—	—	—	—	—	—
—	FINANCE, INSURANCE, AND REAL ESTATE⁷	36.6	36.7	36.4	36.5	36.8	—	—	—	—	—
60	Banking	36.3	36.5	36.1	36.4	—	—	—	—	—	—
61	Credit agencies other than banks	37.7	37.7	37.4	37.4	—	—	—	—	—	—
612	Savings and loan associations	37.1	37.2	36.5	36.7	—	—	—	—	—	—
62	Security, commodity brokers and services	37.9	37.7	38.8	(*)	—	—	—	—	—	—
63	Insurance carriers	37.3	37.2	37.2	37.1	—	—	—	—	—	—
631	Life insurance	37.8	36.9	36.7	36.6	—	—	—	—	—	—
632	Accident and health insurance	37.8	37.6	37.7	37.8	—	—	—	—	—	—
633	Fire, marine, and casualty insurance	37.4	37.3	37.2	37.1	—	—	—	—	—	—

See footnotes at end of table.

ESTABLISHMENT DATA HOURS AND EARNINGS

C-2. Gross hours and earnings of production or nonsupervisory workers ¹ on private nonagricultural payrolls, by industry—Continued

SIC Code	Industry	Average weekly earnings					Average hourly earnings				
		June 1977	July 1977	May 1978	June 1978 ^p	July 1978 ^p	June 1977	July 1977	May 1978	June 1978 ^p	July 1978 ^p
-	SERVICES	\$156.11	\$158.18	\$166.98	\$168.34	\$171.03	\$4.66	\$4.68	\$5.06	\$5.04	\$5.06
	Hotels and other lodging places:										
701	Hotels, tourist courts, and motels ⁶	101.09	103.68	109.19	110.72	-	3.24	3.21	3.58	3.56	-
	Personal services:										
721	Laundries and dry cleaning plants	122.84	123.55	131.92	133.38	-	3.48	3.49	3.78	3.80	-
722	Photographic studios	128.90	125.06	137.61	136.86	-	3.93	3.86	4.12	4.16	-
	Motion pictures:										
781	Motion picture filming and distributing ...	304.94	338.52	376.60	379.46	-	7.72	8.57	9.51	9.78	-
806	Hospitals	158.00	162.02	173.39	174.76	-	4.62	4.71	5.13	5.11	-

¹ For coverage of series, see footnote 1, table B-2.

² Beginning January 1976, data relate to line haul railroads with operating revenues of \$10,000,000 or more.

³ Data relate to employees in such occupations in the telephone industry as switchboard operators; service assistants; operating room instructors; and pay-station attendants. In 1975, such employees made up 30 percent of the total number of nonsupervisory employees in establishments reporting hours and earnings data.

⁴ Data relate to employees in such occupations in the telephone industry as central office craft persons; installation and exchange repair craft persons; line, cable and conduit craft

persons; and laborers. In 1975, such employees made up 47 percent of the total number of nonsupervisory employees in establishments reporting hours and earnings data.

⁵ Data relate to nonsupervisory employees except messengers.

⁶ Money payments only; tips, not included.

⁷ Data for nonoffice sales agents excluded from all series in this division.

[†] Beginning February 1977 data not strictly comparable with those previously published due to change in pay practices of a large employer.

*Not available.

p=preliminary.

**ESTABLISHMENT DATA
HOURS AND EARNINGS**

**C-2. Gross hours and earnings of production or nonsupervisory workers¹
on private nonagricultural payrolls, by industry—Continued**

SIC Code	Industry	Average weekly hours					Average overtime hours				
		June 1977	July 1977	May 1978	June 1978 ^P	July 1978 ^P	June 1977	July 1977	May 1978	June 1978 ^P	July 1978 ^P
—	SERVICES	33.5	33.8	33.0	33.4	33.8	—	—	—	—	—
	Hotels and other lodging places:										
701	Hotels, tourist courts, and motels ⁶	31.2	32.3	30.5	31.1	—	—	—	—	—	—
	Personal services:										
721	Laundries and dry cleaning plants	35.3	35.4	34.9	35.1	—	—	—	—	—	—
722	Photographic studios	32.8	32.4	33.4	32.9	—	—	—	—	—	—
	Motion pictures:										
781	Motion picture filming and distributing	39.5	39.5	39.6	38.8	—	—	—	—	—	—
806	Hospitals	34.2	34.4	33.8	34.2	—	—	—	—	—	—

ESTABLISHMENT DATA HOURS AND EARNINGS

C-3. Employment, hours, and indexes of earnings in the Executive Branch of the Federal Government

[Employment in thousands—includes both supervisory and nonsupervisory employees]

Item	1977											1978		
	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	
Executive Branch														
Total employment	2,662.8	2,664.0	2,675.8	2,712.3	2,720.5	2,704.2	2,665.4	2,662.5	2,664.3	2,673.1	2,659.5	2,668.2	2,672.9	
Average weekly hours	39.3	39.2	39.2	39.3	39.7	39.7	39.4	39.8	39.4	40.0	39.6	39.9	39.6	
Average overtime hours . . . . .	.9	.9	.9	1.0	1.1	1.2	1.3	1.2	1.1	1.6	1.2	1.2	1.1
Indexes (1967=100):														
Average weekly earnings	208.7	208.7	209.2	208.9	211.1	212.7	214.9	226.9	225.9	230.5	229.0	230.2	227.4	
Average hourly earnings	209.2	209.7	210.3	209.5	209.5	211.1	214.9	224.6	225.9	227.0	227.8	227.3	226.2	
Department of Defense														
Total employment	918.4	917.4	920.0	932.0	931.6	922.0	909.1	907.8	909.8	907.7	906.4	906.0	905.6	
Average weekly hours	39.9	39.6	39.9	39.9	40.0	40.0	39.9	39.9	39.8	40.0	39.9	40.1	40.0	
Average overtime hours . . . . .	.7	.7	.7	.8	.7	.8	1.1	.9	.9	.8	.7	.8	.9
Indexes (1967=100):														
Average weekly earnings	203.9	204.3	204.8	203.7	203.4	204.2	208.0	217.4	220.9	220.4	221.8	222.3	221.5	
Average hourly earnings	206.0	207.9	206.8	205.7	204.9	205.7	210.1	219.6	223.7	222.1	224.0	223.4	223.2	
Postal service														
Total employment	652.3	650.7	652.9	655.6	657.5	656.8	655.0	649.2	650.2	668.2	645.6	646.9	647.6	
Average weekly hours	39.6	39.7	39.3	39.3	40.4	39.9	40.1	41.2	39.8	41.8	41.1	41.5	40.4	
Average overtime hours	1.2	1.2	1.0	1.1	1.5	1.4	1.7	2.0	1.5	3.5	2.5	2.1	1.7	
Indexes (1967=100):														
Average weekly earnings	233.3	234.9	235.6	235.0	241.9	248.6	251.5	259.0	253.4	271.7	253.9	266.5	258.5	
Average hourly earnings	227.4	228.4	231.4	230.8	231.1	240.5	242.1	242.7	245.7	250.9	249.9	247.9	247.0	
Other agencies														
Total employment	1,092.1	1,095.9	1,102.9	1,124.7	1,131.4	1,125.9	1,101.3	1,105.5	1,104.3	1,097.2	1,107.5	1,107.5	1,119.7	
Average weekly hours	38.5	38.6	38.6	38.6	39.0	39.3	38.7	38.8	38.9	38.8	38.5	38.9	38.8	
Average overtime hours . . . . .	.9	.9	1.0	1.1	1.3	1.5	1.2	1.1	1.1	1.0	.9	1.0	1.0
Indexes (1967=100):														
Average weekly earnings	198.2	198.0	198.7	197.5	200.5	200.1	201.7	216.6	215.4	216.1	216.6	217.6	215.1	
Average hourly earnings	199.8	199.0	199.8	198.5	199.5	197.5	202.2	216.6	214.9	216.1	218.3	217.1	215.1	

NOTE: Averages presented in this table have been computed using data collected by the U.S. Civil Service Commission from all agencies of the executive branch of the Federal Government; the data cover both salaried workers and hourly paid wage-board employees. Since these averages relate to hours and earnings of all workers, both supervisory and nonsupervisory, they are not comparable to similar data presented in table C-2 which relate only to production or nonsupervisory workers.

C-4. Average hourly earnings excluding overtime of production workers on manufacturing payrolls, by industry

Major industry group	Average hourly earnings excluding overtime ¹				
	June 1977	July 1977	May 1978	June 1978 ^p	July 1978 ^p
MANUFACTURING	\$5.37	\$5.43	\$5.78	\$5.81	\$5.87
DURABLE GOODS	5.74	5.79	6.15	6.19	6.23
Ordnance and accessories	5.96	6.04	6.44	6.45	-
Lumber and wood products	4.77	4.83	5.21	5.35	-
Furniture and fixtures	4.15	4.18	4.45	4.48	-
Stone, clay, and glass products	5.48	5.50	5.85	5.91	-
Primary metal industries	7.12	7.29	7.69	7.73	-
Fabricated metal products	5.56	5.59	5.93	5.95	-
Machinery, except electrical	5.89	5.91	6.30	6.35	-
Electrical equipment and supplies	5.12	5.19	5.52	5.52	-
Transportation equipment	6.77	6.76	7.21	7.25	-
Instruments and related products	5.00	5.07	5.38	5.38	-
Miscellaneous manufacturing industries	4.20	4.25	4.49	4.52	-
NONDURABLE GOODS	4.83	4.91	5.21	5.24	5.31
Food and kindred products	5.04	5.07	5.48	5.47	-
Tobacco manufactures	5.65	5.59	6.19	6.34	-
Textile mill products	3.73	3.86	4.00	4.01	-
Apparel and other textile products	3.55	3.54	3.83	3.85	-
Paper and allied products	5.55	5.65	5.99	6.11	-
Printing and publishing	(2)	(2)	(2)	(2)	-
Chemicals and allied products	6.10	6.18	6.63	6.65	-
Petroleum and coal products	7.37	7.43	7.99	7.98	-
Rubber and plastics products, nec	4.84	4.92	5.18	5.20	-
Leather and leather products	3.54	3.52	3.81	3.81	-

¹ Derived by assuming that overtime hours are paid at the rate of time and one-half.

^p = preliminary.

² Not available as average overtime rates are significantly above time and one-half. Inclusion of data for the group in the nondurable goods total has little effect.

**ESTABLISHMENT DATA
HOURS AND EARNINGS**

**C-5. Gross and spendable average weekly earnings of production or nonsupervisory workers¹
on private nonagricultural payrolls, by industry division, in current and 1967 dollars**

Industry	Gross average weekly earnings			Spendable average weekly earnings ²					
				Worker with no dependents			Married worker with 3 dependents		
	June 1977	May 1978	June 1978 ^P	June 1977	May 1978	June 1978 ^P	June 1977	May 1978	June 1978 ^P
TOTAL PRIVATE:									
Current dollars	\$ 190.01	\$ 202.48	\$ 205.82	\$ 157.43	\$ 164.51	\$ 166.92	\$ 173.50	\$ 179.80	\$ 182.30
1967 dollars	104.52	104.75	105.39	86.60	85.11	85.47	95.43	93.02	93.34
MINING:									
Current dollars	306.85	331.88	335.92	235.38	251.70	254.24	260.36	275.79	278.69
1967 dollars	168.78	171.69	172.00	129.47	130.21	130.18	143.21	142.67	142.70
CONTRACT CONSTRUCTION:									
Current dollars	298.08	310.96	322.24	229.67	238.23	245.55	254.25	260.74	268.85
1967 dollars	163.96	160.87	165.00	126.33	123.24	125.73	139.85	134.89	137.66
MANUFACTURING:									
Current dollars	228.48	242.61	247.05	184.52	192.81	195.87	202.61	209.88	213.20
1967 dollars	125.68	125.51	126.50	101.50	99.75	100.29	111.45	108.58	109.17
TRANSPORTATION AND PUBLIC UTILITIES:									
Current dollars	275.25	296.80	299.43	215.00	229.03	230.74	237.76	250.55	252.44
1967 dollars	151.40	153.54	153.32	118.26	118.48	118.15	130.78	129.62	129.26
WHOLESALE AND RETAIL TRADE:									
Current dollars	143.14	151.86	155.31	122.55	127.49	130.07	134.77	140.86	143.39
1967 dollars	78.73	78.56	79.52	67.41	65.95	66.60	74.13	72.87	73.42
FINANCE, INSURANCE, AND REAL ESTATE:									
Current dollars	166.16	179.09	181.04	139.93	147.69	149.09	154.67	161.93	163.43
1967 dollars	91.40	92.65	92.70	76.97	76.40	76.34	85.08	83.77	83.68
SERVICES:									
Current dollars	156.11	166.98	168.34	132.30	138.82	139.84	146.74	152.50	153.56
1967 dollars	85.87	86.38	86.20	72.77	71.82	71.60	80.72	78.89	78.63
CONSUMER PRICE INDEX FOR URBAN WAGE EARNERS AND CLERICAL WORKERS (CPI-W, All items, 1967=100)	181.8	193.3	195.3	NOTE: The Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W) is an estimate of the average change in the prices of goods and services purchased by those consumers, and is used to deflate the current dollar values in this table to the 1967 dollar values shown. A major revision in the Consumer Price Index (revised CPI-W) was introduced with data for January 1978. Data prior to January 1978 in 1967 dollars are based on the unrevised Consumer Price Index for Urban Wage Earners and Clerical Workers (unrevised CPI-W).					

¹ For coverage of series, see footnote 1, table B-2.

² Spendable earnings are calculated by taking the average weekly pay for all production or nonsupervisory jobs, both full-time and part-time, and then deducting social security and Federal income taxes applicable to a single worker or to a married worker with three dependents who earned this amount (see Explanatory Notes for the establishment data in the back of this publication).
The data for spendable earnings for the seven month period June-December 1977 are calculated from formulas which concentrate the full year's effect of tax reduction in those seven months. To compare tax liabilities over the year, these series should be calculated using annual average formulas which reflect the tax reduction impact spread over the entire twelve month period. A technical note on the calculation and uses of the spendable earnings series is available on request.

p = preliminary (applicable to earnings data only).

ESTABLISHMENT DATA HOURS AND EARNINGS

C-6. Indexes of aggregate weekly hours and payrolls of production or nonsupervisory workers¹ on private nonagricultural payrolls, by industry division and major manufacturing group

[1967 = 100]

Industry division and group	June 1977	July 1977	May 1978	June 1978 ^p	July 1978 ^p
	Hours				
TOTAL	118.0	117.8	119.4	122.8	123.2
GOODS-PRODUCING	104.2	102.0	105.6	109.7	108.4
MINING	146.7	142.6	150.2	155.6	155.4
CONTRACT CONSTRUCTION	119.0	123.7	123.8	137.3	144.3
MANUFACTURING	100.1	96.8	100.8	103.3	108.4
DURABLE GOODS	100.3	96.7	102.7	105.2	101.9
Ordnance and accessories	40.6	39.7	40.3	41.5	41.8
Lumber and wood products	110.2	108.4	108.6	115.4	113.0
Furniture and fixtures	109.0	104.3	113.4	116.0	110.8
Stone, clay, and glass products	108.9	107.9	110.7	114.3	113.3
Primary metal industries	92.8	88.9	92.2	94.2	92.0
Fabricated metal products	105.8	101.3	108.6	110.5	106.0
Machinery, except electrical	101.8	99.6	108.7	111.5	109.1
Electrical equipment and supplies	98.7	95.1	101.8	104.3	100.4
Transportation equipment	98.9	94.1	100.0	100.7	96.9
Instruments and related products	113.8	109.9	117.4	120.7	116.8
Miscellaneous manufacturing	95.7	88.6	94.6	96.6	90.6
NONDURABLE GOODS	99.7	96.9	98.0	100.6	98.4
Food and kindred products	96.5	98.7	91.0	94.9	97.6
Tobacco manufactures	70.3	65.7	64.7	69.5	62.5
Textile mill products	102.3	97.7	100.5	102.6	98.5
Apparel and other textile products	91.5	84.7	89.9	91.7	86.0
Paper and allied products	102.8	100.1	102.3	105.6	103.4
Printing and publishing	95.4	94.3	95.5	96.6	95.7
Chemicals and allied products	104.7	103.6	105.7	107.2	105.7
Petroleum and coal products	125.0	126.5	124.9	129.2	132.5
Rubber and plastics products, nec	135.5	129.3	136.2	140.4	135.2
Leather and leather products	76.5	69.0	74.8	77.0	71.6
SERVICE-PRODUCING	127.7	128.8	129.0	131.9	133.5
TRANSPORTATION AND PUBLIC UTILITIES	105.7	104.9	105.2	107.5	107.7
WHOLESALE AND RETAIL TRADE	123.0	124.4	123.4	126.8	128.2
WHOLESALE TRADE	118.5	118.9	120.8	123.5	123.7
RETAIL TRADE	124.7	126.4	124.4	128.0	129.9
FINANCE, INSURANCE, AND REAL ESTATE	133.3	134.7	137.1	140.1	142.6
SERVICES	142.4	144.0	145.1	147.9	150.1

¹For coverage of series, see footnote 1, table B-2.

p = preliminary.

**ESTABLISHMENT DATA
HOURS AND EARNINGS**

**C-6. Indexes of aggregate weekly hours and payrolls of production or nonsupervisory workers¹
on private nonagricultural payrolls, by industry division and major manufacturing group—Continued**

[1967 = 100]

Industry division and group	June 1977	July 1977	May 1978	June 1978 ^p	July 1978 ^p
	Payrolls				
TOTAL	229.9	231.1	251.4	260.1	262.8
GOODS-PRODUCING	208.3	206.2	226.9	238.2	238.5
MINING	316.5	308.8	356.0	370.7	372.4
CONTRACT CONSTRUCTION	230.4	240.7	254.4	283.0	300.8
MANUFACTURING	198.4	193.5	214.8	221.6	238.5
DURABLE GOODS	200.4	194.1	219.8	226.5	220.8
Ordnance and accessories	78.5	77.7	84.1	87.3	88.2
Lumber and wood products	233.2	232.3	250.3	273.9	270.7
Furniture and fixtures	200.5	192.5	223.7	231.2	221.1
Stone, clay, and glass products	223.5	222.9	243.7	254.6	254.4
Primary metal industries	206.8	200.3	222.3	228.8	223.4
Fabricated metal products	206.7	198.6	225.9	230.9	222.2
Machinery, except electrical	196.5	192.6	224.6	232.5	229.0
Electrical equipment and supplies	188.1	183.2	208.8	214.6	209.4
Transportation equipment	206.7	195.8	222.0	224.9	216.9
Instruments and related products	205.5	200.5	228.0	235.0	229.0
Miscellaneous manufacturing	175.5	163.4	185.7	190.8	180.5
NONDURABLE GOODS	195.0	192.4	206.4	213.1	211.3
Food and kindred products	193.0	199.1	197.6	206.2	214.6
Tobacco manufactures	178.7	164.6	181.2	200.4	178.2
Textile mill products	193.9	191.0	204.3	209.5	206.1
Apparel and other textile products	163.0	149.9	172.6	177.1	165.8
Paper and allied products	209.5	208.2	225.2	237.4	235.2
Printing and publishing	176.4	175.3	186.6	189.5	189.4
Chemicals and allied products	214.3	214.8	235.0	239.1	238.1
Petroleum and coal products	270.0	275.1	292.3	302.5	310.3
Rubber and plastics products, nec	252.4	241.2	267.7	277.9	269.4
Leather and leather products	134.5	120.2	141.3	145.7	135.4
SERVICE-PRODUCING	248.5	252.5	272.6	279.0	283.8
TRANSPORTATION AND PUBLIC UTILITIES	223.3	225.9	241.5	246.9	249.5
WHOLESALE AND RETAIL TRADE	233.4	237.3	254.4	262.4	266.5
WHOLESALE TRADE	226.8	229.8	251.3	258.3	261.3
RETAIL TRADE	237.0	241.3	256.1	264.6	269.3
FINANCE, INSURANCE, AND REAL ESTATE	234.1	239.6	261.0	269.1	276.9
SERVICES	289.8	294.2	320.8	325.5	331.5

¹For coverage of series, see footnote 1, table B-2.

p = preliminary.

**PRODUCTIVITY
SEASONALLY ADJUSTED**

C-12. Percent changes from preceding quarter and year in productivity, hourly compensation, unit costs, and prices, private business sector, seasonally adjusted at annual rate

Item	Quarterly percent change						Annual percent change					
	IV 1976 to I 1977	I 1977 to II 1977	II 1977 to III 1977	III 1977 to IV 1977	IV 1977 to I 1978	I 1978 to II 1978 ^p	I 1976 to I 1977	II 1976 to II 1977	III 1976 to III 1977	IV 1976 to IV 1977	I 1977 to I 1978	II 1977 to II 1978 ^p
	PRIVATE BUSINESS SECTOR:											
Output per hour of all persons	2.8	-1.2	5.8	0.6	-4.6	0.1	2.2	1.2	1.8	2.0	0.1	0.4
Output	9.3	6.5	5.0	4.0	-0.6	8.8	4.4	5.0	5.6	6.2	3.7	4.2
Hours	6.3	7.8	-0.7	3.4	4.2	8.6	2.2	3.8	3.7	4.1	3.6	3.8
Compensation per hour	8.3	6.4	10.3	7.0	11.9	7.9	8.7	8.1	8.4	8.0	8.9	9.3
Real compensation per hour	-0.0	2.2	5.0	2.2	3.8	N.A.	2.7	1.3	1.6	1.2	2.2	N.A.
Unit labor costs	5.3	7.7	4.3	6.3	17.4	7.8	6.4	6.9	6.5	5.9	8.8	8.8
Unit nonlabor payments	4.8	9.3	7.3	1.9	-13.3	19.3	2.3	3.5	4.9	5.8	0.9	3.1
Implicit price deflator	5.2	8.2	5.2	4.9	6.7	11.2	5.0	5.8	6.0	5.9	6.3	7.0
NONFARM BUSINESS SECTOR:												
Output per hour of all persons	2.7	-0.8	4.3	0.8	-3.2	0.6	2.2	0.7	1.2	1.7	0.2	0.6
Output	9.4	6.2	5.0	3.5	0.7	10.0	4.7	4.8	5.4	6.0	3.8	4.8
Hours	6.6	7.1	0.7	2.7	4.1	9.3	2.4	4.0	4.1	4.2	3.6	4.1
Compensation per hour	8.6	7.2	8.8	8.0	12.0	8.1	8.7	8.1	8.2	8.1	9.0	9.2
Real compensation per hour	0.3	-1.5	3.6	3.2	3.9	N.A.	2.7	1.3	1.5	1.4	2.3	N.A.
Unit labor costs	5.8	8.1	4.3	7.1	15.8	7.4	6.3	7.4	-6.9	6.3	8.7	8.6
Unit nonlabor payments	1.4	10.1	11.4	-2.6	-13.8	15.5	2.6	3.9	5.4	4.9	0.7	2.0
Implicit price deflator	4.4	8.7	6.5	4.0	5.8	9.8	5.1	6.2	6.4	5.9	6.2	6.5
MANUFACTURING:												
Output per hour of all persons	-0.6	6.6	7.1	-0.3	-5.6	7.3	1.9	2.2	3.0	3.2	1.8	2.0
Output	7.7	13.7	6.6	4.0	-0.5	13.2	4.0	6.1	7.1	7.9	5.8	5.7
Hours	8.3	6.6	-0.5	4.3	5.4	5.5	2.1	3.9	4.0	4.6	3.9	3.7
Compensation per hour	9.9	8.4	9.8	8.8	11.1	6.8	9.1	8.5	9.0	9.2	9.5	9.1
Real compensation per hour	1.5	-0.4	4.6	3.9	3.0	N.A.	3.1	1.7	2.2	2.4	2.8	N.A.
Unit labor costs	10.5	1.6	2.6	9.1	17.7	-0.5	7.1	6.2	5.8	5.9	7.6	7.0
DURABLE GOODS												
Output per hour of all persons	-1.9	9.1	5.8	-1.2	-7.0	9.8	1.6	2.0	2.4	2.8	1.5	1.6
Output	6.9	17.1	8.3	4.5	-1.5	16.7	5.0	6.9	7.5	9.1	6.9	6.8
Hours	8.9	7.4	2.3	5.9	5.9	6.3	3.4	4.8	5.0	6.1	5.3	5.1
Compensation per hour	11.1	9.6	9.8	9.6	10.2	6.6	8.7	8.6	9.4	10.0	9.8	9.0
Real compensation per hour	2.6	0.7	4.6	4.7	2.2	N.A.	2.7	1.7	2.6	3.1	3.0	N.A.
Unit labor costs	13.2	0.5	3.8	11.0	18.5	-2.8	7.0	6.5	6.8	7.0	8.2	7.3
NONDURABLE GOODS												
Output per hour of all persons	1.4	3.2	9.0	1.2	-3.4	3.8	2.3	2.4	3.9	3.6	2.4	2.5
Output	8.8	9.0	4.1	3.2	1.1	8.4	2.6	5.1	6.6	6.2	4.3	4.2
Hours	7.4	5.6	-4.5	2.0	4.6	4.4	0.3	2.6	2.6	2.5	1.9	1.6
Compensation per hour	7.6	6.0	8.9	6.9	12.7	6.9	9.4	8.1	8.1	7.3	8.6	8.8
Real compensation per hour	-0.6	-2.5	3.6	2.1	4.5	N.A.	3.3	1.3	1.3	0.6	1.9	N.A.
Unit labor costs	6.2	2.8	-0.1	5.6	16.6	2.9	6.9	5.6	4.0	3.6	6.0	6.1
NONFINANCIAL CORPORATIONS:												
Output per all-employee hour	3.5	2.7	5.3	-0.2	-2.6	N.A.	1.2	1.0	2.1	2.8	1.2	N.A.
Output	9.9	9.2	5.2	3.6	-0.0	N.A.	3.9	4.8	5.9	7.0	4.5	N.A.
Hours	6.2	6.3	-0.1	3.9	2.7	N.A.	2.7	3.7	3.7	4.1	3.2	N.A.
Compensation per hour	8.7	8.7	9.3	7.5	12.4	N.A.	8.8	8.8	8.9	8.5	9.5	N.A.
Real compensation per hour	0.3	-0.1	4.1	2.7	4.2	N.A.	2.8	1.9	2.1	1.7	2.7	N.A.
Total unit costs	3.5	4.6	3.9	6.8	13.6	N.A.	6.4	6.5	5.6	4.7	7.1	N.A.
Unit labor costs	5.0	5.8	3.9	7.7	15.3	N.A.	7.5	7.6	6.6	5.6	8.1	N.A.
Unit nonlabor costs	-0.7	1.0	3.9	4.3	8.5	N.A.	3.5	3.3	3.0	2.1	4.4	N.A.
Unit profits	12.9	48.2	30.4	-15.8	-47.8	N.A.	-5.3	3.9	11.9	16.4	-4.0	N.A.
Implicit price deflator	4.3	8.3	6.4	4.2	5.5	N.A.	5.2	6.2	6.3	5.8	6.1	N.A.

p=preliminary.
r=revised.

NOTE: The productivity and cost measures included in this table incorporate revised output and compensation measures from the Bureau of Economic Analysis of the U.S. Department of Commerce and new seasonal factors for the labor input component.

**ESTABLISHMENT DATA
STATE AND AREA HOURS AND EARNINGS**

C-13. Gross hours and earnings of production workers on manufacturing payrolls, by State and selected areas

State and area	Average weekly earnings			Average weekly hours			Average hourly earnings		
	JUNE 1977	MAY 1978	JUNE 1978P	JUNE 1977	MAY 1978	JUNE 1978P	JUNE 1977	MAY 1978	JUNE 1978P
ALABAMA	\$196.10	\$218.77	\$224.88	40.6	41.2	41.8	\$4.83	\$5.31	\$5.38
Birmingham	237.92	256.88	263.68	40.6	41.1	41.2	5.86	6.25	6.40
Mobile	240.83	261.43	274.14	42.4	41.3	41.6	5.68	6.33	6.59
ALASKA	363.27	504.85	471.64	41.9	45.4	49.8	8.67	11.12	9.47
ARIZONA	221.94	239.17	242.80	40.5	40.4	40.4	5.48	5.92	6.01
Phoenix	219.23	237.37	243.00	40.3	40.3	40.5	5.44	5.89	6.00
Tucson	226.86	222.87	229.10	39.8	39.1	39.5	5.70	5.70	5.80
ARKANSAS	170.93	183.88	185.07	40.6	39.8	39.8	4.21	4.62	4.65
Fayetteville-Springdale	152.76	166.18	167.03	40.2	39.1	39.3	3.80	4.25	4.25
Fort Smith	179.86	195.69	192.32	39.1	40.1	39.9	4.60	4.88	4.82
Little Rock-North Little Rock	201.23	208.29	211.86	40.9	39.3	39.6	4.92	5.30	5.35
Pine Bluff	206.57	230.87	255.52	41.9	41.3	42.8	4.93	5.59	5.97
CALIFORNIA	241.40	253.60	257.44	40.3	40.0	40.1	5.99	6.34	6.42
Anahaim-Santa Ana-Garden Grove	222.63	237.51	239.90	40.7	40.6	40.8	5.47	5.85	5.88
Bakersfield	250.27	277.26	275.02	39.6	40.3	39.8	6.32	6.88	6.91
Fresno	219.06	227.94	230.87	41.1	39.3	39.6	5.33	5.80	5.83
Los Angeles-Long Beach	225.99	237.37	240.98	40.5	40.3	40.5	5.58	5.89	5.95
Modesto	233.92	253.44	247.89	38.6	39.6	39.1	6.06	6.40	6.34
Oxnard-Simi Valley-Ventura	199.05	218.90	222.80	38.5	39.3	40.0	5.17	5.57	5.57
Riverside-San Bernardino-Ontario	242.40	257.26	264.11	40.0	39.7	40.2	6.06	6.48	6.57
Sacramento	253.36	268.66	269.35	38.8	38.6	39.7	6.53	6.96	6.96
Salinas-Seaside-Monterey	218.68	244.97	225.32	37.9	38.7	36.4	5.77	6.33	6.19
San Diego	227.35	240.79	241.57	38.6	38.9	38.9	5.89	6.19	6.21
San Francisco-Oakland	293.46	303.76	310.40	40.2	39.5	40.0	7.30	7.69	7.76
San Jose	260.18	273.88	272.28	40.4	40.1	40.1	6.44	6.83	6.79
Santa Barbara-Santa Maria-Lompoc	205.35	225.23	222.85	38.6	38.7	37.9	5.32	5.82	5.88
Santa Rosa	226.37	232.86	239.17	39.3	38.3	38.7	5.76	6.08	6.18
Stockton	260.70	274.79	266.44	39.5	39.2	37.9	6.60	7.01	7.03
Vallejo-Fairfield-Napa	246.09	262.82	264.62	39.0	37.6	39.8	6.31	6.99	6.82
COLORADO ¹	(*)	244.73	251.88	(*)	39.6	40.3	(*)	6.18	6.25
Denver-Boulder ¹	(*)	240.91	244.55	(*)	39.3	39.7	(*)	6.13	6.16
CONNECTICUT	231.02	247.38	249.40	41.7	42.0	42.2	5.54	5.89	5.91
Bridgeport	237.84	268.18	268.90	42.7	44.4	44.3	5.57	6.04	6.07
Hartford	254.49	271.14	271.78	42.7	42.7	42.8	5.96	6.35	6.35
New Britain	241.82	255.17	258.34	42.8	42.6	42.7	5.65	5.99	6.05
New Haven-West Haven	230.72	247.20	254.10	41.2	41.2	42.0	5.60	6.00	6.05
Stamford	235.05	246.20	250.67	42.2	41.8	42.2	5.57	5.89	5.94
Waterbury	200.93	216.15	221.45	42.3	42.3	43.0	4.75	5.11	5.15
DELAWARE	237.69	258.70	267.85	40.7	39.8	40.4	5.84	6.50	6.63
Wilmington	272.54	293.66	305.25	40.8	39.9	40.7	6.68	7.36	7.50
DISTRICT OF COLUMBIA:									
Washington SMSA	212.52	213.17	213.56	38.5	38.9	38.9	5.52	5.48	5.49
FLORIDA	188.03	202.37	204.27	40.7	40.8	41.1	4.62	4.96	4.97
Fort Lauderdale-Hollywood	188.61	190.48	194.28	42.1	40.7	40.9	4.48	4.68	4.75
Jacksonville	225.07	248.30	245.86	40.7	42.3	41.6	5.53	5.87	5.91
Miami	161.92	175.60	174.44	39.3	40.0	40.1	4.12	4.39	4.35
Orlando	201.89	220.92	222.18	41.8	42.0	42.0	4.83	5.26	5.29
Pensacola	239.57	262.66	267.22	43.4	43.2	43.1	5.52	6.08	6.20
Tampa-St. Petersburg	198.29	208.38	212.08	40.8	40.7	41.1	4.86	5.12	5.16
West Palm Beach-Boca Raton	207.95	237.02	234.17	40.3	42.4	41.3	5.16	5.59	5.67
GEORGIA	182.55	196.09	200.33	41.3	40.1	40.8	4.42	4.89	4.91
Atlanta	226.59	230.62	233.16	41.5	39.9	40.2	5.46	5.78	5.80
Savannah	235.44	251.22	267.34	43.2	41.8	42.3	5.45	6.01	6.32
HAWAII	198.59	225.38	213.36	37.4	38.2	38.1	5.31	5.90	5.60
Honolulu	192.31	217.78	207.20	36.7	37.1	37.2	5.24	5.87	5.57
IDAHO	233.23	241.64	274.58	39.8	38.6	40.8	5.86	6.26	6.73
Boise City	219.12	222.38	223.89	41.5	38.2	39.2	5.28	5.82	5.79

See footnotes at end of table.

ESTABLISHMENT DATA
STATE AND AREA HOURS AND EARNINGS

C-13. Gross hours and earnings of production workers on manufacturing payrolls, by State and selected areas—Continued

State and area	Average weekly earnings			Average weekly hours			Average hourly earnings		
	JUNE 1977	MAY 1978	JUNE 1978P	JUNE 1977	MAY 1978	JUNE 1978P	JUNE 1977	MAY 1978	JUNE 1978P
ILLINOIS	\$257.84	\$267.97	\$273.88	41.2	40.1	40.5	\$6.26	\$6.68	\$6.77
Bloomington—Normal	192.13	222.64	229.70	39.2	38.2	39.6	4.90	5.82	5.79
Champaign—Urbana—Rantoul	245.36	244.64	247.22	41.8	37.6	37.3	5.86	6.51	6.62
Chicago SMSA	263.37	266.81	269.96	42.1	41.1	41.3	6.26	6.49	6.54
Davenport—Rock Island—Moline	263.52	271.08	286.63	39.7	37.9	39.5	6.63	7.15	7.26
Decatur	268.42	290.57	295.72	40.1	41.3	41.1	6.69	7.04	7.19
Peoria	307.72	299.13	309.38	40.5	37.2	37.8	7.59	8.05	8.19
Rockford	245.58	273.40	277.41	41.1	41.5	41.7	5.98	6.59	6.65
Springfield	297.80	304.37	300.88	43.5	42.4	41.4	6.84	7.17	7.26
INDIANA	276.30	290.69	291.28	41.8	41.0	41.2	6.61	7.09	7.07
Gary—Hammond—East Chicago	335.75	381.29	(*)	39.5	41.4	(*)	8.50	9.21	(*)
Indianapolis	293.87	289.34	(*)	42.9	41.1	(*)	6.85	7.04	(*)
IOWA	257.60	274.80	275.89	40.0	40.0	40.1	6.44	6.87	6.88
Cedar Rapids	250.90	276.40	274.79	39.7	40.0	39.2	6.32	6.91	7.01
Des Moines	263.12	265.71	278.83	38.3	36.7	38.3	6.87	7.24	7.28
Dubuque	323.52	333.60	351.09	40.9	40.0	41.5	7.91	8.34	8.46
Sioux City	208.41	244.45	244.48	38.1	39.3	38.2	5.47	6.22	6.40
Waterloo—Cedar Falls	328.82	340.94	352.26	41.0	40.3	41.2	8.02	8.46	8.55
KANSAS	217.83	234.50	237.80	41.1	40.5	41.0	5.30	5.79	5.80
Topeka	227.20	254.81	244.73	40.5	40.9	39.6	5.61	6.23	6.18
Wichita	229.96	250.92	256.20	40.7	41.0	42.0	5.65	6.12	6.10
KENTUCKY	227.45	246.54	245.96	40.4	39.7	39.8	5.63	6.21	6.18
Louisville	266.15	287.58	287.04	41.2	41.2	41.3	6.46	6.98	6.95
LOUISIANA	238.21	262.71	266.70	41.5	41.7	42.2	5.74	6.30	6.32
Baton Rouge	310.89	344.25	337.48	43.3	45.0	44.0	7.18	7.65	7.67
New Orleans	229.14	251.65	252.53	40.2	40.2	40.6	5.70	6.26	6.22
Shreveport	217.24	232.13	236.14	42.1	41.6	41.5	5.16	5.58	5.69
MAINE	178.35	193.36	196.58	39.9	40.2	40.2	4.47	4.81	4.89
Lewiston—Auburn	145.54	161.02	164.74	38.1	38.8	39.6	3.82	4.15	4.16
Portland	174.54	196.66	198.09	39.4	40.3	40.1	4.43	4.88	4.94
MARYLAND	242.00	259.35	262.51	40.0	39.9	40.2	6.05	6.50	6.53
Baltimore	254.29	272.28	277.85	40.3	40.1	40.8	6.31	6.79	6.81
MASSACHUSETTS	206.15	220.84	225.50	40.5	40.3	41.0	5.09	5.48	5.50
Boston	224.07	242.60	247.64	40.3	40.5	41.0	5.56	5.99	6.04
Brockton	162.86	171.90	172.80	38.5	38.2	38.4	4.23	4.50	4.50
Fall River	149.97	161.62	164.05	36.4	36.9	37.2	4.12	4.38	4.41
Lawrence—Haverhill	200.88	212.26	220.98	40.5	39.6	40.4	4.96	5.36	5.47
Lowell	177.70	194.22	201.14	38.8	39.8	40.8	4.58	4.88	4.93
New Bedford	177.80	188.55	191.58	39.6	39.2	39.5	4.49	4.81	4.85
Springfield—Chicopee—Holyoke	217.36	225.36	229.61	41.8	41.2	41.9	5.20	5.47	5.48
Worcester	212.63	229.04	231.28	40.5	40.9	41.3	5.25	5.60	5.60
MICHIGAN	330.53	339.69	(*)	44.1	42.6	(*)	7.50	7.97	(*)
Ann Arbor	366.97	373.07	(*)	45.4	43.7	(*)	8.08	8.54	(*)
Battle Creek	314.78	327.09	(*)	42.1	41.8	(*)	7.48	7.83	(*)
Bay City	369.73	325.78	(*)	50.4	42.9	(*)	7.34	7.59	(*)
Detroit	351.79	367.48	(*)	44.1	43.0	(*)	7.98	8.55	(*)
Flint	404.13	390.55	(*)	47.9	44.3	(*)	8.44	8.82	(*)
Grand Rapids	254.39	270.63	(*)	41.8	41.4	(*)	6.09	6.54	(*)
Jackson	275.13	298.76	(*)	42.4	42.9	(*)	6.49	6.96	(*)
Kalamazoo—Portage	284.43	290.04	(*)	42.1	41.1	(*)	6.76	7.06	(*)
Lansing—East Lansing	361.27	366.60	(*)	45.5	43.2	(*)	7.94	8.49	(*)
Muskegon—Norton Shores—Muskegon Heights	266.78	289.59	(*)	42.0	41.4	(*)	6.35	7.00	(*)
Saginaw	395.10	414.60	(*)	46.2	45.6	(*)	8.55	9.09	(*)
MINNESOTA	237.98	252.73	254.64	40.2	39.8	40.1	5.92	6.35	6.35
Duluth—Superior	211.83	238.98	242.87	39.3	39.5	39.3	5.39	6.05	6.18
Minneapolis—St. Paul	259.08	270.14	275.40	40.8	40.2	40.8	6.35	6.72	6.75
MISSISSIPPI	164.82	178.88	181.60	40.2	39.4	40.0	4.10	4.54	4.54
Jackson	184.61	201.14	202.86	41.3	40.8	40.9	4.47	4.93	4.96

See footnotes at end of table.

ESTABLISHMENT DATA
STATE AND AREA HOURS AND EARNINGS

C-13. Gross hours and earnings of production workers on manufacturing payrolls, by State and selected areas—Continued

State and area	Average weekly earnings			Average weekly hours			Average hourly earnings		
	JUNE 1977	MAY 1978	JUNE 1978P	JUNE 1977	MAY 1978	JUNE 1978P	JUNE 1977	MAY 1978	JUNE 1978P
MISSOURI	\$231.34	\$244.80	\$246.80	40.8	40.0	40.0	\$5.67	\$6.12	\$6.17
Kansas City	265.43	271.08	275.27	41.8	40.1	40.6	6.35	6.76	6.78
St. Joseph	213.96	216.28	218.28	40.6	38.9	39.4	5.27	5.56	5.54
St. Louis	270.82	291.20	292.58	41.6	41.6	41.5	6.51	7.00	7.05
Springfield	195.37	198.28	203.71	40.2	38.5	39.1	4.86	5.15	5.21
MONTANA	270.26	328.94	335.25	41.9	43.8	44.7	6.45	7.51	7.50
NEBRASKA	222.14	231.65	230.16	41.6	41.0	41.1	5.34	5.65	5.60
Lincoln	210.30	225.23	223.29	38.8	38.7	38.3	5.42	5.82	5.83
Omaha	238.46	248.86	251.91	41.4	40.4	40.5	5.76	6.16	6.22
NEVADA	231.72	248.40	255.36	38.3	36.8	38.4	6.05	6.75	6.65
Las Vegas	300.37	317.98	(*)	40.7	40.2	(*)	7.38	7.91	(*)
NEW HAMPSHIRE	181.85	196.75	198.13	40.5	40.4	40.6	4.49	4.87	4.88
Manchester	(*)	172.92	174.49	(*)	39.3	39.3	(*)	4.40	4.44
Nashua	(*)	221.20	221.73	(*)	41.5	41.6	(*)	5.33	5.33
NEW JERSEY	242.02	251.94	256.26	41.8	41.1	41.6	5.79	6.13	6.16
Atlantic City	181.50	172.14	174.65	37.5	38.0	38.3	4.84	4.53	4.56
Camden ²	226.97	247.25	252.13	40.1	40.4	40.6	5.66	6.12	6.21
Hackensack ³	230.91	242.82	247.54	43.0	42.6	43.2	5.37	5.70	5.73
Jersey City ³	229.55	245.01	247.85	40.7	40.1	40.3	5.64	6.11	6.15
New Brunswick—Perth Amboy—Sayreville ³	257.84	265.02	271.01	42.2	40.4	41.0	6.11	6.56	6.61
Newark ³	248.89	255.62	260.76	42.4	41.7	42.4	5.87	6.13	6.15
Paterson—Clifton—Passaic ³	226.46	240.08	244.91	41.1	40.9	41.3	5.51	5.87	5.93
Trenton	245.32	258.08	267.21	41.3	40.2	41.3	5.94	6.42	6.47
NEW MEXICO	166.76	185.18	190.39	37.9	39.4	39.5	4.40	4.70	4.82
Albuquerque	170.10	185.10	188.18	37.8	39.3	38.8	4.50	4.71	4.85
NEW YORK	225.44	239.60	(*)	39.9	39.8	(*)	5.65	6.02	(*)
Albany—Schenectady—Troy	243.58	256.64	(*)	40.8	40.1	(*)	5.97	6.40	(*)
Binghamton	197.87	224.27	(*)	40.3	41.0	(*)	4.91	5.47	(*)
Buffalo	306.13	317.24	(*)	42.4	41.2	(*)	7.22	7.70	(*)
Elmira	222.75	244.22	(*)	40.5	40.5	(*)	5.50	6.03	(*)
Monroe County ⁴	289.26	313.41	(*)	41.8	41.9	(*)	6.92	7.48	(*)
Nassau—Suffolk ⁵	214.12	223.51	(*)	39.8	39.7	(*)	5.38	5.63	(*)
New York—Northeastern New Jersey	217.85	227.70	(*)	39.9	39.6	(*)	5.46	5.75	(*)
New York and Nassau—Suffolk ³	198.12	208.57	(*)	38.1	38.2	(*)	5.20	5.46	(*)
New York SMSA ⁵	197.32	205.42	(*)	37.8	37.9	(*)	5.22	5.42	(*)
New York City ⁶	194.25	201.21	(*)	37.5	37.4	(*)	5.18	5.38	(*)
Poughkeepsie	235.74	240.95	(*)	42.4	41.4	(*)	5.56	5.82	(*)
Rochester	274.56	296.61	(*)	41.6	41.6	(*)	6.60	7.13	(*)
Rockland County ⁶	222.29	244.52	(*)	42.1	42.6	(*)	5.28	5.74	(*)
Syracuse	254.14	263.63	(*)	41.8	41.0	(*)	6.08	6.43	(*)
Utica—Rome	212.22	231.49	(*)	40.5	40.9	(*)	5.24	5.66	(*)
Westchester County ⁶	220.55	247.66	(*)	40.1	42.7	(*)	5.50	5.80	(*)
NORTH CAROLINA	163.21	173.89	176.80	40.2	39.7	40.0	4.06	4.38	4.42
Asheville	160.00	171.97	175.34	40.2	39.9	40.4	3.98	4.31	4.34
Charlotte—Gastonia	166.85	178.27	181.56	41.3	40.7	40.8	4.04	4.38	4.45
Greensboro—Winston-Salem—High Point	178.97	186.76	195.29	40.4	39.4	40.1	4.43	4.74	4.87
Raleigh—Durham	184.86	193.16	203.50	39.5	39.5	40.7	4.68	4.89	5.00
NORTH DAKOTA	(*)	200.02	218.55	(*)	36.7	40.1	(*)	5.45	5.45
Fargo—Moorhead	(*)	238.19	238.60	(*)	39.5	39.7	(*)	6.03	6.01
OHIO	287.80	301.14	308.00	42.7	42.0	42.6	6.74	7.17	7.23
Akron	297.04	305.73	304.45	43.3	42.7	42.7	6.86	7.16	7.13
Canton	275.49	297.20	298.00	40.1	40.0	40.0	6.87	7.43	7.45
Cincinnati	265.44	280.31	290.36	42.2	41.9	42.7	6.29	6.69	6.80
Cleveland	300.72	316.60	319.12	43.9	42.9	43.3	6.85	7.38	7.37
Columbus	248.47	256.40	261.55	40.8	40.0	40.3	6.09	6.41	6.49
Dayton	310.22	310.00	318.69	44.7	42.7	43.3	6.94	7.26	7.36
Toledo	303.63	310.70	314.08	43.5	42.1	42.5	6.98	7.38	7.39
Youngstown—Warren	318.37	351.96	359.13	41.4	42.0	42.3	7.69	8.38	8.49

See footnotes at end of table.

ESTABLISHMENT DATA
STATE AND AREA HOURS AND EARNINGS

C-13. Gross hours and earnings of production workers on manufacturing payrolls, by State and selected areas—Continued

State and area	Average weekly earnings			Average weekly hours			Average hourly earnings		
	JUNE 1977	MAY 1978	JUNE 1978 ²	JUNE 1977	MAY 1978	JUNE 1978 ²	JUNE 1977	MAY 1978	JUNE 1978 ²
OKLAHOMA	\$213.96	\$230.17	\$234.67	40.6	40.1	40.6	\$5.27	\$5.74	\$5.78
Oklahoma City	211.12	229.31	226.80	40.6	40.3	40.0	5.20	5.69	5.67
Tulsa	228.57	246.21	252.46	40.1	40.1	40.2	5.70	6.14	6.28
OREGON	260.95	275.80	298.08	39.9	38.9	40.5	6.54	7.09	7.36
Eugene—Springfield	280.44	299.25	(*)	41.0	39.9	(*)	6.84	7.50	(*)
Jackson County	293.92	282.46	294.71	44.0	38.8	39.4	6.68	7.28	7.48
Portland	245.36	266.50	269.43	38.1	38.4	38.6	6.44	6.94	6.98
PENNSYLVANIA	232.62	250.00	253.89	39.9	40.0	40.3	5.83	6.25	6.30
Allentown—Bethlehem—Easton	227.15	241.17	245.63	38.5	38.1	38.5	5.90	6.33	6.38
Altoona	198.18	214.01	213.84	39.4	38.7	38.6	5.03	5.53	5.54
Delaware Valley ⁷	243.21	259.60	264.87	40.2	40.0	40.5	6.05	6.49	6.54
Erie	238.14	258.75	260.62	41.2	41.6	41.5	5.78	6.22	6.28
Harrisburg	208.24	224.00	227.61	40.2	40.0	40.5	5.18	5.60	5.62
Johnstown	256.37	268.25	269.47	39.2	39.8	40.1	6.54	6.74	6.72
Lancaster	203.94	222.71	221.75	39.6	40.2	40.1	5.15	5.54	5.53
Northeast Pennsylvania	168.90	181.16	185.86	36.4	37.2	37.7	4.64	4.87	4.93
Philadelphia SMSA	(*)	257.20	262.85	(*)	40.0	40.5	(*)	6.43	6.49
Pittsburgh	288.46	303.56	308.21	40.8	40.1	40.5	7.07	7.57	7.61
Reading	212.12	225.61	225.03	39.5	39.1	39.0	5.37	5.77	5.77
Scranton ⁸	174.56	190.61	196.61	37.3	38.9	39.4	4.68	4.90	4.99
Wilkes-Barre—Hazleton ⁹	164.22	173.76	180.31	35.7	35.9	36.5	4.60	4.84	4.94
Williamsport	192.84	218.12	221.92	38.8	39.3	39.7	4.97	5.55	5.59
York	214.56	234.35	238.14	41.5	41.7	42.0	5.17	5.62	5.67
RHODE ISLAND	172.09	182.35	183.21	39.2	39.3	39.4	4.39	4.64	4.65
Providence—Warwick—Pawtucket	172.53	184.54	185.00	39.3	39.6	39.7	4.39	4.66	4.66
SOUTH CAROLINA	171.79	184.68	186.41	41.0	40.5	40.7	4.19	4.56	4.58
Charleston—North Charleston	194.11	213.21	220.28	41.3	41.4	42.2	4.70	5.15	5.22
Columbia	175.74	179.86	182.35	40.4	39.1	39.3	4.35	4.60	4.64
Greenville—Spartanburg	170.55	182.25	185.81	40.9	40.5	41.2	4.17	4.50	4.51
SOUTH DAKOTA	191.28	209.80	210.94	40.1	41.3	41.2	4.77	5.08	5.12
Rapid City	160.06	172.56	192.23	38.2	35.8	38.6	4.19	4.82	4.98
Sioux Falls	240.66	266.99	260.15	42.0	45.1	43.0	5.73	5.92	6.05
TENNESSEE	188.79	201.70	206.14	40.6	40.1	40.5	4.65	5.03	5.09
Chattanooga	198.72	206.65	204.32	41.4	40.6	40.3	4.80	5.09	5.07
Knoxville	224.41	238.32	241.94	41.1	40.6	40.8	5.46	5.87	5.93
Memphis	218.56	224.87	237.56	40.7	39.8	41.1	5.37	5.65	5.78
Nashville—Davidson	206.85	213.84	218.02	40.4	39.6	40.3	5.12	5.40	5.41
TEXAS	225.60	237.22	242.36	41.7	40.9	41.5	5.41	5.80	5.84
Amarillo	233.02	238.33	243.54	43.8	44.3	44.2	5.32	5.38	5.51
Austin	178.35	190.40	192.15	41.0	42.5	42.7	4.35	4.48	4.50
Beaumont	315.52	338.44	347.69	40.4	40.1	40.9	7.81	8.44	8.50
Corpus Christi	257.49	261.81	273.91	41.8	41.1	45.2	6.16	6.37	6.06
Dallas—Fort Worth	211.26	216.68	221.27	42.0	40.5	40.9	5.03	5.35	5.41
El Paso	148.37	164.72	166.46	41.1	39.5	40.6	3.61	4.17	4.10
Galveston—Texas City	350.24	379.73	382.34	43.4	43.2	43.3	8.07	8.79	8.83
Houston	282.28	304.15	307.04	42.9	43.7	43.8	6.58	6.96	7.01
Lubbock	168.92	177.51	176.71	41.3	40.9	41.0	4.09	4.34	4.31
San Antonio	168.49	176.22	174.86	40.6	38.9	38.6	4.15	4.53	4.53
Waco	190.32	202.80	198.74	42.2	40.0	39.2	4.51	5.07	5.07
Wichita Falls	198.77	213.56	211.85	40.9	40.6	40.2	4.86	5.26	5.27
UTAH	206.41	218.12	221.60	40.1	39.3	39.5	5.15	5.55	5.61
Salt Lake City—Ogden	195.13	207.64	211.74	39.7	39.4	39.8	4.92	5.27	5.32
VERMONT	193.75	204.82	208.38	41.4	40.8	41.1	4.68	5.02	5.07
Burlington	220.33	225.36	239.08	42.7	41.2	43.0	5.16	5.47	5.56
Springfield	219.76	239.28	244.80	41.0	42.5	42.5	5.36	5.63	5.76
VIRGINIA	189.14	199.50	201.80	40.5	39.9	40.2	4.67	5.00	5.02
Bristol	166.92	177.79	178.75	39.0	38.4	39.2	4.28	4.63	4.56
Lynchburg	194.28	191.67	211.46	40.9	38.8	41.3	4.75	4.94	5.12
Norfolk—Virginia Beach—Portsmouth	209.84	229.77	235.90	41.8	41.4	41.9	5.02	5.55	5.63
Northern Virginia ¹⁰	219.35	232.58	237.10	41.0	40.1	40.6	5.35	5.80	5.84
Petersburg-Colonial Heights-Hopewell	220.95	238.32	243.10	38.9	38.5	39.4	5.68	6.19	6.17

See footnotes at end of table.

**ESTABLISHMENT DATA
STATE AND AREA HOURS AND EARNINGS**

C-13. Gross hours and earnings of production workers on manufacturing payrolls, by State and selected areas

State and area	Average weekly earnings			Average weekly hours			Average hourly earnings		
	JUNE 1977	MAY 1978	JUNE 1978P	JUNE 1977	MAY 1978	JUNE 1978P	JUNE 1977	MAY 1978	JUNE 1978P
VIRGINIA—Continued									
Richmond	\$219.29	\$242.78	\$251.33	39.3	39.8	41.0	\$5.58	\$6.10	\$6.13
Roanoke	161.92	180.64	182.16	39.3	39.7	40.3	4.12	4.55	4.52
WASHINGTON									
Seattle—Everett	266.74	287.82	(*)	39.4	39.0	(*)	6.77	7.38	(*)
Spokane	272.05	295.96	(*)	39.6	39.2	(*)	6.87	7.55	(*)
Tacoma	229.67	245.38	(*)	38.6	38.4	(*)	5.95	6.39	(*)
.....	271.32	302.61	(*)	39.9	39.3	(*)	6.80	7.70	(*)
WEST VIRGINIA									
Charleston	242.00	259.35	260.43	40.2	39.9	39.4	6.02	6.50	6.61
Huntington—Ashland	276.60	304.43	308.74	42.1	42.4	43.0	6.57	7.18	7.18
Parkersburg—Marietta	262.64	292.25	292.66	39.2	40.2	40.2	6.70	7.27	7.28
Wheeling	252.10	272.80	288.43	39.7	40.9	41.5	6.35	6.67	6.95
.....	249.00	269.78	276.51	41.5	41.0	39.9	6.00	6.58	6.93
WISCONSIN									
Appleton—Oshkosh	249.53	267.86	270.02	40.8	40.8	41.1	6.11	6.56	6.58
Eau Claire	243.86	264.96	272.98	42.1	42.0	42.6	5.80	6.31	6.40
Green Bay	253.58	264.94	276.69	41.0	40.6	41.9	6.18	6.52	6.61
Kenosha	262.37	273.57	286.10	42.9	41.3	41.9	6.12	6.63	6.83
La Crosse	296.73	300.87	301.63	41.3	40.1	39.9	7.18	7.50	7.56
Madison	200.67	221.61	220.23	39.2	41.2	40.8	5.12	5.38	5.40
Milwaukee	268.24	273.46	273.90	40.9	39.6	40.0	6.56	6.91	6.85
Racine	274.67	289.50	292.76	40.8	40.4	40.6	6.73	7.17	7.20
.....	267.87	296.44	296.06	40.9	41.5	42.3	6.55	7.14	7.01
WYOMING									
Casper	225.76	239.78	231.00	40.1	38.0	37.5	5.63	6.31	6.16
Cheyenne	275.88	275.89	274.28	41.3	39.3	38.2	6.68	7.02	7.18
.....	231.68	309.26	259.90	42.2	41.4	39.2	5.49	7.47	6.63

¹ Based on the 1967 Standard Industrial Classification Manual.

² Subarea of Philadelphia, Pennsylvania Standard Metropolitan Statistical Area: Burlington, Camden, and Gloucester Counties, New Jersey.

³ Subarea of New York—Northeastern New Jersey.

⁴ Subarea of Rochester Standard Metropolitan Statistical Area.

⁵ Area included in New York and Nassau—Suffolk combined SMSA's.

⁶ Subarea of New York Standard Metropolitan Statistical Area.

⁷ Subarea of Philadelphia, Pennsylvania Standard Metropolitan Statistical Area: Bucks, Chester, Delaware, Montgomery, and Philadelphia Counties, Pennsylvania.

⁸ Subarea of Northeast Pennsylvania Standard Metropolitan Statistical Area: Lackawanna County.

⁹ Subarea of Northeast Pennsylvania Standard Metropolitan Statistical Area: Luzerne County.

¹⁰ Subarea of Washington, D.C. Standard Metropolitan Statistical Area: Alexandria, Fairfax, Falls Church, Manassas, and Manassas Park cities, and Arlington, Fairfax, Loudoun, and Prince William Counties, Virginia.

p=preliminary.
* Not available.

SOURCE: Cooperating State agencies listed on inside back cover.

**ESTABLISHMENT DATA
LABOR TURNOVER**

D-1. Labor turnover rates in manufacturing, 1969 to date

(Per 100 employees)

Year	Annual average	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Total accessions													
1969	4.7	4.6	3.9	4.4	4.5	4.8	6.6	5.1	5.6	5.9	5.0	3.6	2.9
1970	4.0	4.0	3.6	3.7	3.7	4.2	5.4	4.4	5.1	4.7	3.8	3.0	2.4
1971	3.9	3.5	3.1	3.5	3.6	4.0	4.9	4.0	5.3	4.8	3.9	3.3	2.5
1972	4.4	4.1	3.7	4.0	4.0	4.9	5.3	4.6	6.0	5.3	4.8	3.6	2.7
1973	4.8	4.6	4.0	4.4	4.5	5.3	5.9	5.1	6.2	5.7	5.2	3.8	2.6
1974	4.2	4.2	3.6	4.0	4.4	5.1	5.4	4.8	5.4	4.9	3.8	2.4	1.8
1975	3.7	3.0	2.7	3.2	3.7	3.9	4.5	4.5	5.1	4.6	3.7	2.8	2.2
1976	3.9	3.8	3.5	4.2	3.9	4.4	4.8	4.2	5.1	4.4	3.5	3.0	2.2
1977	4.0	3.7	3.7	4.0	3.8	4.6	4.9	4.2	5.2	4.6	3.8	3.0	2.3
1978	-	3.7	3.2	3.7	4.0	4.7	4.9						
New hires													
1969	3.7	3.3	3.0	3.4	3.5	3.8	5.4	3.9	4.3	4.8	4.0	2.8	2.1
1970	2.8	2.9	2.5	2.6	2.6	2.8	3.9	3.0	3.5	3.4	2.7	1.9	1.4
1971	2.6	2.0	1.9	2.2	2.3	2.7	3.5	2.7	3.4	3.4	2.7	2.2	1.6
1972	3.3	2.6	2.4	2.7	2.9	3.6	4.1	3.4	4.4	4.3	3.8	2.9	2.0
1973	3.9	3.5	3.1	3.5	3.6	4.4	5.0	4.1	5.0	4.7	4.3	3.0	2.0
1974	3.2	3.2	2.7	3.0	3.3	3.9	4.3	3.7	4.2	3.9	2.9	1.7	1.0
1975	2.0	1.3	1.2	1.3	1.6	2.0	2.5	2.6	3.1	3.0	2.4	1.7	1.3
1976	2.6	2.1	2.1	2.6	2.5	3.0	3.6	2.8	3.5	3.2	2.5	1.9	1.3
1977	2.8	2.2	2.1	2.6	2.7	3.4	3.7	3.0	3.9	3.5	2.9	2.2	1.6
1978	-	2.4	2.2	2.6	2.9	3.6	3.9						
Recalls													
1976	1.0	1.4	1.0	1.2	1.0	1.0	.8	1.0	1.1	.8	.7	.7	.7
1977	.9	1.2	1.3	1.1	.9	.8	.8	1.0	1.0	.8	.6	.6	.5
1978	-	1.0	.7	.8	.8	.7	.7						
Total separations													
1969	4.9	4.5	4.0	4.4	4.5	4.6	4.6	5.3	6.2	6.6	5.4	4.3	4.2
1970	4.8	4.8	4.3	4.4	4.8	4.6	4.4	5.3	5.6	6.0	5.3	4.3	4.1
1971	4.2	4.2	3.5	3.7	3.9	3.7	3.8	4.8	5.5	5.3	4.3	3.7	3.8
1972	4.2	4.0	3.5	3.8	3.8	3.9	4.2	4.8	5.4	5.3	4.3	3.7	3.7
1973	4.6	4.3	3.7	4.2	4.1	4.4	4.5	5.1	6.5	5.7	4.9	4.2	3.9
1974	4.8	4.9	4.0	4.4	4.2	4.4	4.2	4.9	6.1	5.4	5.0	5.0	5.2
1975	4.2	6.2	4.5	4.2	4.0	3.9	3.6	4.4	4.6	4.3	4.0	3.5	3.4
1976	3.8	3.7	3.1	3.5	3.5	3.4	3.5	4.3	4.9	4.6	4.1	3.4	3.5
1977	3.8	3.9	3.4	3.4	3.4	3.5	3.5	4.3	5.1	4.8	3.8	3.3	3.3
1978	-	3.5	3.1	3.5	3.5	3.6	3.8						
Quits													
1969	2.7	2.3	2.1	2.4	2.6	2.7	2.6	2.7	4.0	4.4	3.0	2.1	1.6
1970	2.1	2.1	1.9	2.0	2.1	2.1	2.1	2.1	3.0	3.3	2.1	1.4	1.2
1971	1.8	1.5	1.3	1.5	1.6	1.7	1.8	1.8	2.8	2.9	2.0	1.5	1.2
1972	2.2	1.7	1.6	1.9	2.0	2.2	2.2	2.2	3.6	3.5	2.5	1.9	1.6
1973	2.7	2.2	2.1	2.5	2.5	2.7	2.8	2.8	4.5	3.9	3.0	2.2	1.6
1974	2.3	2.2	1.9	2.3	2.4	2.6	2.5	2.5	4.0	3.2	2.2	1.4	.9
1975	1.4	1.1	.9	1.0	1.1	1.3	1.3	1.5	2.4	2.0	1.6	1.2	.9
1976	1.7	1.3	1.2	1.5	1.6	1.7	1.8	1.8	2.8	2.4	1.7	1.2	1.0
1977	1.8	1.4	1.3	1.6	1.7	1.9	1.9	1.9	3.1	2.8	1.9	1.5	1.2
1978	-	1.5	1.4	1.8	2.0	2.1	2.2						
Layoffs													
1969	1.2	1.2	1.0	1.0	.9	.9	1.0	1.6	1.1	1.1	1.3	1.3	1.8
1970	1.8	1.7	1.5	1.6	1.7	1.5	1.5	2.3	1.7	1.7	2.2	2.1	2.2
1971	1.6	1.9	1.4	1.4	1.4	1.2	1.2	2.1	1.8	1.5	1.5	1.5	1.8
1972	1.1	1.4	1.1	1.1	1.0	.8	1.1	1.7	.9	.9	.9	1.0	1.3
1973	.9	1.0	.7	.8	.7	.6	.6	1.4	.8	.7	.8	1.1	1.5
1974	1.5	1.7	1.2	1.1	.9	.8	.8	1.4	1.1	1.2	1.8	2.8	3.6
1975	2.1	4.1	2.9	2.5	2.1	1.8	1.5	2.0	1.3	1.4	1.6	1.7	1.9
1976	1.3	1.6	1.1	1.1	1.1	.9	.9	1.6	1.1	1.3	1.5	1.5	1.8
1977	1.1	1.7	1.4	1.0	.9	.8	.8	1.5	1.0	1.1	1.1	1.1	1.5
1978	-	1.2	.9	.9	.7	.7	.7						

p=preliminary.

**ESTABLISHMENT DATA
LABOR TURNOVER**

D-2. Labor turnover rates, by industry—Continued

[Per 100 employees]

SIC Code	Industry	Accession rates						Separation rates					
		Total		New hires		Recalls		Total		Quits		Layoffs	
		May 1978	June 1978 ^p	May 1978	June 1978 ^p	May 1978	June 1978 ^p	May 1978	June 1978 ^p	May 1978	June 1978 ^p	May 1978	June 1978 ^p
	NONDURABLE GOODS—Continued												
	PAPER AND ALLIED PRODUCTS—Continued												
264	Miscellaneous converted paper products	3.7	-	3.1	-	0.4	-	2.7	-	1.5	-	0.4	-
2643	Bags, except textile bags	4.0	-	3.7	-	.2	-	3.5	-	2.3	-	.4	-
265	Paperboard containers and boxes	4.8	-	3.8	-	.7	-	3.5	-	1.7	-	.8	-
2651,2	Folding and setup paperboard boxes	5.3	-	3.8	-	1.2	-	4.0	-	2.0	-	1.1	-
2653	Corrugated and solid fiber boxes	4.2	-	3.6	-	.5	-	2.8	-	1.5	-	.5	-
27	PRINTING AND PUBLISHING	3.7	4.2	3.2	3.6	.4	0.4	3.1	3.1	2.0	2.1	.5	0.5
28	CHEMICALS AND ALLIED PRODUCTS	2.2	2.8	1.7	2.2	.3	.3	1.5	1.7	.7	.8	.3	.4
281	Industrial chemicals	2.0	-	1.5	-	.2	-	1.3	-	.5	-	.3	-
282	Plastics materials and synthetics	1.7	-	1.2	-	.2	-	1.2	-	.5	-	.2	-
2821	Plastics materials and resins	2.3	-	1.7	-	.1	-	1.4	-	.6	-	.2	-
2823,4	Synthetic fibers	1.2	-	.7	-	.3	-	1.0	-	.5	-	.2	-
283	Drugs	1.1	-	.9	-	.1	-	.7	-	.3	-	.1	-
2834	Pharmaceutical preparations . . . . .	.7	-	.6	-	.1	-	.6	-	.3	-	.1	-
284	Soap, cleaners, and toilet goods	3.3	-	2.4	-	.7	-	1.9	-	.9	-	.4	-
2841	Soap and other detergents	2.6	-	1.8	-	.7	-	1.3	-	.4	-	.3	-
2844	Toilet preparations	3.6	-	2.4	-	1.0	-	2.4	-	1.2	-	.5	-
285	Paints and allied products	3.2	-	2.5	-	.5	-	2.0	-	1.0	-	.2	-
286,9	Other chemical products	3.1	-	2.5	-	.4	-	1.8	-	.9	-	.2	-
29	PETROLEUM AND COAL PRODUCTS	3.2	3.1	2.6	2.8	.3	.1	1.8	1.9	.8	.9	.3	.3
291	Petroleum refining	2.4	-	2.0	-	.1	-	1.0	-	.3	-	.3	-
295,9	Other petroleum and coal products	5.9	-	4.5	-	1.0	-	4.2	-	2.3	-	.6	-
30	RUBBER AND PLASTICS PRODUCTS, NEC	6.2	6.2	5.1	5.2	.7	.7	5.3	5.1	3.2	3.4	.8	.5
301	Tires and inner tubes	2.9	-	1.7	-	.5	-	1.7	-	.7	-	.2	-
302,3,6	Other rubber products	5.0	-	3.9	-	.7	-	4.0	-	2.2	-	.8	-
307	Miscellaneous plastics products	7.7	-	6.5	-	.8	-	6.9	-	4.4	-	1.0	-
31	LEATHER AND LEATHER PRODUCTS	8.5	7.2	7.0	6.0	1.0	.8	7.1	7.9	5.1	4.8	.9	2.0
311	Leather tanning and finishing	5.1	-	4.7	-	.3	-	4.6	-	2.8	-	.7	-
314	Footwear, except rubber	9.3	-	7.9	-	.8	-	7.5	-	5.8	-	.6	-
	NONMANUFACTURING												
10	METAL MINING	4.2	3.5	3.4	3.0	.4	.2	2.2	2.4	1.2	1.4	.3	.4
101	Iron ores	3.7	-	3.0	-	.4	-	1.4	-	.6	-	.3	-
102	Copper ores	2.5	-	1.6	-	.4	-	1.4	-	.5	-	.3	-
11,12	COAL MINING	2.7	1.6	2.2	1.5	.2	.1	1.7	.7	.8	.4	.4	.1
12	Bituminous coal and lignite mining	2.7	-	2.3	-	.2	-	1.7	-	.8	-	.4	-
481	COMMUNICATION: Telephone communication	1.8	(*)	1.5	(*)	0	(*)	.9	(*)	.4	(*)	.1	(*)
482	Telegraph communication ²	(*)	-	-	-	(*)	-	(*)	-	(*)	-	(*)	-

¹ Less than 0.05.

² Data relate to all employees except messengers.

^p = preliminary.

* = not available.

ESTABLISHMENT DATA

SEASONALLY ADJUSTED LABOR TURNOVER

D-3. Labor turnover rates in manufacturing, 1966 to date, seasonally adjusted

[Per 100 employees]

Year	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Total accessions												
1966	4.9	5.0	5.3	5.1	5.0	4.9	4.9	5.0	5.0	4.9	4.7	4.7
1967	4.5	4.4	4.3	4.3	4.4	4.5	4.4	4.3	4.4	4.4	4.5	4.6
1968	4.4	4.4	4.6	4.6	4.6	4.5	4.5	4.7	4.6	4.8	4.9	4.9
1969	4.9	4.8	4.9	4.9	4.7	5.0	4.7	4.5	4.7	4.6	4.5	4.6
1970	4.4	4.4	4.0	4.0	4.1	4.1	4.1	3.9	3.9	3.8	3.7	3.8
1971	3.8	3.7	3.7	3.8	3.8	3.8	3.8	4.0	4.0	3.9	4.0	4.2
1972	4.3	4.3	4.4	4.3	4.4	4.2	4.3	4.4	4.4	4.6	4.6	4.9
1973	5.0	5.1	5.0	4.8	4.7	4.6	4.6	4.6	4.7	4.8	4.9	4.7
1974	4.7	4.6	4.5	4.5	4.6	4.3	4.2	4.1	3.9	3.6	3.1	3.1
1975	3.1	3.2	3.2	3.7	3.6	3.7	4.0	4.0	3.8	3.7	3.8	3.9
1976	4.1	4.2	4.3	4.1	4.0	3.8	3.8	3.8	3.7	3.6	3.9	4.1
1977	4.0	4.6	4.2	4.0	4.1	3.9	3.8	3.8	3.9	3.8	3.9	4.5
1978	4.0	4.0	4.0	4.2	4.1	P3.9						
New hires												
1966	3.7	3.8	4.1	4.0	4.0	3.9	3.8	3.7	3.7	3.9	3.7	3.6
1967	3.4	3.4	3.2	3.1	3.1	3.3	3.2	3.1	3.3	3.3	3.4	3.5
1968	3.3	3.3	3.4	3.5	3.5	3.4	3.4	3.5	3.6	3.6	3.6	3.7
1969	3.7	3.8	3.9	3.8	3.7	3.9	3.6	3.5	3.7	3.6	3.5	3.5
1970	3.4	3.2	2.9	2.8	2.7	2.8	2.8	2.7	2.6	2.5	2.4	2.4
1971	2.4	2.4	2.4	2.5	2.5	2.5	2.6	2.6	2.6	2.5	2.7	2.9
1972	3.0	3.0	3.1	3.2	3.2	3.1	3.2	3.2	3.4	3.5	3.7	3.8
1973	4.0	4.2	4.1	3.9	3.9	3.8	3.7	3.7	3.7	3.8	3.9	3.8
1974	3.8	3.6	3.6	3.5	3.5	3.3	3.2	3.1	2.9	2.6	2.2	1.9
1975	1.6	1.6	1.5	1.7	1.8	1.9	2.3	2.3	2.2	2.2	2.3	2.5
1976	2.6	2.8	2.9	2.8	2.7	2.7	2.5	2.5	2.4	2.4	2.5	2.6
1977	2.7	2.9	3.0	3.0	3.0	P2.8	2.7	2.7	2.7	2.7	2.9	3.3
1978	2.9	3.0	3.0	3.2	3.1	P3.0						
Total separations												
1966	4.3	4.3	4.5	4.5	4.6	4.7	4.9	4.8	4.6	4.6	4.8	4.9
1967	4.8	4.9	4.9	4.7	4.6	4.6	4.5	4.3	4.5	4.5	4.4	4.5
1968	4.7	4.6	4.5	4.5	4.4	4.5	4.6	4.7	4.7	4.6	4.6	4.6
1969	4.6	4.9	4.9	4.8	4.8	5.0	4.8	4.9	4.9	5.0	4.9	4.9
1970	5.0	5.2	4.9	5.2	5.0	4.8	4.5	4.8	4.8	5.0	4.7	4.4
1971	4.3	4.1	4.0	4.1	4.2	4.1	4.2	4.6	4.3	4.1	4.1	4.1
1972	4.2	4.1	4.0	4.3	4.2	4.5	4.4	4.1	4.0	4.2	4.2	4.4
1973	4.5	4.6	4.6	4.5	4.6	4.6	4.7	4.6	4.4	4.6	4.7	4.9
1974	4.9	4.9	4.9	4.8	4.6	4.6	4.5	4.6	4.5	4.8	5.1	5.0
1975	5.2	5.0	4.6	4.5	4.6	4.3	3.9	3.9	3.8	3.8	3.8	3.6
1976	3.5	3.6	3.9	3.9	3.8	3.9	3.9	4.0	3.9	3.9	3.6	3.7
1977	3.8	4.1	3.8	3.8	3.8	3.8	3.9	3.9	3.9	3.7	3.6	3.9
1978	3.6	3.8	3.8	4.0	3.9	P4.0						
Quits												
1966	2.3	2.3	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.7
1967	2.5	2.5	2.4	2.4	2.3	2.4	2.2	2.2	2.3	2.3	2.3	2.4
1968	2.4	2.4	2.4	2.4	2.4	2.4	2.5	2.6	2.6	2.5	2.6	2.6
1969	2.7	2.8	2.8	2.8	2.7	2.7	2.7	2.7	2.7	2.7	2.6	2.6
1970	2.5	2.5	2.3	2.3	2.1	2.1	2.1	2.0	2.0	1.9	1.8	1.9
1971	1.8	1.7	1.7	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9
1972	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.4	2.6
1973	2.7	2.9	2.8	2.8	2.7	2.7	2.8	2.7	2.6	2.8	2.8	2.8
1974	2.7	2.7	2.7	2.7	2.6	2.5	2.4	2.3	2.2	2.0	1.8	1.6
1975	1.4	1.3	1.2	1.2	1.3	1.3	1.4	1.4	1.3	1.5	1.6	1.6
1976	1.6	1.7	1.8	1.8	1.7	1.7	1.7	1.6	1.6	1.6	1.5	1.7
1977	1.8	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.9	2.1
1978	1.9	2.0	2.1	2.3	2.1	P2.1						
Layoffs												
1966	1.2	1.1	1.1	1.1	1.1	1.2	1.5	1.2	1.0	1.1	1.2	1.3
1967	1.4	1.5	1.6	1.5	1.4	1.3	1.4	1.3	1.3	1.3	1.2	1.2
1968	1.4	1.3	1.2	1.2	1.2	1.2	1.3	1.3	1.2	1.2	1.1	1.1
1969	1.0	1.1	1.1	1.0	1.1	1.3	1.1	1.2	1.2	1.3	1.3	1.4
1970	1.5	1.7	1.8	1.9	1.9	1.9	1.6	1.9	1.9	2.2	2.0	1.7
1971	1.7	1.5	1.5	1.5	1.6	1.5	1.5	2.0	1.7	1.5	1.4	1.3
1972	1.2	1.2	1.1	1.2	1.1	1.4	1.3	1.1	1.0	1.0	.9	.9
1973	.8	.7	.8	.8	.8	.8	.8	.9	.8	.8	.9	1.1
1974	1.3	1.2	1.1	1.1	1.1	1.2	1.2	1.4	1.4	1.9	2.4	2.5
1975	2.9	2.9	2.6	2.5	2.5	2.2	1.7	1.7	1.7	1.6	1.5	1.3
1976	1.1	1.0	1.2	1.3	1.3	1.4	1.4	1.5	1.5	1.5	1.3	1.2
1977	1.2	1.4	1.1	1.1	1.1	1.2	1.3	1.3	1.3	1.1	.9	1.0
1978	.9	.9	.9	.9	1.0	P1.0						

p=preliminary.

**ESTABLISHMENT DATA
STATE AND AREA LABOR TURNOVER**

D-4. Labor turnover rates in manufacturing for selected States and areas

[Per 100 employees]

State and area	Accession rates						Separation rates					
	Total		New hires		Recalls		Total		Quits		Layoffs	
	Apr. 1978	May 1978 ^P	Apr. 1978	May 1978 ^P	Apr. 1978	May 1978 ^P	Apr. 1978	May 1978 ^P	Apr. 1978	May 1978 ^P	Apr. 1978	May 1978 ^P
ALABAMA:												
Birmingham	2.7	3.0	1.6	2.0	0.8	0.7	2.3	2.5	1.1	1.2	0.4	0.5
Mobile	6.4	8.4	2.8	4.2	3.5	4.1	5.2	6.9	2.0	2.5	2.1	3.3
ALASKA	18.4	21.2	9.8	14.4	8.1	6.3	10.3	8.8	5.0	4.7	4.2	3.5
ARIZONA	4.7	6.7	4.0	5.7	.6	.7	3.7	4.9	2.4	3.3	.3	.4
Phoenix	4.9	6.7	4.1	5.9	.6	.5	3.9	4.9	2.5	3.5	.3	.4
ARKANSAS	6.9	8.0	5.9	6.9	.7	.8	6.6	6.8	4.9	4.7	.5	.9
Fort Smith	8.4	10.7	7.1	9.5	1.3	1.1	7.2	9.2	5.8	7.0	.2	.6
Little Rock-North Little Rock	5.9	5.6	5.4	5.2	.3	.3	5.8	6.1	3.7	3.4	.8	1.5
Pine Bluff	5.3	4.7	4.7	4.0	.3	.3	5.0	5.6	3.7	3.6	.2	1.3
COLORADO ²	5.0	6.3	4.4	5.6	.5	.7	4.1	4.4	2.8	2.9	.7	.5
Denver-Boulder	4.7	5.7	4.2	5.0	.3	.4	4.1	4.6	2.6	2.9	.6	.6
CONNECTICUT	2.3	3.0	1.8	2.3	.3	.4	2.3	2.1	1.2	1.2	.5	.3
Hartford	2.5	2.6	2.0	2.1	.3	.2	1.8	1.7	1.0	1.0	.2	.2
DELAWARE ¹	2.6	2.8	1.2	1.9	.4	.1	1.7	1.9	.8	.9	.2	.3
Wilmington ¹	2.3	2.6	1.0	1.6	.3	.1	1.5	1.6	.6	.6	.3	.4
FLORIDA	5.7	6.1	4.8	5.2	.6	.7	5.4	5.5	3.1	3.4	1.2	.9
Fort Lauderdale-Hollywood	6.3	7.0	6.0	6.6	.2	.3	6.5	5.9	4.6	3.9	.2	.6
Jacksonville	4.6	5.9	3.3	3.5	1.3	2.2	5.7	5.4	2.0	1.9	2.4	2.3
Miami	5.1	6.0	4.7	5.3	.3	.6	5.3	5.3	3.5	3.3	.9	1.0
Orlando	5.7	5.5	5.0	4.7	.4	.7	4.8	4.4	2.9	3.0	1.0	.6
Pensacola	1.5	2.6	1.3	1.7	.1	.6	1.3	2.1	.8	1.4	.1	.5
Tampa-St. Petersburg	7.2	7.7	5.7	7.3	1.3	.3	5.4	6.5	3.8	4.9	.4	.5
West Palm Beach-Boca Raton	3.3	4.0	3.0	3.6	.2	.4	4.3	3.2	1.7	2.3	1.9	(³)
GEORGIA	4.2	(*)	3.5	(*)	.4	(*)	4.3	(*)	2.8	(*)	.6	(*)
Atlanta ⁴	2.9	(*)	2.3	(*)	.4	(*)	3.4	(*)	1.8	(*)	.8	(*)
HAWAII ⁵	2.8	3.8	1.4	1.5	1.2	2.0	4.9	4.6	.8	1.0	3.4	2.9
IDAHO ⁶	9.0	9.8	6.3	7.3	2.6	2.0	5.8	6.5	4.3	4.8	.5	.5
ILLINOIS:												
Chicago SMSA	3.4	4.5	2.7	3.5	.5	.4	3.6	3.4	1.8	1.8	.5	.3
INDIANA	4.2	4.9	2.6	3.6	.9	.7	3.5	3.3	1.6	1.8	1.0	.4
Indianapolis ⁷	3.5	4.4	1.9	3.2	.4	.5	2.6	2.7	1.3	1.5	.4	.3
IOWA	3.0	4.2	1.9	2.7	.9	1.1	3.1	2.9	1.6	1.6	.9	.7
Cedar Rapids	2.2	3.9	1.3	2.2	.7	1.3	2.4	2.3	.9	1.1	1.1	.9
Des Moines	4.1	6.2	2.4	3.3	1.1	2.4	3.7	4.5	1.9	2.2	.3	.9
KANSAS	5.1	6.0	4.5	5.3	.5	.5	4.3	4.3	3.1	3.1	.3	.3
Topeka	4.9	5.4	3.8	5.0	1.0	.3	3.0	3.3	2.2	2.2	.1	.3
Wichita	5.5	5.4	4.7	4.5	.6	.6	4.1	3.7	3.2	2.8	.1	.1
KENTUCKY	3.6	3.9	2.3	2.9	1.0	.6	3.0	3.0	1.5	1.6	.7	.5
Louisville	3.4	3.4	2.2	2.2	.4	.6	2.6	2.4	1.1	1.1	.3	.3
LOUISIANA:												
New Orleans	4.2	8.8	3.5	5.8	.4	2.6	3.9	4.0	2.3	2.4	.5	.5
MAINE	5.8	7.6	4.4	6.0	1.1	1.2	5.3	5.8	3.2	3.7	1.2	1.1
Portland	3.7	5.4	3.2	4.7	.3	.4	3.8	4.5	2.4	2.6	.6	1.0
MARYLAND	3.3	3.4	1.8	2.1	1.3	1.1	2.7	2.5	1.1	1.1	.9	.8
Baltimore	3.6	3.1	1.8	1.9	1.6	1.0	2.7	2.5	1.0	.9	1.0	.9
MASSACHUSETTS	3.5	4.3	2.6	3.4	.6	.5	2.9	3.1	1.7	1.8	.5	.6
Boston	3.7	4.2	2.7	3.3	.8	.7	2.6	2.3	1.4	1.3	.4	.3
MICHIGAN	2.7	(*)	1.6	(*)	.6	(*)	2.6	(*)	.9	(*)	.9	(*)
Detroit	2.6	(*)	1.6	(*)	.4	(*)	2.8	(*)	1.0	(*)	1.1	(*)
Flint	2.3	(*)	1.7	(*)	.1	(*)	1.4	(*)	.5	(*)	.2	(*)
Grand Rapids	3.8	(*)	2.5	(*)	.9	(*)	2.6	(*)	1.3	(*)	.6	(*)
Lansing-East Lansing	5.6	(*)	3.4	(*)	1.5	(*)	4.4	(*)	1.6	(*)	1.9	(*)

See footnotes at end of table.

ESTABLISHMENT DATA
STATE AND AREA LABOR TURNOVER

D-4. Labor turnover rates in manufacturing for selected States and areas—Continued

[Per 100 employees]

State and area	Accession rates						Separation rates					
	Total		New hires		Recalls		Total		Quits		Layoffs	
	Apr. 1978	May 1978 ^P	Apr. 1978	May 1978 ^P	Apr. 1978	May 1978 ^P	Apr. 1978	May 1978 ^P	Apr. 1978	May 1978 ^P	Apr. 1978	May 1978 ^P
MINNESOTA	4.1	4.7	2.8	3.8	1.2	0.7	3.1	3.7	1.9	2.1	0.6	0.9
Minneapolis—St. Paul	3.5	4.1	2.4	3.5	.9	.4	2.5	2.6	1.6	1.8	.3	.2
MISSISSIPPI:												
Jackson	4.3	4.4	2.8	3.4	.2	.4	3.8	3.9	2.7	2.5	.4	.6
MISSOURI	3.6	4.5	2.8	3.6	.6	.6	3.4	3.4	1.9	2.0	.7	.6
Kansas City	3.1	3.8	2.7	3.2	.2	.3	3.2	2.9	1.7	1.7	.7	.4
St. Louis	3.2	3.6	2.1	2.7	.9	.6	2.5	2.4	1.1	1.2	.7	.5
MONTANA	3.3	3.4	2.1	3.0	(*)	(*)	2.6	4.4	1.6	1.6	.5	1.2
NEBRASKA	4.9	5.9	3.9	4.8	.9	1.0	4.3	3.8	3.1	2.8	.3	.3
NEVADA	7.7	10.7	7.1	10.1	.4	.4	7.4	9.3	4.6	7.2	.4	.4
NEW HAMPSHIRE	4.2	4.9	3.8	4.3	.2	.3	4.2	4.0	3.1	3.0	.3	.3
NEW JERSEY:												
Camden ⁸	4.2	3.4	2.6	2.4	1.0	.6	3.2	3.3	1.5	1.4	.7	1.0
Hackensack	4.1	4.9	3.3	3.5	.7	1.2	4.3	3.6	1.8	1.8	1.5	.8
Jersey City	3.7	3.8	2.3	3.1	1.2	.6	3.1	2.7	1.1	1.2	1.3	1.0
Newark	2.8	3.4	2.2	2.5	.4	.6	2.9	4.0	1.1	1.2	.9	2.0
New Brunswick—Perth Amboy—Sayreville	4.0	4.1	2.4	3.3	.5	.7	2.9	3.1	1.3	1.4	.7	.4
Paterson—Clifton—Passaic	3.8	4.7	2.5	3.5	1.0	1.0	2.7	3.2	1.2	1.6	.6	.7
Trenton	2.5	3.0	1.8	2.1	.4	.7	2.5	3.5	1.1	1.2	.6	1.6
NEW YORK	3.4	3.9	2.2	2.5	1.0	1.1	3.0	3.2	1.1	1.2	1.1	1.3
Albany—Schenectady—Troy	2.7	3.0	1.3	1.6	.6	.6	2.8	3.0	.8	1.3	.7	.6
Binghamton	2.6	2.8	2.0	2.1	.5	.4	1.9	2.1	1.1	1.3	.2	.2
Buffalo	2.3	3.1	1.0	1.7	1.0	1.1	2.1	2.1	.6	.6	.8	.7
Elmira	2.8	2.8	2.1	1.9	.4	.3	2.0	2.4	1.0	1.1	.1	.4
Monroe County ⁹	1.7	2.4	1.4	1.8	.2	.2	1.6	1.7	.7	.7	.4	.4
Nassau—Suffolk ¹⁰	4.7	5.1	3.8	4.2	.7	.7	3.8	4.3	2.2	2.4	.7	.9
New York and Nassau—Suffolk	4.3	4.3	2.9	2.9	1.3	1.3	3.8	4.3	1.3	1.3	1.7	2.1
New York SMSA ¹⁰	4.2	4.1	2.6	2.5	1.5	1.5	3.7	4.2	1.0	1.1	2.0	2.4
New York City ¹¹	4.4	4.4	2.7	2.6	1.6	1.7	4.0	4.6	1.0	1.1	2.3	2.7
Rochester	2.0	2.7	1.5	2.0	.4	.4	1.9	1.9	.8	.8	.6	.5
Syracuse	2.5	2.8	1.5	2.1	.8	.4	2.4	2.3	.8	1.0	1.0	.8
Utica—Rome	2.7	3.4	1.9	2.7	.5	.6	2.1	2.6	1.0	1.3	.4	.5
Westchester County ¹¹	2.7	2.6	2.2	2.0	.3	.4	2.0	2.2	.9	1.0	.4	.5
NORTH CAROLINA	4.5	5.5	3.8	4.7	.4	.4	4.5	4.9	3.3	3.5	.3	.4
Charlotte—Gastonia	5.9	6.2	5.2	5.3	.5	.5	5.7	6.0	4.4	4.6	.2	.2
Greensboro—Winston-Salem—High Point	3.8	5.2	3.3	4.4	.2	.2	3.9	4.4	3.0	3.3	.1	.2
NORTH DAKOTA	5.8	7.0	3.7	4.9	1.9	1.9	5.5	7.9	2.7	3.5	2.0	3.5
Fargo—Moorhead	5.4	7.3	3.3	2.7	2.1	4.1	7.3	5.8	2.3	1.8	3.9	3.0
OHIO	2.9	3.1	1.8	2.2	(*)	(*)	2.2	2.2	1.0	1.0	.5	.4
Akron	1.7	2.1	1.2	1.6	(*)	(*)	1.4	1.7	.6	.9	.3	.4
Canton	3.1	4.0	1.0	2.1	(*)	(*)	2.2	2.3	.8	.8	.4	.4
Cincinnati	3.0	3.0	2.2	2.3	(*)	(*)	2.1	2.0	1.1	1.0	.4	.5
Cleveland	2.6	2.9	1.8	2.2	(*)	(*)	2.5	2.4	1.2	1.2	.5	.3
Columbus	3.0	2.7	2.3	2.2	(*)	(*)	2.2	2.4	1.1	1.2	.4	.5
Dayton	2.5	3.0	1.6	2.2	(*)	(*)	2.0	2.0	1.0	1.0	.3	.2
Toledo	3.6	3.1	2.7	2.2	(*)	(*)	1.7	2.1	1.0	.8	.2	.4
Youngstown—Warren	3.5	3.5	1.3	1.6	(*)	(*)	2.1	2.3	.5	.5	.5	.6
OKLAHOMA	6.3	7.6	5.3	6.8	.8	.5	6.0	6.3	4.4	4.6	.5	.5
Oklahoma City ¹⁰	6.0	7.1	4.7	6.5	1.3	.6	5.3	5.6	4.1	4.2	.4	.5
Tulsa ¹²	6.9	7.1	5.9	6.2	.6	.4	6.1	5.8	3.9	3.9	.4	.6
OREGON ¹	4.8	5.2	3.9	4.1	.7	.9	4.2	4.3	2.5	2.6	.8	.7
Portland ¹	5.1	5.4	4.1	4.5	.9	.8	4.1	5.1	2.4	3.0	.7	1.1
PENNSYLVANIA	3.1	3.8	1.8	2.4	1.0	1.1	2.7	2.6	1.1	1.1	.9	.8
Allentown—Bethlehem—Easton	2.8	3.5	1.5	2.1	1.1	1.2	2.2	2.1	.9	.9	.6	.7
Altoona	3.2	3.5	1.5	1.5	1.4	1.6	2.4	1.7	.8	.7	1.4	.6
Erie	3.5	4.1	1.7	2.3	1.4	1.5	3.3	3.0	1.0	1.3	1.3	.9
Harrisburg	2.8	2.7	1.9	2.0	.7	.6	2.8	2.9	1.4	1.7	.7	.8
Johnstown	3.3	5.2	.9	1.5	2.3	3.6	3.7	3.0	.9	.8	2.0	.9
Lancaster	3.2	4.0	2.9	3.5	.2	.4	2.9	3.2	2.0	2.1	.5	.5

See footnotes at end of table.

**ESTABLISHMENT DATA
STATE AND AREA LABOR TURNOVER**

D-4. Labor turnover rates in manufacturing for selected States and areas—Continued

[Per 100 employees]

State and area	Accession rates						Separation rates					
	Total		New hires		Recalls		Total		Quits		Layoffs	
	Apr. 1978	May 1978 ^P	Apr. 1978	May 1978 ^P	Apr. 1978	May 1978 ^P	Apr. 1978	May 1978 ^P	Apr. 1978	May 1978 ^P	Apr. 1978	May 1978 ^P
PENNSYLVANIA—Continued												
Northeast Pennsylvania	3.2	3.8	1.9	1.9	0.9	1.5	3.3	2.4	1.2	1.0	1.5	0.7
Philadelphia SMSA	2.8	3.3	1.8	2.3	.7	.8	2.6	2.5	1.1	1.0	.9	.9
Pittsburgh	2.9	4.0	1.0	1.8	1.5	1.7	1.9	2.3	.4	.5	.9	1.0
Reading	2.9	3.7	2.2	2.8	.5	.7	3.7	2.8	1.6	1.5	1.4	.7
Scranton ¹³	2.4	3.6	1.5	1.3	.8	2.1	4.1	2.3	1.3	.8	2.4	1.1
Wilkes-Barre—Hazleton ¹³	3.4	3.3	2.1	2.1	.9	.7	2.1	2.2	1.0	1.2	.5	.4
Williamsport	2.4	3.6	1.4	2.5	.8	1.0	1.8	1.8	.8	.9	.6	.5
York	3.6	4.2	3.0	3.6	.5	.3	3.5	3.1	1.9	2.1	.9	.4
RHODE ISLAND												
Providence—Warwick—Pawtucket	5.4	5.4	4.2	4.5	.7	.6	4.8	4.6	3.1	2.7	.8	1.1
.....	5.2	5.4	4.2	4.5	.7	.6	4.5	4.6	2.9	2.8	.7	.9
SOUTH CAROLINA												
Charleston—North Charleston	4.0	5.2	3.4	4.4	.3	.4	3.9	4.3	2.7	2.9	.3	.3
Columbia	5.8	6.2	5.2	5.5	.4	.4	4.8	4.6	2.6	2.8	.8	.1
Greenville—Spartanburg	3.5	4.8	3.1	4.2	.3	.2	3.5	3.2	2.6	2.6	.2	(³)
.....	4.6	5.7	4.2	5.1	.3	.4	4.4	5.1	3.1	3.3	.2	.5
SOUTH DAKOTA												
Sioux Falls	4.9	6.1	4.0	5.4	.9	.6	3.9	3.4	2.5	2.7	.4	.2
.....	4.9	5.8	2.9	5.1	1.9	.7	2.7	3.2	2.1	2.7	.2	.3
TENNESSEE:												
Memphis	4.3	4.6	3.3	3.7	.7	.5	3.1	3.2	1.9	1.9	.2	.3
TEXAS:												
Dallas—Fort Worth	5.3	6.6	4.9	6.2	.3	.2	4.9	5.4	3.6	4.1	.2	.2
Houston	4.3	5.6	4.0	5.3	.2	.2	4.2	4.7	2.9	3.3	.2	.2
San Antonio	5.3	6.3	4.7	5.8	.3	.2	4.0	4.8	3.1	3.3	.1	.5
UTAH⁵												
Salt Lake City—Ogden ⁵	5.5	6.5	4.6	5.6	.6	.6	4.5	4.9	3.5	3.5	.2	.4
.....	5.7	5.6	5.1	5.2	.4	.2	4.6	4.8	3.4	3.4	.3	.5
VERMONT												
Burlington	3.7	4.8	2.6	4.0	.8	.5	3.0	3.2	1.8	1.8	.5	.6
Springfield	2.8	4.1	1.7	3.5	.6	.2	1.6	2.3	.6	.8	.6	1.2
.....	2.8	3.5	1.9	2.9	.8	.5	2.0	1.4	1.3	.9	.2	.1
VIRGINIA												
Richmond	3.3	4.0	2.7	3.1	.4	.5	3.6	3.4	1.9	2.1	.7	.4
.....	1.5	2.3	1.1	1.4	(³)	.3	3.0	1.6	.8	.7	1.4	.1
WASHINGTON:												
Seattle—Everett ¹⁴	4.0	(*)	2.8	(*)	.9	(*)	3.0	(*)	1.6	(*)	.8	(*)
WISCONSIN												
Milwaukee	3.2	4.2	2.0	3.1	.9	.7	2.7	2.7	1.3	1.4	.7	.4
.....	3.3	3.7	1.7	2.7	1.1	.5	2.4	2.2	.9	1.1	.6	.3
WYOMING												
.....	7.0	9.6	6.0	8.8	.9	.7	6.0	6.4	4.1	4.7	.4	.2

¹ Excludes canning and preserving.
² Based on the 1967 Standard Industrial Classification Manual.
³ Less than 0.05.
⁴ Excludes agricultural chemicals, and miscellaneous manufacturing.
⁵ Excludes canned fruits, vegetables, preserves, jams, and jellies.
⁶ Excludes canning and preserving, and sugar.
⁷ Excludes canning and preserving, and newspapers.
⁸ Subarea of Philadelphia, Pennsylvania Standard Metropolitan Statistical Area.
⁹ Subarea of Rochester Standard Metropolitan Statistical Area.

¹⁰ Area included in New York and Nassau-Suffolk combined SMSA's.
¹¹ Subarea of New York Standard Metropolitan Statistical Area.
¹² Excludes new-hire rate for transportation equipment.
¹³ Subarea of Northeast Pennsylvania Standard Metropolitan Statistical Area.
¹⁴ Excludes canning and preserving, printing and publishing.
p=preliminary.
* Not available.

SOURCE: Cooperating State agencies listed on inside back cover.

STATE AND AREA UNEMPLOYMENT DATA

E-1. Labor force and unemployment by State and selected metropolitan areas

(Numbers in thousands)

State and area	Labor force			Unemployment					
				Number			Percent of labor force		
	JUN. 1977P	MAY. 1978R	JUN. 1978P	JUN. 1977R	MAY. 1978R	JUN. 1978P	JUN. 1977R	MAY. 1978R	JUN. 1978P
ALABAMA	1,580.6	1,570.8	1,582.2	125.9	82.6	94.3	8.0	5.3	6.0
Birmingham	366.6	368.5	371.6	26.5	17.1	19.4	7.2	4.6	5.2
Huntsville	130.2	130.0	130.8	10.7	6.6	8.5	8.2	5.1	6.5
Mobile	179.7	178.1	180.8	15.6	10.3	11.8	8.7	5.8	6.5
Montgomery	110.1	112.9	115.8	7.3	5.5	6.4	6.7	4.9	5.5
Tuscaloosa	52.9	51.8	51.2	3.8	2.6	3.0	7.2	5.1	5.9
ALASKA	185.9	185.0	190.3	15.7	20.6	20.8	8.4	11.2	10.9
ARIZONA	973.5	972.1	975.8	84.2	52.4	58.8	8.7	5.4	6.0
Phoenix	575.2	578.8	583.9	48.2	27.4	31.1	8.4	4.7	5.3
Tucson	182.6	180.8	179.4	13.7	9.2	10.0	7.5	5.1	5.6
ARKANSAS	936.8	944.6	938.7	59.7	48.9	52.7	6.4	5.2	5.6
Fayetteville-Springdale	67.8	69.3	69.9	3.2	2.8	3.3	4.8	4.1	4.7
Fort Smith ¹	82.7	83.5	84.4	5.3	4.4	4.9	6.4	5.3	5.8
Little Rock-North Little Rock	179.9	180.1	181.1	8.6	6.9	7.7	4.8	3.8	4.3
Pine Bluff	35.8	37.0	35.9	2.5	2.2	2.4	7.0	5.9	6.6
CALIFORNIA ²	10,148.3	10,558.6	10,588.5	859.6	739.9	760.4	8.5	7.0	7.2
Anaheim-Santa Ana-Garden Grove	916.2	989.5	997.0	62.4	45.2	51.1	6.8	4.6	5.1
Bakersfield	173.8	171.9	179.1	14.1	14.1	13.0	8.1	8.2	7.2
Fresno	250.0	258.3	265.6	22.0	23.4	19.8	8.8	9.0	7.5
Los Angeles-Long Beach ³	3,345.0	3,380.0	3,375.0	242.0	242.0	248.0	7.2	7.2	7.4
Modesto	130.9	132.7	135.9	24.8	19.0	20.4	18.9	14.3	15.0
Oxnard-Simi Valley-Ventura	197.2	209.0	207.4	16.3	14.7	15.4	8.3	7.1	7.4
Riverside-San Bernardino-Ontario	510.4	540.0	544.2	45.6	34.1	37.2	8.9	6.3	6.8
Sacramento	421.3	449.8	449.5	41.9	32.8	33.7	9.9	7.3	7.5
Salinas-Seaside-Monterey	124.2	131.8	135.1	9.1	10.0	9.0	7.4	7.6	6.7
San Diego	638.7	679.0	673.5	62.2	43.8	47.4	9.7	6.5	7.0
San Francisco-Oakland	1,497.2	1,559.1	1,554.5	122.2	87.7	92.4	8.2	5.6	5.9
San Jose	608.8	658.8	662.2	50.2	38.4	42.3	8.3	5.8	6.4
Santa Barbara-Santa Maria-Lompoc	132.4	135.9	136.8	10.5	8.5	9.3	7.9	6.3	6.8
Santa Rosa	111.5	116.9	117.2	12.2	8.2	8.8	10.9	7.1	7.5
Stockton	157.9	169.5	165.4	16.9	18.3	18.0	10.7	10.8	10.9
Vallejo-Fairfield-Napa	116.4	122.4	123.2	10.0	7.7	7.7	8.6	6.3	6.3
COLORADO	1,287.1	1,266.0	1,302.2	83.1	69.2	76.7	6.5	5.5	5.9
Denver-Boulder	741.5	742.3	752.2	47.1	37.2	42.0	6.3	5.0	5.6
CONNECTICUT	1,535.6	1,521.5	1,536.3	111.2	68.5	67.8	7.2	4.5	4.4
Bridgeport	187.8	185.9	188.1	14.3	8.6	9.2	7.6	4.6	4.9
Hartford	366.9	363.4	366.6	25.7	14.8	14.3	7.0	4.1	3.9
New Britain	72.5	71.1	71.5	5.6	3.1	3.2	7.7	4.4	4.4
New Haven-West Haven	201.8	196.4	197.9	16.0	8.5	8.3	7.9	4.3	4.2
Stamford	112.1	117.0	119.3	5.9	4.0	4.4	5.3	3.4	3.7
Waterbury	109.9	108.5	109.8	9.1	6.1	6.1	8.3	5.7	5.6
DELAWARE	275.5	268.1	276.0	22.5	17.7	22.5	8.2	6.6	8.2
Wilmington ¹	240.8	231.6	N.A.	19.5	14.4	N.A.	8.1	6.2	N.A.
DISTRICT OF COLUMBIA	335.5	327.8	333.7	37.0	25.1	30.8	11.0	7.7	9.2
Washington SMSA ¹	1,573.3	1,549.2	1,580.6	91.6	66.4	77.4	5.8	4.3	4.9
FLORIDA ²	3,503.6	3,648.9	3,802.7	335.1	224.9	258.7	9.6	6.2	6.8
Fort Lauderdale-Hollywood	346.6	362.2	374.8	35.6	24.4	26.7	10.3	6.7	7.1
Jacksonville	294.5	301.9	317.4	24.2	17.3	21.2	8.2	5.7	6.7
Miami	678.6	695.9	728.2	70.6	48.6	54.2	10.4	7.0	7.4
Orlando	276.2	282.8	298.3	26.5	15.8	18.6	9.6	5.6	6.2
Pensacola	105.1	110.4	116.0	6.9	5.3	6.9	6.6	4.8	6.0
Tampa-St. Petersburg	541.4	563.3	584.7	52.4	32.1	35.5	9.7	5.7	6.1
West Palm Beach-Boca Raton	185.8	199.5	204.3	18.8	13.2	15.4	10.1	6.6	7.5
GEORGIA	2,292.0	N.A.	N.A.	173.6	N.A.	N.A.	7.6	N.A.	N.A.
Atlanta	877.9	N.A.	N.A.	68.6	N.A.	N.A.	7.8	N.A.	N.A.
Augusta ¹	121.8	N.A.	N.A.	9.9	N.A.	N.A.	8.2	N.A.	N.A.
Columbus ¹	87.6	N.A.	N.A.	7.7	N.A.	N.A.	8.8	N.A.	N.A.
Macon	105.2	N.A.	N.A.	9.3	N.A.	N.A.	8.8	N.A.	N.A.
Savannah	88.7	N.A.	N.A.	7.6	N.A.	N.A.	8.5	N.A.	N.A.

See footnotes at end of table.

STATE AND AREA UNEMPLOYMENT DATA

E-1. Labor force and unemployment by State and selected metropolitan areas—Continued

(Numbers in thousands)

State and area	Labor force			Unemployment					
				• Number			Percent of labor force		
	JUN. 1977R	MAY. 1978R	JUN. 1978P	JUN. 1977R	MAY. 1978R	JUN. 1978P	JUN. 1977R	MAY. 1978R	JUN. 1978P
HAWAII	414.0	402.0	410.4	31.3	25.2	30.1	7.5	6.3	7.3
Honolulu	327.1	317.9	323.6	24.1	19.4	23.0	7.4	6.1	7.1
IDAHO	403.5	412.3	427.9	21.5	19.0	21.1	5.3	4.6	4.9
Boise City	79.5	87.0	89.2	2.9	2.6	2.8	3.6	3.0	3.2
ILLINOIS ²	5,348.3	5,274.5	5,407.9	394.8	319.8	332.7	7.4	6.1	6.2
Bloomington—Normal	59.5	61.3	60.1	3.1	2.5	2.7	5.2	4.1	4.6
Champaign—Urbana—Rantoul	73.9	76.3	74.4	4.3	3.5	3.9	5.9	4.6	5.3
Chicago	3,407.7	3,345.1	3,438.7	246.1	197.7	207.9	7.2	5.9	6.0
Davenport—Rock Island—Moline ¹	177.4	179.4	183.3	10.0	13.3	9.8	5.6	7.4	5.4
Decatur	61.4	60.6	61.5	5.1	3.9	4.0	8.2	6.5	6.6
Peoria	173.3	173.9	178.1	11.3	8.6	9.4	6.5	5.0	5.3
Rockford	134.5	133.2	137.6	9.5	6.8	7.5	7.1	5.1	5.4
Springfield	96.6	96.7	99.1	5.9	5.3	5.6	6.1	5.5	5.7
INDIANA	2,501.4	2,541.7	2,570.5	144.8	122.9	139.5	5.8	4.9	5.4
Evansville ¹	135.9	138.4	139.8	6.7	5.2	5.8	4.9	3.8	4.1
Fort Wayne	179.4	182.5	185.3	8.8	7.5	9.0	4.9	4.1	4.9
Gary—Hammond—East Chicago	288.6	284.8	292.2	18.5	14.3	16.7	6.4	5.0	5.7
Indianapolis	555.3	565.5	570.0	33.3	26.0	28.9	6.0	4.6	5.1
Muncie	56.0	57.8	56.9	2.8	4.2	4.2	5.0	7.2	7.4
South Bend	133.1	135.7	137.2	7.8	5.8	7.8	5.9	4.3	5.7
Terre Haute	75.3	78.1	79.1	4.1	4.0	4.3	5.4	5.1	5.5
IOWA	1,439.3	1,455.6	1,468.5	58.6	51.2	56.1	4.1	3.5	3.8
Cedar Rapids	84.5	86.1	86.6	4.0	2.7	3.1	4.7	3.2	3.5
Des Moines	173.2	178.4	180.1	7.4	6.3	7.3	4.3	3.5	4.1
Dubuque	45.0	46.0	46.1	2.5	2.2	2.6	5.5	4.9	5.7
Sioux City ¹	60.1	59.4	59.2	3.0	2.7	3.1	5.0	4.5	5.3
Waterloo—Cedar Falls	65.5	67.4	66.2	3.1	2.9	3.2	4.7	4.3	4.9
KANSAS	1,147.6	1,143.2	1,165.0	47.5	34.1	38.1	4.1	3.0	3.3
Topeka	96.0	94.5	96.7	4.0	3.0	3.4	4.2	3.2	3.5
Wichita	211.2	207.8	214.1	11.0	7.0	8.4	5.2	3.4	3.9
KENTUCKY	1,544.1	1,548.6	1,591.9	68.1	61.3	73.3	4.4	4.0	4.6
Lexington—Fayette	157.5	159.4	163.7	4.9	4.6	5.5	3.1	2.9	3.3
Louisville ¹	400.0	413.2	420.3	20.7	18.5	20.5	5.2	4.5	4.9
LOUISIANA	1,579.8	1,628.1	1,628.4	118.2	122.9	131.9	7.5	7.5	8.1
Baton Rouge	199.8	203.7	203.5	14.9	14.7	15.9	7.4	7.2	7.8
Lake Charles	66.8	66.3	66.8	5.8	6.7	6.9	8.7	10.1	10.4
Monroe	51.1	53.7	52.6	4.1	4.0	4.6	8.0	7.4	8.8
New Orleans	464.1	469.3	470.1	37.4	34.1	36.1	8.1	7.3	7.7
Shreveport	147.4	151.7	153.3	9.5	10.2	11.3	6.4	6.7	7.4
MAINE	481.1	469.9	487.6	38.4	26.8	26.9	8.0	5.7	5.5
Lewiston—Auburn	36.8	37.0	37.2	2.6	1.7	1.7	7.2	4.5	4.6
Portland	85.0	85.0	87.4	6.4	3.8	4.1	7.5	4.5	4.7
MARYLAND	1,975.9	2,037.0	2,069.8	117.1	103.8	108.0	5.9	5.1	5.2
Baltimore	974.3	1,044.6	1,060.2	60.9	57.1	61.1	6.3	5.5	5.8
MASSACHUSETTS ²	2,820.7	2,805.9	2,939.6	218.3	152.0	203.4	7.7	5.4	6.9
Boston	1,354.4	1,345.5	1,413.5	104.2	72.5	100.4	7.7	5.4	7.1
Brockton	78.8	78.7	81.8	7.3	4.3	5.5	9.2	5.4	6.7
Fall River ¹	75.9	77.2	80.0	5.9	4.2	5.3	7.9	5.5	6.7
Lawrence—Haverhill ¹	N.A.	138.2	143.6	N.A.	7.6	10.0	N.A.	5.5	7.0
Lowell ¹	109.7	110.4	116.3	9.0	5.9	8.4	8.2	5.4	7.2
New Bedford	83.2	82.0	85.4	7.7	5.4	6.4	9.3	6.6	7.5
Springfield—Chicopee—Holyoke ¹	272.1	276.8	282.4	18.5	14.2	17.8	6.8	5.1	6.3
Worcester	195.5	195.2	202.9	12.9	8.8	11.9	6.6	4.5	5.9
MICHIGAN ²	4,171.7	4,154.5	4,239.6	352.1	272.3	298.7	8.4	6.6	7.0
Ann Arbor	129.0	131.3	133.6	8.8	6.7	7.4	6.9	5.1	5.6
Bettie Creek	82.8	81.2	82.6	7.5	5.4	5.6	9.1	6.7	6.8
Bay City	53.5	53.7	54.8	4.8	3.5	3.6	9.0	6.4	6.6
Detroit	1,990.9	1,975.5	2,014.8	161.6	121.9	138.3	8.1	6.2	6.9
Flint	218.3	221.5	226.2	19.3	15.2	16.6	8.8	6.8	7.3

See footnotes at end of table.

STATE AND AREA UNEMPLOYMENT DATA

E-1. Labor force and unemployment by State and selected metropolitan areas—Continued

(Numbers in thousands)

State and area	Labor force			Unemployment					
				Number			Percent of labor force		
	JUN. 1977R	MAY. 1978R	JUN. 1978P	JUN. 1977R	MAY. 1978R	JUN. 1978P	JUN. 1977R	MAY. 1978R	JUN. 1978P
MICHIGAN—Continued									
Grand Rapids	284.1	286.5	292.2	19.5	13.6	15.8	6.9	4.7	5.4
Jackson	66.0	64.1	66.0	5.8	3.9	4.1	8.9	6.1	6.2
Kalamazoo—Portage	129.8	129.3	131.7	9.1	7.3	8.0	7.0	5.6	6.0
Lansing—East Lansing	224.2	225.6	228.4	17.6	12.9	13.9	7.9	5.7	6.1
Muskegon—Norton Shores—Muskegon Heights	77.0	75.8	78.3	7.4	5.7	6.6	9.6	7.5	8.4
Saginaw	101.3	103.1	105.3	8.0	5.6	6.4	7.9	5.4	6.1
MINNESOTA									
Duluth—Superior	1,981.8	1,979.6	2,032.3	101.6	68.5	78.4	5.1	3.5	3.9
Minneapolis—St. Paul	115.8	N.A.	N.A.	8.5	N.A.	N.A.	7.3	N.A.	N.A.
.....	1,021.5	1,050.3	1,066.6	45.4	31.2	35.9	4.4	3.0	3.4
MISSISSIPPI									
Jackson	984.4	981.6	977.7	79.8	65.8	80.6	8.1	6.7	8.2
.....	142.1	140.7	142.0	9.0	7.4	8.9	6.3	5.3	6.3
MISSOURI									
Kansas City ¹	2,266.9	2,254.9	2,275.7	134.5	103.9	108.5	5.9	4.6	4.8
St. Joseph	664.9	675.9	683.7	38.7	27.6	28.8	5.8	4.1	4.2
St. Louis ¹	46.4	44.9	45.0	2.9	2.0	2.4	6.3	4.5	5.3
Springfield	1,080.9	1,067.4	1,084.4	77.2	54.6	57.3	7.1	5.1	5.3
.....	98.3	99.3	99.9	4.7	3.7	4.0	4.8	3.7	4.0
MONTANA									
Billings	356.1	361.7	373.4	22.5	20.6	24.7	6.3	5.7	6.6
Great Falls	52.7	52.6	51.7	2.3	2.2	2.7	4.4	4.3	5.2
.....	36.0	35.1	35.3	2.1	2.1	2.8	5.9	6.0	8.0
NEBRASKA									
Lincoln	785.2	772.4	787.1	29.2	18.1	21.8	3.7	2.3	2.8
Omaha ¹	106.8	107.6	107.8	3.0	2.1	2.5	2.8	1.9	2.3
.....	282.9	279.3	283.5	15.7	9.1	11.3	5.5	3.3	4.0
NEVADA									
Las Vegas	324.4	338.7	342.4	23.1	13.4	14.5	7.1	4.0	4.2
Reno	175.0	180.5	181.8	14.3	8.2	9.1	8.2	4.6	5.0
.....	91.6	100.1	100.6	4.6	2.6	2.3	5.0	2.6	2.3
NEW HAMPSHIRE									
Manchester	414.5	423.5	437.7	24.0	16.3	19.5	5.8	3.9	4.5
.....	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
NEW JERSEY²									
Atlantic City	3,406.8	3,343.1	3,427.9	315.0	244.4	259.6	9.2	7.3	7.6
Jersey City	86.9	82.0	N.A.	8.9	8.3	N.A.	10.2	10.1	N.A.
Long Branch—Asbury Park	259.1	248.6	N.A.	34.4	28.8	N.A.	13.3	11.6	N.A.
Newark	225.8	219.0	N.A.	20.1	14.7	N.A.	8.9	6.7	N.A.
New Brunswick—Perth Amboy—Sayreville	936.0	933.2	N.A.	85.1	64.6	N.A.	9.1	6.9	N.A.
Paterson—Clifton—Passaic	300.0	304.3	N.A.	26.3	20.4	N.A.	8.8	6.7	N.A.
Trenton	214.6	209.3	N.A.	23.9	17.9	N.A.	11.1	8.5	N.A.
Vineland—Millville—Bridgeton	157.1	156.0	N.A.	10.3	8.9	N.A.	6.6	5.7	N.A.
.....	58.6	59.3	N.A.	6.8	5.7	N.A.	11.5	9.5	N.A.
NEW MEXICO									
Albuquerque	516.9	528.2	539.9	41.3	25.1	29.4	8.0	4.8	5.4
.....	188.6	194.1	197.4	16.2	8.8	11.2	8.6	4.6	5.6
NEW YORK²									
Albany—Schenectady—Troy	7,889.6	7,763.5	7,918.1	688.6	580.7	579.6	8.7	7.5	7.3
Binghamton ¹	364.4	359.8	365.2	25.7	21.8	21.8	7.1	6.0	6.0
Buffalo	137.2	132.9	137.0	9.4	7.9	8.0	6.9	6.0	5.8
Elmira	573.8	557.1	568.6	47.3	45.2	43.8	8.2	8.1	7.7
Nassau—Suffolk	41.1	39.7	40.6	4.2	3.1	3.2	10.3	7.8	7.8
New York	1,245.5	1,233.4	1,271.2	109.2	84.1	84.8	8.8	6.8	6.7
New York City ²	3,648.5	3,611.5	3,656.5	335.8	287.9	293.3	9.2	8.0	8.0
Poughkeepsie	3,063.0	3,041.0	3,075.0	291.0	250.0	259.0	9.5	8.2	8.4
Rochester	99.0	99.1	101.6	5.9	5.3	5.1	6.0	5.4	5.0
Syracuse	460.5	445.8	456.9	32.5	27.7	26.7	7.1	6.2	5.8
Utica—Rome	290.2	289.9	294.8	23.0	18.8	19.0	7.9	6.5	6.5
.....	140.2	134.0	137.8	12.8	9.2	8.9	9.1	6.8	6.5
NORTH CAROLINA									
Asheville	2,677.7	2,679.6	2,705.3	164.6	102.8	104.3	6.1	3.8	3.9
Charlotte—Gastonia	81.5	82.9	84.9	4.2	2.6	2.8	5.1	3.1	3.2
Greensboro—Winston-Salem—High Point	324.1	329.4	331.3	17.3	8.1	10.0	5.3	2.5	3.0
Raleigh—Durham	406.4	411.2	411.9	22.7	12.5	13.0	5.6	3.0	3.1
.....	258.5	266.4	269.4	12.3	6.1	7.4	4.8	2.3	2.7
NORTH DAKOTA									
Fargo—Moorehead	305.7	303.9	310.4	14.8	11.1	13.5	4.8	3.7	4.4
.....	68.5	70.9	71.8	2.7	2.1	3.0	3.9	2.9	4.2

See footnotes at end of table.

STATE AND AREA UNEMPLOYMENT DATA

E-1. Labor force and unemployment by State and selected metropolitan areas—Continued

(Numbers in thousands)

State and area	Labor force			Unemployment					
				Number			Percent of labor force		
	JUN. 1977R	MAY. 1978R	JUN. 1978P	JUN. 1977R	MAY. 1978R	JUN. 1978P	JUN. 1977R	MAY. 1978R	JUN. 1978P
OHIO ²	4,866.6	4,852.4	4,954.6	344.4	246.6	268.1	7.1	5.1	5.4
Akron	295.8	294.1	300.8	21.5	15.8	17.7	7.3	5.4	5.9
Canton	175.5	173.1	176.0	13.3	9.1	9.1	7.6	5.2	5.1
Cincinnati ¹	627.3	627.5	640.7	39.6	27.8	31.9	6.3	4.4	5.0
Cleveland	912.4	903.7	923.4	63.0	41.2	45.0	6.9	4.6	4.9
Columbus	516.1	514.0	525.3	35.0	23.6	25.5	6.8	4.6	4.9
Dayton	370.9	372.4	379.6	22.6	16.7	17.8	6.1	4.5	4.7
Toledo ¹	359.8	361.1	369.1	27.7	21.2	23.0	7.7	5.9	6.2
Youngstown—Warren	235.7	234.2	236.9	19.7	17.0	17.8	8.4	7.3	7.5
OKLAHOMA	1,260.6	1,267.4	1,274.6	70.1	51.4	53.9	5.6	4.1	4.2
Oklahoma City	369.6	388.1	391.5	19.5	13.3	14.8	5.3	3.4	3.8
Tulsa	299.9	297.8	299.4	16.6	11.8	12.4	5.5	4.0	4.2
OREGON	1,155.9	1,166.6	1,191.9	82.3	58.8	60.0	7.1	5.0	5.0
Eugene—Springfield	120.8	120.4	122.4	9.9	6.9	7.3	8.2	5.7	6.0
Portland ¹	551.4	567.3	576.8	36.6	25.0	26.3	6.6	4.4	4.6
Salem	108.1	108.5	111.4	7.5	5.7	6.0	7.0	5.3	5.4
PENNSYLVANIA ²	5,257.4	5,150.6	5,316.1	426.6	299.1	348.5	8.1	5.8	6.6
Allentown—Bethlehem—Easton ¹	303.6	294.5	N.A.	20.2	15.0	N.A.	6.7	5.1	N.A.
Altoona	57.8	56.4	58.6	4.5	3.7	4.2	7.8	6.6	7.1
Erie	122.8	121.1	124.8	9.8	7.0	8.0	8.0	5.8	6.4
Harrisburg	211.8	208.8	214.6	12.8	8.7	10.6	6.0	4.2	5.0
Johnstown	108.6	103.1	107.6	6.8	8.9	9.5	6.3	8.6	8.9
Lancaster	165.1	167.4	171.8	8.8	6.8	7.8	5.3	4.0	4.6
Northeast Pennsylvania	275.5	263.8	271.5	27.2	18.2	20.3	9.9	6.9	7.5
Philadelphia ¹	2,099.6	2,045.9	N.A.	201.5	134.1	N.A.	9.6	6.6	N.A.
Pittsburgh	981.8	967.1	999.4	67.5	49.0	57.2	6.9	5.1	5.7
Reading	147.9	146.9	150.5	10.2	7.6	8.2	6.9	5.1	5.4
Williamsport	51.0	49.7	51.6	4.8	3.0	3.3	9.4	6.0	6.5
York	159.2	159.3	166.2	10.6	6.9	8.4	6.7	4.3	5.1
RHODE ISLAND	445.0	436.1	438.8	39.1	27.7	29.1	8.9	6.3	6.6
Providence—Warwick—Pawtucket ¹	447.2	442.0	445.5	39.0	27.6	29.7	8.7	6.3	6.7
SOUTH CAROLINA	1,325.3	1,307.3	1,335.5	104.5	70.0	82.5	7.9	5.4	6.2
Charleston—North Charleston	150.8	148.9	152.7	13.1	8.8	11.1	8.7	5.9	7.3
Columbia	165.5	172.8	170.4	10.9	6.9	7.9	6.6	4.0	4.7
Greenville—Spartanburg	260.3	255.3	259.7	17.8	11.8	13.0	6.8	4.6	5.0
SOUTH DAKOTA	340.3	334.9	349.5	11.5	8.8	11.3	3.4	2.6	3.2
Sioux Falls	56.9	58.7	61.2	1.6	1.2	1.9	2.8	2.0	3.1
TENNESSEE	1,943.0	1,902.2	1,924.3	135.5	92.3	100.5	7.0	4.9	5.2
Chattanooga ¹	186.7	N.A.	N.A.	12.0	N.A.	N.A.	6.4	N.A.	N.A.
Knoxville	202.7	193.9	197.7	11.9	7.7	8.0	5.9	4.0	4.1
Memphis ¹	381.7	368.4	373.3	29.3	18.1	20.7	7.7	4.9	5.5
Nashville—Davidson	385.4	384.7	390.0	20.3	13.6	17.7	5.3	3.5	4.5
TEXAS ²	5,869.5	5,936.7	6,125.1	333.9	247.1	319.8	5.7	4.2	5.2
Amarillo	85.3	86.0	90.2	3.4	2.7	3.4	4.0	3.1	3.8
Austin	225.9	235.3	241.9	10.8	6.7	9.0	4.8	2.8	3.7
Beaumont—Port Arthur—Orange	168.3	165.1	169.7	12.6	10.4	12.1	7.5	6.3	7.1
Corpus Christi	128.0	130.3	132.4	9.7	7.1	8.3	7.6	5.5	6.3
Dallas—Fort Worth	1,339.2	1,365.9	1,413.2	65.3	49.2	64.1	4.9	3.6	4.5
El Paso	166.1	158.4	164.4	21.5	13.2	16.0	12.9	8.3	9.7
Galveston—Texas City	89.4	88.6	93.2	7.4	5.0	6.1	8.3	5.6	6.5
Houston	1,289.7	1,330.3	1,380.9	61.7	45.7	63.7	4.8	3.4	4.6
Lubbock	96.6	101.0	101.5	4.0	3.3	4.4	4.2	3.3	4.4
San Antonio	398.1	399.8	417.7	31.2	22.5	30.1	7.8	5.6	7.2
Waco	76.1	77.0	79.4	4.0	3.1	4.1	5.3	4.0	5.2
Wichita Falls	59.8	60.0	61.8	2.5	1.9	2.4	4.2	3.1	3.9
UTAH	537.4	536.4	545.5	30.2	20.0	22.1	5.6	3.7	4.1
Salt Lake City—Ogden	355.9	356.6	360.5	20.2	13.5	14.9	5.7	3.8	4.1
VERMONT	228.7	233.2	237.8	15.7	13.3	13.6	6.9	5.7	5.7

See footnotes at end of table.

STATE AND AREA UNEMPLOYMENT DATA

E-1. Labor force and unemployment by State and selected metropolitan areas—Continued

(Numbers in thousands)

State and area	Labor force			Unemployment					
				Number			Percent of labor force		
	JUN. 1977R	MAY. 1978R	JUN. 1978P	JUN. 1977R	MAY. 1978R	JUN. 1978P	JUN. 1977R	MAY. 1978R	JUN. 1978P
VIRGINIA	2,422.2	2,443.7	2,491.4	132.1	108.9	122.6	5.5	4.5	4.9
Lynchburg	70.1	70.9	72.1	3.4	2.7	3.3	4.9	3.8	4.5
Newport News—Hampton	156.0	160.3	165.3	9.6	8.0	9.7	6.2	5.0	5.9
Norfolk—Virginia Beach—Portsmouth ¹	313.0	318.1	326.7	18.9	16.2	19.1	6.0	5.1	5.9
Richmond	314.5	321.2	325.4	13.8	10.7	12.2	4.4	3.3	3.7
Roanoke	109.9	112.5	114.4	5.5	5.0	5.3	5.0	4.4	4.6
WASHINGTON	1,686.8	1,733.5	1,779.3	152.8	105.7	116.5	9.1	6.1	6.5
Seattle—Everett	709.3	746.4	763.6	60.9	39.8	44.8	8.6	5.3	5.9
Spokane	133.7	138.5	140.6	11.5	7.2	8.3	8.6	5.2	5.9
Tacoma	159.6	163.0	166.2	16.1	11.4	12.8	10.1	7.0	7.7
WEST VIRGINIA	697.2	695.4	705.5	39.6	31.8	31.2	5.7	4.6	4.4
Charleston	114.3	112.4	113.7	4.5	3.6	3.5	4.0	3.2	3.1
Huntington—Ashland ¹	114.6	111.7	113.4	6.4	5.1	5.2	5.6	4.6	4.6
Parkersburg—Marietta ¹	63.5	62.7	63.7	3.7	2.4	2.7	5.7	3.9	4.2
Wheeling ¹	76.0	75.5	76.2	3.6	3.4	3.2	4.8	4.4	4.2
WISCONSIN	2,251.5	2,272.6	2,323.6	106.3	91.6	108.9	4.7	4.0	4.7
Appleton—Oshkosh	141.5	136.9	140.8	6.4	5.1	6.4	4.5	3.8	4.6
Green Bay	87.2	82.5	85.4	4.3	3.5	4.1	4.9	4.3	4.8
Kenosha	62.9	58.2	60.9	3.7	4.6	5.4	5.9	7.9	8.8
La Crosse	43.0	44.6	44.7	2.0	1.6	1.9	4.7	3.6	4.3
Madison	171.9	169.9	171.3	6.4	5.1	5.9	3.7	3.0	3.4
Milwaukee	719.2	691.2	707.3	30.6	24.3	29.2	4.3	3.5	4.1
Racine	90.9	88.1	91.8	4.3	3.6	5.2	4.7	4.0	5.7
WYOMING	208.4	208.0	224.0	7.2	5.5	6.7	3.5	2.6	3.0

¹ Includes interstate portion of area located in adjacent State.

² Data are obtained directly from the Current Population Survey. (See "Explanatory Notes" for State and Area Unemployment Data in Employment and Earnings, monthly.)

p=preliminary.

r=revised.

N.A.=not available.

NOTE: Estimates have been benchmarked to 1977 Current Population Survey annual averages. Data refer to place of residence.

SOURCE: Current Population Survey and Cooperating State Employment Security Agencies listed on inside back cover.

Labor force and unemployment estimates for counties, cities, and other small areas have been prepared for administration of various Federal economic assistance programs and may be ordered from the National Technical Information Service. When ordering, please specify "CETA Area Employment and Unemployment," "State, County, and Selected City Employment and Unemployment," or "Unemployment Rates for States and Local Governments, First Quarter 1978." A complete set of price schedules and publications is available from the National Technical Information Service, U.S. Department of Commerce, 5285 Port Royal Road, Springfield Virginia, 22161.

Explanatory Notes

These explanatory notes provide information on the concepts, methodology, and scope of Household Data (A tables), Establishment Data (B, C, and D tables), and State and Area Unemployment Data (E table) published in *Employment and Earnings*.

Introduction

The statistics in this periodical are compiled from two major sources: (1) Household interviews, and (2) reports from employers.

Data based on household interviews are obtained from a sample survey of the population 16 years of age and over. The survey is conducted each month by the Bureau of the Census for the Bureau of Labor Statistics and provides comprehensive data on the labor force, the employed and the unemployed, including such characteristics as age, sex, race, family relationship, marital status, occupation, and industry attachment. The survey also provides data on the characteristics and past work experience of those not in the labor force. The information is collected by trained interviewers from a sample of about 56,000 households, representing 614 areas in 1,113 counties and independent cities, with coverage in 50 States and the District of Columbia. The data collected are based on the activity or status reported for the calendar week including the 12th of the month.

Data based on establishment records are compiled each month from mail questionnaires by the Bureau of Labor Statistics, in cooperation with State agencies. The establishment survey is designed to provide industry information on nonagricultural wage and salary employment, average weekly hours, average hourly and weekly earnings, and labor turnover for the Nation, States, and metropolitan areas. The employment, hours, and earnings series are based on payroll reports from a sample of establishments employing over 30 million nonagricultural wage and salary workers. The data relate to all workers, full- or part-time, who received pay during the payroll period which includes the 12th of the month. Based on a somewhat smaller sample, labor turnover data relate to actions occurring during the entire month.

RELATION BETWEEN THE HOUSEHOLD AND ESTABLISHMENT SERIES

The household and establishment data supplement one another, each providing significant types of information that the other cannot suitably supply. Population characteristics, for example, are readily obtained only from the household survey whereas detailed industrial classifications can be reliably derived only from establishment reports.

Data from these two sources differ from each other because of differences in definition and coverage, sources of information, methods of collection, and estimating procedures. Sampling variability and response errors are additional reasons for discrepancies. The major factors which have a differential effect on levels and trends of the two series are as follows.

Employment

Coverage. The household survey definition of employment comprises wage and salary workers (including domestics and other private household workers), self-employed persons, and unpaid workers who worked 15 hours or more during the survey week in family-operated enterprises. Employment in both agricultural and nonagricultural industries is included. The payroll survey covers only wage and salary employees on the payrolls of nonagricultural establishments.

Multiple jobholding. The household approach provides information on the work status of the population without duplication, since each person is classified as employed, unemployed or not in the labor force. Employed persons holding more than one job are counted only once and are classified according to the job at which they worked the greatest number of hours during the survey week. In the figures based on establishment records, persons who worked in more than one establishment during the reporting period are counted each time their names appear on payrolls.

Unpaid absences from jobs. The household survey includes among the employed all persons who had jobs but were not at work during the survey week—that is, were not working but had jobs from which they were temporarily absent because of illness, bad weather, vacation, labor-management dispute, or because they were taking time off for various other reasons, even if they were not paid by their employers for the time off. In the figures based on payroll reports, persons on leave paid for by the company are included, but not those on leave without pay for the entire payroll period.

For a comprehensive discussion of the differences between household and establishment survey employment data, see Gloria P. Green's article "Comparing Employment Estimates from Household and Payroll Surveys," *Monthly Labor Review*, December 1969. Reprints of this article are available upon request from the Bureau of Labor Statistics.

Hours of work

The household survey measures hours actually worked whereas the payroll survey measures hours paid for by employers. In the household survey data, all persons with a job but not at work are excluded from the hours distributions and the computations of average hours. In the payroll survey, employees on paid vacation, paid holiday, or paid sick leave are included and assigned the number of hours for which they were paid during the reporting period.

COMPARABILITY OF THE HOUSEHOLD DATA WITH OTHER SERIES

Unemployment insurance data. The unemployed total from the household survey includes all persons who did not have a job at all during the survey week and were looking for work or were waiting to be called back to a job from which they had been laid off, regardless of whether or not they were eligible for unemployment insurance. Figures on unemployment insurance claims, prepared by the Employment and Training Administration of the Department of Labor, exclude persons who have exhausted their benefit rights, new workers who have not earned rights to unemployment insurance, and persons losing jobs not covered by unemployment insurance systems (agriculture, domestic service, self-employment, unpaid family work, and religious organizations). Beginning in January 1978, coverage was extended to include domestic workers whose employers paid \$1,000 or more in wages in any calendar quarter, agricultural employees whose employers engaged 10 or more workers in 20 weeks or paid a total of \$20,000 or more in wages in any calendar quarter, and almost all State and local government employees.

In addition, the qualifications for drawing unemployment compensation differ from the definition of unemployment used in the household survey. For example, persons with a job but not at work and persons working only a few hours during the week are sometimes eligible for unemployment compensation but are classified as employed rather than unemployed in the household survey.

For an examination of the similarities and differences between State insured unemployment and total unemployment, see "Measuring Total and State Insured Unemployment" by Gloria P. Green in the June 1971 issue of the *Monthly Labor Review*. Reprints of this article may be obtained upon request.

Agricultural employment estimates of the Department of Agriculture. The principal differences in coverage are the inclusion of persons under 16 in the Statistical Research Service (SRS) series and the treatment of dual jobholders who are counted more than once if they work on more than one farm during the reporting period. There are also wide differences in sampling techniques and collecting and estimating methods, which cannot be readily measured in terms of impact on differences in level and trend of the two series.

COMPARABILITY OF THE PAYROLL EMPLOYMENT DATA WITH OTHER SERIES

Statistics on manufactures and business, Bureau of the Census. BLS establishment statistics on employment differ from employment counts derived by the Bureau of the Census from its censuses or annual sample surveys of manufacturing establishments and the censuses of business establishments. The major reasons for some noncomparability are different treatment of business units considered parts of an establishment, such as central administrative offices and auxiliary units, the industrial classification of establishments, and different reporting terms by multiunit companies. There are also differences in the scope of the industries covered, e.g., the Census of Business excludes professional services, public utilities, and financial establishments, whereas these are included in BLS statistics.

County Business Patterns. Data in County Business Patterns (CBP), published by the Bureau of the Census, U.S. Department of Commerce, differ from BLS establishment statistics in the treatment of central administrative offices and auxiliary units. Differences may also arise because of industrial classification and reporting practices. In addition, CBP excludes interstate railroads and government, and coverage is incomplete for some of the nonprofit activities.

Employment covered by State unemployment insurance programs. Most nonagricultural wage and salary workers are covered by the unemployment insurance programs. Beginning in January 1972, coverage was expanded to include employees of small firms and selected nonprofit activities who had not been covered previously. However, certain activities, such as interstate railroads, parochial schools, and churches are not covered by unemployment insurance whereas these are included in BLS establishment statistics. Beginning in January 1978, coverage was extended to include domestic workers whose employers paid \$1,000 or more in wages in any calendar quarter, agricultural employees whose employers engaged 10 or more workers in 20 weeks or paid a total of \$20,000 or more in wages in any calendar quarter, and almost all State and local government employees.

Household data

(A tables)

COLLECTION COVERAGE

Statistics on the employment status of the population, the personal, occupational, and other characteristics of the employed, the unemployed and persons not in the labor force, and related data are compiled for the BLS by the Bureau of the Census in its Current Population Survey (CPS). A detailed description of this survey appears in *Concepts and Methods Used in Labor Force Statistics Derived from the Current Population Survey*, BLS Report 463. This report is available from BLS upon request.

These monthly surveys of the population are conducted with a scientifically selected sample designed to represent the civilian noninstitutional population. Respondents are interviewed to obtain information about the employment status of each member of the household 16 years of age and over. Separate statistics are also collected and published for 14 and 15 year olds. The inquiry relates to activity or status during the calendar week, Sunday through Saturday, which includes the 12th of the month. This is known as the survey week. Actual field interviewing is conducted in the following week.

Inmates of institutions, members of the Armed Forces, and persons under 14 years of age are not covered in the regular monthly enumerations and are excluded from the population and labor force statistics shown in this report. Data on members of the Armed Forces, who are included as part of the categories "total noninstitutional population" and "total labor force," are obtained from the Department of Defense.

Each month, 56,000 occupied units are eligible for interview. About 2,500 of these households are visited but interviews are not obtained because the occupants are not found at home after repeated calls or are unavailable for other reasons. This represents a noninterview rate for the survey of about 4 percent. In addition to the 56,000 occupied units, there are 9,500 sample units in an average month which are visited but found to be vacant or otherwise not to be enumerated. Part of the sample is changed each month. The rotation plan provides for three-fourths of the sample to be common from 1 month to the next and one-half to be common with the same month a year earlier.

Beginning in September 1975, the sample was enlarged by 9,000

households in order to provide greater reliability for smaller States and thus permit the publication of annual statistics for all 50 States and the District of Columbia. These supplementary households were added to the national 47,000 household sample in January 1978.

CONCEPTS

Employed persons comprise (a) all those who during the survey week did any work at all as paid employees, in their own business, profession, or farm, or who worked 15 hours or more as unpaid workers in an enterprise operated by a member of the family, and (b) all those who were not working but who had jobs or businesses from which they were temporarily absent because of illness, bad weather, vacation, labor-management dispute, or personal reasons, whether or not they were paid by their employers for the time off, and whether or not they were seeking other jobs.

Each employed person is counted only once. Those who held more than one job are counted in the job at which they worked the greatest number of hours during the survey week.

Included in the total are employed citizens of foreign countries, temporarily in the United States, who are not living on the premises of an Embassy.

Excluded are persons whose only activity consisted of work around the house (such as own home housework, and painting or repairing own home) or volunteer work for religious, charitable, and similar organizations.

Unemployed persons comprise all persons who did not work during the survey week, who made specific efforts to find a job within the past 4 weeks, and who were available for work during the survey week (except for temporary illness). Also included as unemployed are those who did not work at all, were available for work, and were waiting to be called back to a job from which they had been laid off; or (b) were waiting to report to a new wage or salary job within 30 days.

Duration of unemployment represents the length of time (through the current survey week) during which persons classified as unemployed had been continuously looking for work. For persons on layoff, duration of unemployment represents the number of full weeks since the termination of their most recent employment. A period of 2 weeks or more during which a person was employed or ceased looking for work is considered to break the continuity of the present period of seeking work. Measurements of mean and median duration are computed from a distribution of single weeks of unemployment.

Unemployed persons by reasons for unemployment are divided into four major groups. (1) Job losers are persons whose employment ended involuntarily who immediately began looking for work and persons on layoff. (2) Job leavers are persons who quit or otherwise terminated their employment voluntarily and immediately began looking for work. (3) Reentrants are persons who previously worked at a full-time job lasting 2 weeks or longer but were out of the labor force prior to beginning to look for work. (4) New entrants are persons who never worked at a full-time job lasting 2 weeks or longer.

Jobseekers are all unemployed persons who made specific efforts to find a job, sometime during the 4-week period preceding the survey week. Jobseekers do not include persons unemployed because they (a) were waiting to be called back to a job from which they had been laid off or (b) were waiting to report to a new wage or salary job within 30 days. Jobseekers are grouped by the methods used to seek work, including going to public or private employment agency or to an employer directly, seeking assistance from friends or relatives, placing or answering ads, or utilizing some "other" method. Examples of the "other" category include being on a union or professional register, obtaining assistance from a community organization, or waiting at a designated pick-up point.

The civilian labor force comprises the total of all civilians classified as employed or unemployed in accordance with the criteria

described above. The "total labor force" also includes members of the Armed Forces stationed either in the United States or abroad.

The unemployment rate represents the number unemployed as a percent of the civilian labor force. This measure can also be computed for groups within the labor force classified by sex, age, marital status, race, etc. The job-loser, job-leaver, reentrant, and new entrant rates are each calculated as a percent of the civilian labor force; the sum of the rates for the four groups thus equals the total unemployment rate.

Participation rates represent the proportion of the noninstitutional population that is in the labor force. Two types of participation rates are published. The total labor force participation rate, which is the ratio of the total labor force and the total noninstitutional population; and the civilian labor force participation rate, which is the ratio of the civilian labor force and the civilian noninstitutional population. Participation rates are usually published for sex-age groups, often cross-classified by other demographic characteristics such as race and educational attainment.

Employment-population ratios represent the proportion of the total noninstitutional population that is employed. This measure can also be computed as a ratio of employment and the civilian noninstitutional population.

Not in labor force includes all civilians 16 years and over who are not classified as employed or unemployed. These persons are further classified as "engaged in own home housework," "in school," "unable to work" because of long-term physical or mental illness, and "other." The "other" group includes for the most part retired persons, those reported as too old to work, the voluntarily idle, and seasonal workers for whom the survey week fell in an "off" season and who were not reported as unemployed. Persons doing only incidental unpaid family work (less than 15 hours) are also classified as not in the labor force.

For persons not in the labor force, data on previous work experience, intentions to seek work again, desire for a job at the time of interview, and reasons for not looking for work are compiled on a quarterly basis. As of January 1970, the detailed questions for persons not in the labor force are asked only in those households that are in the fourth and eighth months of the sample, i.e., the "outgoing" groups, those which had been in the sample for 3 previous months and would not be in for the subsequent month. Between 1967 and 1969, the detailed not-in-labor force questions were asked of persons in the first and fifth months in the sample, i.e., the "incoming" groups.

Occupation, industry, and class of worker for the employed apply to the job held in the survey week. Persons with two or more jobs are classified in the job at which they worked the greatest number of hours during the survey week. The unemployed are classified according to their last full-time civilian job lasting 2 weeks or more. The occupation and industry groups used in data derived from the CPS household interviews are defined as in the 1970 Census of Population. Information on the detailed categories included in these groups is available upon request.

The class-of-worker breakdown specifies "wage and salary workers," subdivided into private and government workers, "self-employed workers," and "unpaid family workers." Wage and salary workers receive wages, salary, commission, tips, or pay in kind from a private employer or from a government unit. Self-employed persons are those who work for profit or fees in their own business, profession, or trade, or operate a farm. Unpaid family workers are persons working without pay for 15 hours a week or more on a farm or in a business operated by a member of the household to whom they are related by blood or marriage.

Hours of work statistics relate to the actual number of hours worked during the survey week. For example, a person who normally works 40 hours a week but who was off on the Columbus Day holiday would be reported as working 32 hours even though he was paid for the holiday.

For persons working in more than one job, the figures relate to the number of hours worked in all jobs during the week. However, all the hours are credited to the major job.

The distribution of employment by hours worked relates to persons "at work" during the survey week. At work data differ from data on total employment because the latter include persons in zero-hour worked category, "with a job but not at work." Included in this latter group are persons who were on vacation, ill, involved in a labor dispute, or otherwise absent from their jobs for voluntary, noneconomic reasons.

Persons who worked 35 hours or more in the survey week are designated as working "full time," persons who worked between 1 and 34 hours are designated as working "part-time." Part-time workers are classified by their usual status at their present job (either full time or part time) and by their reason for working part time during the survey week (economic or other reasons). "Economic reasons" include: Slack work, material shortages, repairs to plant or equipment, start or termination of job during the week, and inability to find full-time work. "Other reasons" include: Labor disputes, bad weather, own illness, vacation, demands of home housework, school, no desire for full-time work, and full-time worker only during peak season. Persons on full-time schedules include, in addition to those working 35 hours or more, those who worked from 1-34 hours for noneconomic reasons and usually work full time.

Full- and part-time labor force. The *full-time labor force* consists of persons working on full-time schedules, persons involuntarily working part time (part time for economic reasons), and unemployed persons seeking full-time jobs. The *part-time labor force* consists of persons working part time voluntarily and unemployed persons seeking part-time work. Persons with a job but not at work during the survey week are classified according to whether they usually work full or part time.

Labor force time lost is a measure of aggregate hours lost to the economy through unemployment and involuntary part-time employment and is expressed as a percent of potentially available aggregate hours. It is computed by assuming: (1) That unemployed persons looking for full-time work lost an average of 37.5 hours, (2) that those looking for part-time work lost the average number of hours actually worked by voluntary part-time workers during the survey week, and (3) that persons on part time for economic reasons lost the difference between 37.5 hours and the actual number of hours they worked.

Race. White and black and other are terms used to describe the race of workers. The black and other category, which until recently had been identified as "Negro and other races" and prior to 1969 as "nonwhite," includes all persons who are observed in the enumeration process to be other than white. At the time of the 1970 Census of Population, 89 percent of the black and other population group were black; the remainder were American Indians, Eskimos, Orientals, and all other "nonwhite" groups. The term "black" is used in this volume when the relevant data are provided exclusively for the black population.

Hispanic origin refers to persons who identified themselves in the enumeration process as Mexican, Puerto Rican living on the mainland, Cuban, Central or South American or other Hispanic origin or descent. According to the 1970 Census, approximately 96 percent of their population is white.

Major activity: going to school and major activity: *other* are terms used to describe whether the activity of young persons during the reference week are primarily one of going to school or not. Statistics on major activity are published every month in table A-7 for 16-21 year-olds by employment status, race, and sex, and, if unemployed, whether seeking full- or part-time work.

Vietnam-era veterans are those who served in the Armed Forces of the United States between August 5, 1964, and May 7, 1975.

Tables for veterans in this volume are limited to males in the civilian noninstitutional population; i.e., veterans in institutions and females are excluded.

Nonveterans are males who never served in the Armed Forces.

Poverty areas classification consists of all Census geographical divisions in which 20 percent or more of the residents were poor according to the 1970 Decennial Census. Persons were classified as poor or nonpoor by using income thresholds adopted by a Federal interagency committee in 1969. These thresholds vary by family size, composition, and residence (farm-nonfarm). While poverty areas have a substantial concentration of low-income residents, many poor persons live outside these areas and, conversely, the areas include many people who are not poor.

The *metropolitan areas* classification consists of the total of all areas encompassed by Standard Metropolitan Statistical Areas (SMSA's). The metropolitan area total is based on the number of SMSA's as defined in the 1970 Decennial Census and does not include any subsequent additions or changes. Nonmetropolitan areas refer to the total of all areas outside SMSA's. The nonmetropolitan total is disaggregated into farm and nonfarm components.

HISTORIC COMPARABILITY

Raised lower age limit

Beginning with data for 1967, the lower age limit for official statistics on persons in the labor force was raised from 14 to 16 years. At the same time, several definitions were sharpened to clear up ambiguities. The principal definitional changes were: (1) Counting as unemployed only persons who were currently available for work and who had engaged in some specific jobseeking activity within the past 4 weeks, an exception to the latter condition is made for persons waiting to start a new job in 30 days or waiting to be recalled from layoff; in the past, the current availability test was not applied and the time period for jobseeking was ambiguous; (2) counting as employed persons who were absent from their jobs in the survey week because of strikes, bad weather, etc. and were also looking for other jobs; previously, these persons had been classified as unemployed; (3) sharpening the questions on hours of work, duration of unemployment, and self-employment in order to increase their reliability.

These changes did not affect the unemployment rate by more than one-fifth of a percentage point in either direction, although the distribution of unemployment by sex was affected. The number of employed was reduced about 1 million because of the exclusion of 14- and 15-year-olds. For persons 16 years and over, the only employment series appreciably affected were those relating to hours of work and class of worker. A detailed discussion of the changes and their effect on the various series is contained in "New Definitions for Employment and Unemployment" by Robert L. Stein in the February 1967 issue of *Employment and Earnings and Monthly Report on the Labor Force*. Reprints may be obtained upon request.

Noncomparability of labor force levels

Before the changes introduced in 1967, the labor force data were not comparable for three earlier periods: (1) Beginning 1953, as a result of the introduction of data from the 1950 census into the estimation procedure, population levels were raised by about 600,000; labor force, total employment, and agricultural employment by about 350,000, primarily affecting the figures for totals and males; other categories were relatively unaffected; (2) beginning 1960, the inclusion of Alaska and Hawaii resulted in an increase of about 500,000 in the population and about 300,000 in the labor force, four-fifths of this in nonagricultural employment; other labor force categories were not appreciably affected; (3) beginning 1962, the introduction of figures from the 1960 census reduced the population by about 50,000, labor force and employment by about 200,000; unemployment totals were virtually unchanged.

In addition, beginning 1972, information from the 1970 census was introduced into the estimation procedures, producing an increase in the civilian noninstitutional population of about 800,000; labor force and employment totals were raised by a little more than 300,000, and unemployment levels and rates were essentially unchanged. A subsequent population adjustment based on the 1970 census was introduced in March 1973. This adjustment affected the white and black and other groups but had little effect on totals. The adjustment resulted in the reduction of nearly 300,000 in the white population and an increase of the same magnitude in the black and other population. Civilian labor force and total employment figures were affected to a lesser degree; the white labor force was reduced by 150,000, and the black and other labor force rose by about 210,000. Unemployment levels and rates were not significantly affected.

Beginning in January 1974, the methodology used to prepare independent estimates of the civilian noninstitutional population was modified to an "inflation-deflation" approach. This change in the derivation of the population estimates had its greatest impact on estimates of 20-24 year-old males—particularly those of the black and other population—but had little effect on 16 and over totals. Additional information on the adjustment procedure appears in "CPS Population Controls Derived from Inflation-Deflation Method of Estimation" in the February 1974 issue of *Employment and Earnings*.

Effective July 1975, as a result of the immigration of Vietnamese refugees into the United States, the total and black-and-other independent population controls for persons 16 years and over were adjusted upward by 76,000—30,000 males and 46,000 females. The addition of the refugees increased the black-and-other population by less than 1 percent in any age-sex group, and all of the changes were in the "other" population.

Beginning in 1978, the introduction of an expansion of the sample and revisions in the estimation procedures resulted in an increase of roughly a quarter of a million in the overall civilian labor force and employment totals; unemployment levels and rates were essentially unchanged. An explanation of the procedural changes and an indication of the differences appear in "Revisions in the Current Population Survey in January 1978" in the February 1978 issue of *Employment and Earnings*.

Changes in occupational classification system

Beginning with 1971, the comparability of occupational employment data was affected as a result of changes in census occupational classifications introduced into the Current Population Survey (CPS). These changes stemmed from an exhaustive review of the classification system to be used for the 1970 Census of Population. This review, the most comprehensive since the 1940 census, was to reduce the size of large groups, to be more specific about general and "not elsewhere classified" groups, and to provide information on emerging significant occupations. Differences in March 1970 employment levels tabulated on both the 1960 and 1970 classification systems ranged from a drop of 650,000 in operatives to an increase of 570,000 in service workers, much of which resulted from a shift between these two groups; the non-farm laborers group increased by 420,000, and changes in other groups amounted to 220,000 or less.

An additional major group was created by splitting the operatives category into two: operatives, except transport, and transport equipment operatives. Separate data for these two groups first became available in January 1972. At the same time, several changes in titles, as well as in order of presentation, were introduced; for example, the title of the managers, officials, and proprietors group was changed to "managers and administrators, except farm," since only proprietors performing managerial duties are included in the category.

Apart from the effects of revisions in the occupation classification system beginning in 1971, comparability of occupational employment data was further affected in December 1971, when a question eliciting information on major activities or duties was added to the monthly CPS questionnaire in order to determine more precisely the occupational classification of individuals. This change resulted in several dramatic occupational shifts, particularly from managers and administrators to other groups. Thus, meaningful comparisons of occupational levels cannot always be made for 1972 and subsequent years with earlier periods. However, revisions in the occupational classification system as well as in the CPS questionnaire are believed to have had but a negligible impact on unemployment rates.

Additional information on changes in the occupational classification system of the CPS appears in "Revisions in Occupational Classifications for 1971" and "Revisions in the Current Population Survey" in the February 1971 and February 1972 issues, respectively, of *Employment and Earnings*.

Changes in sample design

Since the inception of the survey, there have been various changes in the design of the CPS sample. Most of these changes were made in order to improve the efficiency of the sample design and/or to increase the reliability of the sample estimates.

One major change made after every decennial census is to change the sample design to make use of the recently collected census materials. Also, occasionally the sample is expanded in terms of number of sample areas and number of sample persons. In 1953, a rotation plan was introduced in which a sample unit would be interviewed for 4 months, leave the sample for eight months, and then return to the sample for another 4 months. When Alaska and Hawaii achieved statehood, three more sample areas were added to the sample to account for the population in these States. After the 1960 census, selection of a major portion of the sample from census address lists was begun, though a portion of the sample is still collected using area sampling. Following the 1970 census, the ultimate sampling unit was changed from a non-contiguous cluster of six housing units to a usually contiguous cluster of four housing units. The most recent change was introduced in January 1978, when a supplemental sample of housing units, selected in 24 States and the District of Columbia and designed to provide more reliable annual average estimates for States, was incorporated with the existing design.

The following table provides a description of some aspects of the CPS sample design in use during the referenced data collection periods. For a more detailed account of the history of the CPS sample design, see *The Current Population Survey: Design and Methodology*, U.S. Department of Commerce, Bureau of the Census, Technical Paper No. 40, or *Concepts and Methods used in Labor Force Statistics Derived from the Current Population Survey*, BLS Report 463.

Time period	Number of sample areas ¹	Households eligible		Households visited not eligible ²
		Interviewed	Not interviewed	
Aug. 1947 to Jan. 1954	68	21,000	500-1,000	3,000-3,500
Feb. 1954 to Apr. 1956	230	21,000	500-1,000	3,000-3,500
May 1956 to Dec. 1959	330	33,500	1,500	6,000
Jan. 1960 to Feb. 1963	333 ³	33,500	1,500	6,000
Mar. 1963 to Dec. 1966	357	33,500	1,500	6,000
Jan. 1967 to July 1971	449	48,000	2,000	8,500
Aug. 1971 to July 1972	449	45,000	2,000	8,000
Aug. 1972 to Dec. 1977	461	45,000	2,000	8,000
Jan. 1978 to present	614	53,500	2,500	9,500

¹ Beginning in May 1956, these areas were chosen to provide coverage in each State and the District of Columbia.

² These are households which were visited, but were found to

be vacant or otherwise not eligible for interview.

³ Three sample areas were added in 1960 to represent Alaska and Hawaii after statehood.

ESTIMATING METHODS

Under the estimating methods used in the CPS, all of the results for a given month become available simultaneously and are based on returns from the entire panel of respondents. There are no subsequent adjustments to independent benchmark data on labor force, employment, or unemployment. Therefore, revisions of the historical data are not an inherent feature of this statistical program.

The CPS estimation procedure involves weighting the data from each sample person. The basic weight, which is the inverse of the probability of the person being in the sample, is a rough measure of the number of actual persons that the sample person represents. In States supplemented in the 1978 expansion, almost all sample persons within the same sample area have the same basic weight, but the weight may differ across sample areas. The basic weight is the same for almost all sample persons in unsupplemented States. The basic weights are then adjusted for noninterview, and the ratio estimation procedure is applied.

1. *Noninterview adjustment.* The weights for all interviewed households are adjusted to the extent needed to account for occupied sample households for which no information was obtained because of absence, impassable roads, refusals, or unavailability of the respondent for other reasons. This adjustment is made separately by combinations of sample areas within each State and the District of Columbia, and within these, for six groups—two race categories (white, and black and other) within three residence categories. For sample areas which are Standard Metropolitan Statistical Areas (SMSA's), these residence categories are the central cities, and the urban and the rural balance of the SMSA's. For other sample areas, the residence categories are urban, rural nonfarm, and rural farm. The proportion of sample households not interviewed varies from 3 to 5 percent depending on weather, vacations, etc.

2. *Ratio estimates.* The distribution of the population selected for the sample may differ somewhat, by chance, from that of the population as a whole, in such characteristics as age, race, sex, and residence. Since these characteristics are closely correlated with labor force participation and other principal measurements made from the sample, the latter estimates can be substantially improved when weighted appropriately by the known distribution of these population characteristics. This is accomplished through two stages of ratio estimates as follows:

a. *First-stage ratio estimate.* In the CPS sample, a portion of the 614 sample areas are chosen to represent other areas not in the sample; the remainder of the sample areas represent only themselves. The first-stage ratio estimation procedure was designed

to reduce the contribution to the variance resulting from requiring sample areas to represent nonsample areas. Therefore this procedure is not applied to sample areas which represent only themselves. The procedure is applied within each State that contains nonsample areas and takes into account the differences that existed at the time of the 1970 census in the distribution by race and residence of the population in sample areas and the known race-residence distribution in the portions of the State represented by these areas.

b. *Second-stage ratio estimate.* In this stage, the sample proportion in the categories described below are adjusted to the distribution of independent current estimates of the population in the same categories. The second-stage ratio estimate is done in order to increase the reliability of the estimates and is done in three steps. In the first step, the sample estimates are adjusted within each State and the District of Columbia to an independent control for the population 16 years and over for the State. The second step involves "nonwhite" persons only, and is an adjustment to independent estimates of 40-age-sex-race categories across the whole Nation. (The race categories used are black and other minority races.) The third adjustment is applied to all sample persons and is a weighting to nationwide independent population estimates within 68 age-sex-race groups. The entire second-stage ratio estimation procedure is iterated six times, each time beginning at the weights developed the previous time. This iteration ensures that the sample estimates both of State population and of national age-sex-race categories, will be virtually equal to the independent population estimates.

The independent controls by State for the civilian noninstitutional population 16 years and over are an arithmetic extrapolation of the trend in the growth of this segment of the population from the April 1, 1970 census through the latest available July 1 estimate, adjusted as a last step to a current estimate of the U.S. population of this group. State estimates by age for July 1 are published annually in *Current Population Reports*, Series P-25. For a description of the methodology used in developing the State total, see Report 640 of that series. Descriptions of the age estimates methodology are available on request from the Chief of the Population Division, U.S. Bureau of the Census, Washington, D.C. 20233.

Prior to January 1974, the independent national controls used for the age-sex-race groups in both the second and third steps of the second-stage ratio estimation procedure were prepared by carrying forward the most recent census data (1970) after taking account of subsequent aging of the population, births, deaths, and migration between the United States and other countries. Beginning

in 1974, the "inflation-deflation" method of deriving independent population controls was introduced into the CPS estimation procedures. These independent controls are prepared by inflating the most recent census counts to include the estimated net census undercount by age, sex, and race, aging this population forward to each subsequent month and later age by adding births and net migration, and subtracting deaths. These post-censal population estimates are then "deflated" to census level to reflect the pattern of net undercount in the most recent census by age, sex, and race. The actual percent change over time in the population in any age group is preserved.

3. Composite estimate procedure. In deriving statistics for a given month, a composite estimating procedure is used which takes account of net changes from the previous month for continuing parts of the sample (75 percent) as well as the sample results for the current month. Almost all estimates of month-to-month change are improved by this procedure, and most estimates of levels are also improved, but to a lesser extent.

Rounding of estimates

The sums of individual items may not always equal the totals shown in the same tables because of independent rounding of totals and components to the nearest thousand. Differences, however, are insignificant.

Reliability of the estimates

There are two types of errors possible in an estimate based on a sample survey—sampling and nonsampling. The standard errors provided primarily indicate the magnitude of the sampling error. They also partially measure the effect of some nonsampling errors in response and enumeration but do not measure any systematic biases in the data.

Nonsampling errors. The full extent of nonsampling error is unknown, but special studies have been conducted to qualify some sources of nonsampling error in the CPS as discussed below. The effect of nonsampling error should be small on estimates of relative change, such as month-to-month change. Estimates of monthly levels would be more severely affected by the nonsampling error.

Nonsampling errors in surveys can be attributed to many sources, e.g., inability to obtain information about all cases in the sample, definitional difficulties, differences in the interpretation of questions, inability or unwillingness of respondents to provide correct information, inability to recall information, errors made in collection such as in recording or coding the data, errors made in processing the data, errors made in estimating values for missing data, and failure to represent all sample households and all persons within sample households (undercoverage).

Nonsampling errors occurring in the interview phase of the survey have been studied by means of a reinterview program. This program is used to estimate various sources of error as well as to evaluate and control the work of the interviewers. A random sample of each interviewer's work is inspected through reinterview at regular intervals. The results indicate, among other things, that the data published from the CPS are subject to moderate systematic biases. A description of the CPS reinterview program and some of the other results may be found in the *Current Population Survey Reinterview Program, January 1961 through December 1966*, Technical Paper No. 19, U.S. Department of Commerce, Bureau of the Census.

The effects of some components of nonsampling error in the CPS data can be examined as a result of the rotation plan used for the sample, since the level of the estimates vary by rotation group. A description of these effects appears in the article "The Effects of Rotation Group Bias on Estimates from Panel Surveys,"

by Barbara A. Bailer, *Journal of the American Statistical Association*, Volume 70, No. 349, March 1975.

Undercoverage in the CPS results from missed housing units and missed persons within sample households. Overall undercoverage, as compared to the level of the decennial census, is about 5 percent. It is known that the CPS undercoverage varies with age, sex, and race. Generally, undercoverage is larger for males than for females and larger for black and other races than for whites. Ratio estimation to independent age-sex-race population controls, as described previously, partially corrects for the biases due to survey undercoverage. However, biases exist in the estimates to the extent that missed persons in missed households or missed persons in interviewed households have different characteristics than interviewed persons in the same age-sex-race group. Further, the independent population controls used have not been adjusted for undercoverage in the 1970 census, which was estimated at 2.5 percent of the population, with differentials by age, sex, and race similar to those observed in the CPS.

The approximate magnitude of two sources of undercoverage of housing units is known. Of the 83,000,000 housing units in the U.S. about 600,000 new construction housing units, other than mobile homes, are not represented in the CPS sample because they were assigned building permits prior to the 1970 census but building was not completed by the time of the census, (i.e., April 1970). Most conventional new construction, for which building permits were issued after the census, is represented. About 290,000 occupied mobile homes are not represented in the CPS; these units were either missed in the census or have been built or occupied since the census. These estimates of missed units are relevant to the present sample only and not to earlier designs where the extent of undercoverage was generally less. The extent of other sources of undercoverage of housing units is unknown but believed to be small.

Additional information on nonsampling error in the CPS appears in the paper, "An Error Profile: Employment as Measured by the Current Population Survey," by Camilla Brooks and Barbara Bailer, Proceedings of the Annual Meetings of the American Statistical Association, Social Statistics Section, Chicago, Illinois, August 1977; in the paper "The Current Population Survey: An Overview," by Marvin Thompson and Gary Shapiro, *Annals of Economic and Social Measurement*, Vol. 2, No. 2, April 1973; and in *The Current Population Survey, Design and Methodology*, Technical Paper No. 40, U.S. Department of Commerce, Bureau of the Census. This last document includes a comprehensive and up-to-date discussion of various sources of errors, and describes attempts to measure them in the CPS.

Sampling error. Since the estimates are based on a sample, they may differ somewhat from the figures that would have been obtained if a complete census had been taken using the same schedules, instructions, and enumerators. The standard error is primarily a measure of sampling variability, that is, of the variation that occurs by chance because a sample rather than the entire population is surveyed. The chances are about 68 out of 100 that an estimate from the survey differs from a complete census figure by less than the standard error. The chances are about 95 out of 100 that the differences would be less than twice the standard error.

In order to derive standard errors that would be applicable to a large number of estimates and could be prepared at a moderate cost, a number of approximations were required. First, the standard errors in this report reflect the sample design and estimation procedure in effect prior to the expansion for annual average State estimates. Thus, these standard errors may slightly overstate the standard errors applicable to the present design. Secondly, instead of computing an individual standard error for each estimate, generalized sets of standard errors were computed for various types of characteristics. This generalization yields more stable estimates of the standard errors. Consequently, the sets of

standard errors provided give an indication of the order of magnitude of the standard error of an estimate rather than the precise standard error.

Tables A and B show approximate standard errors for major employment status characteristics for both monthly estimates and for changes for consecutive months. These standard errors are applicable to the level of the estimates in recent months.

Tables C through G provide generalized standard errors for monthly level and month-to-month change for estimated totals, unemployment rates, and percentages. Table H contains factors for use with table G for computing standard errors, as described below, for monthly level and month-to-month change for percentages. Standard errors for intermediate values not shown in the tables may be approximated by linear interpolation. The standard error for estimated changes from one month to the next is more closely related to the monthly level for the characteristic than to the size of the specific month-to-month change itself. Thus, in order to use the generalized standard errors for month-to-month change as given in the tables of standard errors, it is necessary to obtain the monthly estimate for the characteristic. It should be noted that the tables of standard errors for month-to-month change apply only to estimates of change between two consecutive months. Estimates of change over other time periods are subject to higher standard errors. For years prior to 1967, the standard errors must be adjusted due to differences in sample size. For years before 1956, the standard errors should be multiplied by 1.50 and for the 1956-1966 period they should be multiplied by 1.22.

Standard errors for estimated totals. Tables C and D provide generalized standard errors for monthly totals and for month-to-month change. The figures given in these tables are to be used for the characteristics as indicated.

Illustration. Assume that the tables showed that the number of persons working a specific number of hours was 12,000,000, an increase of 400,000 over the previous month. Linear interpolation in the second column of table C shows that the standard error on an estimate of 12,000,000 is about 150,000. Consequently, the chances are about 68 out of 100 that the sample estimate differs by less than 150,000 from the figure which would have been obtained from a complete count of the number of persons working the given number of hours. Recall that the standard error of a month-to-month change is primarily dependent on the size of the monthly estimate. Thus, using linear interpolation in column one of table D the standard error on a month-to-month change of 400,000 when the monthly level is approximately 12,000,000 is about 111,000.

Standard errors for rates and percentages. The reliability of an estimated unemployment rate or an estimated percentage, computed using sample data for both numerator and denominator, depends on both the size of the rate or percentage and the total upon which the rate or percentage is based. Estimated rates and percentages are relatively more reliable than the corresponding estimates of the numerator of the rates or percentages; this is particularly true for percentages of 50 percent or more. As a general rule, percentages are not published when the monthly base is less than 75,000 or the annual average base is less than 35,000.

Tables E and F shows generalized standard errors for monthly level and month-to-month change for unemployment rates.

Generalized standard errors for estimated monthly percentages and estimated month-to-month change in percentages can be obtained through the use of the standard errors in table G and

the factors in table H. First obtain the standard error from table G for the specific percentage and base. The generalized standard error is then calculated by multiplying the standard error from table G by the appropriate factor from table H. When the numerator and denominator of the percentage are in different categories, use the factor indicated by the numerator of the percentage.

Illustration. For example, assume that the tables show that 3.6 percent of a total of 90,771,000 employed persons are employed in agriculture. First the standard error on an estimate of 3.6 percent with a base of 90,771,000 is obtained from table G (0.09 percent). The appropriate factor from table H for the numerator of the percentage, agriculture employment, is 1.26. The generalized standard error on the estimated 3.6 percent is then approximately $0.09 \times 1.26 = 0.1$ percent.

Table A. Standard errors of major employment status categories

Employment status, sex, age, and race	Standard error of—	
	Monthly level	Month-to-month change (consecutive months only)
<i>(In thousands)</i>		
Total, 16 years and over:		
Civilian labor force	226	173
Employed	239	182
Unemployed	112	115
Males, 20 years and over:		
Civilian labor force	127	111
Employed	138	121
Unemployed	70	73
Females, 20 years and over:		
Civilian labor force	176	129
Employed	174	131
Unemployed	70	73
Both sexes, 16-19 years:		
Civilian labor force	80	85
Employed	85	94
Unemployed	57	70
Black and other, 16 years and over:		
Civilian labor force	80	61
Employed	87	66
Unemployed	55	58
Males, 20 years and over:		
Civilian labor force	47	41
Employed	52	46
Unemployed	35	38
Females, 20 years and over:		
Civilian labor force	62	48
Employed	62	49
Unemployed	35	38
Both sexes, 16-19 years:		
Civilian labor force	33	37
Employed	30	35
Unemployed	28	31

Table B. Standard errors of unemployment rates for major characteristics

Selected categories	Standard error of—		Selected categories	Standard error of—	
	Monthly level	Consecutive month change		Monthly level	Consecutive month change
Total (all civilian workers) . . . . .	.11	.12	OCCUPATION—Continued		
Males, 20 years and over . . . . .	.13	.14	Blue-collar workers—Continued		
Females, 20 years and over . . . . .	.19	.20	Operatives, except transport . . . . .	.40	.45
Both sexes, 16-19 years . . . . .	.56	.67	Transport equipment operatives . . . . .	.53	.60
White workers . . . . .	.11	.12	Nonfarm laborers . . . . .	.61	.70
Black (and other) workers . . . . .	.48	.55	Service workers . . . . .	.32	.36
Married men, spouse present . . . . .	.13	.14	Farm workers . . . . .	.56	.63
Married women, spouse present . . . . .	.23	.25			
Full-time workers . . . . .	.12	.12	INDUSTRY		
Part-time workers . . . . .	.34	.42	Nonagricultural private wage and		
Unemployed 15 weeks and over . . . . .	.06	.08	salary workers . . . . .	.13	.14
OCCUPATION			Construction . . . . .	.54	.61
White-collar workers . . . . .	.13	.14	Manufacturing . . . . .	.24	.26
Professional and technical . . . . .	.20	.22	Durable goods . . . . .	.30	.34
Managers and administrators,			Nondurable goods . . . . .	.40	.45
except farm . . . . .	.22	.24	Transportation and public utilities . . . . .	.39	.44
Sales workers . . . . .	.40	.44	Wholesale and retail trade . . . . .	.26	.29
Clerical workers . . . . .	.25	.28	Finance and service industries . . . . .	.18	.20
Blue-collar workers . . . . .	.21	.23	Government workers . . . . .	.22	.24
Craft and kindred workers . . . . .	.28	.31	Agricultural wage and salary workers	1.10	1.26

Table C. Standard errors for estimates of monthly level (in thousands)

Estimated monthly level	Characteristics ¹								
	Agricultural employment	Labor force data other than unemployment and agricultural employment data						Unemployment	
		Total or white	Black and other	Total or white, 16-19 years	Black and other, 16-19 years	Total or white males only, or females only	Black and other males only, or females only	Total or white	Black and other
50	13	10	10	10	10	9	9	10	11
100	18	14	14	14	14	13	13	14	15
500	41	32	32	32	28	30	29	31	33
1,000	57	45	44	44	33	42	40	44	46
2,000	81	64	60	60	13	59	52	62	63
4,000	113	90	79	77	—	82	60	87	83
6,000	137	109	88	84	—	99	53	106	93
8,000	—	125	90	84	—	113	16	122	—
10,000	—	139	87	76	—	124	—	135	—
15,000	—	166	36	—	—	146	—	163	—
20,000	—	188	—	—	—	161	—	182	—
30,000	—	219	—	—	—	177	—	—	—
40,000	—	249	—	—	—	178	—	—	—
50,000	—	253	—	—	—	164	—	—	—
60,000	—	260	—	—	—	131	—	—	—
70,000	—	260	—	—	—	49	—	—	—
80,000	—	254	—	—	—	—	—	—	—
100,000	—	221	—	—	—	—	—	—	—
120,000	—	143	—	—	—	—	—	—	—

¹ When determining the standard error of an estimate for a group which is a subset of the age, sex, race groups listed, use the standard error for the next larger group, e.g., when determining the

standard error on the estimated number of employed persons age 20 to 54 years use the column for total employed.

Table D. Standard errors for estimates of month-to-month change

(In thousands)

Estimated monthly level	Type of characteristic ¹							
	Labor force data other than unemployment and agriculture employment data							
	Total or white	Black and other	Total, or white, 16-19 years	Black and other, 16-19 years	Unemployment			
					Total or white	Both sexes 16-19 years, or part-time labor force ²	Black and other	Black and other, 16-19 years
50	8	8	12	12	11	12	12	12
100	11	11	17	17	16	17	16	17
500	24	23	37	33	35	39	36	34
1,000	34	33	52	37	48	55	49	39
2,000	47	45	70	—	68	77	65	—
4,000	66	58	89	—	93	107	80	—
6,000	81	65	96	—	110	129	—	—
8,000	93	68	93	—	123	147	—	—
10,000	103	65	78	—	132	162	—	—
15,000	123	33	—	—	145	191	—	—
20,000	130	—	—	—	146	211	—	—
30,000	163	—	—	—	—	—	—	—
40,000	179	—	—	—	—	—	—	—
50,000	189	—	—	—	—	—	—	—
60,000	194	—	—	—	—	—	—	—
70,000	195	—	—	—	—	—	—	—
80,000	191	—	—	—	—	—	—	—
100,000	179	—	—	—	—	—	—	—
120,000	119	—	—	—	—	—	—	—

¹ See footnote 1, table C.

² Part-time labor force for unemployment also includes persons

reentering the labor force, persons who left their last job, and persons by duration of unemployment.

Table E. Standard errors of unemployment rates

Monthly base of unemployment rate (In thousands)	Monthly unemployment rate									
	1	2	5	10	15	20	25	30	35	50
50	2.05	2.88	4.49	6.18	7.36	8.25	8.93	9.46	9.85	10.36
100	1.45	2.04	3.18	4.37	5.20	5.83	6.32	6.69	6.97	7.33
500 .....	.65	.91	1.42	1.96	2.33	2.61	2.82	2.99	3.12	3.28
1,000 .....	.46	.65	1.01	1.38	1.65	1.84	2.00	2.12	2.21	2.32
2,000 .....	.32	.46	.71	.98	1.17	1.31	1.42	1.50	1.56	1.64
4,000 .....	.23	.32	.50	.69	.83	.92	1.00	1.06	1.10	1.16
6,000 .....	.19	.26	.41	.57	.67	.75	.82	.86	.90	.94
10,000 .....	.15	.21	.32	.44	.52	.59	.63	.67	.70	.73
20,000 .....	.11	.15	.23	.31	.37	.41	.45	.47	.49	.51
60,000 .....	.06	.08	.12	.17	.20	.23	.25	.26	.27	.28
100,000 .....	.04	.06	.10	.13	.16	.18	.19	.20	.21	.22

Table F. Standard errors of month-to-month change in unemployment rates

Monthly base of unemployment rate (In thousands)	Monthly unemployment rate									
	1	2	5	10	15	20	25	30	35	50
50	2.32	3.28	5.12	7.10	8.52	9.64	10.05	11.39	11.97	12.55
100	1.64	2.32	3.62	5.02	6.02	6.81	7.11	8.05	8.39	8.87
500 .....	.74	1.04	1.62	2.25	2.69	3.04	3.17	3.58	3.73	3.93
1,000 .....	.52	.73	1.15	1.59	1.90	2.15	2.24	2.52	2.62	2.74
2,000 .....	.37	.52	.81	1.12	1.34	1.51	1.57	1.76	1.83	1.89
4,000 .....	.26	.37	.57	.79	.94	1.06	1.10	1.22	1.26	1.26
6,000 .....	.21	.30	.47	.64	.76	.86	.89	.97	1.00	—
10,000 .....	.16	.13	.36	.49	.59	.65	.67	.72	—	—
20,000 .....	.11	.15	.24	.33	.39	.44	.48	.51	—	—
60,000 .....	.06	.09	.13	.18	.21	.22	.23	—	—	—
100,000 .....	.05	.07	.10	.13	.14	.14	—	—	—	—

Table G. Standard errors of estimated percentages and month-to-month change in percentages for labor force data

Monthly base of percentages (In thousands)	Percentage of monthly level									
	1 or 99	2 or 98	5 or 95	10 or 90	15 or 85	20 or 80	25 or 75	30 or 70	35 or 65	50
50	2.03	2.85	4.44	6.12	7.28	8.15	8.83	9.34	9.72	10.19
100	1.43	2.02	3.14	4.32	5.15	5.77	6.24	6.61	6.88	7.21
500 .....	.64	.90	1.41	1.93	2.30	2.58	2.79	2.95	3.07	3.22
1,000 .....	.45	.64	.99	1.37	1.63	1.82	1.97	2.09	2.17	2.28
2,000 .....	.32	.45	.70	.97	1.15	1.29	1.40	1.48	1.54	1.61
4,000 .....	.23	.32	.50	.68	.81	.91	.99	1.04	1.09	1.14
6,000 .....	.19	.26	.41	.56	.66	.74	.81	.85	.89	.93
10,000 .....	.14	.20	.31	.43	.51	.58	.62	.66	.69	.73
20,000 .....	.10	.14	.22	.31	.36	.41	.44	.47	.49	.51
40,000 .....	.07	.10	.16	.22	.26	.29	.31	.33	.34	.36
60,000 .....	.06	.08	.13	.18	.21	.24	.25	.27	.28	.29
80,000 .....	.05	.07	.11	.15	.18	.20	.22	.23	.24	.25
100,000 .....	.05	.06	.10	.14	.16	.18	.20	.21	.22	.23
160,000 .....	.04	.05	.08	.11	.13	.14	.16	.17	.17	.18

NOTE: The standard errors in this table must be multiplied by a specific type of characteristic. the factors in table H to obtain the approximate standard error for

Table H. Factors to be used with Table G to compute approximate standard errors for percentages and month-to-month changes in percentages

Type of characteristic	Factor		Type of characteristic	Factor	
	Monthly level	Month-to-month change		Monthly level	Month-to-month change
Agricultural employment:			Unemployment:		
Total or full-time labor force . . .	1.26	1.05	Part-time labor force, duration of unemployment left last job, reentering labor force	1.01	1.21
Part-time labor force	1.26	1.50	All other unemployment characteristics:		
Labor force data other than agricultural employment data and unemployment data:			Total or white:		
Total	1.00	.74	Total . . . . .	.97	1.08
Males only . . . . .	.93	.84	Both sexes, 16-19 years . . . . .	.97	1.21
Females only . . . . .	.86	.75	Black and other:		
Both sexes, 16-19 years	1.00	1.18	Total	1.04	1.13
Part-time labor force	1.00	1.18	Both sexes, 16-19 years	1.04	1.24

Establishment data

(B, C, and D tables)

COLLECTION

Payroll reports provide current information on wage and salary employment, hours, earnings, and labor turnover in nonagricultural establishments, by industry and geographic location.

Federal-State cooperation

Under cooperative arrangements with State agencies, the respondent fills out a single employment or labor turnover reporting form, which is then used for national, State, and area estimates. This eliminates duplicate reporting on the part of respondents, and together with the use of identical techniques at the national and State levels, insures maximum comparability of estimates.

State agencies mail the forms to the establishments and examine the returns for consistency, accuracy, and completeness. The States use the information to prepare State and area series and then send the establishment data to the BLS for use in preparing the national series.

Shuttle schedules

Two types of data collection schedules are used: Form BLS 790—Monthly Report on Employment, Payroll, and Hours; and Form DL 1219—Monthly Report on Labor Turnover. These schedules are of the "shuttle" type, with space for each month of the calendar year. The collection agency returns the schedule to the respondent each month so that the next month's data can be entered. This procedure assures maximum comparability and accuracy of reporting, since the respondent can see the figures he has reported for previous months.

Form BLS 790 provides for entry of data on the number of full- and part-time workers on the payrolls of nonagricultural establishments and, for most industries, payroll and hours of production and related workers or nonsupervisory workers for the pay period which includes the 12th of the month. Form DL 1219 provides for the collection of information on the total number of accessions and separations, by type, during the calendar month.

CONCEPTS

Industrial classification

Establishments reporting on Form BLS 790 and Form DL 1219 are classified into industries on the basis of their principal product or activity determined from information on annual sales volume. This information is collected each year on a supplement to the monthly 790 or 1219 report. For an establishment making more than one product or engaging in more than one activity, the entire employment of the establishment is included under the industry indicated by the most important product or activity.

All data on employment, hours, earnings, and labor turnover for the Nation and for a few States and areas are classified in accordance with the 1967 *Standard Industrial Classification Manual* (SICM), Office of Management and Budget. Most States and areas have converted their series to the 1972 SICM.

Industry employment

Employment data, except those for the Federal Government refer to persons on establishment payrolls who received pay for any part of the pay period which includes the 12th of the month. For Federal Government establishments, employment figures represent the number of persons who occupied positions on the

last day of the calendar month. Intermittent workers are counted if they performed any service during the month.

The data exclude proprietors, the self-employed, unpaid volunteer or family workers, farm workers, and domestic workers in households. Salaried officers of corporations are included. Government employment covers only civilian employees, military personnel are excluded.

Persons on establishment payrolls who are on paid sick leave (when pay is received directly from the firm), on paid holiday or paid vacation, or who work during a part of the pay period and are unemployed or on strike during the rest of the period, are counted as employed. Not counted as employed are persons who are laid off, on leave without pay, or on strike for the entire period or who are hired but have not been paid during the period.

Industry hours and earnings

Average hours and earnings data are derived from reports of payrolls and hours for production and related workers in manufacturing and mining, construction workers in contract construction, and nonsupervisory employees in the remaining private non-agricultural components. For Federal Government, hours and earnings relate to all employees, both supervisory and nonsupervisory. Terms are defined below. When the pay period reported is longer than 1 week, figures are reduced to a weekly basis.

Production and related workers include working supervisors and all nonsupervisory workers (including group leaders and trainees) engaged in fabricating, processing, assembling, inspection, receiving, storage, handling, packing, warehousing, shipping, maintenance, repair, janitorial and guard services, product development, auxiliary production for plants own use (e.g., power plant), and record-keeping and other services closely associated with the above production operations.

Construction workers include the following employees in the contract construction division: Working supervisors, qualified craft workers, mechanics, apprentices, laborers, etc., whether working at the site of construction or in shops or yards, at jobs (such as pre-cutting and preassembling) ordinarily performed by members of the construction trades.

Nonsupervisory employees include employees (not above the working supervisory level) such as office and clerical workers, repairers, salespersons, operators, drivers, physicians, lawyers, accountants, nurses, social workers, research aides, teachers, drafters, photographers, beauticians, musicians, restaurant workers, custodial workers, attendants, line installers and repairers, laborers, janitors, guards, and similar occupational levels, and other employees whose services are closely associated with those of the employees listed.

Payroll covers the payroll for full- and part-time production, construction, or nonsupervisory workers who received pay for any part of the pay period which includes the 12th of the month. The payroll is reported before deductions of any kind, e.g., for old-age and unemployment insurance, group insurance, withholding tax, bonds or union dues; also included is pay for overtime, holidays, vacations, and sick leave paid directly by the firm. Bonuses (unless earned and paid regularly each pay period), other pay not earned in the pay period reported (e.g., retroactive pay), tips, and the value of free rent, fuel, meals, or other payment in kind are excluded. "Fringe benefits" (such as health and other types of insurance, contributions to retirement, etc. paid by the employer) are also excluded.

Hours cover the hours paid for, during the pay period which

includes the 12th of the month, for production, construction, or nonsupervisory workers. Included are hours paid for holidays and vacations, and for sick leave when pay is received directly from the firm.

Overtime hours cover hours worked by production or related workers for which overtime premiums were paid because the hours were in excess of the number of hours of either the straight-time workday or the workweek during the pay period which includes the 12th of the month. Weekend and holiday hours are included only if overtime premiums were paid. Hours for which only shift differential, hazard, incentive, or other similar types of premiums were paid are excluded.

Gross average hourly and weekly earnings. Average hourly earnings are on a "gross" basis, reflecting not only changes in basic hourly and incentive wage rates but also such variable factors as premium pay for overtime and late-shift work and changes in output of workers paid on an incentive plan. Shifts in the volume of employment between relatively high-paid and low-paid work and changes in workers' earnings in individual establishments also affect the general earnings averages. Averages for groups and divisions further reflect changes in average hourly earnings for individual industries.

Averages of hourly earnings differ from wage rates. Earnings are the actual return to the worker for a stated period of time; rates are the amount stipulated for a given unit of work or time. The earnings series does not measure the level of total labor costs on the part of the employer since the following are excluded: Irregular bonuses, retroactive items, payments of various welfare benefits, payroll taxes paid by employers, and earnings for those employees not covered under the production-worker, construction-worker, or nonsupervisory-employee definitions.

Gross average weekly earnings are derived by multiplying average weekly hours by average hourly earnings. Therefore, weekly earnings are affected not only by changes in gross average hourly earnings but also by changes in the length of the workweek. Monthly variations in such factors as proportion of part-time workers, stoppages for varying causes, labor turnover during the survey period, and absenteeism for which employees are not paid may cause the average workweek to fluctuate.

Long-term trends of gross average weekly earnings can be affected by structural changes in the makeup of the work force. For example, persistent long-term increases in the proportion of part-time workers in retail trade and many of the service industries have reduced average workweeks in these industries and have affected the average weekly earnings series.

Average weekly hours. The workweek information relates to the average hours for which pay was received and is different from standard or scheduled hours. Such factors as unpaid absenteeism, labor turnover, part-time work, and stoppages cause average weekly hours to be lower than scheduled hours of work for an establishment. Group averages further reflect changes in the workweek of component industries.

Average overtime hours. The overtime hours represent the portion of the gross average weekly hours which were in excess of regular hours and for which overtime premiums were paid. If an employee worked on a paid holiday at regular rates, receiving as total compensation his holiday pay plus straight-time pay for hours worked that day, no overtime hours would be reported.

Since overtime hours are premium hours by definition, gross weekly hours and overtime hours do not necessarily move in the same direction from month-to-month; for example, overtime premiums may be paid for hours in excess of the straight-time workday although less than a full week is worked. Diverse trends at the

industry-group level also may be caused by a marked change in hours for a component industry where little or no overtime was worked in both the previous and current months. In addition, such factors as stoppages, absenteeism, and labor turnover may not have the same influence on overtime hours as on gross hours.

Hours and earnings for total private nonagricultural industries. The series covers all nonagricultural industry divisions except government. The principal source of payroll data is Form BLS 790. Secondary source material such as the Bureau's *Employment and Wages, County Business Patterns* of the Bureau of the Census, and additional supporting information such as The Hospital Guide, Part II, of the American Hospital Association and special studies by the National Council of Churches supplement data for certain industry groups within the service division.

For a technical description of this series, see the article, "Hours and Earnings for Workers in Private Nonagricultural Industries," published in the May 1967 issue of *Employment and Earnings and Monthly Report on the Labor Force*. Reprints are available upon request.

Railroad hours and earnings. The figures for class I railroads (excluding switching and terminal companies) are based on monthly data summarized in the M-300 report of the Interstate Commerce Commission and relate to all employees except executives, officials, and staff assistants (ICC group I) who received pay during the month. Gross average hourly earnings are computed by dividing total compensation by total hours paid for. Average weekly hours are obtained by dividing the total number of hours paid for, reduced to a weekly basis, by the number of employees, as defined above. Gross average weekly earnings are derived by multiplying average weekly hours by average hourly earnings.

Spendable average weekly earnings. Spendable average weekly earnings in current dollars are obtained by deducting estimated Federal social security and income taxes from average weekly earnings. The amount of income tax liability depends on the number of dependents supported by the worker and his marital status, as well as on the level of his gross income. To reflect these variables, spendable earnings are computed for a worker with no dependents and a married worker with three dependents. The computations are based on gross average weekly earnings for all production or nonsupervisory workers in the industry division excluding other income and income earned by other family members.

The series reflects the spendable earnings of only those workers, with either none or three dependents, whose gross weekly pay approximates the average earnings indicated for all production and nonsupervisory workers. It does not reflect, for example, the average earnings of all married workers with three dependents; such workers, in fact have higher gross average earnings than workers with no dependents.

Since part-time as well as full-time workers are included, and since the proportion of part-time workers has been rising, the series understates the increase in earnings for full-time workers. As noted, "fringe benefits" are not included in the earnings. For a more complete discussion of the uses and limitations of these series, see the article by Paul M. Schwab, "Two Measures of Purchasing Power Contrasted," in the *Monthly Labor Review* for April 1971. Reprints of this article are available upon request from the Bureau of Labor Statistics.

"Real" earnings, or earnings in constant dollars are computed by dividing the earnings averages for the current month by the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W), and then multiplying by 100. "Real" earnings for months prior to January 1978, use the unrevised CPI-W as the deflator, whereas those for January 1978, forward use the revised CPI-W as the deflator.

Average hourly earnings excluding overtime. Average hourly earnings excluding overtime premium pay are computed by dividing the total production worker payroll for the industry group by the sum of total production-worker hours and one-half of total overtime hours. Prior to January 1956, these data were based on the application of adjustment factors to gross average hourly earnings (as described in the *Monthly Labor Review*, May 1950, pp. 537-540). Both methods eliminate only the earnings due to overtime paid for at 1½ times the straight-time rates. No adjustment is made for other premium payment provisions, such as holiday work, late-shift work, and overtime rates other than time and one-half.

Indexes of aggregate weekly payrolls and hours. The indexes of aggregate weekly payrolls and hours are prepared by dividing the current month's aggregate by the monthly average for the 1967 period. The hour aggregates are the product of average weekly hours and production-worker or nonsupervisory worker employment, and the payroll aggregates are the product of hour aggregates and average hourly earnings. At all higher levels of aggregation, hour and payroll aggregates are the sum of the component aggregates.

Indexes of diffusion of changes in number of employees on non-agricultural payrolls. These indexes measure the percent of industries which posted increases in employment over the specified time span. The indexes are calculated from 172 unpublished seasonally adjusted employment series (two-digit nonmanufacturing industries and three-digit manufacturing industries) covering all nonagricultural payroll employment in the private sector. A more detailed discussion of these indexes appears in "Introduction of Diffusion Indexes," in the December 1974 issue of *Employment and Earnings*.

Labor turnover

Labor turnover is the gross movement of wage and salary workers into and out of employed status with respect to individual establishments. This movement, which relates to a calendar month, is divided into two broad types: *Accessions* (new hires and rehires) and *separations* (terminations of employment initiated by either employer or employee). Each type of action is cumulated for a calendar month and expressed as a rate per 100 employees. The data relate to all employees, whether full- or part-time, permanent or temporary, including executive, office, sales, other salaried personnel, and production workers. Transfers to another establishment of the company are included, beginning with January 1959.

Accessions are the total number of permanent and temporary additions to the employment roll, including both new and rehired employees.

New hires are temporary or permanent additions to the employment roll of persons who have never before been employed in the establishment (except employees transferring from another establishment of the same company) or of former employees not recalled by the employer.

Recalls are permanent or temporary additions to the employment roll of persons specifically recalled to a job in the same establishment of the company following a period of layoff lasting

more than 7 consecutive days. (The collection of recalls, as a separate item, began January 1976.)

Other accessions are all additions to the employment roll which are not classified as new hires or recalls. These include transfers from other establishments of the company and former employees returning from military leave or other absences without pay who have been counted as separations. Data on other accessions are not published separately but are included in total accessions.

Separations are terminations of employment during the calendar month and are classified according to cause: Quits, layoffs, and other separations, are defined as follows:

Quits are terminations of employment initiated by employees, failure to report after being hired, and unauthorized absences, if on the last day of the month the person has been absent more than 7 consecutive calendar days.

Layoffs are suspensions without pay lasting or expected to last more than 7 consecutive calendar days, initiated by the employer without prejudice to the worker.

Other separations, which are not published separately but are included in total separations, are terminations of employment because of discharge, permanent disability, death, retirement, transfers to another establishment of the company, and entrance into the Armed Forces for a period expected to last more than 30 consecutive calendar days.

Relationship of labor turnover to employment series

Month-to-month changes in total employment in manufacturing industries reflected by labor turnover rates are not comparable with the changes shown in the Bureau's employment series for the following reasons: (1) Accessions and separations are computed for the entire calendar month; the employment reports refer to the pay period which includes the 12th of the month; and (2) employees on strike are not counted as turnover actions although such employees are excluded from the employment estimates if the work stoppage extends through the report period.

ESTIMATING METHODS

The principal features of the procedure used to estimate employment for the industry statistics are (1) the use of the "link relative" technique, which is a form of ratio estimation, (2) periodic adjustment of employment levels to new benchmarks, and (3) the use of size and regional stratification.

The "link relative" technique

From a sample composed of establishments reporting for both the previous and current months, the ratio of current month employment to that of the previous month is computed. This is called a link relative. The estimates of employment (all employees, including production and nonproduction workers together) for the current month are obtained by multiplying the estimates for the previous month by these "link relatives." In addition, small bias correction factors are applied to selected employment estimates each month. The size of the bias correction factors is determined from past experience. Other features of the general procedures are described in table 1. Summary of methods for

Table 1. Summary of methods for computing industry statistics on employment, hours, and labor turnover

Item	Basic estimating cell (industry, region, size, or region/size cell)	Aggregate industry levels (divisions, groups and, where stratified, individual cells)
Monthly data		
All employees	All employees estimate for previous month multiplied by ratio of all employees in current month to all employees in previous month, for sample establishments which reported for both months.	Sum of all employee estimates for component cells.
Production or nonsupervisory workers, women employees	All employee estimate for current month multiplied by (1) ratio of production or nonsupervisory workers to all employees in sample establishments for current month, (2) ratio of women to all employees.	Sum of production or nonsupervisory worker estimates, or estimates of women employees for component cells.
Gross average weekly hours	Production or nonsupervisory worker hours divided by number of production or nonsupervisory workers.	Average, weighted by production or nonsupervisory employment, of the average weekly hours for component cells.
Average weekly overtime hours	Production worker overtime hours divided by number of production workers.	Average, weighted by production worker employment, of the average weekly overtime hours for component cells.
Gross average hourly earnings	Total production or nonsupervisory worker payroll divided by total production or nonsupervisory worker hours.	Average, weighted by aggregate hours, of the average hourly earnings for component cells.
Gross average weekly earnings	Product of gross average weekly hours and average hourly earnings.	Product of gross average weekly hours and average hourly earnings.
Labor turnover rates	The number of particular actions (e.g., quits) in reporting establishments divided by total employment in those firms. The result is multiplied by 100.	Average, weighted by employment, of the rates for component cells.
Annual average data		
All employees and production or nonsupervisory workers	Sum of monthly estimates divided by 12.	Sum of monthly estimates divided by 12.
Gross average weekly hours	Annual total of aggregate hours (production or nonsupervisory worker employment multiplied by average weekly hours) divided by annual sum of employment.	Annual total of aggregate hours for production or nonsupervisory workers divided by annual sum of employment for these workers.
Average weekly overtime hours	Annual total of aggregate overtime hours (production worker employment multiplied by average weekly overtime hours) divided by annual sum of employment.	Annual total of aggregate overtime hours for production workers divided by annual sum of employment for these workers.
Gross average hourly earnings	Annual total of aggregate payrolls (production or nonsupervisory worker employment multiplied by weekly earnings) divided by annual aggregate hours.	Annual total of aggregate payrolls divided by annual aggregate hours.
Gross average weekly earnings	Product of gross average weekly hours and average hourly earnings.	Product of gross average weekly hours and average hourly earnings.
Labor turnover rates	Annual aggregate (of each labor turnover action) divided by annual sum of employment.	Annual aggregate (of each labor turnover action) divided by annual sum of employment.

computing industry statistics on employment, hours, earnings, and labor turnover.

Size and regional stratification

A number of industries are stratified by size of establishment and/or by region, and the stratified production or nonsupervisory worker data are used to weight the hours and earnings into broader industry groupings. Accordingly, the basic estimating cell for an employment, hours, or earnings series, as the term is used in the summary of computational methods, may be a whole industry or a size stratum, a region stratum, or a size stratum of a region within an industry.

Benchmark adjustments

Employment estimates are compared periodically with comprehensive counts of employment which provide "benchmarks" for the various nonagricultural industries, and appropriate adjustments are made as indicated. The industry estimates are currently projected from March 1974 levels. Normally, benchmark adjustments are made annually.

The primary sources of benchmark information are employment data, by industry, compiled quarterly by State agencies from reports of establishments covered under State unemployment insurance laws. These tabulations cover nearly nine-tenths of the total nonagricultural employment in the United States. Benchmark data for the residue are obtained from the records of the Social Security Administration, the Interstate Commerce Commission, and a number of other agencies in private industry or government.

The estimates relating to the benchmark month are compared with new benchmark levels, industry by industry. If revisions are necessary, the monthly series of estimates are adjusted between the new benchmark and the preceding one, and the new benchmark for each industry is then carried forward progressively to the current month by use of the sample trends. Thus, under this procedure, the benchmark is used to establish the level of employment; the sample is used to measure the month-to-month changes in the level. A comparison of the actual amounts of revisions due to benchmark adjustment for the last 3 years is shown in table J.

Data for all months since the last benchmark to which the series has been adjusted are subject to revision. To provide users of the data with a convenient reference source for the revised data,

Table J. Nonagricultural payroll employment estimates, by industry divisions, as a percentage of the benchmark for 1971, 1973, and 1974

Industry division	1971	1973 ¹	1974
Total	100.2	98.4	99.9
Mining	99.8	96.5	97.0
Contract construction	96.9	90.4	100.6
Manufacturing	100.4	98.9	99.9
Transportation and public utilities ..	100.9	99.3	100.0
Wholesale and retail trade	100.3	97.8	100.1
Finance, insurance, and real estate	100.2	99.5	98.9
Services	100.4	99.1	99.3
Government	100.0	99.5	100.6

¹ 2-year revision.

the BLS publishes as soon as possible after each benchmark revision a summary volume of employment, hours, earnings, and labor turnover statistics, entitled *Employment and Earnings, United States*.

THE SAMPLE

Design

The sampling plan used in the current employment statistics program is known as "sampling proportionate to average size of establishment." This design is an optimum allocation design among strata since the sampling variance is proportional to the average size of establishments. The universe of establishments is stratified first by industry and then within each industry by size of establishment in terms of employment. For each industry, the number of sample units is distributed among the size class cells on the basis of average employment per establishment in each cell. In practice this is equivalent to distributing the predetermined total number of establishments required in the sample among the cells on the basis of the ratio of employment in each cell to total employment in the industry. Within each noncertainty stratum the sample members are selected at random.

Under this type of design, large establishments fall into the sample with certainty. The size of the sample for the various industries is determined empirically on the basis of experience and of cost considerations. In a manufacturing industry in which a high proportion of total employment is concentrated in relatively few establishments, a large percentage of total employment is included in the sample. Consequently, the sample design for such industries provides for a complete census of the large establishments with only a few chosen from among the smaller establishments or none at all if the concentration of employment is great enough. On the other hand, in an industry in which a large proportion of total employment is in small establishments, the sample design calls for inclusion of all large establishments and also for a substantial number of the small ones. Many industries in the trade and services divisions fall into this category. To keep the sample to a size which can be handled by available resources, it is necessary to accept samples in these divisions with a smaller proportion of universe employment than is the case for most manufacturing industries. Since individual establishments in these nonmanufacturing divisions generally show less fluctuation from regular cyclical or seasonal patterns than establishments in manufacturing industries, these smaller samples (in terms of employment) generally produce reliable estimates.

In the context of the BLS employment and labor turnover statistics programs, with their emphasis on producing timely data

at minimum cost, a sample must be obtained which will provide coverage of a sufficiently large segment of the universe to provide reasonably reliable estimates that can be published promptly and regularly. The present sample meets these specifications for most industries. With its use, the BLS is able to produce preliminary estimates each month for many industries and for many geographic levels within a few weeks after reports are mailed by respondents, and at a somewhat later date, statistics in considerably greater industrial detail.

Coverage

The BLS sample of establishment employment and payrolls is the largest monthly sampling operation in the field of social statistics. Table K shows the approximate proportion of total employment in each industry division covered by the group of establishments furnishing monthly employment data. The coverage for individual industries within the division may vary from the proportions shown. Table L shows the approximate coverage, in terms of employment, of the labor turnover sample.

Reliability of the employment estimates

Although the relatively large size of the BLS establishment sample assures a high degree of accuracy, the estimates derived from it may differ from the figures that would be obtained if it were possible to take a complete census using the same schedules and procedures. As discussed under the previous section, a link relative technique is used to estimate employment. This requires the use of the previous month's estimate as the base in computing the current month's estimate. Thus, small sampling

Table K. Approximate size and coverage of BLS employment and payrolls sample, March 1974¹

Industry division	Number of establishments in samples	Employees	
		Number reported	Percent of total
Total	158,400	31,637,000	41
Mining	2,100	307,000	46
Contract construction ..	16,500	771,000	20
Manufacturing	47,000	11,821,000	59
Transportation and public utilities:			
Railroad transportation (ICC)	95	537,000	94
Other transportation and public utilities ..	7,300	2,181,000	53
Wholesale and retail trade	38,200	3,050,000	18
Finance, insurance, and real estate	10,100	1,507,000	36
Services	23,500	2,740,000	20
Government:			
Federal (Civil Service Commission) ²	3,200	2,691,000	100
State and local	10,400	6,032,000	52

¹ Since a few establishments do not report payroll and hour information, hours and earnings estimates may be based on a slightly smaller sample than employment estimates.

² National estimates of Federal employment are provided to the BLS by the Civil Service Commission. State and area estimates are based on a sample of 3,200 reports covering about 53 percent of employment in Federal establishments.

and response errors may cumulate over several months. To remove this accumulated error, the estimates are usually adjusted annually to new benchmarks. In addition to taking account of sampling and response errors, the benchmark revision adjusts the estimates for changes in the industrial classification of individual establishments (resulting from changes in their product which are not reflected in the levels of estimates until the data are adjusted to new benchmarks). In fact, at the more detailed industry levels, particularly within manufacturing, changes in classification are the major cause of benchmark adjustments. Another cause of differences arises from

Table L. Approximate size and coverage of BLS labor turnover sample, March 1974

Industry	Employees	
	Number reported	Percent of total
Total	10,873,730	52
Manufacturing	10,007,800	51
Metal mining	61,850	66
Coal mining	56,770	35
Communications:		
Telephone	734,270	74
Telegraph	13,040	61

Table M. Average benchmark percent revision in employment estimates and relative errors¹ for average weekly hours and average hourly earnings by industry division

Industry division	Average benchmark revision in estimates of employment ²	Relative errors (in percent)	
		Average weekly hours	Average hourly earnings
Total nonagricultural employment	0.2		
Total private .....	.1	0.1	0.2
Mining	1.2	.5	.5
Contract construction	1.2	.2	.3
Manufacturing .....	.3	.1	.1
Durable .....	.4	.1	.1
Nondurable goods .....	.3	.1	.1
Transportation and public utilities .....	.4	.7	.4
Trade .....	.3	.1	.2
Wholesale	1.0	.2	.3
Retail .....	.2	.2	.2
Finance, insurance, and real estate .....	.4	.2	.4
Services .....	.6	.4	.8
Government ³ .....	.6	—	—

¹ Relative errors relate to March 1971 data.

² The average percent revision in employment for the 1967-71 and 1974 benchmarks.

³ Estimates for government are based on a total count for Federal Government and samples for State and local government benchmarked to a quinquennial census of government conducted by the Bureau of the Census.

improvements in the quality of the benchmark data. Improvements brought about by the most recent expansion in unemployment insurance coverage were the major cause of differences in the March 1973 benchmark adjustments. (See article by Carol M. Utter, "BLS Establishment Estimates Revised to March 1973 Benchmark Levels," in the December 1974 issue.) Table M presents the average percent revisions of the six most recent benchmarks (excluding the March 1973 adjustment) for major industry divisions. Detailed descriptions of individual benchmark revisions are available from the Bureau upon request.

The hours and earnings estimates for cells are not subject to benchmark revisions, although the broader groupings may be affected slightly by changes in employment weights. The hours and earnings estimates, however, are subject to sampling errors which may be expressed as relative errors of the estimates. (A relative error is a standard error expressed as a percent of the estimate.) Relative errors for major industries are presented in table M and for individual industries with the specified number of employees in table N. The chances are about 2 out of 3 that the

Table N. Root-mean-square errors of differences between benchmarks and estimates of employment and average relative errors for average weekly hours and average hourly earnings

Size of employment estimate	Root-mean-square error of employment estimates ¹	Relative errors (in percent)	
		Average weekly hours	Average hourly earnings
50,000	1,900	0.9	1.5
100,000	2,700	.7	1.1
200,000	4,100	.5	.9
500,000	9,600	.4	.8
1,000,000	13,000	.3	.5
2,000,000	16,800	.3	.5

¹ Assuming 12-month intervals between benchmark revisions.

Table O. Errors of preliminary employment estimates

Size of employment estimate	Root-mean-square error of	
	Monthly level	Month-to-month change
50,000	600	600
100,000	800	700
200,000	1,400	1,200
500,000	3,300	3,200
1,000,000	4,200	4,200
2,000,000	6,500	6,300
10,000,000	27,000	23,000
Total nonagricultural employment	94,000	81,000
Mining	6,000	5,000
Contract construction	17,000	15,000
Manufacturing	35,000	33,000
Transportation and public utilities	14,000	12,000
Wholesale and retail trade	33,000	31,000
Finance, insurance, and real estate	6,000	6,000
Services	27,000	22,000
Government	45,000	39,000

hours and earnings estimates from the sample would differ by a smaller percentage than the relative error from the averages that would have been obtained from a complete census.

One measure of the reliability of the employment estimates for individual industries is the root-mean-square error (RMSE). The measure is the standard deviation adjusted for the bias in estimates

$$(\text{RMSE} = \sqrt{(\text{Standard Deviation})^2 + (\text{Bias})^2}).$$

If the bias is small, the chances are about 2 out of 3 that an estimate from the sample would differ from its benchmark by less than the root-mean-square error. The chances are about 19 out of 20 that the difference would be less than twice the root-mean-square error.

Approximations of the root-mean-square errors (based on the experience of the last 6 years) of differences between final estimates and benchmarks are presented in table N.

For the two most recent months, estimates of employment, hours, and earnings are preliminary and are so footnoted in the tables. These figures are based on less than the total sample and are revised when all the reports in the sample have been received. Table O presents root-mean-square errors of the amounts of revisions that may be expected between the preliminary and final levels of employment and preliminary and final month-to-month changes. Revisions of preliminary hours and earnings estimates are normally not greater than .1 of an hour for weekly hours and 1 cent for hourly earnings.

STATISTICS FOR STATES AND AREAS

State and area employment, hours, earnings, and labor turnover data are collected and prepared by State agencies in cooperation with BLS. The area statistics relate to metropolitan areas. Definitions for all areas are published each year in the issue of *Employment and Earnings* that contains State and area annual averages (usually the May issue). Changes in definitions are noted as they occur. Additional industry detail may be obtained from the State agencies listed on the inside back cover of each issue. These statistics are based on the same establishment reports used by BLS for preparing national estimates. For employment, the sum of the State figures may differ slightly from the equivalent official U.S. totals on a national basis, because some States have more recent benchmarks than others and because of the effects of differing industrial and geographic stratification.

For the States and the areas shown in the B and C sections of this periodical, all the annual average data for the detailed industry statistics currently published by each cooperating State agency are presented (from the earliest date of availability of each series) in a summary volume published annually by the BLS.

State and area unemployment data

(E table)

FEDERAL-STATE COOPERATIVE PROGRAM

Labor force and unemployment estimates for States, labor market areas (LMA's), and other areas covered under Federal assistance programs are developed by State employment security agencies under a Federal-State cooperative program. The local unemployment estimates which are derived from standardized procedures developed by BLS are the basis for determining eligibility of an area for benefits under Federal programs such as the Compre-

PRODUCTIVITY DATA

Tables C-10, C-11, and C-12 are compiled by the Bureau of Labor Statistics from establishment data and from estimates of compensation and Gross National Product supplied by the U.S. Department of Commerce and the Federal Reserve Board.

Definition

Hours of wage and salary workers in nonagricultural establishments refer to hours paid for all employees—production workers, nonsupervisory workers, and salaried workers.

Output is the constant dollar market value of final goods and services produced in a given period. Indexes of *output per hour* of labor input, or labor productivity, measure changes in the volume of goods and services produced per unit of labor.

Compensation per hour includes wages and salaries of employees plus employers contributions for social insurance and private benefit plans. The data also include an estimate of wages, salaries, and supplementary payment for the self-employed, except for non-financial corporations, in which there are no self-employed.

Real compensation per hour is compensation per hour adjusted to eliminate the effect of changes in the Consumer Price Index for All Urban Consumers (CPI-U).

Unit labor costs measure the labor compensation cost required to produce one unit of output and are derived by dividing compensation per hour by output per hour. *Unit nonlabor payments* include profits, depreciation, interest, and indirect taxes per unit of output. They are computed by subtracting compensation of all persons from the current dollar gross national product and dividing by output, in these tables, unit nonlabor costs contain all the components of unit nonlabor payments except unit profits. *Unit profits* includes corporate profits and inventory valuation adjustments per unit of output.

The *implicit price deflator* is derived by dividing the current dollar estimate of gross product by the constant dollar estimate, making the deflator, in effect, a price index for gross product of the sector reported.

Notes on the data

For the private business sector and the nonfarm business sector, these indexes relate to the Gross Domestic Product less households and institutions, owner-occupied housing, and statistical discrepancy. For the nonfinancial corporate sector, the indexes refer to the Gross Domestic Product of nonfinancial corporate business.

Manufacturing data have been revised to reflect revisions in the Federal Reserve Board Index of Industrial Production. Output data are supplied by the Bureau of Economic Analysis, U.S. Department of Commerce, and the Federal Reserve Board. Quarterly measures have been adjusted by the Bureau of Labor Statistics to annual estimates of output (gross product originating) from the Bureau of Economic Analysis. Compensation and hour data are from the Bureau of Economic Analysis and the Bureau of Labor Statistics.

hensive Employment and Training Act, the Public Work Employment Act and the Public Works and Economic Development Act.

ESTIMATING METHODS

Labor force and unemployment in 10 large States: New York, California, Illinois, Ohio, New Jersey, Pennsylvania, Michigan, Texas, Massachusetts, and Florida; and two areas: Los Angeles-Long Beach metropolitan area and New York City, are sufficiently

reliable to be used directly from the CPS. For a description of the CPS concepts see "Explanatory note A, Household Data," above.

Monthly employment and unemployment estimates in the remaining 40 States and 205 labor market areas are prepared in several stages.

1. Preliminary estimate—Employment: The total employment estimate is based primarily on data from the survey of establishments which produces an estimate of payroll employment. This place-of-work estimate must be adjusted to refer to place of residence as used in the CPS. Factors for adjusting from place of work to place of residence have been developed for the major categories of employment by class of worker and industry on the basis of employment relationships which existed at the time of the 1970 Decennial Census. These factors are applied to the payroll employment estimates for the current period to obtain adjusted employment estimates.

2. Preliminary estimate—Unemployment: In the current month, the estimate of unemployment is an aggregate of the estimates for each of three building block categories: (1) Persons who were previously employed in industries covered by State UI laws; (2) those previously employed in industries not covered by these laws; and (3) those who were either entering the labor force of the first time or reentering after a period of separation. This is referred to below, as the UI-based estimate.

An estimate for those previously employed in covered industries is derived from a count of current unemployment insurance claimants, plus estimates of claimants whose benefits have been exhausted, those persons disqualified from receiving benefits for nonmonetary reasons (because they quit, were discharged for cause, etc., but would otherwise have been eligible), and persons who either filed claims late, or not at all.

The estimate of those previously employed in industries not covered by UI is derived by applying to the employment estimate for each non-covered industry or class of worker subgroup in the State the ratio of covered unemployment to covered employment, weighted by factors reflecting national historical relationships.

For the third category, new entrants and reentrants into the labor force, a composite estimate is developed from equations that relate the total entrants into the labor force to the experienced unemployed and the experience labor force. For each month, the estimate of entrants into the labor force is a function of: (a) the month of the year; (b) the level of the experienced unemployed; (c) the level of the experienced labor force; and (d) proportion of the working age population that is considered "youth." The composite estimate of total entrants is defined as:

$$U=A(X+E) + BX, \text{ Where}$$

U=total entrant unemployment

E=total employment

X=total experienced unemployment

A,B=synthetic factors incorporating seasonal variation and an assumed relationship between the proportion of youths in the working population and the historical relationship of entrants to the experienced unemployed (B factor) or the experienced labor force (A factor).

3. Correction factors for employment and unemployment are then applied at the State level to the UI-based estimates obtained above for each of the 40 States and the District of Columbia. These correction factors are based on the ratio of the CPS to the UI-based estimates for the six month period ending in the current month (e.g. a 6-month moving average).

4. Substate adjustment for additivity. Independent estimates of employment and unemployment are prepared both for the State (obtained directly from the CPS in the 10 large States or by the UI-based method in the remaining States), and labor market areas (LMA's) within the State. The total labor force included in the LMA's exhaust the geographic boundaries of the State. A proportional adjustment is applied to all substate LMA estimates to ensure that the substate estimates of employment and unemployment add to the independent State totals. In California and New York, which also have substate areas taken directly from the CPS, the additivity adjustment for the remaining areas is applied to the State total minus the direct CPS area.

5. Benchmark correction procedures. Once each year monthly estimates prepared by State employment security agencies using UI-based estimating procedures are adjusted, or benchmarked, by BLS to the annual average CPS estimates for the 40 States for which monthly CPS estimates are not available. This adjustment is necessary because the State-prepared estimates are not as reliable as the CPS annual averages due to differences in State UI laws, the structural limitations of the UI-based estimating method, and errors in the UI data.

The benchmarked estimates are produced in three stages. First, the monthly UI-based estimates are adjusted by the ratio of the CPS to the UI-based annual averages. Second, the difference between the ratio of annual averages for two consecutive year is wedged into the monthly estimates in order to minimize the disturbance to the original series. Finally, the second-stage estimates are forced into agreement with CPS annual averages. In the 10 States which use CPS estimates monthly, no benchmark correction is required, as the average of the 12 monthly State CPS estimates will equal the CPS annual averages.

Seasonal adjustment

Many economic statistics reflect a regularly recurring seasonal movement which can be estimated on the basis of past experience. By eliminating that part of the change which can be ascribed to usual seasonal variation, it is possible to observe the cyclical and other nonseasonal movements in the series. However, in evaluating deviations from the seasonal pattern—that is, changes in a seasonally adjusted series—it is important to note that seasonal adjustment is merely an approximation based on past experience. Seasonally adjusted estimates have a broader margin of possible error than the original data on which they are based, since they are subject not only to sampling and other errors, but in addition, are affected by the uncertainties of the seasonal adjustment process itself. Seasonally adjusted series for selected labor force and establishment data are published regularly in *Employment and Earnings*.

The seasonal adjustment methods used for these series are an adaptation of the standard ratio-to-moving average method, with a provision for moving "adjustment factors" to take account of changing seasonal patterns. A detailed description of the method is given in the two publications, *BLS Seasonal Factor Method (1966)* and *X-11 Variant of the Census Method II Seasonal Adjustment Program*, Technical Paper No. 15, Bureau of the Census (1967).

Data for the household series are seasonally adjusted utilizing the Census Bureau's X-11 Method. Each January, seasonal adjustment factors for unemployment and other labor force series are revised to take into account data from the previous year. In January 1976, in addition to the routine annual revisions, the Bureau introduced a modification in the procedure for seasonally

adjusting teenage unemployment and those few other unemployment series (e.g., unemployed new entrants) of which teenagers are the exclusive or major part. All other series are adjusted following past procedures.

All civilian labor force and unemployment rate statistics, as well as the major employment and unemployment estimates, are computed by aggregating independently adjusted series. For example, for each of the three major labor force components—agricultural employment, nonagricultural employment and unemployment—data for four sex-age groups (males and females under and over 20 years of age) are separately adjusted for seasonal variation and are then added to derive seasonally adjusted total figures. In order to provide seasonally adjusted total employment and civilian labor force estimates, the appropriate series are aggregated. The unemployment rate for all civilian workers is derived by dividing the estimate for total unemployment (the sum of 4 seasonally adjusted sex-age components) by the civilian labor force (the sum of 12 seasonally adjusted sex-age components).

Revised seasonally adjusted series for major components of the labor force based on data through December 1977, new seasonal factors for the 12 major components of the civilian labor force, and a description of the seasonal adjustment methodology are published in the February 1978 *Employment and Earnings*. Many additional series, which are either components or aggregates of the series presented, are available from the BLS upon request.

For establishment data, seasonally adjusted series for all employees, production workers, hours, and earnings, are computed using the *BLS Seasonal Factor Method*. Seasonal adjustment factors are directly applied to the component levels. Seasonally adjusted totals for most of these series are then obtained by taking a weighted average of the seasonally adjusted data for the component series. Seasonally adjusted average weekly earnings are the product of seasonally adjusted average hourly earnings and seasonally adjusted average weekly hours. Average weekly earnings in constant

dollars, seasonally adjusted, are obtained by dividing average weekly earnings, seasonally adjusted, by the seasonally adjusted revised Consumer Price Index for Urban Wage Earners and Clerical Workers (revised CPI-W), and multiplying by 100. Indexes of aggregate weekly hours, seasonally adjusted, are obtained by multiplying average weekly hours, seasonally adjusted, by production or nonsupervisory workers, seasonally adjusted, and dividing by the 1967 base. For total private, total good-producing, total private service-producing, trade, manufacturing, and durable and nondurable goods, the indexes of aggregate weekly hours, seasonally adjusted, are obtained by summing the aggregate weekly hours, seasonally adjusted, for the appropriate component industries and dividing by the 1967 base.

The seasonally adjusted establishment data for Federal Government are based on a series which excludes the Christmas temporary help employed by the Postal Service in December. The employment of these workers constitutes the only significant seasonal change in Federal Government employment during the winter months. Furthermore, the volume of such employment may change substantially from year to year because of administrative decisions by the Postal Service. Hence, it was considered desirable to exclude this group from the data upon which the seasonally adjusted is based.

For labor turnover rates, seasonal adjustment factors are applied directly to the component series. These series are then aggregated to obtain total levels (total accessions and total separations). These factors are derived by the Census X-11 Method using the trading day option. As a result these series are adjusted for the number of times each day of the week occurs in a given month, as well as for the month of the year.

The revised seasonally adjusted series for the establishment data reflect experience through August 1977. Seasonal factors to be used for current adjustment appear in the December 1977 issue of *Employment and Earnings*.

Additional information concerning the preparation of the labor force, employment, hours, earnings, and labor turnover series—concepts and scope, survey methods, and limitations—is contained in the *Handbook of Methods, BLS Bulletin 1910*.

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