MONTHLY LABOR REVIEW

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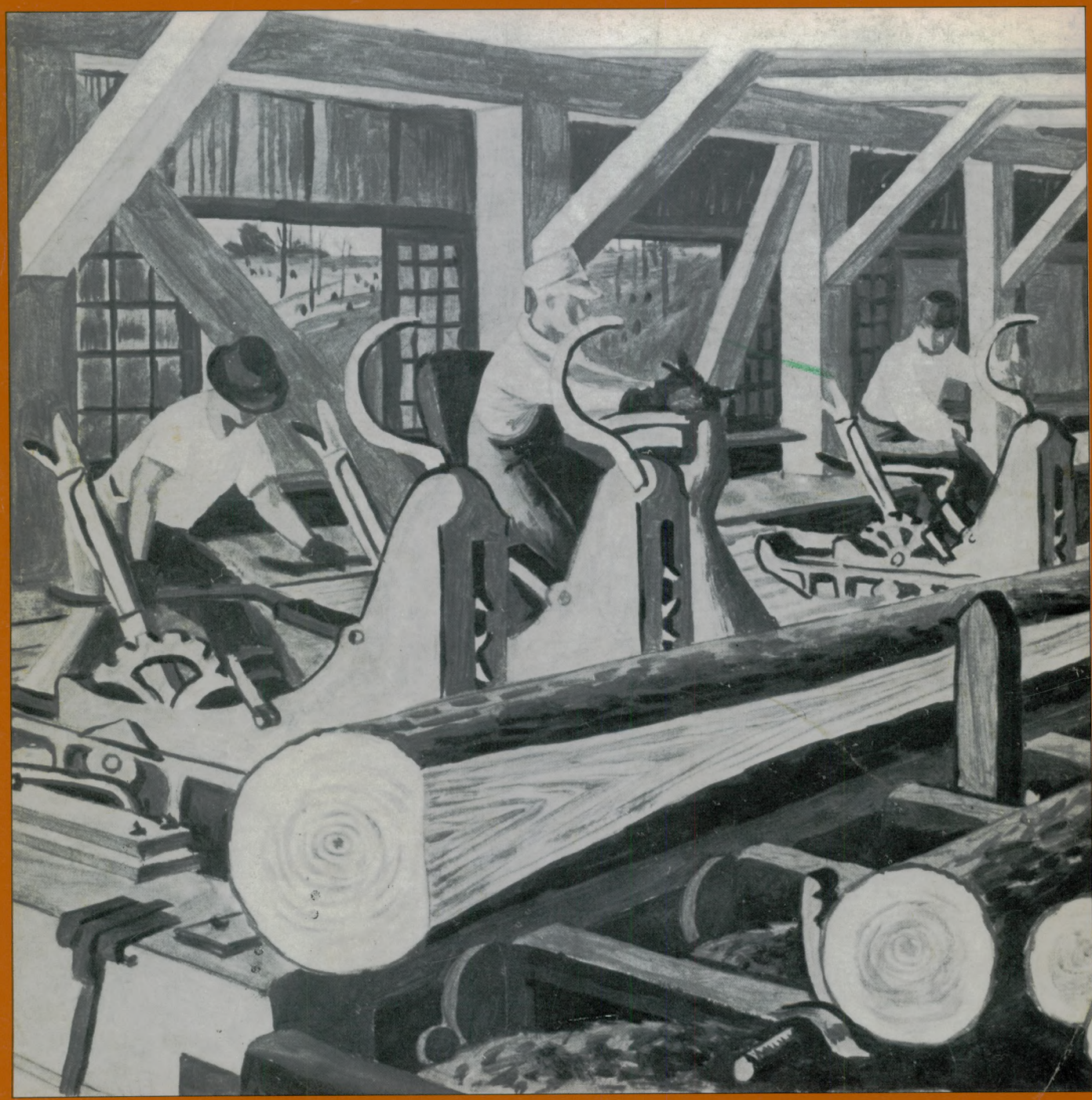
In this issue:
Employment and unemployment in 1982



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MONTHLY LABOR REVIEW

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Labor Month In Review

ROLL CALL. With release this month of data on the January employment situation, the Bureau of Labor Statistics began publishing a new unemployment rate and other labor force series in which members of the Armed Forces stationed in the United States are included in the employment count. Implications of this important change were discussed in an article in the November issue of the *Monthly Labor Review*. Here are some specific questions and answers about the new data.

Why are persons in the resident Armed Forces being included in the unemployment rate?

The National Commission on Employment and Unemployment Statistics, established in 1978 to review our Nation's labor force data system, determined that with the change to a volunteer system, military employment is not substantively different from civilian employment. The Commission, therefore, recommended in its final report, *Counting the Labor Force,* that military personnel stationed in the United States be counted in employment and labor force totals and thus be reflected in the overall unemployment rate.

How will the addition of persons in the resident Armed Forces affect the measurement of employment and unemployment?

Addition of the resident Armed Forces to the number employed will add about 1.7 million to the civilian level. Because those in the Armed Forces are employed, the count of the unemployed will not be affected. The new unemployment rate that includes the resident Armed Forces in the labor force base will be one- or two-tenths of a percentage point below the civilian unemployment rate. For men, the new jobless rate will be two- or three-tenths of a point below the civilian rate, while for women, the two rates will generally be identical.

Will this new unemployment rate be seasonally adjusted? How will its month-to-month movements differ from those of the civilian rate?

The new unemployment rate will be available on both a seasonally adjusted and an unadjusted basis. While there will be no seasonal adjustment of the level of the resident Armed Forces, the other components of this unemployment rate—that is, the civilian labor force and the unemployed—will be seasonally adjusted to yield an adjusted jobless rate. The month-to-month movements in the two unemployment rates will be quite similar and normally will vary by one-tenth of a percentage point or less.

Who is counted in the resident Armed Forces?

The Bureau of Labor Statistics will use information on Armed Forces members stationed in the United States provided by the Department of Defense. Included will be those persons on active military duty stationed in any of the 50 States; persons on active duty with the Coast Guard; Army, Air Force, and Marine reserve forces on active duty training or tours for extended periods; and National Guard personnel on initial active duty training. Navy personnel on ships are counted in the resident Armed Forces if their ship's home port is in the United States and the ship is not deployed to the Mediterranean, the Mideast, the Far East, or the Indian Ocean.

How much does the size of the resident Armed Forces fluctuate, and what would happen if the military draft were resumed?

The resident Armed Forces has ranged from 1.2 million at the inception of the data series in 1950 to 2.3 million in 1968. However, the year-to-year change in the annual average size of the resident military over the past 10 years has not exceeded 60,000 and has averaged only 30,000. Fluctuations as small as these have virtually no impact on the unemployment rate. If the military draft were resumed, BLS would examine the effect it would have on the data. The National Commission suggested that "the size of the military draft and the degree to which it would change the present composition under a voluntary system would largely determine whether the military forces should be separated from the civilian labor force."

Why is the count of the Armed Forces limited to those residing in the United States?

Just as civilian employment includes only persons residing in the United States, the count of the Armed Forces is similarly defined. The size of the entire Armed Forces, including military personnel stationed overseas, is about 2.2 million, and has ranged from 1.6 million in 1950 to 3.5 million in 1968 and 1969.

How will this change affect the measurement of unemployment for States and local areas?

State and local labor force estimates will continue to be based on the civilian labor force. Because the Armed Forces are isolated from the local labor market—they do not contribute employment opportunities or in general provide a source of workers for civilian jobs in the community—the National Commission recommended that the military not be included in State and local area statistics. Therefore, when comparing jobless rates for the Nation as a whole with those for States or specific areas, the civilian-based rate should be used.

BOTH THE NEW SERIES including the resident Armed Forces and the civilian unemployment rate will appear in the Current Labor Statistics section of the March *Review*. Further information on the change appears in the February issue of *Employment and Earnings*. □

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Unemployment continued to rise in 1982 as recession deepened

By yearend, the overall unemployment rate had reached a double-digit level; all sectors and all worker groups were affected, with men age 20 and over the hardest hit

MICHAEL A. URQUHART AND MARILLYN A. HEWSON

The economy entered 1982 in a severe recession and labor market conditions deteriorated throughout the year. The unemployment rate, already high by historical standards at the onset of the recession in mid-1981, reached 10.8 percent at the end of 1982, higher than at any time in post-World War II history.

The current recession followed on the heels of the brief 1980 recession, from which several key goods industries had experienced only limited recovery. Housing, automobiles, and steel, plus many of the industries that supply these basic industries, were in a prolonged downturn spanning 3 years or more, and bore the brunt of the 1981–82 job cutbacks.

Unemployment rose throughout 1982 and, by September, the overall rate had reached double digits for the first time since 1941. A total of 12 million persons were jobless by yearend—an increase of 4.2 million persons since the prerecession low of July 1981.[1] Unemployment rates for every major worker group reached postwar highs, with men age 20 and over particularly hard hit.[2]

Chart 1 shows the increase in the unemployment rate from peak to trough of the business cycle of all eight postwar recessions.[3] The severity of each recession is measured by the actual magnitude at the recession trough and the extent of the change from peak to trough. The current recession is similar to the 1973–75 recession in terms of length and severity. The 3.6-percentage-point increase in the jobless rate was considerably above the 2.9 average for all previous recessions, but is about the same as the rise of 3.8 points in 1973–75, when the recession lasted 16 months. However, because the current cycle began with the highest unemployment rate for any business cycle peak, the subsequent increase easily pushed it higher than that of any other recession.

The chart also illustrates an uptrend in the unemployment rate since 1969. Numerous factors—including changes in the demographic composition of the labor force, and in unemployment insurance and welfare laws—have been suggested as partly responsible for this trend.[4] But the biggest contributor has been the poor performance of the economy in recent years. For example, since 1969, recoveries have generally been weaker and shorter in duration than their predecessors. Indeed, the recovery from the 1980 recession lasted only 12 months and reduced the overall unemployment rate by only 0.6 percentage point, compared with an average decline of 2.7 points in all previous recoveries.

Some analysts have pointed to the weakness of the 1980–81 recovery as evidence that there was really only one long recession spanning from the beginning of 1980 to the present.[5] Such a view is not inconsistent with the general upward movement of the overall unemployment rate during this period. The 7.4-percent unemployment

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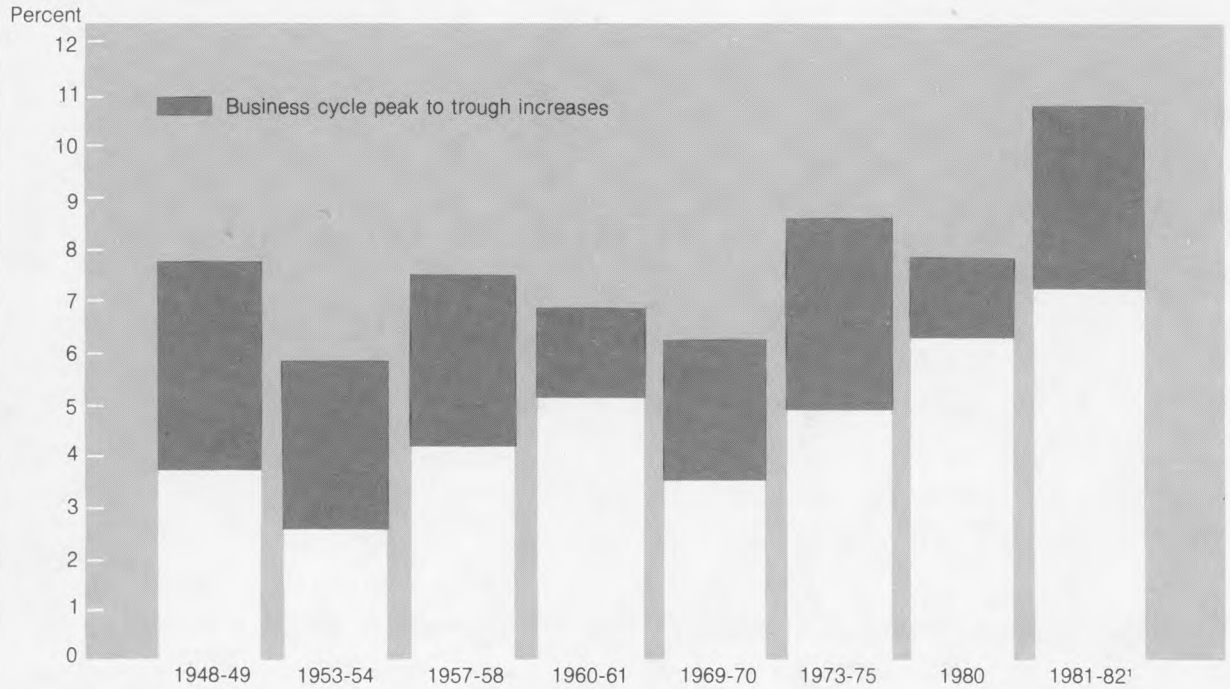
Chart 1. Unemployment rates during the eight postwar recessions (seasonally adjusted)



¹Includes data through December 1982.

rate that prevailed in the first 3 quarters of 1981 was only two-tenths below the high reached in the third quarter of 1980. Some worker groups—particularly blacks and teenagers—experienced no significant decline in their jobless rate over the late 1980-early 1981 recovery period.

Most industries cut jobs

The pattern of job losses during 1982 was an extension of the deterioration that characterized the Nation's economy in late 1981. In the first quarter of 1982, nonfarm payroll employment (as measured by the Bureau of Labor Statistics' survey of establishments) declined more than half a million. The rate of decline moderated slightly in the second quarter, followed by a sharp decline in the job count in the third quarter. (See table 1.) This stemmed partly from the fact that some companies stepped up production to meet the boost in consumer spending that was expected with the midyear tax cut, and when spending did not rise as expected, production cutbacks and additional layoffs occurred. Declines continued into the fourth quarter, and by December, the number of payroll jobs lost since the onset of the recession had reached 2.9 million, exceeding the postwar record drop of 2.3 million during the severe 1973–75 recession.

Virtually all sectors of the economy were affected adversely by the economic contraction, including the generally more stable services sector. The widespread nature of the 1982 job curtailments was clearly evident in the BLS diffusion index of private nonagricultural payroll employment.[6] In the fourth quarter, only 24 percent of the 186 industries included in the index reported job gains.

Goods-producing industries. Although the impact of the downturn was pervasive, the sharpest job cutbacks took place in the goods-producing sector. While this sector represented less than 30 percent of total nonfarm payroll employment, it accounted for 9 of every 10 jobs lost during 1982.

After 8 years of almost continuous employment growth, the mining industry suffered sizable declines in 1982. The number of mining jobs dropped more than 150,000 from its fourth-quarter 1981 level. The reduction stemmed largely from cutbacks in oil and gas extraction as improvements in energy efficiency, the global recession, and high prices reduced demand for oil and natural gas. Mortgage rates remained high throughout most of the year, and the resulting contraction in residential construction activity coupled with the impact of the recessionary environment on nonresidential con-

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struction demand gave rise to a 225,000 decline in construction employment in 1982, following a 160,000 decline in the last 2 quarters of 1981.

Even with severe job curtailments in construction and mining, three-fourths of the employment declines in the goods sector occurred in manufacturing, as every major manufacturing industry registered some decrease in 1982. It should be emphasized that many of the Nation's basic manufacturing industries were confronted with serious structural problems prior to the onset of the economic downturn in 1980—particularly autos, steel, machinery, and textiles. Deficiencies in investment emphasized the need to modernize plants in some industries, but the persistently high interest rates and sluggish demand of the last 3 years exacerbated the problems of these sagging industries.

The largest job reductions within manufacturing during 1982 occurred in the major metals and nonelectrical machinery industries, reflecting the slump in the auto industry, mounting import competition, and a retrenchment in capital spending plans. Employment declines in primary and fabricated metals totaled 260,000 and 180,000, respectively, between the fourth quarters of 1981 and 1982. The nonelectrical machinery industry underwent an even more precipitous decline, falling nearly 400,000 by yearend. Together, these three industries accounted for more than three-fifths of the durable goods cutbacks in 1982.

As indicated above, significant employment declines in the automotive industry had already taken place before 1982.[7] These continued and were joined by job curtailments in aircraft, shipbuilding, and railroad equipment. As a consequence employment declines in overall transportation equipment totaled almost 180,000 from its fourth-quarter 1981 level to its lowest level since 1962.

The recession took its toll on the electric and electronic equipment industry, as cutbacks totaled more than 100,000. Other durable goods industries which are closely tied to the construction industry were hard hit by the more than 3-year deterioration in the housing market. Lumber and wood products; stone, clay and glass; and furniture and fixtures all had sharp employment declines in 1982.

Table 1. Employees on nonagricultural payrolls, by industry division and major manufacturing group, seasonally adjusted quarterly averages, 1981–82

[In thousands]

Industry division and group	1981				1982			
	I	II	III	IV	I	II	III	IV p
Total	90,945	91,172	91,360	90,954	90,408	90,029	89,371	88,687
Goods-producing	25,559	25,577	25,646	25,159	24,588	24,179	23,676	23,103
Mining	1,113	1,033	1,179	1,201	1,200	1,153	1,087	1,048
Construction	4,274	4,230	4,148	4,066	3,958	3,955	3,903	3,841
Manufacturing	20,172	20,314	20,319	19,892	19,430	19,071	18,686	18,214
Durable goods	12,120	12,228	12,226	11,895	11,562	11,303	11,009	10,585
Lumber and wood products	685	690	672	629	608	616	615	617
Furniture and fixtures	461	472	475	463	449	443	440	434
Stone, clay, and glass products	646	645	642	620	594	583	575	558
Primary metal industries	1,136	1,138	1,130	1,080	1,023	949	887	817
Fabricated metal products	1,596	1,611	1,610	1,553	1,505	1,468	1,429	1,371
Machinery, except electrical	2,481	2,504	2,533	2,510	2,441	2,363	2,237	2,115
Electric and electronic equipment	2,080	2,100	2,114	2,076	2,047	2,031	2,008	1,957
Transportation equipment	1,906	1,933	1,903	1,827	1,776	1,749	1,729	1,652
Instruments and related products	721	725	733	728	718	711	704	689
Miscellaneous manufacturing Industries	408	410	415	411	400	390	385	375
Nondurable goods	8,052	8,086	8,093	7,997	7,868	7,768	7,677	7,629
Food and kindred products	1,688	1,683	1,665	1,662	1,659	1,644	1,633	1,639
Tobacco manufactures	70	71	70	69	68	67	64	62
Textile mill products	827	829	830	804	772	758	738	727
Apparel and other textile products	1,241	1,248	1,254	1,233	1,196	1,164	1,138	1,135
Paper and allied products	689	690	692	681	671	661	656	651
Printing and publishing	1,255	1,262	1,271	1,276	1,276	1,272	1,268	1,266
Chemicals and allied products	1,108	1,109	1,109	1,103	1,092	1,078	1,068	1,058
Petroleum and coal products	215	217	216	215	208	206	206	207
Rubber and miscellaneous plastic products	727	743	749	725	708	706	698	680
Leather and leather products	232	234	236	229	217	212	208	204
Service-producing	65,386	65,595	65,714	65,795	65,819	65,850	65,696	65,584
Transportation and public utilities	5,146	5,161	5,172	5,147	5,113	5,091	5,033	4,993
Wholesale and retail trade	20,413	20,547	20,643	20,600	20,652	20,610	20,552	20,376
Wholesale trade	5,327	5,359	5,382	5,371	5,342	5,320	5,283	5,229
Retail trade	15,087	15,188	15,262	15,230	15,310	15,290	15,269	15,147
Finance, insurance, and real estate	5,262	5,294	5,319	5,327	5,329	5,343	5,362	5,365
Services	18,383	18,518	18,659	18,807	18,867	18,960	19,058	19,114
Government	16,183	16,075	15,921	15,914	15,858	15,846	15,690	15,736
Federal	2,789	2,776	2,769	2,754	2,738	2,732	2,737	2,726
State	13,394	13,300	13,151	13,160	13,120	13,113	12,953	13,010

p=preliminary.

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The nondurable goods sector also suffered steep cutbacks during the year, losing more than 365,000 jobs. A positive note in this sector was that the magnitude of the declines lessened in each successive quarter of 1982. Although all of the nondurable industry groups experienced job declines, the largest number of losses was in apparel. Textiles and rubber and plastic products also were hard hit, as the pervasive weakness in the auto industry was reflected in these supplier industries. The number of jobs in textiles and apparel has trended downward for years, primarily because of stiff competition from foreign imports, but 1982 job losses were exacerbated by the general economic contraction.

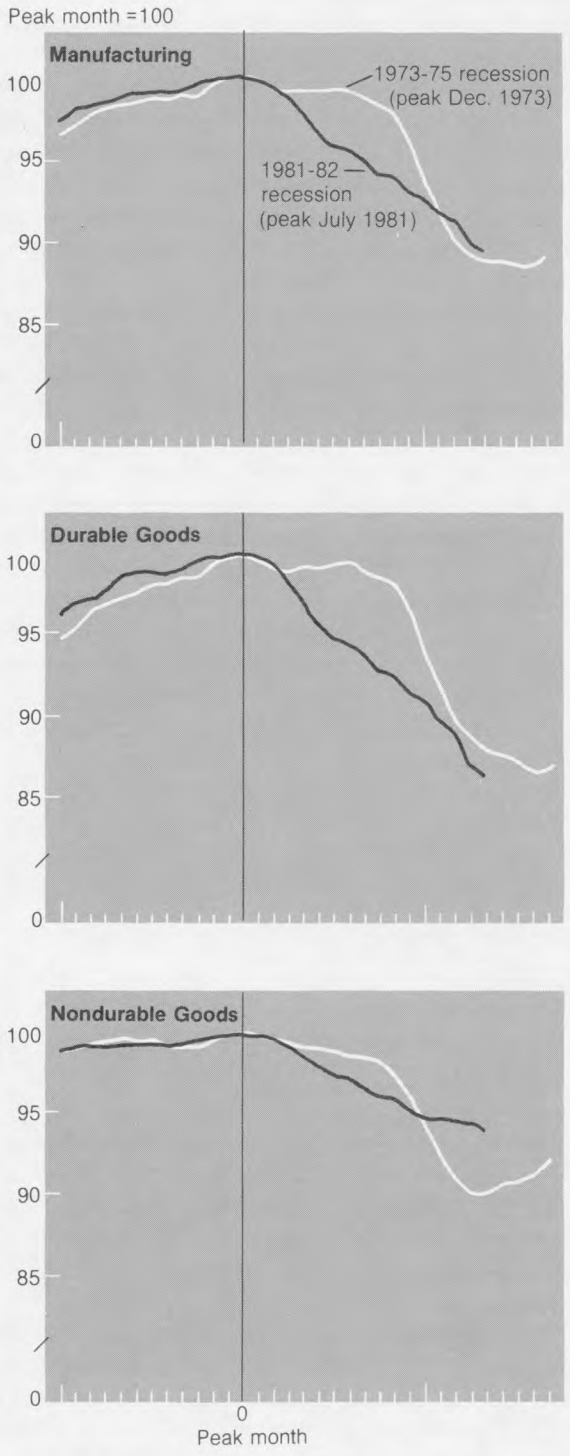
The 1973–75 recession is generally regarded as the most severe of prior postwar recessions and, as such, provides a useful benchmark for assessing the magnitude of the current downturn in manufacturing. Chart 2 depicts the relative employment changes in total manufacturing, durable goods, and nondurable goods manufacturing by indexing the respective series to its peak level during each recession. To provide a broader perspective, each plot begins 1 year prior to the peak of the employment series.

By November 1982, the 1981–82 relative employment decline in manufacturing was not as great as that for 1973–75 at the same number of months (16) from the peak; however, employment had dropped much more rapidly than it did in 1973–75, and if the decline continues into 1983, it will exceed the relative decline experienced in 1973–75. For durable goods, however, employment not only had fallen much more rapidly in 1981–82 than in the 1973–75 downturn, but also had already experienced a greater relative decline. Employment in the nondurable goods sector, while declining steeper in the first 12 months of the current recession than in 1973–75, actually fared better in the next 4 months of the cycle as the rate of decline slowed.

Table 2 shows the manufacturing industry employment declines in the current recession and in 1973–75, revealing the varied impact of the two recessions. It also shows the relative decline over the 1979–82 period, demonstrating the point made earlier that several industries never fully recovered from the brief but sharp 1980 recession before plunging further in the current downturn.

Employment in six industries (primary metals, fabricated metal products, nonelectrical machinery, transportation equipment, tobacco, and petroleum and coal products), while still falling at the end of 1982, had already dropped by an equal or greater percentage than during the 1973–75 period. Because only a few industries had recovered sufficiently from the 1980 recession to surpass their prior employment peaks, the 1980 and 1981–82 recessions together constituted a deep and prolonged deterioration that has extended for more

Chart 2. Relative changes in manufacturing employment during 1973-75 and 1981-82 recessions
(Seasonally adjusted data)



NOTE: Data for October and November 1982 are preliminary.

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than 3 years for all but three manufacturing industries. Moreover, two key industries, primary metals and transportation equipment, when viewed over the longer period (1979–82), show employment declines about twice those of the 1973–75 downturn. Some industries, such as food, textiles, apparel, and leather, have been trending downward for many years and may not have returned to their 1979 levels during the 1980–81 recovery.

These job cutbacks, of course, resulted in large increases in unemployment rates in the goods-producing industries. The residential construction and auto manufacturing industries historically have been key indicators of the health of the economy, and their jobless rates of more than 20 percent signaled economic weakness in 1982. The unemployment rate for construction workers had risen steadily since late 1980, and was 22 percent by the end of 1982, while the rate for auto workers, which had been as low as 3.8 percent in early 1978, ended the year at 24 percent.

Job curtailments in both the automobile manufacturing and housing construction industries brought about job cutbacks and higher unemployment rates in a host of supplier industries. Clearly, these supplier industries have been hard hit. Jobless rates among workers in the primary metals industry rose the most, posting a more than fourfold increase since late 1979. The following tabulation shows fourth-quarter seasonally adjusted unemployment rates in selected manufacturing industries that are closely tied to the construction and automobile manufacturing industries:

	1979	*1980*	*1981*	*1982*
Housing-related:				
Lumber and wood products	7.0	12.1	18.6	18.7
Stone, clay, and glass	6.1	10.1	9.8	15.8
Furniture and fixtures	4.2	9.5	11.3	16.1
Auto-related:				
Primary metals	5.3	8.9	11.3	26.0
Fabricated metals	6.4	10.5	12.1	18.4
Rubber and plastics	8.5	10.5	11.1	14.5

Service-producing industries. Underscoring the widespread impact of the current economic downturn, the service-producing sector, although not as severely affected as the goods sector, declined somewhat during 1982. While this sector had shown some strength earlier in the recession, employment declined by nearly 400,000 from May to yearend.

Only two major industry groups managed job gains for the year—the services industry and finance, insurance, and real estate—but at a much reduced pace than in more normal times. The number of jobs in services—which includes activities ranging from lodging and recreation to medical, legal, educational, business, repair, and personal services—increased by 300,000 between the fourth quarters of 1981 and 1982. Finance, insurance, and real estate were up 35,000 over the same period. Sharp declines occurred in transportation and public utilities, where job losses totaled more than 150,000 in 1982. Most of the cutbacks were in transportation where employment turned downward in the second half of 1981, paralleling the slowdown in the goods sector. Jobs in wholesale and retail trade decreased by 225,000 during 1982, with most of the cutbacks in the fourth quarter.

Table 2. Employment declines in manufacturing industries, selected periods, 1973–82

Industry	Percent decline[1]		
	1973–75	1981–82	1979–82
Durable goods:			
Lumber and wood products	22.7	12.5	21.6
Furniture and fixtures	21.3	9.0	14.1
Stone, clay, and glass products	15.3	14.7	22.8
Primary metal industries	15.5	29.4	36.8
Fabricated metal products	15.2	15.6	21.3
Machinery, except electrical	10.3	17.5	17.6
Electric and electronic equipment	17.9	8.4	9.8
Transportation equipment	13.2	15.7	23.0
Instruments and related products	9.8	6.7	6.7
Miscellaneous manufacturing	13.7	11.0	17.1
Nondurable goods:			
Food and kindred products	5.2	3.5	6.3
Tobacco manufactures	7.6	14.1	15.3
Textile mill products	19.3	13.8	19.7
Apparel and other textile products	18.1	10.3	16.0
Paper and allied products	12.4	6.5	8.6
Printing and publishing	3.9	1.0	1.0
Chemicals and allied products	6.3	5.0	5.6
Petroleum and coal products	5.1	5.1	5.1
Rubber and misc. plastic products	16.7	10.0	15.2
Leather and leather products	17.8	15.1	19.8

[1] The months in which the high and the low occurred in each industry varied considerably and are available upon request from the Bureau.

Employment in the public sector failed to provide the stability it has historically shown during periods of economic downturn. Government employment dropped by more than 175,000 in 1982, continuing the declines that began in mid-1980. The decrease was primarily in State and local government, stemming largely from severe budgetary problems and smaller school enrollments.

Unemployment widespread

Age and sex. Unemployment developments in 1982 differed widely by age and sex, with adult men (those age 20 and over) being hardest hit. (See table 3.) The substantial increase in joblessness for men pushed their rate above that for women for all of 1982. Since July 1981, the rate for men rose almost 4.5 percentage points to 10.1 percent in December, while the rate for women went up about 2.5 points to 9.2 percent. This contrasts sharply with the 1973–75 recession, when increases were about the same for men and women (4.4 and 4.0 points) and the rate for men remained well below that for women, reaching a high of 7.3 percent, compared to 8.5 percent for women.

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The employment situation for teenagers continued to worsen in 1982; their unemployment rate has shown a step-like pattern of deterioration since mid-1979. The teenage jobless rate leveled off in the final months of 1982, but was still a record 24.5 percent in December, more than 3 points above the rate reached during the 1973–75 recession.

The disproportionate impact of the recession on adult males is clearly illustrated below. The following tabulation provides the seasonally adjusted quarterly unemployment rates for men and women by age since the onset of the current downturn:

	1981 III quarter		*1982 IV quarter*	
Age	*Men*	*Women*	*Men*	*Women*
All workers, age 16 and over	7.1	7.9	11.1	10.1
Teenagers	19.5	18.7	25.7	22.7
Adults, age 20 and over	6.1	6.8	10.0	9.0
Age 20–24	12.6	11.3	17.7	14.1
Age 25–54	5.3	6.2	9.2	8.5
Age 55 and over	3.5	3.9	6.2	4.9

About 70 percent of the increase in unemployment between the third quarter of 1981 and the fourth quarter of 1982 occurred among men, with all age groups registering sharp increases. In fact, by the end of 1982, the rates for men had surpassed those for women of corresponding age groups by a substantial margin.

Occupations. Much of the greater impact of the economic decline on men can be attributed to their concentration in the more cyclical blue-collar occupations: men accounted for 81 percent of employment in these occupations, compared with only 46 percent of white-collar jobs. Unemployment among blue-collar workers increased 6.3 points, to 16.1 percent, between the third quarter of 1981 and the fourth quarter of 1982. (See table 3.) The increase was sharpest for factory operatives, whose 20.7-percent rate in the fourth quarter was up almost 10 points. In contrast, the rise for white-collar workers was only about 1.5 percentage points, reaching a high of 5.4 percent in the fourth quarter of 1982. Service workers unemployment rose moderately in 1982, finishing the year at 11.4 percent.

For all major occupations, increases in the unemployment rates between 1981 and 1982 were greater in the goods-producing sector than in service-producing. Overall joblessness in the goods sector increased about 4 points to 13.4 percent, compared with a rise of about 1 point in the services sector to 7.4 percent.[8] (See table 4.)

The comparison of male and female unemployment rates by occupational groups within the goods- and service-producing sectors was particularly noteworthy. The overall unemployment rate was higher for men than for women in 1982. But, the reverse was true when the major groups within each sector were examined: while the year-to-year increase in joblessness was greater for men than for women, the industry/occupational jobless rates for women were still generally higher. This means that the lower overall rate for women is explained by their greater concentration in the service-producing sector, which, on average, has a much lower jobless rate than the goods sector; nearly 80 percent of all women are employed in the service sector.

Family and household relationship. During 1982, an average of 8.0 million families had at least one member unemployed. This represents 13 percent of all families, up from about 10.5 percent in 1981. There was a corresponding decline (from 63.5 to 59.5 percent) in the proportion of families experiencing unemployment that still had at least one member working full time.

In families where the husband was unemployed in 1982, only 40 percent had at least one member working full time, compared with 71 percent when the wife was unemployed. Only 10 percent of families maintained by

Table 3. Unemployment rates by selected demographic characteristic and occupation, seasonally adjusted quarterly averages, 1981–82

Item	1981				1982			
	I	II	III	IV	I	II	III	IV
Characteristic								
Total (all civilian workers)	7.4	7.4	7.4	8.3	8.8	9.4	10.0	10.7
Men, 20 years and over	6.1	6.0	6.1	7.1	7.8	8.4	9.1	10.0
Women, 20 years and over	6.6	6.6	6.8	7.2	7.6	8.2	8.4	9.0
Teenagers, 16–19 years	19.1	19.1	19.1	21.2	21.9	22.7	23.9	24.3
White	6.5	6.5	6.4	7.3	7.7	8.3	8.8	9.5
Black	14.7	15.1	15.8	16.9	17.4	18.6	19.3	20.4
Hispanic	11.0	9.8	9.8	11.1	12.4	13.3	14.4	15.2
Married men, spouse present	4.2	4.0	4.1	5.1	5.4	6.2	6.9	7.6
Married women, spouse present	5.9	5.7	5.8	6.4	6.7	7.3	7.4	8.1
Women who maintain families	10.0	10.3	10.7	10.6	10.6	11.8	12.0	12.3
Full-time workers	7.1	7.0	7.1	8.0	8.6	9.3	9.8	10.6
Part-time workers	9.1	9.3	9.5	9.6	10.0	10.4	10.7	10.9
Occupation								
White-collar workers	3.9	3.9	4.1	4.3	4.5	4.8	4.9	5.4
Professional and technical	2.7	2.9	2.7	2.9	3.1	3.2	3.3	3.6
Managers and administrators, except farm	2.6	2.6	2.7	2.9	3.0	3.5	3.7	3.9
Salesworkers	4.2	4.3	4.9	4.9	5.1	5.5	5.5	6.2
Clerical workers	5.5	5.5	5.8	6.1	6.5	6.9	6.9	7.7
Blue-collar workers	10.1	9.8	9.8	11.7	12.7	13.7	14.8	16.1
Craft and kindred workers	7.1	7.1	7.1	8.5	8.9	9.8	11.0	11.6
Operatives, except transport	12.0	11.5	11.5	14.0	15.5	16.6	18.5	20.7
Transport equipment operatives	9.0	8.1	8.1	9.4	10.4	11.8	12.0	13.1
Nonfarm laborers	14.6	14.0	14.2	16.2	17.5	18.4	18.5	19.8
Service workers	8.5	8.8	8.6	9.5	9.8	10.6	10.6	11.4
Farm workers	5.1	5.0	4.8	6.1	5.8	6.9	6.2	7.2

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Table 4. Unemployment rates by selected occupations in the goods- and service-producing sectors, 1981–82

Characteristic	1981				1982			
	Total	White-collar	Blue-collar	Service	Total	White-collar	Blue-collar	Service
Total	7.2	4.3	10.8	9.3	9.2	5.2	14.9	11.1
Men	7.2	3.0	10.2	9.6	9.8	4.1	14.4	11.7
Women	7.2	5.3	13.1	9.2	8.6	6.1	17.0	10.8
Goods-producing	9.4	3.7	11.9	10.7	13.5	5.2	17.3	15.6
Men	9.0	2.5	11.2	10.9	13.4	4.3	16.9	14.9
Women	10.5	5.6	14.0	11.8	13.8	6.8	18.8	19.8
Service-producing	6.2	4.4	9.0	9.3	7.4	5.2	10.9	10.9
Men	5.9	3.2	8.7	9.5	7.4	4.0	10.8	11.4
Women	6.4	5.2	10.6	9.1	7.4	6.0	11.9	10.7

an unemployed woman had a member employed full time.

Race-ethnic differences. The unemployment pattern among the major race-ethnic groups was similar to the overall pattern—minimal recovery from the 1980 recession and steadily increasing rates since mid-1981 to record highs in 1982. The recovery from the previous recession was weaker for blacks, and their unemployment rate began rising earlier than that for whites or Hispanics.

As a result, blacks have had record jobless rates virtually since the beginning of the recession, exceeding 20 percent during the last 3 months of 1982. The situation for black teenagers was especially severe, with an unemployment rate hovering around 50 percent during most of the year.

Jobless rates for whites and Hispanics also rose sharply in 1982. Since the third quarter of 1981, unemployment among white workers was up about 3 points to 9.3 percent by the fourth quarter of 1982, while the rate for Hispanics was up about 5.5 points to 15.2 percent.

Reasons for unemployment. One characteristic of all economic declines is the very pronounced increases in the number of persons losing jobs when firms cut back production and, thus, reduce their work forces through temporary or permanent layoffs. As a result, the job-loser share of total unemployment tends to increase markedly over the course of a recession. In contrast, employees are less likely to quit in search of other jobs, and inactive persons are less likely to enter the labor force during downturns, so the share of unemployment represented by job leavers and labor force entrants tends to decline.

The current recession has been marked by an unusually high proportion of job losers. (See table 5.) Their share of total unemployment remained at recession levels, that is, above 50 percent, after the first quarter of 1980. It began to rise steadily in mid-1981 and, by late 1982, had surpassed 60 percent for the first time since the data were first collected in 1967. Perhaps of more significance, job losers overall have accounted for an extraordinarily high proportion of the increase in unemployment. There were 7.3 million job losers in the fourth quarter of 1982, an increase of 3.2 million since the third quarter of 1981. They accounted for about 85 percent of the total increase in unemployment, compared with only about 75 percent of the increase during the 1973–75 recession.

Duration of unemployment. Another important consideration in the evaluation of overall unemployment is the duration of joblessness. Short spells of unemployment are often considered to be the result of frictions in the labor market, as workers move from job to job and labor supply adjusts to changes in demand. The longer a period of unemployment, the greater the economic hardship that is normally associated with it.

Both measures of average duration—the mean and the median—generally reflect overall economic performance and move in the same direction as the unemployment rate, albeit with a lagged response at economic turning points. While duration declines during an economic expansion, it can also continue to decline at the beginning of a downturn as the newly unemployed enter the jobless stream. Thus, both measures of average duration declined in the fourth quarter of 1981 when unemployment rose sharply. (See table 5.) With worsening joblessness in 1982, both measures of duration rose as the proportion of those unemployed 15 weeks or longer increased substantially, from about 26 percent in the fourth quarter of 1981 to 37 percent at the end of 1982. In the peak jobless quarter of the 1973–75 recession, 32

Table 5. Unemployed persons by duration of and reasons for unemployment, seasonally adjusted quarterly averages, 1981–82

Characteristic	1981				1982			
	I	II	III	IV	I	II	III	IV
Duration (numbers in thousands)								
Less than 5 weeks	3,280	3,297	3,391	3,852	3,823	3,802	3,965	3,971
5 to 14 weeks	2,381	2,471	2,469	2,851	3,082	3,311	3,381	3,507
15 weeks and over	2,336	2,242	2,205	2,352	2,705	3,288	3,687	4,474
15 to 26 weeks	1,092	1,101	1,093	1,204	1,431	1,633	1,806	2,089
27 weeks and over	1,244	1,141	1,112	1,149	1,274	1,655	1,881	2,385
Average duration, in weeks	14.1	13.8	14.0	13.2	13.8	15.2	16.1	17.5
Median duration, in weeks	7.2	7.1	6.9	6.8	7.5	8.9	8.7	9.9
Reasons (percent distribution)								
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Job losers	50.5	50.5	51.6	53.6	56.2	58.0	59.2	61.5
On layoff	16.6	16.6	16.5	19.5	19.1	19.4	20.9	21.0
Other job losers	33.9	33.9	35.1	34.1	37.1	38.6	38.3	40.5
Job leavers	11.4	11.6	11.4	10.3	9.3	8.3	7.3	6.8
Reentrants	25.8	25.7	25.3	24.9	23.3	22.9	22.0	21.0
New entrants	12.3	12.2	11.7	11.2	11.2	10.8	11.5	10.7

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Table 6. Discouraged workers, by selected characteristics, seasonally adjusted quarterly averages, 1981–82

[In thousands]

Characteristic	1981				1982			
	I	II	III	IV	I	II	III	IV
Total	1,094	1,042	1,108	1,191	1,331	1,487	1,638	1,849
Job market factors	825	725	812	890	1,045	1,082	1,222	1,391
Personal factors	269	317	296	301	286	405	416	458
Men	373	412	389	439	509	577	595	690
Women	722	630	718	751	822	911	1,043	1,159
White	750	705	747	800	875	995	1,072	1,247
Black and other	357	335	354	388	478	482	549	595

percent of the total were long-term jobless. By the fourth quarter of 1982, mean duration had reached 17.5 weeks, and the median duration, 9.9 weeks. Because of their lagging characteristic, both measures can be expected to continue rising into 1983, even if an improvement in the labor market begins soon.

Shortened workweeks and discouragement. Just as the health of the economy influences unemployment, it similarly influences the number of people who report that they want a job but are not looking for one because they believe no work is available—so-called "discouraged workers." In addition, as the Nation enters a recession, employers frequently reduce hours where possible before laying off employees. Persons on such shortened workweeks are termed involuntary part-time workers. They, along with discouraged workers, are not reflected in the official count of unemployment, although information on both groups is important in achieving a full appreciation of the nature and magnitude of the underutilization of human resources.

Historically, the number of discouraged workers tends to move in tandem with overall unemployment.[9] As a result of the general sluggishness of the economy during the last 3 years, the number of discouraged workers has risen almost continuously since mid-1979. The weak recovery of 1980–81 had almost no impact in reducing their numbers, and the current recession added 800,000 to their ranks. (See table 6.) There were 1.8 million discouraged workers in the final quarter of 1982, three-fourths of whom cited job market factors (as opposed to personal factors) as the reason for not looking for work.

Although the recession-induced rise in discouragement was pervasive, women and blacks (including other racial minorities) accounted for a disproportionate share of the increase. Their respective shares of the discouraged total were 63 and 32 percent in the fourth quarter of 1982; in contrast, they accounted for 43 and 13 percent of the working-age population.

The number of workers involuntarily on part-time schedules continued to increase throughout 1982 and, by the fourth quarter, totaled about 6.7 million or 7.2 percent of the "at-work" population; both figures are the highest recorded since collection of the data began in 1955. Slack work, the most cyclical component of involuntary part-time work, accounted for more than half this total. The following tabulation shows the number of involuntary part-time workers and their percentage of the "at-work" population (seasonally adjusted quarterly averages):[10]

	Number (in thousands)	*Involuntary part time due to:*		
		All reasons	*Slack work*	*Could find only part time*
1981:				
I	4,579	4.8	2.5	2.0
II	4,435	4.7	2.3	2.0
III	4,746	5.0	2.5	2.1
IV	5,341	5.7	3.0	2.3
1982:				
I	5,646	6.0	3.1	2.5
II	6,009	6.4	3.4	2.6
III	6,334	6.7	3.6	2.8
IV	6,722	7.2	3.8	3.1

Besides a reduction in scheduled hours, the current high number of workers on shortened workweeks also reflects a growing tendency among employers to keep workers on short workweeks for longer periods.[11] At the other end of the spectrum, it is clear that there are a growing number of would-be full-time workers who must accept part-time jobs if they want to work at all.

Employment moves lower

Total employment, as measured by the household survey, dropped by more than 1.1 million between the second quarter of 1981 and first quarter of 1982. Declines leveled off in the spring and summer months, with the employment total actually rising a bit, but the moderate rebound was erased in the fourth quarter.[12] All three major age-sex groups registered declines, as total employment dropped more than 450,000 in the final quarter, to 99.1 million. (See table 7.)

The employment-population ratio provides an indication of the economy's ability to generate enough jobs for a growing population, as the ratio is affected by changes in both the number of jobholders and in the working-age population.[13] (See chart 3.) At 56.5 percent in December, the overall ratio was at its lowest level in more than 5 years. The 2.0-percentage-point decline in the current economic contraction was similar to the drop during the 1973–75 recession. However, if the deterioration is measured from its high of 59.4 percent in late 1979, the decline in the employment-population ratio exceeded the mid-1970's experience.

Quarterly seasonally adjusted employment-population ratios for the major age-sex groups illustrate the heavy

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Table 7. Employed persons by selected categories, seasonally adjusted quarterly averages, 1980–81

[In thousands]

Characteristic	1981				1982			
	I	II	III	IV	I	II	III	IV
Total, 16 years and over	100,204	100,789	100,520	100,087	99,660	99,720	99,605	99,135
Teenagers	7,476	7,347	7,180	6,905	6,733	6,619	6,445	6,394
Men, 20 years and over	53,478	53,760	53,739	53,351	53,085	53,052	52,838	52,591
Women, 20 years and over	39,250	39,682	39,601	39,831	39,842	40,048	40,322	40,150
White	88,455	89,021	88,889	88,471	88,064	88,150	87,957	87,452
Black	9,385	9,425	9,297	9,314	9,255	9,172	9,201	9,129
Hispanic origin	5,273	5,352	5,346	5,421	5,292	5,183	5,132	5,028

impact of the current recession on men. The teenage ratio also fell sharply during the year, in the face of employment cutbacks amounting to almost 800,000. Adult women were not as adversely affected by the slump in economic activity, because of their concentration in the service-producing sector. The following tabulation shows the employment-population ratios from the third quarter of 1981 through the fourth quarter of 1982:

	1981		*1982*			
	III	*IV*	*I*	*II*	*III*	*IV*
Total	58.2	57.8	57.4	57.2	57.0	56.6
Teenagers	43.6	42.2	41.5	41.1	40.3	40.3
Adult men	72.4	71.5	70.9	70.5	70.0	69.3
Adult women	48.4	48.5	48.3	48.3	48.5	48.1

The different employment pattern of men and women in 1982 was symptomatic of the pattern displayed by full-time and part-time workers. The number of persons at work on full-time schedules (35 hours or more per week) in nonagricultural industries declined by 3.1 million from the third-quarter 1981 level to 71.4 million in the fourth quarter of 1982. As employers cut back production, reduced hours, and laid off workers, the number of full-time workers declined throughout 1982, reaching its lowest level since 1978 by yearend. Changes in the number of nonagricultural workers voluntarily on part-time schedules are generally much more volatile than those for full-time workers. After declining steadily from the onset of the recession in mid-1981 through the first quarter of 1982, the number of voluntary part-timers rose in both the second and third quarter, largely accounting for the small midyear pickup in total employment. As with the total, the voluntary part-timers fell again in the fourth quarter, to 12.4 million.

Blacks and Hispanics suffered proportionally greater employment declines than whites in 1982. At 9.1 million in the fourth quarter, black employment was 185,000 below a year earlier, while losses among Hispanics numbered 400,000 for the year. Employment among white workers was off more than 1 million over the year.

Labor force expands

The civilian labor force grew about 1.9 million between the fourth quarters of 1981 and 1982, slightly more than in the previous 2 years, but considerably below the pace of the late 1970's. Whereas the two recessions obviously contributed to the slowdown, there has also been a reduction in the number of persons reaching labor force age, as the baby-boom generation, nearly all of which has moved into adulthood, has been followed by a baby-bust generation. Thus, the number of teenagers in the population has actually been declining since early 1978, and by 1982, had declined by 1.2 million. The teenage labor force was down 300,000 in 1982 from the fourth quarter of 1981, following a 500,000 drop in 1981. On the other hand, men and women each added about 1 million persons to the labor force in 1982; in 1981, the female labor force increase was twice that for men. (See table 8.)

The percentage of the working-age population in the labor force—the labor force participation rate—was up slightly over the year, to 64.1 percent in the fourth quarter of 1982. This was solely the result of a continued increase in female labor force participation, which more than offset a decline in the teenage rate; male participation was unchanged. The decrease in teenage participation continued a trend which began in 1979.

The participation rate for adult males, which has been on a downtrend throughout the postwar years, showed a further drop at the beginning of 1982. However, male participation did increase somewhat in the second quarter, to 78.8 percent and held there the rest of the year. Female participation, at 52.9 percent in the fourth quarter of 1982, increased through most of the recession to maintain its upward secular pattern of the past several decades. There were 43.9 million women in the labor force in the final quarter, 40 percent of the total number of persons in the work force.

Table 8. Civilian labor force and participation rates, by major age-sex group, seasonally adjusted quarterly averages, 1981–82

[In thousands]

Characteristic	1981				1982			
	I	II	III	IV	I	II	III	IV
Civilian labor force, total	108,219	108,802	108,580	109,116	109,292	110,088	110,629	110,974
Men, 20 years and over	56,951	57,222	57,211	57,421	57,558	57,920	58,158	58,420
Women, 20 years and over	42,030	42,494	42,491	42,938	43,107	43,602	44,006	44,111
Teenagers	9,239	9,087	8,878	8,757	8,626	8,566	8,466	8,443
Participation rates, total	63.9	64.1	63.7	63.8	63.7	64.0	64.1	64.1
Men, 20 years and over	79.2	79.2	78.8	78.8	78.6	78.8	78.8	78.8
Women, 20 years and over	51.9	52.3	52.0	52.3	52.3	52.7	53.0	52.9
Teenagers	56.4	55.8	54.9	54.6	54.2	54.1	53.9	54.1

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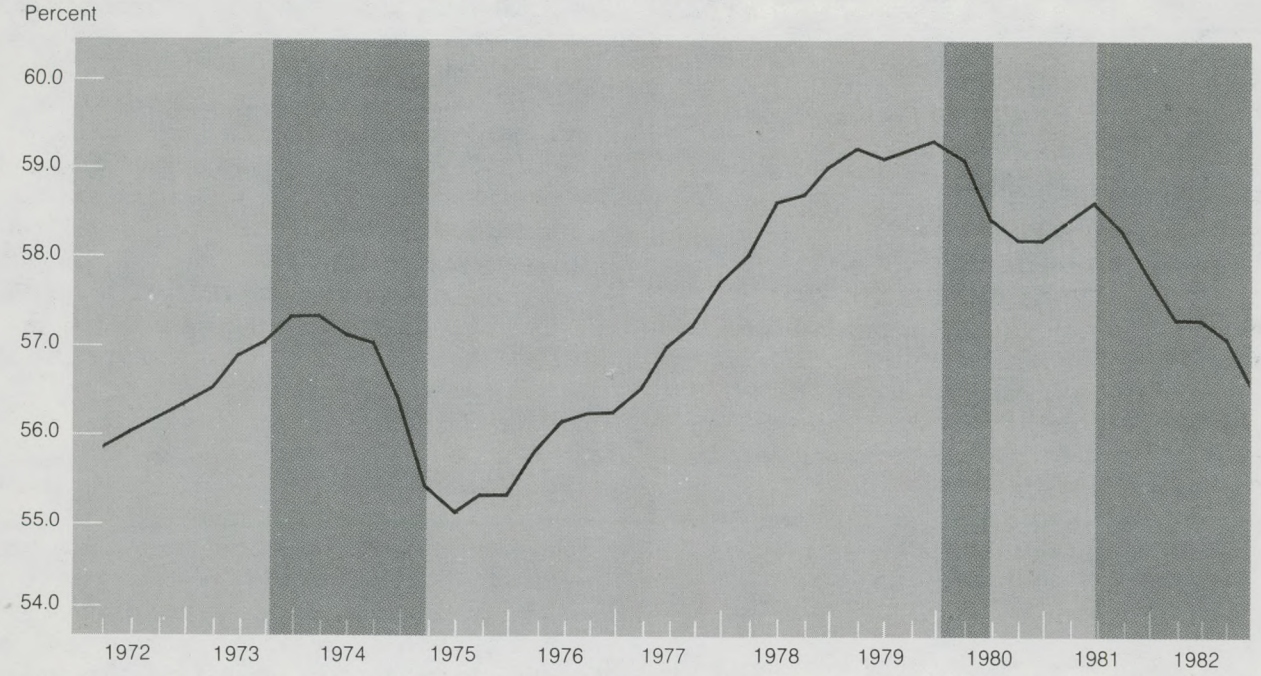
Chart 3. Employment-population ratio, seasonally adjusted quarterly averages, 1972-82



NOTE: Shaded areas denote a recession. Fourth quarter 1982 datum is an October-November average.

AT THE END OF 1982, industry job cutbacks in the current recession had exceeded those experienced in the severe 1973–75 recession, and unemployment was still rising. The prolonged slack in economic activity that began in 1980 had severely affected the labor market, gradually spreading from a few major industries to virtually every industry and every worker group. By yearend, there were few signs that the labor market had begun to make the transition from recession to recovery. □

FOOTNOTES

[1] National Bureau of Economic Research business cycle peak.

[2] Data on labor force, total employment, and unemployment are derived from the Current Population Survey (CPS), a sample survey of households conducted and tabulated by the Bureau of the Census for the Bureau of Labor Statistics. Statistics on nonagricultural payroll employment and hours from the Current Employment Statistics Program (CES) are collected by State agencies from employer reports of payroll records and are tabulated by the Bureau of Labor Statistics. A description of the two surveys appears in the Bureau of Labor Statistics monthly publication, *Employment and Earnings.*

[3] Peak-to-trough dates for the eight post-World War II recessions have been designated by the National Bureau of Economic Research as follows: November 1948 to October 1949, July 1953 to May 1954, August 1957 to April 1958, April 1960 to February 1961, December 1969 to November 1970, November 1973 to March 1975, January 1980 to July 1980, July 1981 to a trough not yet identified.

[4] For more on this topic, see the series of articles in the March 1979 issue of the *Monthly Labor Review*, pp. 13–53.

[5] See Stephen H. Wildstrom, "One Recession or Two," *Data Resources U.S. Review*, October 1982, pp. 1.12–1.14.

[6] See John F. Early, "Introduction of Diffusion Indexes," *Employment and Earnings*, December 1974, pp. 7–11.

[7] See Douglas R. Fox, "Motor Vehicles, Model Year 1982," *Survey of Current Business*, October 1982, pp. 20–24.

[8] Annual averages were used as a basis for comparison when seasonally adjusted data were not available.

[9] See Carol M. Ondeck, "Discouraged workers' link to jobless rate reaffirmed," *Monthly Labor Review*, October 1978, pp. 40–42.

[10] The data were seasonally adjusted especially for this study. Included in the total, but not shown separately, are the small number of workers on shortened workweeks because of material shortages and those who began or ended a job during the survey week.

[11] See Robert W. Bednarzik, "Worksharing in the U.S.: its prevalence and duration," *Monthly Labor Review*, July 1980, pp. 3–12.

[12] The movements of total employment derived from the household survey and of nonfarm payroll jobs from the establishment survey were not always in tandem during the current recession, nor did the magnitude of change equate. Given the conceptual and sampling differences between the two surveys, this was not unusual, although the change over the full cycle as reflected in the two series differed somewhat more than in past recessions. For a discussion of the differences in the estimates of employment derived from these two surveys, see Gloria P. Green and John Stinson, Jr., "Comparison of Nonagricultural Employment Estimates from Two Surveys," *Employment and Earnings*, March 1982, pp. 9–12.

[13] See Carol Boyd Leon, "The employment-population ratio: its value in labor force analysis," *Monthly Labor Review*, February 1981, pp. 36–45.

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Estimating annual hours of labor force activity

Two new measures show wide variations in the amount of labor supplied by population subgroups; patterns relate to the occupation, race, sex, age, and family status of individuals, and to phases of the business cycle

SHIRLEY J. SMITH

Today's labor force is characterized by high turnover, and a diversity of work schedules tailored to the needs and opportunities of employers and available workers. The dynamic composition of the work force makes it diffcult to assess the true extent of labor force involvement or job attachment within various groups of the population. An intergroup comparison of labor force participation rates for a given year yields one set of differentials; a comparison of the proportions of persons economically active during the year gives an entirely different perspective; and, analysis of work schedules (as between full year, full time; part year, part time; and so forth) gives a third view of each group's relative contribution. Every statistic addresses a different aspect of the group's labor force involvement, but none successfully summarizes time input on a single, meaningful scale.

We know that different groups make varying portions of their year available for labor force activities. It is also clear that the economy uses some of these potential contributions more fully than it does others. But the diversity of work patterns within and between groups confounds our understanding of their respective work roles. For instance, annual earnings reports summarize the outcome of a group's job market involvement during a full year. But because individual time input varies so widely, it is hard to interpret the meaning of earnings differentials or changes over time, even when we limit our analysis to so-called year-round, full-time workers.

This article reports on experimentation with two new annual estimates, focusing on time in the labor force and time in employment (expressed in hours per year). These estimates are based on data drawn from the "work experience" supplement to the Current Population Survey (CPS), which is administered each March.

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Methodology and applications

For each person 16 years of age and over, the CPS March supplement includes a battery of questions on labor force activities during the previous calendar year. Survey respondents are asked about weeks worked, usual hours worked per week, weeks worked part time, time spent in unemployment (including layoff), and a variety of other issues. By assembling the various elements of each person's work profile, this study attempts to estimate average annual hours of labor force involvement, and of job attachment, for various subgroups of the population during 1977, 1979, 1980, and 1981.

The annual hours estimates. The work profile of the individual is translated into an estimate of his or her annual hours of labor force attachment, as follows:

$$(1) \qquad AHLF = [(W_w - W_o) \times H_u] + (W_o \times H_o^P) + (W_l \times H_u)$$

where:

AHLF = Annual hours of labor force participation during the previous year;

W_w = Weeks worked during the year, including both full and part time;

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W_o = Weeks worked in other status (that is, part time for those who normally worked full time, or full time for those who normally worked part time);

H_u = Usual hours worked per week by the individual when on his or her normal schedule;

H_o^p = Usual weekly hours in other status, a proxy value drawn from the usual hours of persons of the same age, sex, and race who normally worked on the other schedule (not controled for voluntary versus involuntary part time); and,

W_l = Weeks of unemployment (including layoff) reported by the individual.

There are three terms in this equation. The first identifies the individual's reported time at work on his or her normal schedule. The second quantifies time spent on an alternate schedule, and the third estimates hours of availability for work while unemployed (including periods of layoff). Explicit in the last term is the assumption that the respondent would have worked his or her usual schedule during the period, if work had been available.

By dropping the last term of the expression, we estimate a second variable, annual hours of employment. This is computed as:

$$(2) \quad AHE = [(W_w - W_o) \times H_u] + (W_o \times H_o^p)$$

No attempt has been made to discount this employment figure for time spent with a job but not at work. The resulting AHE estimate is simply based on the assumption that workers are paid for holidays and vacations.[1]

Because the estimates rest on this assumption, and on broad questions about time allocation—rather than employees' diaries or employers' records—they are, of course, approximate. Figures are most likely to be accurate for persons with continuous work patterns. They are least satisfactory for those having variable terms of employment during the year.

Although certain response biases are likely to occur in the CPS data, it will be seen that averages for most groups behave in a plausible and predictable manner. Although still experimental, the new statistics offer several interesting new perspectives on labor force behavior.

Applications for the annual hours data. The estimates presented below have been developed in connection with the BLS worklife project, which attempts to estimate the average duration of labor force involvement and of employment during a typical person's lifetime.[2] There are, however, a number of other equally interesting uses for these data.

Examined in cross-section, average AHLF figures indicate the amount of labor supply normally offered by members of each group during a given year. Average AHE values show the degree to which their supply has actually been used. And, a ratio of total employment hours to civilian noninstitutionalized persons in the group indicates the availability of paid employment for that segment of the population.

The average annual hours data suppress certain details of time allocation which confound group comparisons.[3] At the same time, they emphasize others which are normally overlooked. The reference period for the estimates is a full year. Everyone who works (or looks for work) during that period is identified, and the reported amount of his or her contribution is counted toward aggregate labor time. For instance, equal weights are given to a woman who works 26 weeks at 40 hours per week and to one who works 52 weeks of 20 hours each. But the year-round worker who normally spends 45 hours per week on the job counts more heavily than one who normally averages only 40.

These estimates distill each work pattern into a single scalar variable—time. They permit us to focus more sharply on the distinctions between groups, such as men and women; the young, prime age, and elderly workers; blacks and whites; persons of various educational backgrounds; marital and parental groupings; and persons in different occupations and industries. Temporal comparisons show the extent of convergence or divergence among these groups and illustrate the effects of the business cycle on employment in specific sectors of the economy.

Longitudinal analysis of annual work patterns

The data presented below cover the period 1977 through 1981. The economic recovery following the 1973–75 recession is captured at two points: 1977 (midway through) and 1979 (at its conclusion). Figures for 1979 portray the job market at near peak conditions; the year ended just as the economy was about to head into another downturn (January to July 1980). Both 1980 and 1981 were periods of reversal and decline. A modest recovery following the July 1980 trough ended in a minor peak 1 year later; thereafter, the economic picture darkened once more. Being annual estimates, these figures do not follow all of the ups and downs of these cycles, yet they appear to have been sufficiently sensitive to these developments to tally the extent of impact felt by various demographic groups.

Unless otherwise specified, the estimates which follow

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relate hours to persons economically active during the year. Those not working or looking for work have been excluded from the base.

Levels of participation and employment. As a point of reference, a person holding a job for 52 weeks at 40 hours per week, if paid for holidays and vacation time, would spend 2,080 hours in paid employment during the year. In reality, few demographic groups claim to be active in the labor force for an average of 2,080 hours annually. Even fewer are consistently able to maintain such a high level of employment. To do so, nearly all workers in the group must hold full-year full-time jobs; the group rate of labor force entry and exit must be insignificant; and the worktime lost for reasons other than holidays and vacation must be nil. Only white men between the ages of 25 and 59 normally approach such a schedule. (See table 1.)

In 1981, actively employed men averaged 1,850 hours of employment as against 1,445 for active women. Adding in periods of unemployment, their annual hours of labor force participation were 1,974 and 1,524, respectively.

The lower panel of table 1 shows a secular rise in the labor supply of women. Between 1977 and 1981, the annual average period of availability for work increased from 1,471 to 1,524 hours, or about 53 hours per active woman. (The simultaneous increase in numbers of women active had no bearing on this change.) White men showed a marginal decline in availability during the interval, from 2,002 to 1,986 hours per year.[4]

Estimates of hours of employment are far more sensitive to business conditions than are those for participation as a whole. They reveal the cyclical vulnerability of certain groups, particularly those employed in the goods-producing sector. Production workers bear the brunt of a recession,[5] and because men more often than women hold these jobs, their hours reports trace the clearer picture of business cycle impact. The average hours of employment per active man were

Table 1. Annual hours of paid employment and of labor force participation by sex, race, and age, selected years, 1977–81

Age in March of reference year	Annual hours of employment											
	Total				White				Black and other			
	1977	1979	1980	1981	1977	1979	1980	1981	1977	1979	1980	1981
Men, total	1,886	1,902	1,865	1,850	1,912	1,925	1,893	1,875	1,660	1,707	1,644	1,656
16 to 17	754	783	765	715	787	816	802	747	467	500	504	461
18 to 19	1,257	1,325	1,264	1,209	1,310	1,363	1,293	1,250	872	1,050	1,074	903
20 to 24	1,661	1,754	1,687	1,634	1,685	1,782	1,726	1,667	1,474	1,549	1,426	1,407
25 to 34	2,069	2,096	2,034	2,016	2,095	2,122	2,064	2,044	1,859	1,891	1,811	1,810
35 to 44	2,170	2,155	2,142	2,126	2,203	2,195	2,167	2,150	1,912	2,005	1,945	1,944
45 to 54	2,136	2,147	2,107	2,108	2,157	2,169	2,130	2,129	1,947	1,961	1,910	1,936
55 to 59	2,074	2,093	2,056	2,037	2,089	2,106	2,064	2,054	1,904	1,953	1,965	1,861
60 to 64	1,783	1,861	1,843	1,839	1,805	1,876	1,860	1,844	1,573	1,695	1,638	1,782
65 and over	1,095	1,222	1,223	1,241	1,102	1,227	1,232	1,254	1,028	1,176	1,148	1,104
Women, total	1,392	1,431	1,443	1,445	1,397	1,433	1,444	1,449	1,356	1,420	1,433	1,419
16 to 17	613	665	665	644	638	698	685	669	394	437	501	462
18 to 19	1,068	1,152	1,127	1,074	1,108	1,183	1,166	1,122	746	910	845	747
20 to 24	1,385	1,443	1,443	1,417	1,416	1,464	1,468	1,440	1,193	1,306	1,298	1,277
25 to 34	1,445	1,514	1,524	1,531	1,445	1,507	1,519	1,531	1,512	1,555	1,552	1,523
35 to 44	1,499	1,556	1,566	1,577	1,489	1,538	1,544	1,564	1,553	1,662	1,698	1,650
45 to 54	1,579	1,613	1,617	1,621	1,577	1,610	1,615	1,615	1,591	1,637	1,629	1,661
55 to 59	1,612	1,635	1,613	1,600	1,623	1,642	1,620	1,617	1,504	1,576	1,551	1,475
60 to 64	1,366	1,466	1,476	1,470	1,383	1,477	1,481	1,477	1,216	1,374	1,430	1,415
65 and over	963	983	1,043	1,030	980	1,008	1,084	1,048	831	774	703	877
	Annual hours of labor force participation											
Men, total	1,985	1,982	1,981	1,974	2,002	1,998	1,997	1,986	1,838	1,845	1,854	1,879
16 to 17	854	883	878	832	881	914	906	857	692	615	683	630
18 to 19	1,435	1,467	1,466	1,422	1,468	1,493	1,491	1,444	1,240	1,269	1,306	1,263
20 to 24	1,836	1,884	1,880	1,848	1,848	1,901	1,902	1,862	1,752	1,754	1,732	1,754
25 to 34	2,169	2,185	2,170	2,162	2,187	2,201	2,185	2,174	2,030	2,054	2,058	2,074
35 to 44	2,242	2,233	2,235	2,225	2,267	2,248	2,249	2,239	2,053	2,109	2,128	2,115
45 to 54	2,197	2,207	2,181	2,182	2,214	2,224	2,196	2,197	2,053	2,058	2,051	2,055
55 to 59	2,135	2,141	2,119	2,113	2,147	2,151	2,126	2,125	2,010	2,034	2,038	1,983
60 to 64	1,860	1,908	1,910	1,894	1,878	1,920	1,919	1,894	1,694	1,777	1,811	1,892
65 and over	1,152	1,250	1,257	1,274	1,157	1,252	1,253	1,276	1,108	1,233	1,295	1,259
Women, total	1,471	1,490	1,518	1,524	1,466	1,485	1,512	1,518	1,510	1,529	1,558	1,559
16 to 17	685	740	732	728	705	761	743	738	664	591	639	656
18 to 19	1,182	1,241	1,235	1,192	1,206	1,263	1,254	1,217	1,041	1,065	1,094	1,016
20 to 24	1,498	1,524	1,543	1,524	1,507	1,531	1,556	1,534	1,450	1,476	1,462	1,464
25 to 34	1,538	1,576	1,602	1,614	1,518	1,559	1,587	1,603	1,663	1,672	1,684	1,677
35 to 44	1,572	1,609	1,636	1,648	1,554	1,587	1,610	1,627	1,687	1,744	1,791	1,771
45 to 54	1,634	1,652	1,680	1,682	1,629	1,646	1,675	1,673	1,671	1,705	1,711	1,743
55 to 59	1,663	1,674	1,671	1,659	1,673	1,678	1,674	1,671	1,574	1,640	1,646	1,566
60 to 64	1,421	1,513	1,525	1,526	1,440	1,522	1,526	1,531	1,245	1,431	1,514	1,485
65 and over	986	1,010	1,071	1,057	998	1,034	1,114	1,072	871	802	712	924

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1,886 during 1977, an expansionary year, and reached 1,902 in 1979, when demand for labor was even higher. By 1981, however, they had dropped to 1,850 hours. Women also experienced a cyclical boost during 1979. But because of their increased commitment to the labor force and their heavier involvement in the service industries—which are less cyclically sensitive—they were able to maintain, and even to increase, their gains during the slack years which followed.

Racial differentials. During the period 1977–81, white men averaged about 140 more hours of labor force involvement annually than did "black and other" men. Yet, perhaps because of differentials in job opportunities, whites were estimated to have worked about 235 more hours per year than did their minority counterparts.

Active minority women reported more hours of availability than did whites—about 44 more per year. But because of higher rates of unemployment, they averaged about 24 fewer hours of work.

The effects of recession were felt most heavily by minority workers. The total decline in hours worked from 1979 to 1981 was almost identical for white and black men, but the initial impact of recession in 1980 was felt most strongly among blacks and others. Both groups of women registered modest gains during 1980, but by 1981, only whites retained their average net gain over 1979 levels.

Sexual disparity. During the 1977–81 period, the average active white woman worked about three-fourths as many hours as did her male counterpart. (See table 2.) The sex differential was widest between the ages of 25 and 44, when a high proportion of adults were raising families. There is evidence, reported below, that in the white community part of the economic burden carried by women temporarily passes to their husbands during this phase of the life cycle.

Among blacks, the sex differential in hours worked was less pronounced. Although black women's annual hours of work were very similar to those of white women, the relatively short work year reported by black men brought their hours more in line with those of black women. The ratio of female to male hours for this group was closer to 85 percent. Among minority groups, more so than among whites, there was a tendency for both men and women to increase their workload during the prime ages; thus, the male-female differential in hours worked was more uniform across the life cycle.

Reflecting both secular trends and cyclical swings, the male-female gap in annual hours of work narrowed considerably for both blacks and whites after 1977. The bulk of the convergence noted in 1979 was due to improvements in the employment situation (including, perhaps, occupational shifts) of women. Most of the narrowing registered in 1980 was associated with a deterioration in the job market for men.

Age differentials. Because most are still in school, persons age 16 to 17 report fairly short periods of labor force involvement during the year—an average of 832 hours for men and just 728 for women in 1981. (See table 1.) This availability function increases sharply with age, peaking for men between the ages of 35 and 44, and for women, between the ages of 45 and 54. At their highest levels in 1981, men reported being available for 2,225 hours of work, compared with 1,682 hours for women.

As might be expected, those 16 to 24 registered the greatest employment setbacks during the slack years 1980 and 1981. Persons still working at age 65 registered slight increases in paid employment during this period, a rational response to an uncertain future on fixed income.

Worktime lost through unemployment. Probably the least reliable set of estimates in the annual hours profile is that pertaining to unemployment (the last term in equation 1 above). It has been demonstrated that retrospective reports understate the length of bouts of unemployment, particularly if the jobless spells took place several months prior to the CPS interview.[6] This "recall bias" is especially detrimental to the unemployment es-

Table 2. Ratio of women's to men's hours of work, total and by race and age, selected years, 1977–81

Race and age	1977	1979	1980	1981
Total, all persons	73.8	75.2	77.4	78.1
16 to 17	81.3	84.9	86.9	90.1
18 to 19	85.0	86.9	89.2	88.8
20 to 24	83.4	82.3	85.5	86.7
25 to 34	70.3	72.2	74.9	75.9
35 to 44	69.1	71.5	73.1	74.2
45 to 54	73.9	75.1	76.7	76.9
55 to 59	77.7	78.1	78.5	78.5
60 to 64	76.6	78.8	80.1	79.9
65 and over	87.9	80.4	85.3	83.0
Total, white	73.1	74.4	76.3	77.3
16 to 17	81.1	85.5	85.4	89.6
18 to 19	84.6	86.8	90.2	89.8
20 to 24	84.0	82.2	85.1	86.4
25 to 34	69.0	71.0	73.6	74.9
35 to 44	67.6	70.1	71.3	72.7
45 to 54	73.1	74.2	75.8	75.9
55 to 59	77.7	78.0	78.5	78.7
60 to 64	76.6	78.7	79.6	80.1
65 and over	88.9	82.2	88.0	83.6
Total, black and other	81.7	83.2	87.2	85.7
16 to 17	82.8	87.4	99.4	100.2
18 to 19	85.6	86.7	78.6	82.7
20 to 24	81.0	84.3	90.4	90.8
25 to 34	81.3	82.2	85.7	84.6
35 to 44	81.2	82.9	87.3	84.9
45 to 54	81.7	83.5	85.3	85.8
55 to 59	79.0	80.7	78.9	79.3
60 to 64	77.3	81.1	87.3	79.4
65 and over	80.8	65.8	61.2	79.4

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Table 3. Estimated proportion of available worktime lost through unemployment by age and sex, selected years, 1977–81

Sex and age in March of reference year	1977	1979	1980	1981
Men, total	5.0	4.0	5.9	6.3
16 to 17	11.7	11.3	12.9	14.1
18 to 19	12.4	9.7	13.8	15.0
20 to 24	9.5	6.9	10.3	11.6
25 to 34	4.6	4.1	6.3	6.8
35 to 44	3.2	2.6	4.2	4.4
45 to 54	2.8	2.7	3.4	3.4
55 to 59	2.9	2.2	3.0	3.6
60 to 64	4.1	2.5	3.5	2.9
65 and over	4.9	2.2	2.7	2.6
Women, total	5.4	4.0	4.9	5.2
16 to 17	10.5	10.1	9.2	11.5
18 to 19	9.6	7.2	8.7	9.8
20 to 24	7.5	5.3	6.5	7.0
25 to 34	5.4	3.9	4.9	5.1
35 to 44	4.6	3.3	4.3	4.3
45 to 54	3.4	2.4	3.7	3.6
55 to 59	3.1	2.3	3.5	3.6
60 to 64	3.9	3.1	3.2	3.7
65 and over	2.3	2.7	2.6	2.6

timates (and, thus, the AHLF statistics) for youth and women.[7]

Despite this probable bias, the annual hours data show an age profile which resembles (without actually matching) that of the annual average unemployment rates for the year, developed from the regular monthly Current Population Survey. (See table 3.) In 1981, men and women reported peak annual average unemployment rates of 22.0 and 20.7 percent at ages 16 to 17. However, the retrospective reports on annual hours lost to unemployment, as determined by the March 1982 CPS supplement, showed a conservative average of 14.1 percent for men and just 11.5 percent for women—figures which almost certainly understate the severity of the problem.

Hours of work per capita. The estimates mentioned so far relate hours to workers. They hold in abeyance group differentials in the proportion active during the year, spotlighting contrasts in the workload carried by those who do work. Firms commonly respond to recessionary pressure by shortening the hours of employment offered to their workers; the hours-per-worker ratio helps measure the extent of this hours effect.

But to study the economy's success at providing employment for various groups, we must look at a different ratio—hours of work per *person.*[8] (See table 4.) When total hours are distributed across all persons in the population subgroup studied, only one group—white men age 35 to 44—consistently registers nearly "full employment," or a potential schedule of 2,080 hours per person. Estimates for 1981 show that, during that year, the economy used just 1,783 hours of labor supply per minority man and only 1,249 per minority woman in the same age range. In the ages of peak activity for white women, 20 to 24, the group average was only 1,170 hours. In terms of a 40-hour week, these figures represent 52, 44, 31, and 29 weeks per capita, respectively. The economy made use of only about 500 hours' time per capita for white teenagers 16 to 17, and just 200 hours per capita for blacks and others in the same age group—the equivalent of 12.5 and 5 full weeks of work per person during 1981.

Viewed in temporal series, these population averages show the pace of tightening labor demand during an economic recovery, and the outcome of combined hours and employment effects in times of job shortage. They indicate that the contraction of labor demand between 1979 and 1981 resulted in a drop in adult male employment equivalent to about 63 hours of work per capita annually. Substantial gains for some groups of women were offset by losses for others. The net gain for all women over the period was only 2 hours per person.

Educational differentials. The annual hours tables show that—beyond age 24, when most persons have completed their schooling—there is a positive relationship between years of schooling and hours worked per year. Workers with graduate training average substantially longer hours of employment than do their less educated peers. (See table 5.) Part of this differential is due to better employment opportunities, part to occupational selection. (Some of the professions made accessible by higher education, such as medicine and law, demand unusually long hours of work.)

It is interesting to note that among persons active in the labor force, men without high school diplomas report somewhat longer hours of work than do women of the same age with graduate training. Part of this difference is due to childbearing, which often entails short

Table 4. Reported hours of employment per person[1] by race, sex, and age, 1979–81

Sex and age	Total			White			Black and other		
	1979	1980	1981	1979	1980	1981	1979	1980	1981
Men, total	1,554	1,509	1,491	1,591	1,551	1,531	1,272	1,212	1,210
16 to 17	583	537	504	647	598	564	244	250	213
18 to 19	1,178	1,103	1,044	1,236	1,159	1,112	810	801	642
20 to 24	1,646	1,574	1,515	1,696	1,634	1,577	1,308	1,211	1,143
25 to 34	2,032	1,963	1,940	2,070	2,015	1,985	1,751	1,613	1,639
35 to 44	2,098	2,048	2,039	2,132	2,092	2,075	1,823	1,728	1,783
45 to 54	1,980	1,937	1,941	2,016	1,977	1,975	1,698	1,620	1,668
55 to 59	1,735	1,706	1,705	1,779	1,746	1,747	1,339	1,348	1,334
60 to 64	1,194	1,140	1,098	1,220	1,173	1,124	947	839	865
65 and over	288	281	280	289	282	286	283	270	228
Women, total	838	842	840	838	841	841	835	845	835
16 to 17	442	420	393	491	463	436	209	207	191
18 to 19	923	875	814	996	953	891	529	481	425
20 to 24	1,157	1,160	1,125	1,203	1,206	1,170	903	915	884
25 to 34	1,116	1,125	1,145	1,104	1,117	1,145	1,185	1,173	1,149
35 to 44	1,120	1,121	1,152	1,101	1,100	1,135	1,242	1,244	1,249
45 to 54	1,023	1,057	1,054	1,026	1,055	1,050	1,002	1,074	1,084
55 to 59	839	845	822	839	847	823	838	824	776
60 to 64	533	526	520	534	530	516	520	494	553
65 and over	99	104	95	100	106	96	86	81	90

[1] Base consists of all persons in the cohort, regardless of labor force status.

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Table 5. Average hours of work by educational attainment, sex, and age, 1981

Sex and age	Total	Educational attainment			
		Not high school graduate	High school graduate only	Attended college[1]	Attended graduate school[1]
Men:					
16 to 17	715	626	1,105	781	(2)
18 to 19	1,209	1,257	1,501	916	(2)
20 to 24	1,634	1,553	1,805	1,531	1,228
25 to 34	2,016	1,817	1,972	2,075	2,130
35 to 44	2,126	1,936	2,098	2,172	2,336
45 to 54	2,108	1,979	2,101	2,178	2,276
55 to 59	2,037	1,907	2,059	2,105	2,200
60 to 64	1,839	1,738	1,848	1,828	1,993
65 and over	1,241	1,099	1,275	1,358	1,509
Women:					
16 to 17	644	548	990	716	(2)
18 to 19	1,075	908	1,349	883	(2)
20 to 24	1,417	1,108	1,471	1,443	1,323
25 to 34	1,531	1,237	1,502	1,577	1,759
35 to 44	1,577	1,471	1,586	1,569	1,741
45 to 54	1,621	1,530	1,622	1,658	1,818
55 to 59	1,600	1,485	1,612	1,672	1,791
60 to 64	1,470	1,386	1,468	1,539	1,800
65 and over	1,030	982	1,045	1,066	1,174

[1] Nongraduates included.
[2] Data not published because cell contained fewer than 35,000 observations.

periods of economic inactivity for normally active women. The hours index penalizes labor force entrants (or reentrants) for such periods of inactivity during the year, negatively biasing female estimates. A second important factor, of course, is differences in the occupational mix of these two groups.

Table 6 displays hours of work for all persons age 16 and over by educational attainment, race, and sex. The clear hours progression noted in table 5 is less apparent here, because the data reflect large numbers of persons still in high school or college. However, it is evident that in both racial groups, persons with higher education work more hours per year. The table also shows that persons with higher education suffered less from employment cutbacks during the economic slump following 1979. In addition, it indicates that a disproportionate share of the hours gain for women (cited in table 1) occurred among the better-educated groups.

Participation and family roles. The fact that marital and parental responsibilities affect female labor supply is not news. Yet it is interesting to note the degree to which working women vary their length of labor force activity in accord with marital and parental roles.

Among teenagers, for instance, the propensity to work is strongest for single women. (See table 7.) Yet of those who actually work, the newly married—who are setting up households—report the most hours of labor force involvement. From age 20 onward, women living with their husbands report a lower incidence of labor force involvement, and shorter periods of availability for work per active woman annually than do most other groups. The existence of an additional income in the family apparently enables many of them to divide their time between market and home activities. At the opposite extreme, the participation levels and reported hours of availability for single women resemble those of single men. Divorcees, most of whom have been independent for some time, also report fairly intense average work schedules suggestive of a high degree of self- (and family-) support. The hours of women in the transitional state of separation fall somewhere between those of the currently married and the divorced groups. Widows who choose to work put in longer hours than do women of the same age who are living with husbands.

The most striking feature of table 7 is the clarity with which marital roles of men are evident in their hours reports. At most ages, the never-married report a relatively light schedule. The work year of men separated or divorced—many of whom continue to support children—is somewhat longer. But those living with their wives show the strongest propensity to work overtime or carry additional jobs. Their average availability figure in 1981 was 2,140 hours, or about 41 hours per week year-round.

Parental labor force behavior is affected by both the number and the age of children in the home. (See table 8.) For example, among persons age 25 to 34 in 1981, the average man in a dual-earner household reported 2,176 hours of labor force activity if he was childless, but 2,259 if he had four to five children. The incentives for fathers of large families to work longer are twofold. Not only do additional children entail greater direct expenses, but wives in such families average fewer hours of work (and consequently less income) with each additional child. In households where the wife did not work,

Table 6. Average annual hours of work for all persons age 16 and over by educational attainment, sex, and race, 1979–81

Sex and educational attainment	Total			White			Black and other		
	1979	1980	1981	1979	1980	1981	1979	1980	1981
Men									
Total	1,902	1,865	1,850	1,925	1,893	1,875	1,707	1,644	1,656
Not high school graduate	1,615	1,572	1,549	1,632	1,590	1,564	1,526	1,472	1,463
High school graduate only	2,013	1,953	1,929	2,035	1,979	1,955	1,828	1,735	1,716
Attended college	1,946	1,921	1,900	1,962	1,946	1,921	1,768	1,694	1,717
Attended graduate school	2,181	2,147	2,137	2,191	2,159	2,144	2,024	1,977	2,054
Women									
Total	1,431	1,443	1,445	1,433	1,444	1,449	1,420	1,433	1,419
Not high school graduate	1,155	1,154	1,159	1,157	1,152	1,158	1,146	1,161	1,162
High school graduate only	1,519	1,512	1,514	1,516	1,511	1,515	1,543	1,518	1,507
Attended college	1,463	1,486	1,475	1,457	1,477	1,469	1,509	1,555	1,516
Attended graduate school	1,667	1,714	1,716	1,648	1,714	1,716	1,847	1,714	1,716

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Table 7. Proportions of persons economically active during the year, and annual hours of labor force participation per worker by marital status, sex, and age, 1981

Sex and age	Proportion of population economically active[1]						Annual hours of participation per worker					
	Never married	Married, spouse present	Divorced	Separated	Married, spouse absent	Widowed	Never married	Married, spouse present	Divorced	Separated	Married, spouse absent	Widowed
Men, total	75.2	81.1	81.0	79.9	74.4	31.3	1,559	2,140	2,116	2,092	1,962	1,703
16 to 17	63.7	81.5	(2)	(2)	(2)	(2)	811	1,715	(2)	(2)	(2)	(2)
18 to 19	79.0	93.2	(2)	(2)	(2)	(2)	1,351	2,019	(2)	(2)	(2)	(2)
20 to 24	84.9	95.3	93.7	89.4	85.2	(2)	1,689	2,123	2,034	2,077	1,949	(2)
25 to 34	88.4	96.4	89.6	89.4	89.2	(2)	2,052	2,204	2,149	2,138	2,040	(2)
35 to 44	81.0	95.6	92.3	93.2	91.0	85.2	2,110	2,242	2,198	2,161	2,062	2,253
45 to 54	72.7	92.8	81.7	82.3	90.8	78.7	2,018	2,205	2,086	2,043	2,053	2,058
55 to 59	62.1	84.7	69.1	68.6	84.1	71.1	2,153	2,125	2,026	2,011	1,829	1,971
60 to 64	47.5	61.7	46.6	50.0	52.2	40.1	1,777	1,908	1,815	2,144	(2)	1,688
65 and over	20.9	23.9	19.9	23.8	22.0	14.6	1,665	1,267	1,302	(2)	(2)	1,119
Women, total	66.6	56.6	77.0	63.9	53.6	23.5	1,383	1,520	1,853	1,611	1,469	1,536
16 to 17	55.5	51.6	(2)	(2)	(2)	(2)	714	1 877	(2)	(2)	(2)	(2)
18 to 19	70.7	66.3	70.2	58.5	62.4	(2)	1,140	1,389	(2)	933	(2)	(2)
20 to 24	80.5	71.5	83.2	68.0	59.7	(2)	1,541	1,491	1,655	1,515	1,312	(2)
25 to 34	84.1	68.4	84.3	70.5	67.4	61.4	1,902	1,484	1,867	1,619	1,560	1,661
35 to 44	78.1	68.4	85.3	68.5	74.2	67.6	1,934	1,564	1,922	1,678	1,528	1,723
45 to 54	73.8	60.6	79.8	68.4	67.9	65.6	1,943	1,615	1,901	1,737	1,494	1,762
55 to 59	68.7	45.1	76.8	41.3	39.3	58.8	1,863	1,561	1,914	1,710	(2)	1,736
60 to 64	44.2	30.2	59.6	47.8	43.6	38.4	1,705	1,470	1,748	1,504	(2)	1,502
65 and over	14.3	8.7	19.7	18.3	4.8	8.2	1,244	996	1,119	(2)	(2)	1,063

[1] Data refer to persons who were economically active at any time during 1981.

[2] Data not published because cell contained fewer than 35,000 observations.

the husband averaged up to 2,303 hours of labor force activity during the year—the equivalent of 44 hours per week, year-round.

Parents who support and raise their children alone may find both roles compromised. Women maintaining households report having worked longer hours than those living with husbands. Yet within this group, those with the largest families work the fewest hours outside the home. Men in this situation report fewer hours of availability than do those in two-parent homes, and—like their female counterparts—put in still fewer hours if they have large families.

In dual-earner households, a first birth appears to substantially reduce the wife's labor force involvement, while at the same time boosting that of her husband. Both parents' hours remain at altered levels as long as there are pre-school children in the home. Thereafter, working mothers begin to put in more hours on the job, yet their overall contribution remains well below that of childless women of the same age.

Variations in full-year workloads. Time spent on the job is a continuous variable. Tabulations which force the data into discrete categories—such as full-year, full-time work—give the impression that behavior within these cells is more or less homogeneous. In fact, there are great variations from group to group and year to year. The annual hours estimates enable us to study some of these within-cell variations. (See table 9.)

For instance, full-year, full-time work is defined as 35 or more hours of employment during 50 or more weeks of the year. The minimum time input is therefore 1,750 hours, even though the most frequently reported pattern—52 weeks at 40 hours per week—implies a 2,080-hour year. Annual hours estimates indicate that the full-year, full-time concept has a different operational meaning for men than it does for women. In 1981, men so classified averaged 163 more hours of paid employment than did women—the equivalent of 4 additional weeks at 40 hours per week. The expected racial differentials are also evident in these data: blacks working full time, year-round, report fewer hours on average than do their white counterparts.

The estimates in the first section of table 9 identify all year-round workers, whether full or part time. They

Table 8. Annual hours of labor force participation for selected groups age 25 to 34 by marital role, number of children, and age of youngest child, 1981

Item	Male household heads, spouse present		Economically active women		Male household heads, no spouse present
	Wife not in labor force	Wife in labor force	Wives of household heads	No spouse present	
Number of children:[1]					
None	2,173	2,176	1,861	1,966	2,018
1	2,223	2,179	1,533	1,775	2,082
2 or 3	2,255	2,194	1,296	1,663	2,026
4 or 5	2,303	2,259	1,099	1,171	(2)
Age of youngest child:[3]					
None present	2,169	2,175	1,862	1,989	2,111
First to be born within the next year	2,224	2,205	1,401	(2)	(2)
Youngest under age 2	2,235	2,189	1,203	1,682	2,136
Youngest under age 5	2,249	2,190	1,296	1,648	2,055
Youngest age 5 to 16	2,261	2,184	1,503	1,756	2,048

[1] Number of own children under age 18 living in the home in March 1982.

[2] Data not published because cell contained fewer than 35,000 observations.

[3] Age of youngest child in the home in March 1981.

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Table 9. Annual hours of work reported by full-year workers and by full-year, full-time workers by sex and race, selected years, 1977–81

Sex and race	Full-year workers[1]				Full-year, full-time workers[2]			
	1977	1979	1980	1981	1977	1979	1980	1981
Men, total	2,231	2,227	2,211	2,199	2,295	2,291	2,277	2,270
White	2,242	2,238	2,219	2,209	2,306	2,302	2,286	2,280
Black and other	2,121	2,130	2,134	2,114	2,186	2,185	2,195	2,185
Women, total	1,899	1,929	1,915	1,916	2,101	2,115	2,110	2,107
White	1,898	1,927	1,911	1,911	2,107	2,119	2,113	2,111
Black and other	1,909	1,947	1,938	1,947	2,062	2,088	2,090	2,084

[1] Persons working 50 or more weeks during the year.
[2] Persons working 35 or more hours per week during 50 or more weeks of the year.

show that, among persons who work continuously, the average man spends nearly 300 more hours per year on the job than does the average woman—the equivalent of 8 additional 40-hour weeks.

Hours by industry and occupation. The CPS work experience profiles identify the industry and occupation in which each respondent was employed for the greatest length of time during the year. Given present rates of job and occupational mobility, it would be unrealistic to assume that all worktime reported by an individual was spent on the same job. Nonetheless, because a disproportionate share of all transfers occur between related positions, the data probably convey quite a bit of information about persons normally found in each industrial and occupational cluster.[9]

People who enter and leave the job market repeatedly, or who enter for the first time, are often attracted to jobs with minimal entry requirements. Thus, the most accessible jobs tend to be held by those with the weakest labor force attachments. Because the average hours data penalize entrants and retirees for periods of inactivity, accessible jobs tend to be rated as having the lowest average hours of employment per worker during the year. (See table 10.) For instance, those in private household services report an average of only about 800 hours of paid employment per annum. (Because of the dearth of prime-age men in this industry, it is the only one in which women's hours exceed those of men.) Workers in entertainment and recreation, which are often seasonal activities, register an average of less than 1,300 hours per year. Those in retail sales average about 1,500 hours. In each of these industries, a higher labor force accession rate of women contributes to their lower average work duration.

Given the cyclical sensitivity of the construction industry, its workers report surprisingly stable hours of employment during the period in question. The normal workload for men appears to have been about 1,690 hours per year, or about 42 "full" weeks of employment—a level consistent with the seasonal nature of these jobs. Men in wholesale trade and in transportation, communications, and utilities also register highly consistent work patterns over time. The longest work year is reported for the mining industry, which in 1977 averaged 2,066 hours per worker. Men in the industry registered a high of 2,130 hours.

Broken out by occupation, the data show that several groups of men spend greater portions of the year in paid employment than are consistent with a 40-hour week, 52-week year. (See table 11.) Medical practitioners, such as doctors and dentists, report an average of more than 2,400 hours per year—the equivalent of a year-round schedule of 46 hours per week. Managers, both farm and nonfarm, normally report well over 2,200 hours of work per year. The most extreme exam-

Table 10. Annual hours of work by industry of longest employment during the year and sex, selected years, 1977–81

Industry	Total				Men				Women			
	1977	1979	1980	1981	1977	1979	1980	1981	1977	1979	1980	1981
Total	1,671	1,693	1,677	1,669	1,886	1,902	1,865	1,850	1,392	1,431	1,443	1,445
Agriculture	1,728	1,768	1,762	1,727	1,863	1,957	1,932	1,882	1,063	1,126	1,140	1,156
Nonagricultural industries:												
Mining	1,972	2,066	2,045	1,956	1,996	2,130	2,078	1,987	1,772	1,624	1,814	1,784
Construction	1,673	1,720	1,675	1,674	1,689	1,745	1,692	1,696	1,300	1,433	1,474	1,434
Manufacturing:												
Durable goods	1,914	1,923	1,890	1,900	1,986	1,997	1,955	1,954	1,688	1,720	1,704	1,748
Nondurable goods	1,797	1,821	1,801	1,788	1,954	1,981	1,954	1,933	1,551	1,601	1,600	1,598
Transportation, communications, and public utilities	1,926	1,941	1,923	1,935	1,999	2,007	2,004	2,012	1,651	1,740	1,705	1,725
Trade and finance:												
Wholesale trade	1,938	1,942	1,954	1,926	2,071	2,077	2,066	2,060	1,558	1,606	1,630	1,596
Retail trade	1,532	1,513	1,508	1,499	1,775	1,797	1,773	1,747	1,240	1,268	1,284	1,286
Finance, insurance, and real estate	1,803	1,820	1,836	1,818	1,984	2,000	1,971	1,958	1,647	1,699	1,742	1,717
Services:												
Business and repair services	1,644	1,700	1,713	1,691	1,816	1,905	1,879	1,862	1,260	1,334	1,395	1,378
Personal services:												
Private household services	823	796	801	798	526	639	508	591	783	817	843	834
Other personal services	1,487	1,475	1,535	1,486	1,762	1,810	1,834	1,799	1,327	1,308	1,383	1,323
Entertainment and recreation	1,299	1,260	1,298	1,262	1,444	1,435	1,459	1,422	978	1,018	1,063	1,036
Professional and related services	1,653	1,661	1,672	1,676	1,934	1,952	1,940	1,925	1,492	1,514	1,540	1,550
Public administration	1,829	1,850	1,810	1,858	1,972	2,006	1,957	1,994	1,535	1,588	1,577	1,645

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Table 11. Annual hours of work by occupation of longest employment during the year and sex, selected years, 1977–81

Occupation	Total				Men				Women			
	1977	1979	1980	1981	1977	1979	1980	1981	1977	1979	1980	1981
Total	1,671	1,693	1,677	1,669	1,863	1,957	1,932	1,882	1,392	1,431	1,443	1,445
Professional, technical, and kindred workers:												
Engineers	2,101	2,087	2,064	2,064	2,109	2,098	2,071	2,085	1,900	1,752	1,889	1,736
Physicians, dentists, related practitioners	2,383	2,445	2,329	2,353	2,413	2,481	2,404	2,398	2,121	2,188	1,800	2,081
Health workers, except practitioners	1,656	1,664	1,693	1,745	1,982	1,953	1,908	2,067	1,602	1,622	1,661	1,689
Teachers, except college	1,749	1,720	1,735	1,737	2,086	2,096	2,052	2,036	1,603	1,579	1,617	1,613
Engineering, science technicians	1,888	1,881	1,890	1,931	1,937	1,933	1,938	1,944	1,630	1,657	1,706	1,862
Other professional workers, salaried	1,860	1,900	1,869	1,880	1,996	2,045	2,012	2,010	1,621	1,661	1,640	1,679
Other professional workers, self-employed	1,875	1,804	1,878	1,838	2,080	2,039	2,034	2,033	1,194	1,097	1,399	1,391
Managers and administrators, except farm:												
Salaried workers in manufacturing	2,295	2,245	2,206	2,218	2,348	2,303	2,264	2,263	1,894	1,896	1,891	1,933
Salaried workers in other industries	2,141	2,157	2,126	2,122	2,275	2,272	2,240	2,233	1,793	1,911	1,884	1,886
Self-employed workers in retail trade	2,460	2,314	2,326	2,324	2,664	2,583	2,564	2,565	1,999	1,860	1,902	1,888
Self-employed workers, except retail	2,124	2,270	2,158	2,132	2,200	2,337	2,200	2,216	1,594	1,893	1,818	1,672
Salesworkers:												
Retail trade	1,277	1,296	1,308	1,321	1,720	1,753	1,760	1,752	1,053	1,042	1,085	1,104
Other salesworkers	1,964	1,945	1,935	1,941	2,113	2,071	2,091	2,067	1,450	1,597	1,531	1,628
Clerical and kindred workers:												
Bookkeepers	1,546	1,604	1,627	1,578	1,766	1,764	1,743	1,646	1,527	1,588	1,617	1,572
Office machine operators	1,751	1,803	1,775	1,768	1,896	2,015	1,923	1,853	1,706	1,731	1,726	1,738
Stenographers, typists, secretaries	1,602	1,604	1,630	1,627	1,827	1,808	1,762	1,759	1,600	1,601	1,627	1,626
Other clerical and kindred workers	1,552	1,553	1,550	1,557	1,817	1,793	1,741	1,764	1,441	1,457	1,474	1,475
Craft and kindred workers:												
Carpenters	1,655	1,680	1,591	1,590	1,661	1,685	1,593	1,594	(1)	(1)	(1)	(1)
Other construction craftworkers	1,695	1,748	1,721	1,730	1,708	1,758	1,733	1,737	909	1,138	1,047	1,317
Blue-collar work supervisors, n.e.c	2,163	2,173	2,124	2,101	2,181	2,199	2,143	2,133	1,982	1,970	1,988	1,906
Machinists and job setters	2,056	2,030	2,002	1,966	2,073	2,042	2,026	1,985	(1)	(1)	(1)	(1)
Metal craftworkers, except mechanics, machinists, and job setters	2,025	2,027	1,934	1,902	2,023	2,038	1,950	1,908	(1)	(1)	1,677	(1)
Automobile mechanics	2,053	2,039	1,992	1,975	2,058	2,042	1,993	1,978	(1)	(1)	(1)	(1)
Mechanics, except automobile	1,985	2,038	1,985	1,984	1,989	2,047	1,987	1,986	1,687	1,712	1,894	1,855
Other craftworkers	1,837	1,921	1,884	1,835	1,910	1,997	1,970	1,911	1,489	1,554	1,482	1,471
Operatives, except transport:												
Mine workers	1,911	2,020	1,935	1,812	1,910	2,022	1,943	1,826	(1)	(1)	(1)	(1)
Motor vehicle and equipment manufacturing	1,930	1,880	1,651	1,761	1,999	1,923	1,682	1,815	1,650	1,704	1,532	1,568
Other durable goods	1,755	1,810	1,771	1,794	1,827	1,900	1,839	1,849	1,635	1,663	1,656	1,702
Nondurable goods	1,642	1,676	1,673	1,641	1,872	1,879	1,843	1,810	1,498	1,546	1,560	1,537
Other	1,540	1,581	1,559	1,557	1,625	1,699	1,664	1,647	1,337	1,303	1,330	1,363
Transport equipment operatives:												
Drivers and delivery workers	1,884	1,918	1,852	1,892	1,941	1,988	1,918	1,962	1,144	1,225	1,208	1,191
All other	1,890	1,933	1,859	1,867	1,896	1,946	1,861	1,877	(1)	(1)	(1)	1,750
Laborers, except farm:												
Construction	1,298	1,351	1,335	1,306	1,306	1,371	1,344	1,309	971	766	(1)	1,221
Manufacturing	1,636	1,614	1,677	1,695	1,655	1,607	1,666	1,700	1,521	1,650	1,738	1,667
Other industries	1,391	1,309	1,314	1,338	1,424	1,338	1,333	1,355	1,109	1,119	1,190	1,232
Services:												
Private household workers	828	803	824	805	(1)	(1)	(1)	849	833	806	820	803
Services, except private household:												
Cleaning service	1,458	1,420	1,411	1,419	1,572	1,535	1,504	1,505	1,244	1,220	1,267	1,286
Food service	1,167	1,161	1,184	1,186	1,313	1,247	1,317	1,248	1,105	1,121	1,123	1,155
Health service	1,480	1,504	1,526	1,538	1,669	1,761	1,692	1,720	1,462	1,472	1,508	1,518
Personal service	1,302	1,315	1,357	1,236	1,544	1,531	1,543	1,464	1,222	1,248	1,297	1,169
Protective service	1,985	1,987	1,969	1,907	2,023	2,074	2,039	1,959	1,507	1,177	1,326	1,481
Farmers and farm managers	2,350	2,351	2,348	2,321	2,393	2,427	2,439	2,411	1,749	1,642	1,521	1,571
Farm laborers and supervisors:												
Paid workers	1,373	1,390	1,395	1,317	1,574	1,626	1,552	1,458	775	689	769	760
Unpaid family workers	1,259	1,260	1,364	1,337	1,579	1,386	1,579	1,448	1,188	1,191	1,241	1,274

[1] Data not published because cell contained fewer than 35,000 observations.

n.e.c. = not elsewhere classified.

ple is self-employed managers in retail trade. During the period of observation, their shortest recorded work year was 2,564 hours in length (1980), their longest, 2,664 (1977). In year-round equivalents, these figures represent 49 and 51 hours per week.

Women reported their longest average work years in the fields of medicine (about 2,050 hours), management (1,800 to 2,000 hours), and blue-collar crafts supervision (about 1,960 hours). The peak reported workload —2,188 hours for medical practitioners in 1979—was equivalent to a year-round schedule of 42 hours per week.

Apart from private household workers, men registered their shortest average work years in the food ser-

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vices (about 1,275 hours) and general nonfarm labor (about 1,360 hours). The lowest average for women was reported in paid farm labor—770 hours, or fewer than 20 "full" weeks of paid employment.

The work schedule of employees in certain occupations, such as farm management, teaching, nonretail sales, typing and other clerical work, and private household and food services, appeared impervious to cyclical pressure. During the 1977–81 period, average annual schedules for these jobs varied by 30 hours or less. Other occupations were highly sensitive to economic change. Managers in nonmanufacturing enterprises, workers in a number of craft occupations, operatives producing and delivering goods, and self-employed managers in businesses other than retail trade (such as consulting) all found 1979 a particularly good year. Physicians and dentists were also unusually busy during 1979, perhaps because the public had more discretionary income to spend for their services at that time.

A few occupations registered consistent declines in annual hours of employment throughout the 1977–81 period. These included engineers (−37 hours), machinists (−90 hours), metal crafts workers (−123 hours), auto mechanics (−78 hours), and operatives producing motor vehicles and equipment. The last group suffered most, realizing an average loss of 279 hours per worker between 1977 and 1980—the equivalent of almost 7 40-hour weeks of work per person. Modest but consistent increases were registered among health and health service workers (89 and 58 hours, respectively), and in retail sales (44 hours). From 1979 onward, gains were also apparent among working teachers (17 hours), engineering and science technicians (50 hours), laborers in manufacturing (81 hours) and in other industries (29 hours), and food service workers (25 hours).

THE ANNUAL HOURS DATA from the March CPS work experience supplement offer an interesting new window on labor force behavior for various groups. They enable us to condense information on work schedules, proportions of persons active, and weeks of paid employment into a single scalar variable, one which can be used directly in multivariate analysis or can be translated into standard units of time for easy comprehension. While the data are still experimental, it is hoped that in time they will become a functional part of our profile of the labor force. □

FOOTNOTES

[1] This is likely to bias hours estimates more seriously for blacks and women than it does for white males. The March CPS supplement does not contain sufficient information to control for this factor.

[2] See Shirley J. Smith, *Tables of Working Life: The Increment-Decrement Model*, Bulletin 2135 (U.S. Bureau of Labor Statistics, 1982), appendix B.

[3] An example is the difference between persons active during a given month and those active at any time during the calendar year.

[4] Declines in stated availability may have been induced by deteriorating employment conditions for men during this period.

[5] For further discussion of group vulnerabilities, see Norman Bowers, "Have employment patterns in recessions changed?" *Monthly Labor Review*, February 1981, pp. 15–28.

[6] See Francis W. Horvath, "Forgotten unemployment: recall bias in retrospective data," *Monthly Labor Review*, March 1982, pp. 40–43.

[7] Horvath estimates that between 1967 and 1979 "the degree of understatement ranged from 9 to 25 percent and averaged 19.1 percent . . . The understatement appeared to be smaller during periods of increasing unemployment, such as 1974–75." See Horvath, "Forgotten umemployment," p. 42.

[8] The base of this ratio is the civilian noninstitutionalized population.

[9] Because these figures are not discounted for unpaid vacations or holidays, estimates of compensated time may be overstated for certain occupations.

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International comparisons of labor force participation, 1960–81

Since 1960, rates of labor force activity have risen in four industrial nations, remained stable in one, and declined in four others; overall national participation estimates mask significant variations in trends by age and sex

CONSTANCE SORRENTINO

A nine-country comparison of labor force participation rates reveals wide international differences in the proportion of the population offering their services in the labor market. For example, in 1981, when the U.S. labor force participation rate was 64 percent, 67 percent of all Swedes but only 48 percent of all Italians of working age were in the labor force. Participation rates have risen in the United States, Canada, Australia, and Sweden over the past two decades but have declined in France, Germany,[1] Italy, and Japan. British rates have remained virtually unchanged.

Large international differences in participation rate levels and trends are especially apparent for women and young people. The differences for youth reflect variations in their propensity to continue in school or enter the labor market, or to combine work with school. The differences for women stem from their decision to work in the home or outside the home, to which the availability of part-time jobs and attitudes toward the role of women are contributing factors.

Data on participation rates help to explain the large long-term differences in labor force trends among the industrial nations. For instance, the United States and Japan have had similar rates of population growth over the past two decades, yet the U.S. labor force has grown much faster than Japan's because participation rates for women and youth have risen in the United States while they have been falling in Japan. Short-term deviations in the trend of participation rates are an indicator of a dimension of labor slack—withdrawals from the labor force—which is not covered by the unemployment rate.[2]

This article presents internationally comparable data on civilian labor force participation rates[3] for nine industrial nations over the past two decades. Participation rates are also presented separately by sex and for youths and adults, because overall rates mask marked differences in the trends and levels for men, women, young persons, and the elderly. The technical appendix gives a short description of data sources and adjustment methods.

General levels and trends

Labor force participation rates, also known as activity rates, were over 60 percent in 1980 in the United

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States and five other nations—Canada, Australia, Japan, Great Britain, and Sweden. Sweden had the highest activity rate at 67 percent; in the other countries, the rates were 62 to 64 percent. Italy, with only 48 percent of the working-age population economically active, had the lowest rate among the countries studied.[4] Germany and France also had relatively low rates, at 52 and 56 percent.

Participation rates have risen significantly in the United States and Canada, and moderately in Australia and Sweden over the past two decades. In contrast, sharp declines in labor force activity have occurred in Germany, Italy, and Japan, and a more modest decline was posted in France. (In 1960, Japan had the highest participation rate at 68 percent and Canada the lowest, at 56 percent.) British participation rates have remained relatively stable over the 20 years. (See table 1.)

In Canada and Sweden, the most rapid increases occurred after 1970, and in the United States, after 1975. (Activity rates in Sweden had fallen slightly between 1960 and 1970.) In Australia and Great Britain, participation rates have declined slightly in recent years from mid-1970 peaks; whereas in the four countries with overall 20-year declines (France, Germany, Italy, and Japan), activity rates have stabilized in recent years.

The overall activity rate is the net result of divergent movements for men and women in most countries. (Chart 1 shows these trends for six countries. The trends for Australia and Canada are similar to those for the United States. French trends are similar to those for Germany.) Moreover, the aggregate participation rate masks major differences in labor force behavior of young people and older persons.

The United States, Canada, Australia, and Sweden showed aggregate participation rate growth from 1960 to 1980 because sharp increases in women's activity more than offset declining rates for men. Further, these four countries were the only ones with higher youth participation rates in 1980 than in 1960.

On the other hand, in the four countries with significant declines in aggregate participation rates—France, Germany, Italy, and Japan—male rates fell more steeply and female participation showed overall drops or only small increases. In addition, substantial declines in youth participation occurred in all of these countries.

The relatively stable British participation rate over the past 20 years was the result of a sharp drop in male activity and an almost equally large increase in female activity. Youth participation declined moderately.

A falloff in participation rates for older persons (age 55 and over) occurred in all countries studied. Participation rates for older men fell everywhere, but activity rose among 55- to 64-year-old women in all countries except Italy and Japan. For women age 65 and over, participation rates declined in all countries.

Participation by men declines everywhere

Participation rates for men declined in all countries throughout most of the post-1960 period. The largest drop occurred in Italy, where the rate fell from 85 to 68 percent over the past two decades. French and German men also had above average declines, while the smallest decreases occurred in Canada, Japan, and the United States. (See table 1.)

The downward trend in male participation rates observed in all the countries is largely attributable to longer years of schooling and earlier retirement. Changes in the age structure of the population also have some effect. For example, the movement of a greater proportion of the male population into the retirement age group exerts a downward pressure on participation rates, even if ages at retirement do not change. Italy had the largest increase in the proportion of men age 65 and over in the population, from 10.9 percent in 1960 to 14.8 percent in 1980. Canada and the United States had very slight declines in their proportions of older men in the population.

Male activity rates in 1980 ranged from a high of almost 80 percent in Japan and Australia to a low of 68 percent in Italy. With 77 percent of men economically active, the United States appeared in the middle of the ranking. Only three countries—France and Germany, in addition to Italy—had fewer than three-fourths of their working-age men in the labor force.

The comparative picture was different in 1960, when British men had the highest rate—88 percent—and French men had the lowest—81 percent. Japanese men, who had the highest level of activity in 1980, were in the middle of the array in 1960. Italian men ranked much higher in 1960, with their rate surpassing those in five other countries, including the United States.

Participation by women increases

Labor force participation rates of women have shown a strong, sustained rise since 1960 in North America, Australia, Sweden, and Great Britain. In Japan and the remaining European countries studied, female activity rates dropped until the 1970's, then began to rise. For French and Italian women, the rise began in the early 1970's; for Japanese and German women, it began in the latter part of the decade.

The international gap between the highest and lowest activity rates was much wider for women than for men. In 1980, Sweden had, by far, the highest female rate—almost 60 percent—while that for Italian women was 30 percent—half the Swedish level. Only the United States, Sweden, and Canada had more than half of their female populations in the labor force. (See table 1.)

Swedish women also had a comparatively high activity rate in 1960, but their rate was surpassed at that

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Table 1. Labor force participation rates by sex, nine countries, 1960–81

Year	United States	Canada	Australia	Japan	France	Germany	Great Britain	Italy	Sweden
Both sexes									
1960	59.4	[1] 56.2	([2])	67.9	[3] 59.7	60.0	62.4	58.0	([2])
1961	59.3	[1] 56.2	([2])	67.8	([2])	59.9	62.5	57.4	64.5
1962	58.8	[1] 56.0	([2])	66.9	[3] 59.4	59.6	62.5	56.3	65.2
1963	58.7	[1] 55.9	([2])	65.7	58.4	59.4	62.6	54.7	65.8
1964	58.7	[1] 56.2	59.4	64.8	[3] 58.3	59.0	62.5	53.9	64.3
1965	58.9	[1] 56.5	59.9	64.4	57.7	58.7	62.5	52.8	64.0
1966	59.2	57.3	60.6	64.6	[3] 57.8	58.2	62.6	51.2	64.2
1967	59.6	57.6	61.2	64.8	57.0	57.0	62.3	51.2	63.3
1968	59.6	57.6	61.2	64.9	56.6	56.9	61.9	50.5	63.8
1969	60.1	57.9	61.4	64.6	56.3	57.0	61.7	50.1	63.5
1970	60.4	57.8	62.1	64.5	56.4	56.9	61.3	49.5	64.0
1971	60.2	58.1	62.2	64.2	56.1	56.4	60.8	49.2	64.2
1972	60.4	58.6	62.3	63.8	56.3	55.7	61.2	48.0	64.1
1973	60.8	59.7	62.6	64.0	56.2	55.3	62.8	47.9	64.1
1974	61.3	60.5	63.0	63.0	56.3	54.4	62.6	47.9	64.9
1975	61.2	61.1	63.2	62.4	57.0	53.4	63.2	47.9	65.9
1976	61.6	61.1	62.7	62.3	57.0	52.8	63.4	48.2	66.0
1977	62.3	61.5	62.7	62.5	57.3	52.4	63.4	48.0	65.9
1978	63.2	62.6	62.0	62.8	56.7	52.3	63.4	47.7	66.1
1979	63.7	63.3	61.7	62.7	57.2	[4] 52.3	62.8	47.8	66.6
1980	63.8	64.0	62.2	62.6	56.0	[4] 52.5	62.0	48.0	[4] 67.1
1981	63.9	64.7	62.0	62.6	55.8	[4] 52.4	[4] 61.4	[4] 48.0	[4] 67.1
Men									
1960	83.3	[1] 82.8	([2])	84.2	[3] 81.4	82.7	87.9	84.7	([2])
1961	83.2	[1] 81.8	([2])	84.3	([2])	82.7	87.4	83.8	84.9
1962	82.0	[1] 81.1	([2])	80.5	[3] 80.9	82.2	86.8	82.4	84.6
1963	81.4	[1] 80.5	([2])	82.5	80.6	81.8	86.7	80.9	84.3
1964	81.0	[1] 80.1	85.3	81.5	[3] 79.6	81.4	85.9	80.3	82.8
1965	80.7	[1] 79.9	85.1	81.1	78.8	80.8	85.3	79.2	82.0
1966	80.4	79.8	85.4	81.1	[3] 78.5	80.5	84.8	77.5	81.5
1967	80.4	79.3	84.9	81.0	77.1	79.3	84.6	77.5	80.3
1968	80.1	78.6	84.5	81.7	75.6	79.0	83.4	76.3	80.2
1969	79.8	78.3	84.2	81.5	74.9	79.0	82.5	75.5	78.8
1970	79.7	77.8	84.1	81.5	74.9	78.7	81.4	74.5	78.5
1971	79.1	77.3	83.8	81.9	74.4	77.6	81.3	74.1	78.0
1972	78.9	77.5	83.6	81.8	74.1	76.4	81.3	72.6	77.3
1973	78.8	78.2	83.2	81.8	73.3	75.2	82.5	71.7	76.8
1974	78.7	78.7	82.7	81.5	73.0	73.5	80.9	71.3	76.9
1975	77.9	78.4	82.2	81.0	73.2	72.0	81.3	71.0	77.0
1976	77.5	77.6	81.5	80.9	72.6	71.0	81.3	70.9	76.5
1977	77.7	77.6	81.0	80.3	71.6	70.1	80.8	69.2	75.6
1978	77.9	77.9	79.8	80.1	71.4	69.9	80.2	68.6	75.1
1979	77.8	78.4	79.5	79.9	71.6	[4] 69.4	79.1	68.2	75.2
1980	77.4	78.3	79.2	79.6	70.6	[4] 69.4	78.1	67.8	[4] 75.0
1981	77.0	78.3	78.9	79.6	69.9	[4] 69.3	[4] 77.7	([2])	[4] 74.0
Women									
1960	37.7	[1] 30.1	([2])	52.7	[3] 41.6	41.2	39.5	33.8	[2]
1961	38.1	[1] 31.0	([2])	52.4	([2])	41.0	40.0	33.8	44.5
1962	37.9	[1] 31.3	([2])	51.3	[3] 41.3	40.7	40.3	33.0	46.5
1963	38.3	[1] 31.9	([2])	50.0	39.5	40.7	40.7	31.2	48.0
1964	38.7	[1] 32.9	33.8	49.3	[3] 40.1	40.3	41.0	30.1	46.7
1965	39.3	[1] 33.8	34.8	48.8	39.3	40.0	41.6	28.9	46.6
1966	40.3	35.4	36.3	49.2	[3] 40.0	39.4	42.0	27.4	47.5
1967	41.1	36.5	37.8	49.6	39.5	38.4	41.8	27.4	46.8
1968	41.6	37.1	38.3	49.2	39.8	38.5	41.7	27.2	47.9
1969	42.7	38.0	39.0	48.8	39.9	38.5	41.8	27.1	48.6
1970	43.3	38.3	40.4	49.3	40.1	38.4	42.0	26.8	50.0
1971	43.4	39.4	41.0	47.7	39.8	38.3	42.4	26.6	50.9
1972	43.9	40.2	41.2	46.8	40.5	38.0	43.2	25.7	51.5
1973	44.7	41.9	42.4	47.3	41.0	38.2	45.0	26.1	51.7
1974	45.7	43.0	43.5	45.7	41.6	37.9	46.2	26.6	53.3
1975	46.3	44.4	44.5	44.8	42.5	37.4	46.8	26.9	55.2
1976	47.3	45.2	44.3	44.8	42.9	37.2	47.2	27.6	55.8
1977	48.4	46.0	44.8	45.7	44.2	37.1	47.7	28.6	56.7
1978	50.0	47.8	44.5	46.4	43.3	37.2	48.2	28.6	57.5
1979	50.9	48.9	44.3	46.6	44.3	[4] 37.6	48.0	29.2	58.5
1980	51.5	50.3	45.5	46.6	42.7	[4] 37.8	47.7	29.9	[4] 59.5
1981	52.1	51.6	45.5	46.7	43.1	[4] 38.5	[4] 46.6	([2])	[4] 60.5

[1] Estimates by BLS based on new survey definitions. Statistics Canada revised the data for 1966 onward on the new survey basis.

[2] Not available.

[3] Data for October of 1960, 1962, 1964, and 1966. Data for all other years are for March.

[4] Preliminary estimate.

NOTE: Data relate to the civilian labor force approximating U.S. concepts as a percent of the civilian noninstitutionalized working age population. Working age is defined as 16-year-olds and over in the United States, France, and Sweden; 15-year-olds and over in Australia, Canada, Germany, and Japan; and 14-year-olds and over in Italy. For Great Britain, the lower age limit was raised from 15 to 16 in 1973. The institutionalized population is included in Japan and Germany.

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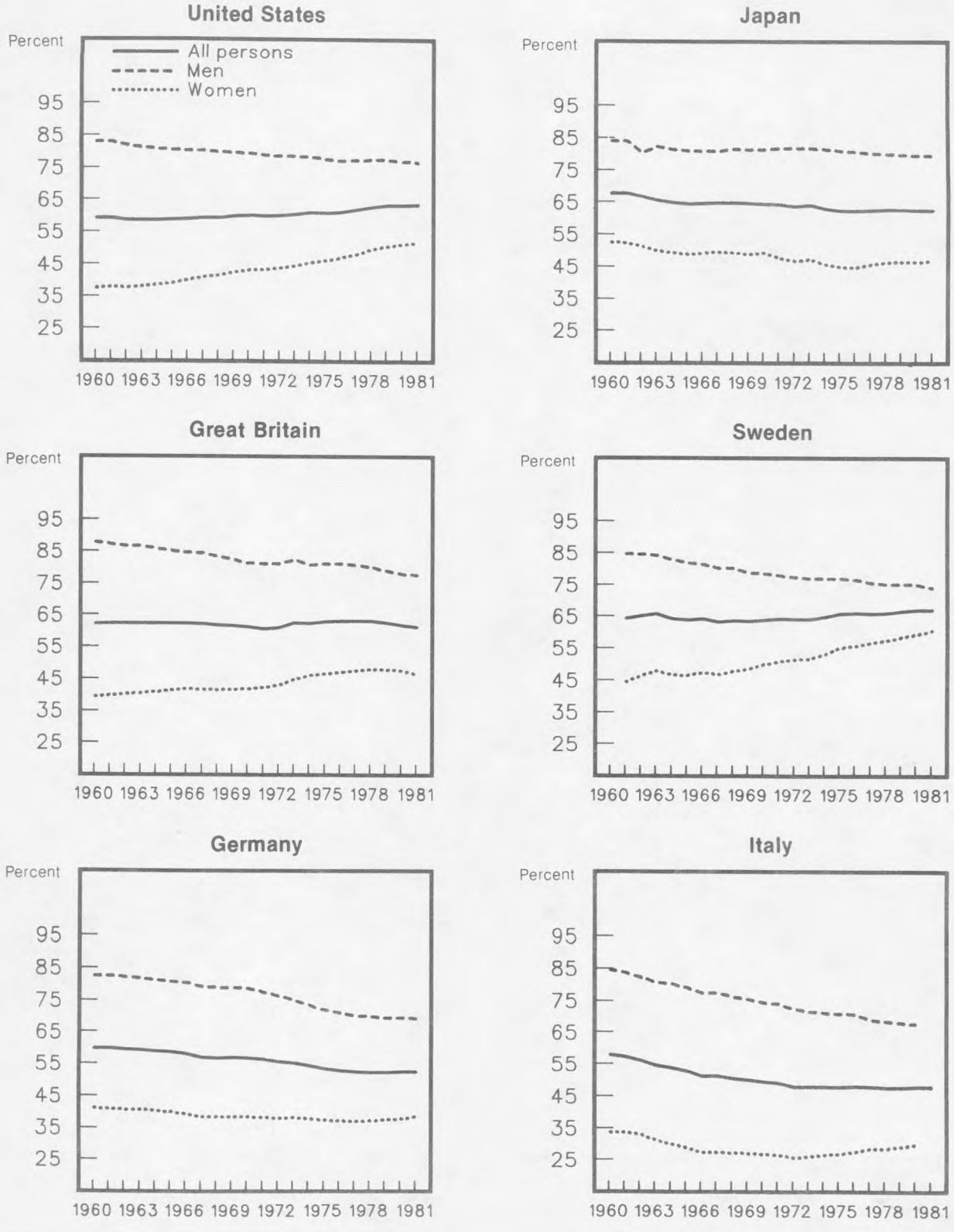
Chart 1. Trends in labor force participation rates, for all persons and by sex, selected countries, 1960-81



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time by Japanese women. Furthermore, in 1960, the U.S. female rate was surpassed by three other European countries—France, Germany, and Great Britain—while Canada had the lowest rate—30 percent.

The varied trends in female activity rates reflect, in part, changes in the industrial structure of the economy. First, female participation rates generally fall along with the decline in the importance of agriculture, because women who were economically active as unpaid family workers on the farm generally withdraw from the labor force after a family moves from farm to city. This accounted for the sharp decline in female activity rates in Japan and Italy during the 1960's. Both countries began that decade with about 30 percent of total employment in the agricultural sector; by 1980, the proportions had fallen to 10 percent in Japan and 14 percent in Italy. Furthermore, as with men, higher educational requirements in industry may raise the average age for leaving school, and improved pensions may encourage earlier retirement.

Eventually, however, female labor force participation enters a second stage during which activity rates begin to rise again. By 1960, women in the United States, Canada, Australia, Sweden, and Great Britain were already well into this second stage. Women in Japan, Germany, Italy, and France, however, entered into the second stage only during the 1970's.

Underlying recent increases in female participation rates in many countries are the following factors: expansion of the service sector; declines in fertility rates; increased availability of part-time work; extension of higher education for women; abating job discrimination against women; and changing attitudes towards women's role in society. A review of trends in two dissimilar societies—Sweden and Japan—serves to illustrate the pervasive effect of these factors.

Service sector expansion. In all countries studied, the service sector has expanded rapidly over the past two decades. By 1980, two-thirds of all civilian workers in the United States and Canada were engaged in services. Over 60 percent of employment in Australia, Sweden, and Great Britain was in the service sector. Italy had the lowest proportion of employment in services, at 48 percent.

Female employment is heavily concentrated in the service sector. In the United States, Australia, Canada, and Sweden, about four-fifths of all working women are in service jobs. The other country with rising female participation since 1960, Great Britain, has three-quarters of total female employment in services. In the countries with overall declines in participation by women, the proportions of total female employment in services were much lower—for example, 56 percent in Italy and 58 percent in Japan. However, even these low figures represent large increases over the 1970 proportions, which were under 40 percent.

Declining fertility rates. In all periods, the major reason women have had lower activity rates than men is that women bear the chief responsibility of rearing children. Married women with children have the lowest activity rates, and the younger their children, the lower their activity rates. However, during the 1960's and 1970's, declining fertility rates tended to reduce the home responsibilities of women, facilitating their rising labor force activity rates in many countries.

Comparative fertility rates over the past two decades are shown in table 2. The number of live births per 100 women age 15 to 44 shows a marked downturn between 1960 and 1980 in all countries except Japan and Sweden. However, the Japanese and Swedish fertility rates were already comparatively low in 1960. The Swedish rate rose marginally by 1970, then declined to below the 1960 level by 1980. Only Japan had a higher fertility rate in 1980 than in 1960. Table 2 also shows the ratio of young children (ages 0–4) to adult females. These are the ages at which children are the heaviest responsibility, and the current ratios are substantially below previous levels except in Japan, Italy, and Sweden, where the levels were already very low in 1960.

Part-time jobs. Part-time work for women is most pervasive in Sweden, where 55 percent of all employed women worked less than 35 hours a week in 1980. In the United States and Canada, 29 and 24 percent of all employed women were working part time.[5] The 1979 European Community household labor force survey indicates lower proportions of part-time employment for women in most member countries. For example, about one-fifth of all employed British, French, and German women held part-time jobs.

Factors in Japan. For Japan, a number of reasons have

Table 2. Fertility rates and ratios of young children to adult women, nine countries, 1960, 1970, and 1980

Country	Fertility rates[1]			Number of young children per 100 adult women[2]		
	1960	1970	1980	1960	1970	1980
United States	11.9	8.8	7.0	56	40	31
Canada	13.1	8.1	6.7	61	41	32
Australia	11.2	9.9	6.9	53	46	35
Japan	7.1	7.3	7.4	35	33	38
France	9.5	8.3	6.7	47	41	33
Germany	8.2	6.7	4.3	37	39	22
Great Britain	8.8	8.5	5.7	40	43	28
Italy	8.2	8.0	7.1	37	40	35
Sweden	6.8	7.0	6.5	34	37	33

[1] Live births per 100 women age 15 to 44.
[2] Number of children under age 5 per 100 women age 15 to 44.
SOURCE: Organization for Economic Cooperation and Development, *Demographic Trends 1950–1990* (Paris, OECD, 1979), pp. 10, 22.

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been cited for the recent rise in female activity rates: (1) economic recovery revived demand for labor after a serious decline during the post-oil crisis recession of 1974–75; (2) expansion in the service sector has created additional demand for women workers, and more part-time jobs; (3) since 1955, when the number of working women began increasing, more women have solidly established themselves in their workplaces, shifting from temporary and irregular work to more permanent occupations; (4) the extension of higher education has prompted women to take jobs outside the home; (5) new equal employment opportunity legislation has promoted advancement of women into occupations which had long been exclusively for men; and, (6) the leveling off in head of household's wage increases and the surge in housing and educational costs have induced a number of women to join the labor force to supplement family income.[6]

As in other countries, life cycle changes are also occurring among Japanese women, who formerly worked only a few years before getting married, and thereafter retired permanently from the labor market. Today, Japanese women are reentering the labor force in their mid-30's, after spending some years at home because of marriage, childbirth, and childcare. (See section on age structure of participation rates.)

The Swedish situation. Sweden's recent very high level of female labor force participation indicates an increasingly more active involvement of married women in economic life compared with other nations. In Sweden, two-thirds of all married women are labor force participants, compared with 50 percent in the United States and Japan, and just 40 percent in Germany.

Several factors are responsible for the high Swedish rate. Many married women have no children or only one child. Furthermore, government-financed day care centers provide for infant care, beginning when children are 6 months of age, at which point maternity leave expires. The introduction of separate taxation for married women in 1971, parenthood insurance in 1974, and greater flexibility in working time have also provided incentives for Swedish women to seek employment. Parenthood insurance provides that either mother or father may stay home up to 3 months after a child's birth and be reimbursed for 90 percent of his or her pay. If the mother decides to use the parenthood insurance, these 3 months are added to the 6 months of her maternity leave. Furthermore, when caring for a sick child under the age of 10, either parent is eligible for cash sickness benefits.

Youth activity changes greatly

Aggregate participation rates mask substantial changes in participation rates for young people since 1960. Participation rates for youth, broken down into teenagers and young adults (age 20 to 24), are presented in table 3. Activity rates for adults (25 and over) are also shown for comparison.

For the United States, Canada, Japan, Italy, and Sweden, the data in table 3 are annual averages. The only available data for the other countries relate to one month of each year, and this introduces an element of noncomparability across countries for which no adjustment can be made. The data for France, Germany, and Australia relate to a month when young people are still in school. Because summer vacation labor force participation is not covered, the activity rates for teenagers in these three countries are understated in comparison with the annual data for other countries. The British statistics are for the end of June of each year, when students may be out of school (beginning in 1976).[7]

Teenagers and young adults in North America have had sharply increasing participation rates over the past two decades, a much faster rise than that recorded for all ages combined. The change in the United States was almost 12 percentage points for persons under 25—from 56.4 in 1960 to 68.1 in 1980; over the same period, Canadian youth gained 10 percentage points. Australia and Sweden were the only other countries with higher youth participation rates in 1980 than during the early 1960's. Australian youth rates held steady in the 1960's, dipped in the early 1970's, then began a slow rise. In Sweden, youth activity fell during the 1960's and rose gradually in the 1970's.

Substantial declines in youth participation in the labor force occurred in all the other countries except Great Britain, where the decrease was moderate. The decline was most evident in Japan, where the participation rate for all young persons was 63 percent in 1960, but only 43 percent by 1980. The drop for Japanese teenagers was even more dramatic—more than half were in the labor force in 1960, compared with fewer than 20 percent by 1980. The rate of decline has tapered off, however. Japanese teenage participation rates dropped from 50 percent in 1960 to 32 percent in 1970 and about 20 percent in 1975, but then fell only to 17.5 percent by 1981.

Even with the rapid upward trend in North American youth activity rates, youth in three other countries still had higher rates than their North American counterparts in 1980. In Australia, Sweden, and Great Britain, 70 percent or more of all youth were in the labor force, compared with about two-thirds of U.S. and Canadian youth. Activity rates for French and German youth were 50 and 58 percent; Japanese and Italian youth had much lower rates. Among the last four countries, Germany had a relatively high teenage participation rate, and Japan, a low teenage rate. Italy's low overall youth participation rate reflects, in large part, a

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very low rate for persons aged 20 to 24, particularly for young women.

The declining trends (or slower increases) in youth labor force activity outside North America reflect the rapid expansion of school attendance. In the United States and Canada, school attendance has also increased, but many youngsters in these two countries combine school with work, so that the expansion of educational enrollments has not lowered labor force activity. In the other countries, where few students also work, increases in school enrollment rates caused youth participation rates to decline.

Foreign school enrollment rates were well below U.S. rates in 1960, when about 64 percent of U.S. teenagers were in school. Only about half of all teens in Canada were enrolled and much smaller proportions in Europe—around 35 percent in France and Germany, and fewer than 20 percent in Italy and Great Britain. About 45 percent of Japanese teenagers were in school. Between 1960 and 1975, enrollment rates rose rapidly abroad,

Table 3. Labor force participation rates for youth and adults, nine countries, selected years, 1960–81

Country and date	Youth			Adults
	Total	Teenagers[1]	Age 20 to 24	
United States:				
1960	56.4	47.5	65.2	60.0
1970	59.8	49.9	69.2	60.5
1974	64.9	54.8	74.0	60.2
1975	64.6	54.0	73.9	60.2
1976	65.3	54.5	74.8	60.5
1977	66.7	56.0	75.7	61.0
1978	68.2	57.8	76.8	61.7
1979	68.6	57.9	77.5	62.2
1980	68.1	56.7	77.2	62.5
1981	67.7	55.4	77.3	62.8
Canada:				
1960	[2]57.8	[2]47.5	[2]69.4	[2]55.7
1970	56.0	42.2	71.6	58.4
1974	62.5	51.0	75.4	59.8
1975	62.9	51.1	75.9	60.5
1976	62.4	49.8	76.2	60.6
1977	63.2	50.4	77.0	61.0
1978	64.4	51.5	78.1	62.0
1979	66.2	54.1	78.9	62.3
1980	67.3	55.2	79.6	62.9
1981	67.9	55.7	79.7	63.6
Australia:				
August 1964	[2]68.9	[2]67.1	[2]75.5	[2]58.6
August 1970	68.5	59.4	77.8	59.8
August 1974	66.9	56.8	77.3	60.7
August 1975	68.3	59.0	78.1	60.7
August 1976	68.0	57.8	78.8	60.2
August 1977	69.9	60.3	80.3	60.3
August 1978	68.9	59.6	78.8	59.3
August 1979	69.1	58.7	80.3	58.6
August 1980	71.1	61.2	81.3	59.1
August 1981	70.6	59.8	81.4	58.8
Japan:				
1960	62.8	50.1	77.7	69.0
1970	55.1	32.1	75.0	67.8
1974	49.5	23.4	71.4	66.7
1975	47.4	20.6	70.7	66.2
1976	45.7	18.6	70.4	66.3
1977	44.6	18.4	69.6	66.7
1978	44.2	18.8	69.4	66.9
1979	43.5	18.0	69.3	67.0
1980	42.9	17.6	69.3	66.9
1981	43.2	17.5	69.9	66.8
France:				
March 1963	68.7	53.1	89.4	57.5
March 1970	57.1	39.4	72.1	56.7
March 1974	54.4	32.6	74.1	57.4
March 1975	54.6	32.2	73.7	57.9
March 1976	54.3	30.1	75.0	57.9
France—Continued:				
March 1977	53.7	29.3	74.3	58.1
March 1978	52.2	27.0	73.5	58.1
March 1979	52.7	27.9	73.7	58.6
March 1980	51.4	26.0	73.3	59.0
March 1981	50.3	24.7	71.7	58.9
Germany:				
April 1963	80.8	79.0	82.7	56.6
April 1970	70.9	64.7	78.4	55.5
April 1974	63.4	54.3	73.6	54.2
May 1975	61.9	52.8	72.7	53.3
May 1976	60.1	49.4	73.1	53.0
April 1977	58.9	46.9	73.8	53.2
April 1978	58.5	46.1	74.1	53.0
April 1979	59.5	47.9	73.9	53.0
April 1980	58.0	44.0	75.5	53.4
May 1981	57.1	42.3	75.0	53.7
Great Britain:[3]				
April 1961	75.0	72.5	77.9	57.1
June 1971	71.0	65.8	74.8	59.5
June 1974	68.6	59.4	76.2	60.6
June 1975	69.6	61.9	76.1	60.5
June 1976	73.4	[4]69.1	77.0	60.6
June 1977	73.1	68.0	77.5	60.6
June 1978	72.9	67.5	77.8	60.2
June 1979	72.9	67.3	77.8	59.5
June 1980	73.0	67.2	78.2	58.9
June 1981	73.2	67.1	78.6	58.3
Italy:[3]				
1960	[2]60.5	[2]57.6	[2]63.9	[2]53.7
1970	[2]45.1	[2]34.5	[2]57.4	[2]48.1
1974	39.9	27.4	56.5	47.5
1975	39.2	26.2	56.8	47.7
1976	38.8	25.6	56.9	48.1
1977	39.8	27.0	57.7	48.0
1978	39.6	26.3	58.3	48.2
1979	40.5	27.1	59.8	48.4
1980	41.5	27.5	61.2	48.3
1981	[5]41.5	[5]26.9	[5]61.9	[5]48.4
Sweden:				
1963	69.1	62.8	75.6	65.1
1970	64.8	52.2	73.6	63.9
1974	68.4	56.1	77.8	64.1
1975	70.8	58.2	80.3	65.0
1976	71.6	59.3	81.3	65.0
1977	71.3	57.3	81.9	65.0
1978	70.8	56.1	82.0	65.2
1979	72.2	57.3	83.8	65.7
1980	72.1	56.4	84.8	66.2
1981	68.9	50.3	84.8	66.7

[1] 16- to 19-year-olds in United States, France, Great Britain (1974 onward), and Sweden; 15- to 19-year-olds in Canada, Australia, Japan, Germany, and Great Britain (prior to 1974); and 14- to 19-year-olds in Italy.

[2] BLS estimates adjusted for comparability with other years shown.

[3] Data are not fully adjusted to U.S. concepts.

[4] The sharp increase in teenage participation rates between 1975 and 1976 is mainly due to a change in school-leaving regulations, allowing students who formerly left school in July to leave before that month (see appendix).

[5] Preliminary.

NOTE: Participation rates are based on the civilian noninstitutional population, except for Japan, Germany, and Great Britain, where the institutional population is included.

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but grew more slowly in the United States, where rates were already high in 1960. By 1975, Japan had the highest proportion of teenagers enrolled in school—76 percent. During the same year, about 72 percent of U.S. teenagers were enrolled in school compared with 53 percent in France, and about 45 percent in Italy and Great Britain.[8] Since 1975, the foreign enrollment rates have been rising more slowly, and this has been a factor in the recent upward trends in youth participation. Also, some European students have begun to adopt the North American pattern of seeking part-time jobs while in school.

In the United States, more than half of the teenagers in the labor force are also in school. The rise of student participation in the U.S. labor force has been attributed to several factors, including need for (or preference for) earnings to supplement family income, greater participation in work-study programs, and increases in the proportion of college students in 2-year colleges, who have higher activity rates than those in 4-year colleges. By comparison, few European and Japanese students work while in school, for a variety of academic and other reasons.[9]

Reversals in youth participation rate movements have occurred recently in several countries. After many years of increase, both teenage and young adult participation rates declined in the United States in 1980, and the teenage decline continued in 1981. In Italy, a very sharp drop in youth activity rates persisted until 1977, when a gradual upward trend emerged. As noted earlier, Australian and Swedish youth participation rates also began to rise in the 1970's. However, in 1981, teenage participation rates dropped in both countries. The decline in Sweden was very large—a falloff of 6 percentage points to 50 percent, the lowest level recorded in the last two decades. The sharp decline was related to a large increase in the number of young persons in full-time school. This rise in school attendance was partly related to the deteriorating labor market for Swedish teenagers. The teenage jobless rate in 1981 was 9.6 percent, the highest ever recorded by the Swedish labor force survey.

Activity by older persons declines

The tendency to shorten working lifetimes is reflected in falling participation rates for older workers over the past two decades. This trend, reinforced by the aging of the population, has increased the burden of the nonparticipating elderly population upon the working population, putting a strain on pension funding in many countries.

Table 4 shows participation rates for two older groups—those 55 to 64, and 65 and over—in the early 1960's and in 1980. For 55- to 64-year-olds, participation rates declined in all countries except Great Britain and Sweden, where strong increases for women overrode declines for men. Among those 65 and over, participation rates declined in all countries for both men and women. Greater coverage of pension schemes and the increased size of pensions were major factors in the decline. Institutional factors tending to lower the compulsory retirement age or to encourage workers to retire early were also important.[10] Since 1973, many of the European countries have adopted provisions to guarantee financial resources for older workers who leave the labor force before pensionable age, thus making room for younger workers.

Japan had relatively small declines in older worker participation, and Japanese workers over 65 had, by far, the highest participation rate among the countries studied. In 1980, their activity rate of about 25 percent was twice as high as the comparable U.S. rate, and three to five times as high as the rates for older workers elsewhere.

About 2 out of 5 Japanese men 65 years old and over are still in the labor force. In the United States, only 1 in 5 older men are economically active, and in France, Germany, Great Britain, and Italy, fewer than 1 in 10.

A relatively high proportion of older Japanese women are also working or seeking work. About 1 in 7 Japanese women 65 or over are in the work force. This compares with around 1 in 12 in the United States, down to 1 in 40 in Sweden and 1 in 55 in Italy. The relatively

Table 4. Labor force participation rates of older workers, nine countries, early 1960's and 1980

Country	Age 55 to 64						Age 65 and over					
	Both sexes		Men		Women		Both sexes		Men		Women	
	Early 1960's[1]	1980	Early 1960's[1]	1980	Early 1960's[1]	1980	Early 1960's[1]	1980	Early 1960's[1]	1980	Early 1960's[1]	1980
United States	60.9	55.7	86.8	72.1	37.2	41.3	20.8	12.5	33.1	19.0	10.8	8.1
Canada	54.7	53.9	86.7	76.2	22.0	33.7	17.5	8.9	30.0	14.7	5.6	4.3
Australia	53.8	44.9	85.8	68.9	21.0	21.8	12.5	6.3	23.3	11.2	4.4	2.8
Japan	65.1	61.9	85.6	85.2	44.4	43.6	38.8	25.8	56.5	40.8	24.4	14.9
France	55.4	[2]53.3	76.2	[2]69.9	36.9	[2]38.3	14.5	[2]6.2	24.0	[2]9.0	9.0	[2]4.3
Germany	51.7	44.7	81.8	67.8	27.2	28.5	13.9	5.2	24.9	7.5	7.7	3.0
Great Britain	59.7	60.0	94.4	83.0	29.3	39.0	13.2	5.6	23.4	8.9	5.7	2.9
Italy	45.6	34.9	73.5	57.7	20.2	14.4	15.0	4.7	25.2	8.4	7.0	1.8
Sweden	65.1	67.1	91.1	79.2	40.5	55.6	20.7	6.5	34.8	11.6	8.6	2.5

[1] Data are for a year or month (France, Germany, and Great Britain) in the 1960–63 period, except for Australian data which are for August 1966.
[2] Data relate to March 1979.

NOTE: French, German, British, and Italian data are not adjusted to U.S. concepts. Participation rates are based on the civilian noninstitutional population, except for Japan, Germany, and Great Britain, where the institutional population is included.

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Table 5. Age structure of labor force participation rates by sex and age, nine countries, 1980

Sex and age	United States	Canada	Australia	Japan	France[1]	Germany[2]	Great Britain[3]	Italy	Sweden
Men									
Teenagers[4]	60.5	58.0	65.4	17.0	31.0	48.5	70.7	29.3	56.9
Age 20 to 24	85.9	86.2	91.5	69.0	80.1	82.0	88.4	67.6	88.0
Age 25 to 34	95.2	95.4	95.9	96.8	96.8	93.6	96.9	94.5	95.6
Age 35 to 44	95.5	96.0	95.6	97.5	97.8	98.2	97.5	97.4	96.9
Age 45 to 54	91.2	92.6	91.2	96.3	94.6	95.1	96.1	92.3	95.0
Age 55 to 64	72.1	76.2	68.9	85.2	69.9	67.8	83.0	57.7	79.2
Age 65 and over	19.0	14.7	11.2	40.8	9.0	7.5	8.9	8.4	11.6
Women									
Teenagers[4]	52.9	52.2	61.5	18.5	24.8	41.4	64.5	24.2	56.0
Age 20 to 24	68.9	73.0	71.1	69.7	68.5	71.1	68.5	51.5	81.6
Age 25 to 34	65.5	62.7	52.5	47.9	67.7	59.5	56.3	47.1	81.4
Age 35 to 44	65.5	61.6	58.2	59.5	61.4	55.1	68.3	38.6	84.8
Age 45 to 54	59.9	54.1	47.8	60.5	55.8	49.6	67.8	31.1	83.3
Age 55 to 64	41.3	33.7	21.8	43.6	38.3	28.5	39.0	14.4	55.6
Age 65 and over	8.1	4.3	2.8	14.9	4.3	3.0	2.9	1.8	2.5

[1] Data relate to March 1979.
[2] Data relate to April 1980.
[3] Data relate to the end of June 1980.
[4] Data are for 16- to 19-year-olds in the United States, France, Great Britain, and Sweden; 15- to 19-year-olds in Canada, Australia, Japan, and Germany; and 14- to 19-year-olds in Italy.

NOTE: French, German, British, and Italian data are not adjusted to U.S. concepts. Participation rates are based on the civilian noninstitutional population, except for Japan, Germany, and Great Britain, where the institutional population is included.

low participation rate for older Swedish women is in sharp contrast with the very high rates in all other age groups.

The prevalence of the work ethic in Japan partly accounts for the high participation rates for older workers. Also, social security and pension benefits are relatively small. Moreover, social security payments begin at age 60 (55 for women), but the compulsory retirement age is 55 to 58 for 60 percent of Japanese men and sometimes lower for women, and lump-sum retirement payments are not enough to allow for self-sufficiency. As a result, most workers who are retired from their regular jobs continue at lower paid jobs or become self-employed out of financial necessity.

Age structure patterns

Table 5 presents a comparison of the detailed age structure of participation rates for one year, 1980. The data for France, Germany, Great Britain, and Italy have not been adjusted to U.S. concepts because information was not available to make adjustments by such detailed age groups. However, some conclusions may be drawn concerning the pattern of the age structures and large differences in levels of activity. Except for the British and Italian data, the unadjusted figures are closely comparable to U.S. concepts, although differences of 1 or 2 percentage points should be discounted.

The age structure of participation rates differs greatly between the sexes. (See chart 2.) Male participation rates plotted by age group display a bell shape in all countries, while the female rates show a more irregular shape which resembles a skewed M in some countries, such as Japan. Great Britain and Australia (not shown) also have distinctly M-shaped curves for women. Curves for French and German women closely resemble the shape of the Italian curve. The Canadian curve is closer to the U.S. curve, but with a much sharper drop in activity for 25- to 34-year-old women.

Men. For men, high rates during the prime working ages, peaking in the 35-to-44 age group, contrast with lower rates at both ends of the age spectrum. In the teenage years and the early 20's, school attendance keeps many young men out of the work force. Retirement brings a downturn at the other end of the spectrum. There are only small international differences in participation rates for men in the prime working ages (25 to 54). Larger differences occur for youth and for older men.

Women. For women, the labor force participation rates are affected not only by the same factors affecting male activity rates, but also by conditions relating to women's domestic role. Generally speaking, after a peak between ages 20 and 24, a fall in economic activity rates occurs which is attributable to marriage and the birth and rearing of children. Subsequently, a number of women return to work and the female activity rate may begin to rise again sometime in the 30's, reaching a second peak in the 40's, which is generally lower than the first maximum. In some countries, however, activity rates continue to fall.

By 1980, however, the traditional pattern of female participation rates had changed in some countries. In the United States and France, the decline in activity for women 25 to 34 was small. In France, however, a more significant decline occurred after age 35. In Sweden, there was virtually no drop in activity rates for 25- to 34-year-olds, and participation rates peaked at their highest—almost 85 percent—in the 35-to-44 age bracket. This indicates that working life for Swedish women is approaching the continuity of that for men.

In Japan, a still more traditional society, there is a sharp drop in economic activity connected with marriage and the birth and rearing of children. Participation rates increase again after 35. A similar pattern occurs in Australia and Great Britain. In Great Britain,

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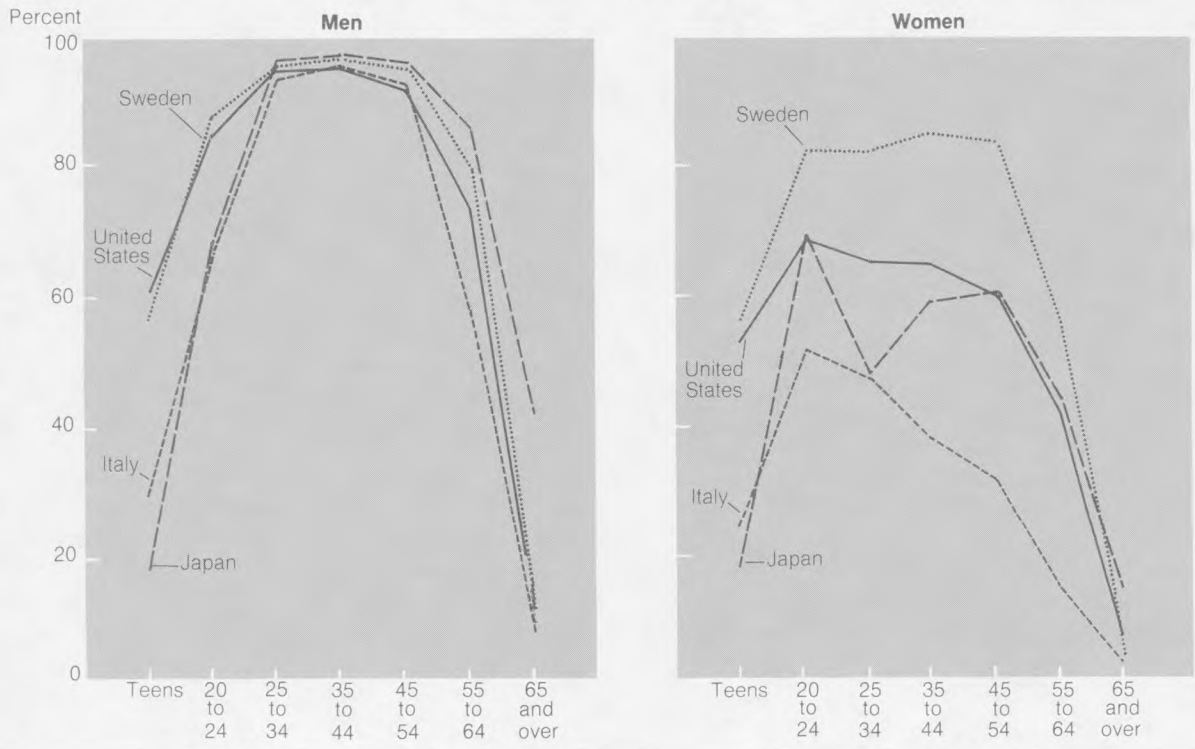
Chart 2. Age structure of labor force participation rates by sex, selected countries, 1980



however, the drop in activity is less sharp and later activity in the 35-to-44 age bracket is virtually as high as in the early 20's.

In Germany and Italy, the pattern is different. Activity rates for women decline about 5 to 10 percent for 25- to 34-year-olds as in Britain, but then continue to decline in later age brackets. In France, while the initial decline is small, participation rates likewise continue to decline in later life. Canadian women age 25 to 34 have a drop in activity comparable with that of German women, but subsequent decreases are much smaller.

In all countries except Sweden, the maximum rate of female labor force activity still occurs in the 20-to-24 age group—at 69 to 73 percent (52 percent in Italy). This compares with maximum male participation rates of 96 to 98 percent in the 35-to-44 age bracket.

Historical patterns. Although the levels have changed slightly, the characteristic bell shape of the male age structure curve has remained unchanged throughout the past two decades. In contrast, there have been major changes in the pattern of the female age structure curves. Chart 3 depicts the changing shapes and levels of the age structure of participation rates for women over the past two decades. Six of the countries are shown, three with overall increases in working activity by women—the United States, Sweden, and Great Britain—and three with aggregate declines—Japan, Germany, and Italy.

The chart shows that participation rates have risen for women in the primary working ages of 25 to 54 in all of the countries. In the United States, Sweden, and Great Britain, the increases for these age groups have been large and continuous. In contrast, Japan, Germany, and Italy show declines in one or more of the age groups from 25 to 54 between 1960 and 1970, followed by increases from 1970 to 1980. The latter increases were only marginal in Japan, but more significant in Germany and Italy.

In the United States, the distinctly M-shaped curve noted in 1960 and 1970 had flattened out by 1980. Prior to 1976, participation rates for women 25 to 34 were lower than for those 35 to 44. By 1976, the rates were about the same for both age groups, and this relationship continued in 1980.

In Sweden, an already less distinct M-shaped curve in 1960 and 1970 had all but disappeared in 1980. Chart 3 shows that labor force activity by Swedish women peaked at ages 20 to 24 in 1960, but by 1970 a new peak occurred in the 35-to-44 age bracket. By 1980,

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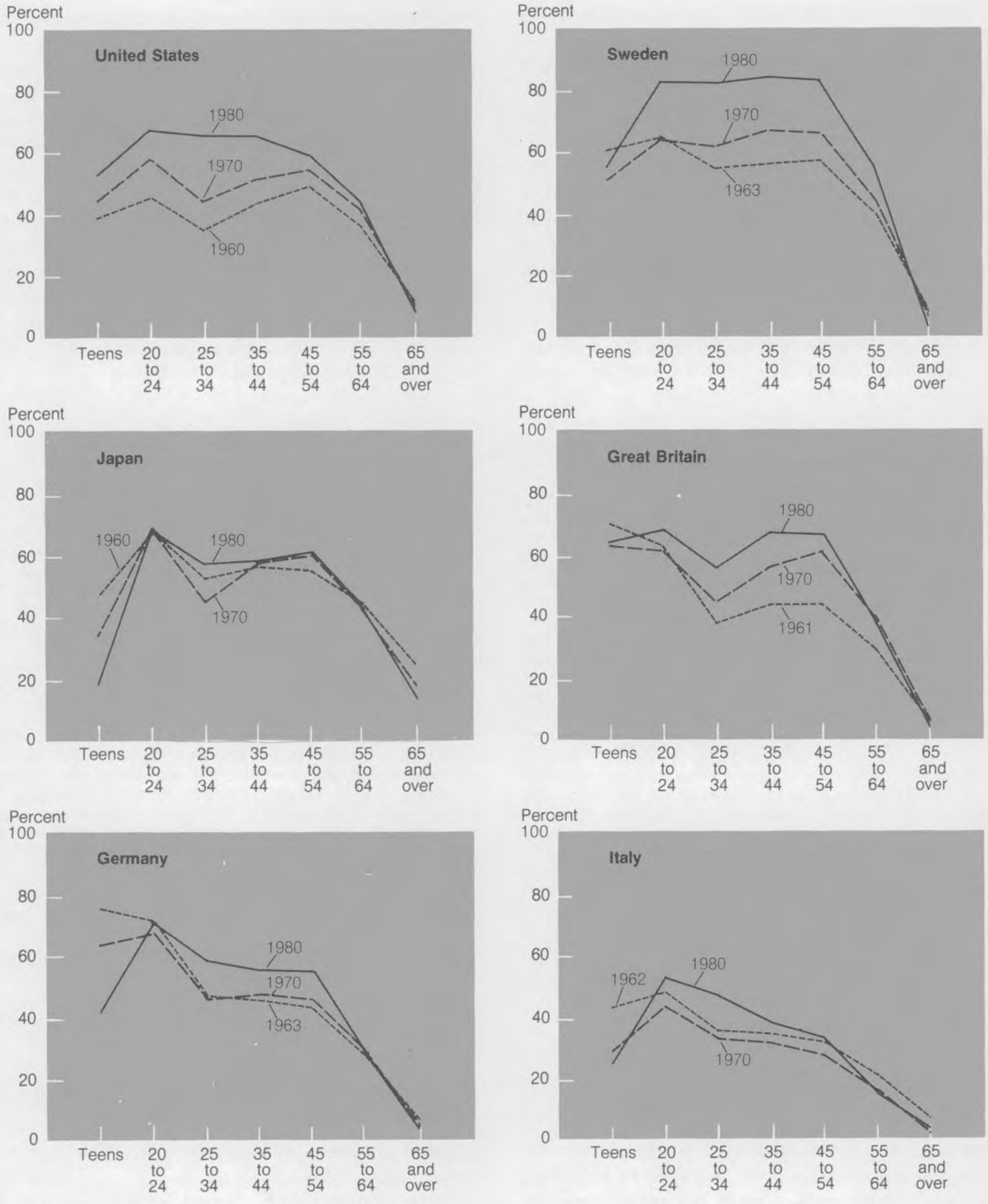
Chart 3. Age structure of labor force participation rates for women, six countries, selected years



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participation rates were much higher for all adult age brackets, except for women 65 and over, and the rate decline in the 25-to-34 group had virtually disappeared.

In contrast to the significant changes in level and shape of the age structure curves in the United States and Sweden, the Japanese curves were practically identical in 1970 and 1980. The 1960 curve also had a similar shape, although the increase in participation after ages 25 to 34 was not nearly as great as in the later years.

Germany's curves for 1963 and 1970 were very close in shape and level, except for teenage girls. In 1963, female labor force activity declined after a peak in the teenage years; by 1970, peak participation occurred in the 20-to-24 age group. By 1980, participation rates had increased significantly for women between the ages of 25 to 54, but the highest rate remained in the 20-to-24 age bracket, with activity lower for each older group.

Like Germany, British female participation rates also were highest in the teenage years in 1960. But in Great Britain, this was also true in 1970. In both countries, the very high levels of teenage labor force participation were related to the widespread apprenticeship programs for youth. Unlike the case for Germany, labor force activity by British women increased again after the sharp decline in the 25-to-34 age bracket. By 1980, the British peak had moved to the 20-to-24 age group, with a similar peak again at ages 35 to 44.

The Italian curves for 1962 and 1970 were almost identical in shape, but the 1970 curve was lower in level. Italy was the only country studied which had a drop in female participation throughout the age spectrum between 1960 and 1970. By 1980, participation rates were higher for women age 20 to 54. The Italian curves were similar in shape to those for Germany—both having peaks at ages 20 to 24, and then subsequent continuous declines. While the M-shape characteristic for other countries shown in the charts did not occur in Germany and Italy, both of these countries have had substantial increases in the level of participation rates for women age 20 to 54 over the past decade. □

FOOTNOTES

[1] The Federal Republic, plus West Berlin.

[2] International cyclical trends in participation will be analyzed in a future article.

[3] Elsewhere, two types of labor force participation rates are published for the United States: the total labor force participation rate, which is the ratio of the total labor force to the total noninstitutional population, and the civilian participation rate, which is the ratio of the civilian labor force to the civilian noninstitutional population. The only difference is that the armed forces are included in the total participation rate and excluded from the civilian rate. In 1981, the total rate for the United States was 64.4; the civilian rate was 63.9. Discussion in this article is limited to civilian labor force participation rates for the United States and the eight other countries covered.

[4] In all societies, there is some degree of illegal or unrecorded labor force activity. This hidden economy includes people working in legal jobs which are not reported so that taxes or other kinds of regulations can be avoided. Italy has a particularly large sector of unreported employment known as *il lavoro nero*, or the labor black market. No attempt has been made here to determine the effect of the labor black market on the Italian participation rates. It is likely that most illegally employed workers will not report their off-the-books jobs in the labor force survey. However, many illegal jobs are second jobs for persons who would be recorded as economically active in their primary, legal employment. To the extent that primary work activity is undeclared, the Italian activity rate will appear lower than it actually is.

[5] For the United States, Canada, and Sweden, data are available on both voluntary and involuntary part-time work. In Sweden, 51 percent of the employed women were voluntarily working at part-time jobs. The remaining 4 percent were on part time for economic reasons and would have preferred more work. The U.S. and Canadian figures for voluntary part time were 23 and 20 percent of total female employment. Data on voluntary part time were not separately available for the European Community countries.

[6] Japan Institute of Labor, *Problems of Working Women*, Japanese Industrial Relations Series 8 (Tokyo, 1981), p. 6.

[7] From June 1976 onward, the participation figures for teenagers are overstated in relation to those countries with annual average data and also in relation to the British data for prior years. The large increase in teenage participation rates between 1975 and 1976 should be discounted because new school regulations were introduced in 1976 which allowed a greater proportion of 16-year-olds to leave school before the end of June. Estimates based on other sources indicate that the teenage participation rates for 1976 onward would be about 5 percentage points lower on an annual average basis. For the other age groups, the midyear estimates are closely comparable to annual averages (see appendix).

[8] See Beatrice G. Reubens and others, *The Youth Labor Force 1945–1995: A Cross-National Analysis* (New Jersey, Allanheld, Osmun, 1981), p. 70.

[9] See *Youth Unemployment: An International Perspective*, BLS Bulletin 2098 (U.S. Bureau of Labor Statistics, 1981), pp. 18–22.

[10] Martin B. Tracy, "Trends in Retirement," *International Social Security Review*, Number 2, 1979, pp. 131–59.

APPENDIX: Data sources and adjustments

Data used in the calculation of participation rates relate to the civilian labor force, adjusted to U.S. concepts. The methods used to make the adjustments are described in *International Comparisons of Unemployment*, BLS Bulletin 1979 (August 1978), appendixes C and D; and in "Supplement to Bulletin 1979," unpublished (January 1982), which is available from the Bureau upon request.

The population base for the participation rates is defined as the civilian noninstitutional population of working age. For most countries, the armed forces had to be excluded from the regularly published population

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figures. Lower age limits for the population were adapted to conform to the age at which compulsory schooling ends in each country. This age varied from 14 in Italy to 16 in the United States, France, and Sweden (see note to table 1).

The regularly published population data for the United States, Canada, and Italy refer to the noninstitutional population. In the United States, there were 2.4 million persons age 16 and over residing in institutions—prisons, nursing homes, mental institutions, and so forth—in 1978; this amounted to 1.5 percent of the total population age 16 and over.

Published data for Australia, France, Great Britain, and Sweden include the institutional population. Adjustments have been made to exclude such persons based on published or, in some cases, unpublished estimates obtained from these countries. (The British data by age in tables 3, 4, and 5 could not be adjusted to a noninstitutional basis.) Participation rates for Japan and Germany, however, are still based on data including the institutionalized population, because data on the size of this population group were not available.

In cases where adjustment was possible, the effect of the exclusion of the institutional population was to raise the labor force participation rate by about 1 percentage point, except for the French participation rates. The French rates were raised by only two-tenths of a percentage point, because a majority of the institutionalized population is already excluded from the scope of the labor force survey. There was no significant difference in the impact on participation rates by sex. In all of the countries, the number of men and women residing in institutions is roughly equal.

Participation rates by age. Participation rates by age, shown in tables 3, 4, and 5, are based on data on labor force and population by age, adjusted to U.S. concepts where possible. However, the French, German, British, and Italian data in tables 4 and 5 and the British and Italian data in table 3 could not be adjusted to U.S. concepts. Data for France and Germany in tables 4 and 5 are closely comparable with U.S. concepts. The British and Italian data diverge from U.S. concepts to a greater extent. Adjustments were made for the other countries mainly to exclude the institutional population (where possible), military personnel, and unpaid family workers who worked less than 15 hours per week. For most countries, the relevant population and labor force data by age were obtained directly from labor force surveys.

The age distribution of the German labor force prior to 1975 is based upon estimates made by the *Institut Fur Arbeitsmarkt-und Berufsforschung* (IAB). The IAB has adjusted the German labor force survey results so that they constitute a consistent time series. This was necessary because the survey used a different method of determining the respondent's age beginning in 1975. Previous data were based on the "birth year method," whereby age was determined by subtracting the birth year from the survey year. From 1975 onward, the survey used the "age year method"—that is, the respondent's actual age at the time of the survey was recorded. Use of these two different methods had a large effect on the participation rates for teenagers, 20- to 24-year-olds, and 60- to 64-year-olds, but hardly any effect on other age groups. The large effect on the aforementioned age groups was due to the fact that data for these groups represent the sum of very different participation rates by single years of age—that is, the participation rate for 15-year-olds is much lower than that for 16-year-olds, and so on. Whether someone's age was recorded as 14 or 15 or as 19 or 20 had a large impact on the data for 15- to 19-year-olds. The IAB used data collected on the basis of both age measurement methods for several years in order to estimate a consistent time series of labor force data by age. The following example indicates the extent of the adjustment: from 1974 to 1975, the unadjusted data indicate an increase in teenage participation rates of almost 8 percentage points; the adjusted data show a decline of 1.5 percentage points.

For Great Britain, the data on labor force by age are obtained from estimates through 1979 and projections for 1980 and 1981 made by the British Department of Employment. The department derives these estimates and projections from household survey and census data, supplemented by other information. The agency has adjusted the labor force data to include the unregistered unemployed. However, the figures still differ from U.S. concepts because (1) they exclude all full-time students who are economically active, and (2) they include the armed forces. BLS has made an adjustment to exclude the armed forces. However, no adjustment could be made with regard to working students. The British estimate that the activity rates for teenagers would be raised by about 3 percentage points if working students were included as economically active. The effect on activity rates of young adults age 20 to 24 would be an increase of about 1 percentage point.

The British statistics by age relate to the end of June of each year. This introduces a further element of noncomparability with other countries where data are either annual averages (United States, Canada, Japan, Italy, and Sweden) or relate to periods when students are in school (France, Germany, and Australia). Until 1976, most British students graduated from school in July; therefore, their labor force participation was not covered in the pre-1976 figures. In 1976, new school-leaving regulations were introduced which allowed a greater proportion of 16-year-olds to leave school before the

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end of June. This resulted in a large increase in teenage participation rates between 1975 and 1976 which would not have occurred otherwise; the teenage activity rates are overstated in relation to prior years and also in relation to the data for other countries.

The June 1977 data for Great Britain can be compared with a European Community (EC) survey taken in April 1977, a time when most students were still in school. Definitions used in the two sources are very similar, except that the EC survey counts full-time students as economically active. (However, it should be noted that the EC survey still underestimates the true numbers of working students to an unknown degree because it is limited to households, and therefore does not cover students in boarding schools.) The following table shows the participation rates by age according to these two sources.

	EC survey, April 1977	*Department of Employment, June 1977*
Under age 25	71.0	73.1
16 to 19 years	61.1	68.0
20 to 24 years	79.5	77.5
25 years or over	61.0	60.6

Assuming that the April figures are representative of participation rates for teenagers over 9 months of the year (school term), and that the June figures are representative of the 3 vacation months, an annual average participation rate for teenagers in 1977 would be roughly 63 percent. Therefore, the midyear figures shown in table 3 for 1976 onward are overstated by about 5 percentage points, in terms of an annual average rate. The teenage participation rates for the years before 1976 are somewhat understated in relation to annual averages because they do not include the summer influx of young people into the labor market. For the other age groups, the midyear figures closely approximate the annual average.

For Italy, the participation rates by age could not be fully adjusted to U.S. concepts because age breakdowns were not available for all the required data. In table 1, the data are fully adjusted to U.S. concepts, and they show an overall participation rate of 48.0 in 1980. In table 3, which shows participation rates for youth and adults, the overall participation rate (not shown) would be 46.9 percent, indicating that the participation rates by age are slightly understated in relation to U.S. concepts.

A note on communications

The *Monthly Labor Review* welcomes communications that supplement, challenge, or expand on research published in its pages. To be considered for publication, communications should be factual and analytical, not polemical in tone. Communications should be addressed to the Editor-in-Chief, *Monthly Labor Review,* Bureau of Labor Statistics, U.S. Department of Labor, Washington, D.C. 20212.

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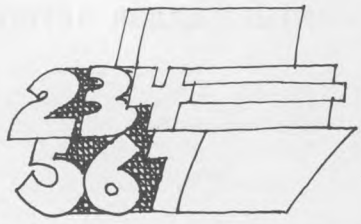
The Anatomy of Price Change



Reconciling the CPI-U and the PCE Deflator: 3rd quarter

JULIE A. BUNN AND JACK E. TRIPLETT

This article, sixth in a series, reconciles two of the Federal Government's major inflation measures—the Consumer Price Index (CPI–U), published by the Bureau of Labor Statistics, and the Implicit Price Deflator for Personal Consumption Expenditures (PCE Deflator), produced by the Bureau of Economic Analysis.[1] The purpose of these articles is to help clarify discussion of issues concerning the sources of divergence between the two measures—"weighting" and "treatment of homeownership costs" issues, and, to a lesser degree, the issue of computational and compilation differences. This is accomplished by measuring the empirical significance of each of these factors.

As in earlier articles, two reconciliations are presented, one dealing with period-to-period changes (annual and quarterly) in the price measures, and the other with total movement of the two indexes over the decade from 1972 to date. In both reconciliations, the effect of one factor or group of factors, holding all other factors constant, can be extracted from the overall divergence by taking the difference between alternative versions of the measures which differ only in one or a small number of respects.

Reconciling period-to-period changes. In the third quarter of 1982, the CPI–U continued to rise more rapidly than the "PCE: Chain-Weight" index.[2] (See table 1). The percentage-point difference (0.9) was the same as for the second quarter. The composition of that difference did, however, shift quite dramatically.

The third-quarter housing treatment effect of 0.6 percentage points is the third negative housing effect of the past year. This negative effect is the result of rental charges increasing at a faster rate than homeownership costs. For each of the 3 months, rents rose faster than CPI–U homeownership costs. (In July, rents increased 1.0 percent and homeownership costs, 0.4 percent, and in August, 0.5 and 0.4 percent; in September, rents increased 0.4 percent, and homeownership costs decreased 0.7 percent.) Although it has generally been true in the recent past that CPI–U homeownership costs have risen more rapidly than rental costs, this effect can change direction as economic conditions affect house prices, interest rates, other components of homeownership costs, and rental charges.

The weighting effect measures the impact on the price measure of using weights for recent periods, compared with the decade-old weighting structure of the CPI–U. The weighting effect turned positive in the third quarter after 4 negative quarters, but continued to be quite small relative to the overall quarterly increase (only 0.2 percentage points relative to a quarterly change of approximately 7 percent).

The "all other" effect, measured as the difference between CPI–X1, a rental equivalency measure, and the PCE: 1972-Weight index, increased substantially in the third quarter. This effect measures the influence of all differences between the CPI and PCE: Chain-Weight index other than those which result from choice of weights and housing treatment. Although a full explanation of this source of price measure difference remains unclear, depending as it does on a very large number of separate factors, the influence of seasonal adjustment procedures more than likely plays an important role. The fact that over a period of several years quarterly effects for any one year have shown a pattern of being low at the outset of the year and then rising in the latter quarters lends support to this view.

Reconciling cumulative changes. Table 2 updates the cumulative reconciliation of the CPI and PCE Deflator. The general results, consistent with those of previous reconciliations, can be summarized as follows: (1) different approaches to the measurement of housing costs have accounted for approximately two-thirds of the cumulative difference between the two measures over the 1972–

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Table 1. Reconciliation of annual and quarterly percent changes in the CPI-U and the Personal Consumption Expenditure price measures, 1980 to 1982–III

Difference	1980[1]	1981[1]	1981[1,2]				1982[2]		
			I	II	III	IV	I	II	III
CPI-U[3]	13.5	10.4	11.0	7.8	11.8	7.7	3.2	4.6	7.6
PCE: Chain-Weight[4]	10.7	9.1	10.3	7.4	8.0	7.2	5.2	3.7	6.7
Total difference[5] (CPI-U minus PCE: Chain-Weight)	2.8	1.3	0.7	0.4	3.8	0.5	−2.0	0.9	0.9
Housing treatment[6]	2.3	0.9	0.4	0.5	2.7	−0.5	−1.3	1.6	−0.6
Weighting effect[7]	0.5	0.2	0.6	0.3	−0.4	−0.1	−0.4	−0.4	0.2
"All other" effect[8]	0.0	0.2	−0.3	−0.4	1.5	1.1	−0.3	−0.3	1.3

[1] Owing to the July 1982 revision of data produced by the Bureau of Economic Analysis, U.S. Department of Commerce, the annual and quarterly figures may differ slightly from those which appeared in earlier articles in this series.

[2] Seasonally adjusted annual rates.

[3] Annual and quarterly changes in the CPI-U are taken from tables provided by the Office of Prices and Living Conditions, Bureau of Labor Statistics. The changes are compiled from 1967-based indexes.

[4] Data for the "PCE: Chain-Weight" were obtained from the Bureau of Economic Analysis, U.S. Department of Commerce.

[5] CPI-U minus "PCE: Chain-Weight" equals the sum of "housing treatment," "weighting" and "all other" effects.

[6] Change in CPI-U minus change in CPI-X1. See September 1981 *Monthly Labor Review*, p. 21, for fuller explanation. Source of CPI-X1 data is same as footnote 3.

[7] Change in "PCE: 1972-Weight" minus change in "PCE: Chain-Weight." See September 1981 *Monthly Labor Review*, pp. 8–9, for fuller explanation. Data source for "PCE: 1972-Weight" changes is same as for footnote 4.

[8] Change in CPI-X1 minus change in "PCE: 1972-Weight." See September 1981 *Monthly Labor Review*, p.6, for fuller explanation.

Table 2. Reconciliation of the CPI-U and the Personal Consumption Expenditure price measures cumulative change from 1972 to the date shown

Difference	1980	1981	1981[1]				1982		
			I	II	III	IV	I	II	III
CPI-U (1972=100)[2]	197.0	217.4	210.3	214.3	220.4	224.6	226.3	228.9	234.2
PCE Deflator (1972=100)[3] (Current-Weight)	179.2	194.5	189.2	192.6	196.4	199.8	202.2	204.0	207.5
Total difference[4] (CPI-U minus PCE Deflator)	17.8	22.9	21.1	21.7	24.0	24.8	24.1	24.9	26.7
Housing treatment[5]	11.7	14.5	13.3	13.7	15.4	15.5	15.3	16.0	17.0
Weighting effect[6]	5.6	7.6	7.4	7.6	7.5	7.7	7.7	7.7	7.7
"All other" effect[7]	0.5	0.8	0.4	0.4	1.1	1.6	1.1	1.2	2.0

[1] Owing to changes in seasonal adjustment factors and to the July 1982 revision of data produced by the Bureau of Economic Analysis, U.S. Department of Commerce, annual and quarterly figures may differ slightly from those which appeared in earlier articles in this series.

[2] Annual data for the CPI-U are annual averages, 1972=100. The quarterly data for 1981 and 1982 were computed by the Office of Research and Evaluation, employing seasonally adjusted monthly data provided by the Office of Prices and Living Conditions.

[3] Data for the Implicit PCE Deflator, or "PCE: Current-Weight" index, were provided by the Bureau of Economic Analysis. The data incorporate revisons released in August 1982.

[4] CPI-U minus PCE Deflator equals the sum of "housing treatment", "weighting" and "all other" effects.

[5] CPI-U minus CPI-X1. See September 1981 *Monthly Labor Review*, p. 5, for fuller explanation. Data source for the CPI-X1 is the same as footnote 2.

[6] "PCE: 1972-Weight" minus "PCE: Current-Weight." See September 1981 *Monthly Labor Review*, p. 6, for fuller explanation. Data source for the "PCE: 1972-Weight" is same as footnote 3.

[7] CPI-X1 minus "PCE: 1972-Weight." See September 1981 *Monthly Labor Review*, p. 6, for fuller explanation.

1982 period; (2) as expected, the impact of choosing weights from different periods has increased as intervals lengthen, yet the total effect of weighting differences over a 10-year period is only 7.7 index points over an interval during which the price level doubled; and (3) despite significant differences between procedures for compiling and computing the two measures, all other factors have made only a very small contribution to the overall divergence.

Result (1) stands out as having particular significance at this time. Last month, the Bureau of Labor Statistics changed the procedures used to compile the homeownership component of the CPI. The new approach—rental equivalence (a derivation of CPI–X1)—is in concept akin to that followed by the Bureau of Economic Analysis in its compilation of the PCE Deflator. Hence, future reconciliations beginning with the first quarter should show less disparity in movements of the two measures. □

FOOTNOTES

[1] The initial reconciliation and technical basis for the analysis are contained in Jack E. Triplett, " Reconciling the CPI and PCE Deflator," *Monthly Labor Review,* September 1981, pp. 3–15. Subsequent reconciliations appeared in the January, May, July and October 1982 issues of the *Monthly Labor Review.*

[2] As discussed in Triplett, pp.7, 13–14, the PCE Deflator, a Paasche-formula index, cannot be used for this reconciliation because Paasche formulas lend themselves to statistical interpretation only when referring to the base year (in this case, 1972).

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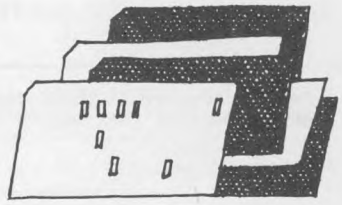
Research Summaries



Recent trends in higher education and labor force activity

ANNE MCDOUGALL YOUNG

Education traditionally has provided a path to the most desirable jobs and career advancement. Even in a sluggish economy, higher education provides considerable advantages in the job market, as demonstrated by the consistently lower-than-average unemployment rates of college graduates. Recent statistics on the employment status of workers as it relates to their educational attainment, show that the premium associated with higher education still holds.[1]

About 1 of 4 persons age 25 to 64 in the work force had completed 4 years or more of college in March 1982 (table 1), compared with 1 of 7 persons in March 1970. The increase reflects, in large part, the growth of the population 25 to 34 years old—the baby-boom generation born in the decade following World War II. One-third of the 25– to 64–year-old work force were in this age group in 1982, and 26 percent of them had graduated from college.

In 1982, as in other years, the highest labor force participation rates and lowest unemployment rates were recorded by college graduates—whether men or women or black, white, or Hispanic (table 2). For example, at 87 percent, the labor force participation rate for all college graduates topped the rate for high school graduates (75 percent) by a wide margin. Unemployment rates were 3.0 percent for college graduates and 8.5 percent for high school graduates. More specifically, 94 percent of the black male college graduates were in the work force, and their unemployment rate was 8.9 percent. Comparable rates for black men with only a high school diploma were 86 percent and 17.3 percent.

Male college graduates had roughly the same labor force participation rates regardless of their race or ethnic group. Among female college graduates, the participation rate for blacks has been substantially higher than for whites. In recent years, however, white women in the college graduate group have increased their rate of labor force participation, while the rate for black women has remained about the same. As a result, the gap between their rates has narrowed substantially, as shown below:

Table 1. Labor force status of persons 25 to 64 years old, by sex, and years of school completed, March 1982

[Numbers in thousands]

Labor force status and years of school completed	Both sexes	Men	Women
Population, total	109,680	52,840	56,842
Elementary: 8 years or less	11,411	5,828	5,582
High school: 1 to 3 years	13,829	6,326	7,504
4 years only	44,595	19,127	25,468
College: 1 to 3 years	18,290	8,969	9,321
4 years or more	21,555	12,587	8,968
Labor force, total	82,016	47,144	34,870
Elementary: 8 years or less	6,365	4,273	2,092
High school: 1 to 3 years	8,987	5,279	3,708
4 years only	33,235	17,347	15,890
College: 1 to 3 years	14,616	8,235	6,382
4 years or more	18,812	12,012	6,799
Labor force participation rate	74.8	89.2	61.3
Elementary: 8 years or less	55.8	73.3	37.5
High school: 1 to 3 years	65.0	83.4	49.4
4 years only	74.5	90.7	62.4
College: 1 to 3 years	79.9	91.8	68.5
4 years or more	87.3	95.4	75.8
Unemployment rate	7.6	7.9	7.2
Elementary: 8 years or less	13.2	12.8	14.0
High school: 1 to 3 years	12.1	12.7	11.2
4 years only	8.5	9.3	7.8
College: 1 to 3 years	6.2	6.8	5.3
4 years or more	3.0	2.9	3.2

NOTE: Because of rounding, sums of individual items may not equal totals.

	1970			*1982*		
	White	*Black*	*Change*	*White*	*Black*	*Change*
Total, 25–64 years . . .	48	59	11	61	65	4
High school:						
Less than 4 years . . .	42	51	9	43	49	6
4 years only	50	66	16	62	70	8
College:						
1 to 3 years.	49	76	27	67	81	14
4 years or more . . .	59	92	33	75	89	14

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Table 2. Labor force status of persons 25 to 64 years old by race, Hispanic origin, and years of school completed, March 1982

[Numbers in thousands]

Labor force status and years of school completed	Men			Women		
	White	Black	Hispanic	White	Black	Hispanic
Population, total	46,452	5,076	2,815	49,027	6,353	3,243
Elementary: 8 years or less	4,728	960	1,036	4,339	999	1,238
High school: 1 to 3 years	5,222	996	371	5,891	1,460	484
4 years only	16,974	1,791	758	22,632	2,363	970
College: 1 to 3 years	7,921	818	374	8,183	934	333
4 years or more	11,607	512	277	7,983	597	217
Labor force, total	41,810	4,196	2,564	29,822	4,122	1,708
Elementary: 8 years or less	3,538	543	895	1,581	413	462
High school: 1 to 3 years	4,394	797	328	2,850	783	234
4 years only	15,492	1,538	727	13,941	1,643	616
College: 1 to 3 years	7,294	733	359	5,474	753	233
4 years or more	11,092	483	255	5,975	533	162
Labor force participation rate	90.0	82.7	91.1	60.8	64.9	52.7
Elementary: 8 years or less	74.8	67.0	86.4	36.4	41.3	37.3
High school: 1 to 3 years	84.1	80.0	88.4	48.4	53.6	48.3
4 years only	91.3	85.9	95.9	61.6	69.5	63.5
College: 1 to 3 years	92.1	89.6	96.0	66.9	80.6	70.0
4 years or more	95.6	94.3	92.1	75.8	89.3	74.7
Unemployment rate	7.2	15.0	10.5	6.4	12.8	11.1
Elementary: 8 years or less	12.0	17.3	13.4	14.5	11.4	18.0
High school: 1 to 3 years	12.6	12.9	14.3	10.4	15.1	18.4
4 years only	8.3	17.3	8.8	6.8	15.6	7.0
College: 1 to 3 years	6.0	14.6	7.8	4.6	10.6	5.6
4 years or more	2.6	8.9	4.7	3.1	5.4	4.9

NOTE: Because of rounding, sums of individual items may not equal totals.

Like women college graduates, the difference between white and black participation rates decreased in other education groups. Most of the change was accounted for by women in the 25 to 34 age group.

A disaggregation of the college graduate labor force by marital status explains more of the differential in labor force rates between these white and black women. In March 1982, the rate for black married women with a college education was 20 percentage points higher than that for whites, as shown below:

	White	*Black*
Single	93	96
Married, spouse present	68	88
Separated or divorced	91	89

Even though relatively fewer black than white college graduates were married (54 compared to 62 percent), the considerably higher level of labor force activity among black wives was enough to raise the overall level substantially.

Occupations

The kinds of jobs held by college graduates have become more diverse since 1970, with a much smaller proportion in the professional and technical fields (table 3). The sluggish business conditions of March 1982 might have accounted for some of the change, but the long-term trend reflects both shifts in the demand for certain occupations and the impact of the baby-boom generation as it matured and entered the labor force.[2]

In 1970, 65 percent of all 25– to 64–year-old college graduates were professional and technical workers.[3] From 1970 to 1982, a combination of factors such as population growth, increased labor force participation by women, financial support from parents, and large scale aid to higher education by all levels of government, helped to more than double the number of workers who were college graduates—from 8.6 to 18.9 million. By 1982, only 54 percent of these graduates were professional and technical workers.

Table 3. Occupation of the total experienced labor force and of college graduates, age 25 to 64

Occupation	Total		College graduates	
	1970 census	March 1982	1970 census	March 1982
Total: Number (thousands)	60,916	82,096	8,616	18,943
Percent	100.0	100.0	100.0	100.0
White-collar workers	47.9	54.6	94.1	89.6
Professional and technical	15.6	18.5	64.6	53.9
Managers	9.5	13.0	16.2	20.1
Sales	6.8	6.1	6.6	7.7
Clerical	15.9	17.0	6.6	7.8
Blue-collar workers	37.5	31.7	3.9	6.0
Crafts	15.4	13.9	2.4	3.6
Operatives, except transport	14.2	10.6	.8	1.2
Transport equipment operatives	4.1	3.6	.3	.5
Nonfarm laborers	3.8	3.6	.3	.7
Service workers	11.7	11.5	1.4	3.5
Farmers and farmworkers	3.0	2.1	.7	9

NOTE: Data for 1970 are from the Decennial Census. Data for 1982 are from special tabulations of the March 1982 Current Population Survey. The experienced labor force includes both employed and unemployed workers by occupation of most recent employment.

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Table 4. Unemployment rates of persons 25 to 64 years old, by occupation of last job, years of school completed, and sex, March 1982

Sex and occupation	Less than 4 years high school	High school, 4 years only	College, 1 to 3 years	College, 4 years or more
Men				
Total	12.6	9.0	6.6	2.8
Professional and technical workers	5.9	4.5	4.2	1.7
Managers and administrators	4.6	2.8	3.8	1.7
Salesworkers	9.1	4.3	5.3	3.0
Clerical workers	6.8	6.0	5.6	3.2
Craftworkers	14.3	9.8	6.8	8.6
Operatives, except transport	14.7	14.5	12.0	18.3
Transport equipment operatives	12.4	11.1	15.9	16.6
Nonfarm laborers	18.6	18.2	13.5	19.3
Service workers	8.6	8.7	9.1	6.5
Farmers and farmworkers	7.5	4.0	3.2	–
Women				
Total	11.9	7.7	5.3	3.2
Professional and technical workers	7.4	4.1	2.7	2.3
Managers and administrators	5.5	3.1	4.7	4.3
Salesworkers	5.8	7.3	4.9	3.6
Clerical workers	9.5	6.3	5.2	4.7
Craftworkers	9.6	7.3	9.8	–
Operatives, except transport	16.5	16.6	12.9	7.4
Transport equipment operatives	8.9	6.4	–	–
Nonfarm laborers	14.0	12.2	(1)	(1)
Service workers	8.7	7.8	7.0	4.6
Farmers and farmworkers	32.0	3.6	–	–

[1] Rate not shown where base is less than 75,000.
Dashes indicate fewer than 1,000 persons unemployed.

The decline in the proportion of college graduates in professional and technical occupations reflects, in part, a slowdown in employment growth in the teaching professions as the number of children age 6 to 17 declined considerably.[4] Some of the shift out of professional and technical occupations represents an increase in the demand for other skills which require more than a high school education. For instance, college graduates have benefited from the growth of business enterprises which needed an increasing number of technically sophisticated managers. Also, many sales jobs now require extensive technical knowledge in order to make an effective presentation of the product. Some college graduates also have shifted into clerical, craft, and service jobs because of their location, work schedules, or because of a preference for manual work. However, the increase in the proportion of college graduates in these three occupations, from 10 percent in 1970 to 15 percent in 1982 would seem to represent some "underemployment" as defined by Clifford Clogg and others.[5] Certainly, the 16 years or more of school they had completed, compared with the median of slightly more than 12 years for all persons in these occupations, indicates substantially more formal education than needed. The "mismatch" of education to occupation seems clear, even though the requirements for entering or advancing in some specific jobs within these occupations may have increased.

For the 1980's, BLS has projected a surplus of between 2 and 3 million college graduates who will enter the labor force.[6] Based on past records, relatively few of these graduates are likely to be unemployed. As shown in table 4, the advantage of more education apparently was sufficient enough for college graduates to have a lower unemployment rate in most occupations. For example, in March 1982, the unemployment rate for male salesworkers with a college degree was 3.0 percent, compared with 9.1 percent for salesworkers with less than 4 years of high school.

The main exceptions were among men in operative and laborers jobs, where a college education is obviously of little advantage. For the relatively small group of college graduates in the operative field, the relatively high unemployment rate may mean that recent graduates had to settle for some of these jobs and were then laid off during the 1981–82 downturn in business conditions.

Among women, unemployment rates for college graduates were about half those for workers with less than a high school diploma, and also much lower than for high school graduates in most occupational groups. This indicates that, rather than raising their unemployment, the "oversupply"[7] of college graduates may simply steer more and more of them toward jobs which have not traditionally required a college education. □

FOOTNOTES

[1] Data for this report are based primarily on special annual tabulations of information obtained through the Current Population Survey (CPS), conducted monthly for the Bureau of Labor Statistics by the Bureau of the Census. The data relate to the civilian noninstitutional population 16 years and over (unless otherwise specified) in the week ending March 13, 1982. Because the estimates are based on a sample, they may differ from the figures that would have been obtained from a complete census. Sampling variability may be relatively large in cases where the numbers are small. Small estimates, or small differences between estimates, should be interpreted with caution. This report is the latest in a series on this subject. The most recent was Anne McDougall Young, "Educational attainment of workers, 1981," *Monthly Labor Review*, April 1982, pp. 52–55. Data on the educational attainment of the population are published by the Bureau of the Census in *Current Population Reports*, Series P–20.

[2] *Occupational Outlook for College Graduates, 1978–79 Edition*, Bulletin 1956 (Bureau of Labor Statistics, 1978).

[3] *1970 Census of the Population, Occupational Characteristics*, PC(2)–7A, table 8 (U.S. Department of Commerce, Bureau of the Census).

[4] Bureau of Labor Statistics, *Special Labor Force Report 134*, and U.S. Department of Labor News Release 82–276.

[5] Clifford C. Clogg, *Measuring Underemployment* (New York, Academic Press, 1979), p. 223.

[6] Jon Sargent, "The Job Outlook for College Graduates," *Occupational Outlook Quarterly*, Summer 1982, p. 7.

[7] Richard Freeman, *The Overeducated American* (Cambridge, Mass., Harvard University Press, 1976).

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Pay in petroleum refineries outpaces manufacturing rise

Wage levels of production and related workers in petroleum refineries rose 57 percent (9.4 percent a year) from April 1976 to May 1981, according to the latest occupational wage survey of this industry.[1] For all manufacturing industries, wage levels increased an average of 8.5 percent annually, according to the wage and salary component of the Employment Cost Index. The larger pay gains in the petroleum industry reflect increases specified in collective bargaining agreements, typically renegotiated every 2 years. The contracts, chiefly with the Oil, Chemical, and Atomic Workers International Union (OCAW, AFL-CIO), covered nearly seven-eighths of the workers surveyed in May 1981.

Since the survey, wage rates rose by 9 percent in January 1982 and by an additional 90 cents per hour (approximately 7.1 percent) in January 1983 in agreements between the OCAW and the major oil producers. Provisions for automatic cost-of-living wage adjustments (COLA) are rare in oil refineries; none, in fact, was found in facilities under OCAW agreements.

Slightly more than nine-tenths of the 65,500 production workers covered by the May 1981 study had straight-time hourly earnings within the narrow $10-$13 range; the average for all production workers was $11.58. This narrow earnings distribution reflects the relatively large proportion of skilled workers in the industry, the high degree of collective bargaining with a single union, the predominance of pattern bargaining, and the prevalence of single-rate pay plans (covering three-fourths of the workers). Among the eight geographic regions studied, average pay levels ranged from $10.32 in the Texas Inland-North Louisiana-Arkansas region (and $10.34 in Western Pennsylvania-West Virginia) to $11.87 on the East Coast. The Texas-Louisiana Gulf Coast, employing two-fifths of the work force, averaged $11.73. Pay levels also were tabulated by size of community and size of establishment. (See table 1.)

The industry's overall pay level is strongly influenced by the relatively large number of skilled workers. For example, one-fourth of all production workers surveyed were either chief operators or assistant operators—two highly skilled positions which involve monitoring the separation of crude oil into its various components; and one-fifth were skilled maintenance workers. By contrast, janitors, maintenance trades helpers, and laborers together made up fewer than one-tenth of the work force. Nevertheless, wage rates paid to lower skilled workers were considerably higher than the pay levels for workers in the same occupations in industries with less unionization and which were less capital-intensive.[2]

Among the individual occupations,[3] average hourly earnings ranged from $9.81 for janitors to $12.55 for chief operators. (See table 1.) This 28-percent earnings spread contrasts with a 37-percent differential recorded in April 1976. Uniform cents-per-hour pay adjustments often stipulated in the industry's collective bargaining agreements contributed to the narrowed differential.

Assistant operators, the largest occupational group studied separately, averaged $11.87 per hour. Other numerically important processing jobs and their averages included pumpers, $12; chief operators' helpers, $11.40; and laborers, $9.83.

The industry's tight clustering of rates is even more evident within individual occupations. For the occupations surveyed separately, the spread of earnings for the middle 50 percent of workers was typically less than $1 an hour. For each of the nine skilled maintenance trades, the middle range covered less than 35 cents. The industry's overall index of dispersion (computed by dividing the middle range of the earnings distribution by the median) was 11—among the lowest of the industries regularly studied by the Bureau. The dispersion index was less than 3 percent for each of the nine journeyman maintenance jobs, while other production occupations generally registered from 3 to 10 percent.

Nearly all refinery workers were provided paid holidays, vacations, and at least part of the cost of life, hospitalization, surgical, basic medical, and major medical insurance, as well as retirement plans. Typically, workers received 10 paid holidays annually, and vacation payments of 2 weeks after 1 year of service, 3 weeks after 5 years, 4 weeks after 10 years, 5 weeks after 20 years, and 6 weeks after 30 years. Health plans were usually financed jointly by the employers and employees.

A comprehensive report on the survey findings, *Industry Wage Survey: Petroleum Refining, May 1981* (Bulletin 2143), is available from the Government Printing Office, or from any of the Bureau's regional offices.

——*FOOTNOTES*——

[1] The surveys included refineries employing 100 workers or more at the time of reference of the universe data, and engaged primarily in producing gasoline, lubricants, and other products from crude petroleum and its fractionation products (industry 2911 as defined in the *1972 Standard Industrial Classification Manual*, prepared by the U.S. Office of Management and Budget.) Earnings data exclude premium pay for overtime and for work on weekends, holidays, and late shifts. For summary findings of the June 1976 study, see Carl Barsky, "Occupational wage levels cluster in petroleum refineries," *Monthly Labor Review*, June 1977, 54–56. For full details, see *Industry Wage Survey: Petroleum Refining, April 1976*, Bureau of Labor Statistics Bulletin 1948.

[2] For example, the average pay level for janitors in refineries was $9.81 an hour, 37 percent above the $7.16 all-manufacturing average reported for janitors in the Nation's metropolitan areas in July 1981. See *Occupational Earnings in All Metropolitan Areas, July 1981*, Summary 82–7 (Bureau of Labor Statistics, June 1982).

[3] The occupations studied separately accounted for 73 percent of the production workers covered by the survey and represent the range of skills and pay levels found in the industry.

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Table 1. Average straight-time hourly earnings and number of production workers in petroleum refineries by selected characteristics, United States and regions, May 1981

Characteristic	United States		East Coast		Western Pennsylvania-West Virginia		Midwest I		Midwest II		Texas-Louisiana Gulf Coast		Texas Inland-North Louisiana-Arkansas		Rocky Mountain		West Coast	
	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings	Number of workers	Average hourly earnings
All production workers[1]	65,566	$11.58	7,056	$11.87	1,863	$10.34	9,657	$11.74	6,125	$11.25	25,839	$11.73	4,019	$10.32	2,095	$11.61	8,912	$11.77
Size of community:																		
Metropolitan areas[2]	52,167	11.66	6,990	11.92	591	10.66	8,279	11.72	2,700	11.28	21,583	11.75	1,550	9.50	1,562	11.64	8,912	11.77
Nonmetropolitan areas	13,399	11.25	—	—	1,272	10.18	1,378	11.88	3,425	11.22	4,256	11.67	2,469	10.83	533	11.52	—	—
Size of establishment:																		
100–999 workers	36,865	11.38	2,980	11.75	1,863	10.34	6,474	11.73	6,125	11.25	6,806	11.38	4,019	10.32	2,095	11.61	6,503	11.88
1000 workers or more	28,701	11.83	4,076	11.96	—	—	3,183	11.76	—	—	19,033	11.86	—	—	—	—	—	—
Selected occupations																		
Maintenance																		
Boilermakers, maintenance	836	12.16	133	12.29	—	—	106	12.04	—	—	376	12.16	10	11.01	—	—	168	12.29
Carpenters, maintenance	595	12.10	60	12.33	10	10.07	47	12.18	24	11.68	295	12.16	25	11.35	18	12.09	116	12.20
Electricians, maintenance	1,307	12.14	148	12.37	26	10.64	174	12.16	91	11.84	571	12.29	76	11.03	43	12.12	178	12.27
Helpers, maintenance trades	1,388	10.46	—	—	69	9.07	170	10.78	105	10.94	492	10.69	263	9.81	—	—	128	10.46
Instrument repairers	1,574	12.17	159	12.33	21	10.75	215	12.20	109	11.83	708	12.29	65	11.08	42	12.18	255	12.27
Machinists, maintenance	1,675	12.19	286	12.37	11	10.85	222	12.12	44	11.74	650	12.21	26	11.51	44	12.12	392	12.20
Mechanics, general	2,785	12.04	299	12.48	34	10.69	803	11.97	346	11.92	965	12.09	—	—	191	11.97	—	—
Mechanics, maintenance (machinery)	1,154	12.02	—	—	—	—	—	—	185	11.76	652	12.21	108	10.90	20	12.24	46	12.39
Pipefitters, maintenance	2,448	12.10	305	12.29	52	10.51	404	12.14	163	11.87	1,070	12.18	—	—	77	12.16	307	12.20
Welders, hand, maintenance	1,156	12.07	186	12.34	44	10.35	139	12.18	79	11.77	444	12.18	69	11.40	36	12.10	159	12.22
Processing																		
Assistant operators	10,240	11.87	997	12.30	54	10.62	1,803	12.11	1,060	11.58	3,872	11.84	533	10.89	363	11.90	1,558	11.92
Chief operators	7,041	12.55	449	13.08	165	11.14	986	12.70	562	12.19	3,169	12.69	520	11.50	223	12.58	967	12.67
Chief operators' helpers	3,151	11.40	274	11.87	60	10.38	389	12.02	219	11.04	1,575	11.40	217	10.37	74	11.79	343	11.31
Compounders	235	11.82	34	12.41	27	10.67	—	—	20	11.73	52	12.47	38	10.89	—	—	22	11.98
Laborers	3,014	9.83	140	10.74	112	10.00	472	10.44	524	9.72	1,064	9.72	372	9.29	166	9.13	164	10.13
Loaders, tank cars or trucks	990	10.59	37	10.34	17	10.36	226	11.31	155	10.80	96	11.01	286	9.25	41	11.42	132	11.51
Package fillers, machine	395	10.81	78	10.82	51	10.67	—	—	68	11.06	163	10.77	—	—	—	—	—	—
Pumpers	1,406	12.00	214	12.61	47	10.47	253	12.42	181	11.47	421	12.34	122	10.31	65	12.27	103	11.77
Pumpers' helpers	611	11.41	52	11.66	—	—	38	11.54	38	10.76	359	11.55	21	10.29	22	11.92	73	11.18
Treaters, oils	526	11.05	28	12.48	55	10.26	31	12.32	63	11.11	—	—	32	9.22	—	—	40	11.99
Treaters' helpers, oils	75	11.37	14	11.52	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Inspecting and testing																		
Routine testers, laboratory	2,650	11.49	193	12.06	90	10.50	381	11.61	279	11.25	1,134	11.80	225	10.01	81	11.49	267	11.44
Recording and control																		
Stock clerks	604	11.26	65	11.31	11	10.26	85	11.20	37	10.94	324	11.42	28	10.28	10	11.52	44	11.23
Material movement																		
Truckdrivers	836	9.99	84	10.86	29	10.09	—	—	53	10.76	193	10.96	56	9.44	21	11.48	58	11.04
Power-truck operators	311	11.00	—	—	41	10.64	—	—	—	—	—	—	—	—	10	11.30	—	—
Forklift	242	10.88	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other than forklift	69	11.44	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Custodial																		
Guards	469	10.43	76	10.81	—	—	60	10.37	34	10.42	236	10.54	—	—	—	—	30	10.57
Janitors	232	9.81	16	3.38	8	9.19	68	10.09	50	10.11	30	10.38	19	8.76	14	8.92	27	10.14

[1] Virtually all workers were men.

[2] Standard metropolitan statistical areas as defined by the U.S. Office of Management and Budget through February 1974.

NOTE: Earnings exclude premium pay for overtime and for work on weekends, holidays, and late shifts.

The regions used in this survey are defined as follows: East Coast — Connecticut, Delaware, District of Columbia, Florida, Georgia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, North Carolina, Rhode Island, South Carolina, Vermont, Virginia, and the following counties in Pennsylvania: Bradford, Columbia, Dauphin, Montour, Northumberland, Sullivan, York, and all counties east thereof; Western Pennsylvania-West Virginia — West Virginia and those counties in Pennsylvania not included in the East Coast region; Midwest I — Illinois, Indiana, Kentucky, Michigan, Ohio, and Tennessee; Midwest II — Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, Oklahoma, South Dakota, and Wisconsin; Texas-Louisiana Gulf Coast — the following counties in Texas: Aransas, Brazoria, Calhoun, Cameron, Chambers, Fort Bend, Galveston, Hardin, Harris, Jackson, Jasper, Jefferson, Kenedy, Kleberg, Liberty, Matagorda, Montgomery, Newton, Nueces, Orange, Polk, Refugio, San Jacinto, San Patricio, Tyler, Victoria, Waller, Wharton, and Willacy; the following parishes in Louisiana: Avoyelles, East Feliciana, Pointe Coupee, St. Helena, Tangipahoa, Vernon, Rapides, Washington, and West Feliciana, and all parishes south thereof; the following counties in Mississippi: George, Hancock, Harrison, Jackson, Pearl River, and Stone; and the following counties in Alabama: Baldwin and Mobile; Texas Inland-North Louisiana-Arkansas — Arkansas and New Mexico and those parts of the States of Alabama, Louisiana, Mississippi, and Texas not included in the Texas-Louisiana Gulf Coast; Rocky Mountain — Colorado, Idaho, Montana, Utah, and Wyoming; and West Coast — Arizona, California, Nevada, Oregon, and Washington. Alaska and Hawaii were excluded from the survey.

Dashes indicate that no data were reported or that data did not meet publication criteria.

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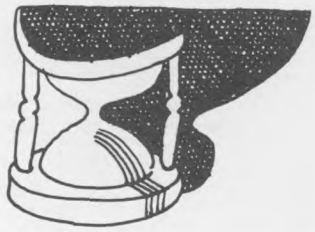
Major Agreements Expiring Next Month



This list of collective bargaining agreements expiring in March is based on contracts on file in the Bureau's Office of Wages and Industrial Relations. The list includes agreements covering 1,000 workers or more.

Employer and location	Industry	Labor organization[1]	Number of workers
American Airlines, Inc., Flight Attendants (Interstate)[2]	Air transportation	Association of Professional Flight Attendants (Ind.)	6,200
Anchor Hocking Corp. (Interstate)	Stone, clay, and glass products	Glass, Pottery, Plastics and Allied Workers	4,200
Associated General Contractors of America, Inc.:			
Connecticut Chapter, 2 agreements	Construction	Carpenters	2,300
San Antonio Chapter (Texas)	Construction	Carpenters	1,000
Borg-Warner Corp., Warner Gear Division (Muncie, Ind.)	Transportation equipment	Auto Workers	2,000
Brockway Glass Co., Inc. (Interstate)	Stone, clay, and glass products	Glass, Pottery, Plastics and Allied Workers	7,150
Brown and Williamson Tobacco Corp. (Louisville, Ky.)	Tobacco	Bakery, Confectionery and Tobacco Workers	2,400
Brown and Williamson Tobacco Corp. (Interstate)	Tobacco	Bakery, Confectionery and Tobacco Workers	2,150
Builders Association of Missouri, 2 agreements (Kansas and Missouri)	Construction	Laborers and Teamsters (Ind.)	3,350
California Metal Trades Association (California)	Fabricated metal products	Machinists	2,000
Cincinnati Gas and Electric Co., and Subsidiaries (Ohio)	Utilities	Independent Utilities Union	1,200
Connecticut Construction Industries Association, Inc. (Connecticut)	Construction	Carpenters	6,500
Connecticut Construction Industries Association, Inc., 5 divisions (Connecticut and New York)	Construction	Operating Engineers	2,800
Construction Industries Association of Western Massachusetts, Inc. (Massachusetts)	Construction	Operating Engineers	1,500
Dairy Employers Labor Council (Washington)	Food products	Teamsters (Ind.)	1,000
Food Market Agreement (Minneapolis, Minn.)[3]	Retail trade	Food and Commercial Workers	7,000
General Telephone Company of California (California)	Communication	Communications Workers	20,500
Glass Containers Corp. (Interstate)	Stone, clay, and glass products	Glass, Pottery, Plastics and Allied Workers	4,000
Glass Containers Corp. (California)	Stone, clay, and glass products	Glass, Pottery, Plastics and Allied Workers	1,000
H.J. Heinz, Heinz U.S.A. Division (Pittsburgh, Pa.)	Food products	Food and Commercial Workers	1,800
Indian Head, Inc. (Interstate)	Stone, glass, and clay products	Glass, Pottery, Plastics and Allied Workers	2,050
Master Food and Liquor Agreement (Sacramento, Calif.)[3]	Retail trade	Food and Commercial Workers	4,600
Meat Market Agreement (Minneapolis, Minn.)[3]	Retail trade	Food and Commercial Workers	1,000
Metal Trades Independent Companies (California)[3]	Fabricated metal products	Machinists	2,450
Metropak Containers Corp. (Interstate)	Stone, clay, and glass products	Glass, Pottery, Plastics and Allied Workers	1,700
Michigan Distribution Contractors Association (Michigan)	Construction	Laborers	2,000
Moving and Storage Industry of New York (New York)[3]	Trucking	Teamsters (Ind.)	2,200
National Broadcasting Co., Inc. (Interstate)	Communication	Broadcast Employees and Technicians	1,600
National Can Co., Foster-Forbes Glass Co. Division (Interstate)	Stone, clay, and glass products	Glass, Pottery, Plastics and Allied Workers	2,000
National Electrical Contractors Association, Rocky Mountain Chapter, Inside Wiring (Colorado)	Construction	Electrical Workers (IBEW)	2,000
North American Rayon Corp. (Elizabethton, Tenn.)	Chemicals	Textile Workers	1,450
Owens-Illinois, Inc., Forming Department (Interstate)	Stone, clay, and glass products	Glass, Pottery, Plastics and Allied Workers	1,950
Owens-Illinois, Inc., Production and Maintenance (Interstate)	Stone, clay, and glass products	Glass, Pottery, Plastics and Allied Workers	12,400

See footnotes at end of table.

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Continued—Major Agreements Expiring Next Month

Employer and location	Industry	Labor organization[1]	Number of workers
Pet, Inc., Whitman Chocolates Division (Philadelphia, Pa.)	Food products	Bakery, Confectionery and Tobacco Workers	1,000
Philadelphia Food Stores (Pennsylvania, New Jersey, and Delaware)[3]	Retail trade	Food and Commercial Workers	5,000
Printing Industries of Metropolitan New York, Inc. (New York and New Jersey)	Printing and Publishing	Printing and Graphic Communications Union	2,000
Restaurant-Hotel Employers' Council of Southern California, Inc. (California)	Restaurants	Hotel Employees and Restaurant Employees	10,000
Rockwell International Corp. (Richland, Wash.)	Chemicals	Directly Affiliated Unions	1,400
St. Paul Food Retailers Association (Minnesota)	Retail trade	Food and Commercial Workers	3,100
Thatcher Glass Manufacturing Co. (Interstate)	Stone, clay, and glass products	Glass, Pottery, Plastics and Allied Workers	4,100
United Airlines, Inc., Flight Attendants (Interstate)[2]	Air transportation	Association of Flight Attendants	9,300
USAIR, Flight Attendants (Interstate)[2]	Air transportation	Association of Flight Attendants	1,660
Wyman-Gordon Co., Inc. (Worcester and Grafton, Mass.)	Primary metals	Steelworkers	1,400
Xerox Corp. (Rochester, N.Y.)	Instruments	Clothing and Textile Workers	5,000
Yosemite Park and Curry Co. (California)	Hotels	Service Employees	1,700

[1] Affiliated with AFL–CIO except where noted as independent (Ind.).
[2] Information is from newspaper reports.
[3] Industry area (group of companies signing the same contract).

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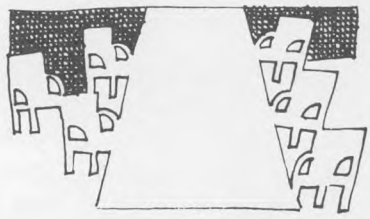
Developments in Industrial Relations



Chrysler-UAW settlement

The round of bargaining in the automobile industry was concluded in early December when Chrysler Corp. and the United Auto Workers (UAW) agreed on a 13-month contract that included an immediate specified wage increase, a major UAW demand in the negotiations that began 5 months earlier. The 44,000 workers have not had a wage increase since 1979 because of Chrysler's precarious financial condition, and had overwhelmingly rejected a September accord because it did not provide for an "up front" guaranteed pay increase. Despite the rejection, the workers did not strike and negotiations continued, with Chrysler sticking to its assertion that it could not afford an increase. In early November, the negotiations reached an impasse and were broken off, but the workers still did not strike, opting to remain on the job until early January, when negotiations were expected to resume. Actually, negotiations resumed later in November, resulting in the December 9 settlement.

In a development that complicated the negotiations, Chrysler's 10,000 Canadian employees walked out in early November. Shortly afterward, nearly 5,000 of the U.S. workers were laid off because of the cessation of the flow of parts between Chrysler plants in the two nations. The stoppage also raised the possibility of a general shutdown of Chrysler operations when parts stockpiles were depleted. In their separate negotiations with Chrysler, the Canadian UAW members contended that they should receive a larger wage increase than the American workers because Canada had a higher rate of inflation and because the Canadian dollar was equal to only about 80 percent of a U.S. dollar, which meant that Canadian workers were penalized because they were being paid the same nominal amount in their currency as their American counterparts were paid in their currency. This commonality of pay rates had developed during the years when Chrysler workers in both nations were covered by a single set of negotiations. The change to separate negotiations occurred in 1980, when the Canadian employees refused to accept the wage-and-benefit concessions the Americans accepted to aid Chrysler.

The immediate wage increase for Chrysler's American employees averaged 75 cents an hour. It consisted of a 3-percent increase in base rates and a 47-cent increase in the cost-of-living allowance, including a 15-cent adjustment retroactive to December 6 that resulted from resumption of the quarterly adjustments that had been suspended in 1981. (See *Monthly Labor Review*, March 1981, p. 73.)

For Chrysler's Canadian workers, the immediate increase averaged $1.15 an hour or about 87 cents an hour in U.S. currency. To some extent, the difference in the increase for employees in the two nations was offset by the fact that American workers retained provisions for "Sunday bonus holidays" (two fall during the agreement term) and a stock purchase plan.

The 75-cent increase for Chrysler's U.S. employees narrowed the pay differential—estimated at $2.50 an hour by UAW President Douglas Fraser—that had developed between Chrysler and Ford-General Motors workers as a result of the three concessionary settlements at Chrysler in 1979, 1980, and 1981. The Chrysler accord provides for possible quarterly cost-of-living adjustments in March, June, September, and December of 1983. The UAW valued these adjustments at 16 cents each, based on its assumption that the price index used in the formula will rise about 6 percent during the contract term. At Ford, workers received the 15-cent cost-of-living adjustment in December, but their 1982 settlement had deferred for 18 months each of the adjustments that normally would have been effective in March, June, and September 1982. The same provisions applied at General Motors, except that the December adjustment was held to 5 cents (the other 10 cents was deferred for 18 months) to equalize the total cost-of-living allowance with Ford's allowance. (See *Monthly Labor Review*, May 1982, pp. 59–60 for the GM terms and

"Developments in Industrial Relations" is prepared by George Ruben of the Division of Developments in Labor-Management Relations, Bureau of Labor Statistics, and is largely based on information from secondary sources.

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April 1982, pp. 62–64 for the Ford terms.)

Under the Employee Stock Ownership Plan, which was required under the Chrysler Corp. Loan Guarantee Act of 1979, Chrysler's U.S. employees will receive more shares of company stock than originally planned because they will now receive the shares that had been destined for Canadian workers.

Other terms for the U.S. workers included:

- Modification of the absence control program. One change in the plan clears all absenteeism records from employee files as of February 1, 1983, giving all workers a "clean slate" when the program starts. Worker concern over the first version of the plan had reportedly been one of the major reasons that led to rejection of the September settlement.
- Termination of the profit-sharing plan in exchange for the up-front pay gains provided by the new contract.
- Establishment of "Lifetime Job Security" projects similar to those at GM and Ford. One difference at Chrysler was the establishment of the "Roundtable—an Alliance for Progress" which will explore broad companywide initiatives to save jobs and improve worker participation in decisionmaking. One of the Roundtable's major functions will be to investigate ways of returning "outsourced" (contracted out) work to Chrysler workers under competitive conditions.

The new contract will expire on January 14, 1984, 8 months earlier than the Ford and GM contracts.

NFL strike ends

The longest strike in the history of professional athletics in the United States ended on November 16, when the National Football League Players' Association and the 26-team league agreed on a 5-year contract. The 57-day walkout meant that each team would play only 9 regular games in the 1982 season, instead of 16. (Two games were played before the start of the walkout.) The postseason playoff system also was temporarily revamped to provide for the top eight teams in each of the two conferences to participate.

The settlement package, valued at about $1.28 billion over 5 years, plus $60 million for one-time bonuses, included: bonuses, payable immediately, ranging from $10,000 for rookies to $60,000 for veterans with at least 4 years of service; a minimum season salary scale ranging from $30,000 for rookies to $200,000 for 18-year players for the 1982 season, $40,000 to $200,000 for the 1983 season, and $50,000 to $200,000 for the 1985 season; establishment of severance pay of $40,000 for players dropped after 4 seasons (longer-service players who are cut from a team receive $10,000 more for each additional year of play); $1 million major medical coverage (formerly $250,000); allowing rookie players to have agents negotiate their individual salaries above the minimum (veterans also can continue to use agents, as long as the agents are approved by the union, or the players can authorize the union to negotiate their salaries); extension of the period in which a team retains exclusive rights to players who choose to start their careers in another league to 4 years (from 2), and the team retains the right of first refusal.

The union did not win its demand that a stated percentage of each team's revenue be allocated for player salaries. Initially, the union sought 55 percent of gross revenue, then 50 percent of television revenue.

The only other times the union struck the league were in 1974 and 1975, and neither strike lasted into the regular season.

RCA settles with two electrical unions

Nearly 16,000 employees were covered by a settlement between two unions and RCA Corp. that was comparable to the unions' earlier pattern-setting accord with the General Electric Co. (See *Monthly Labor Review*, September 1982, pp. 44-45.) The 3-year RCA accord negotiated by the International Union of Electrical Workers (IUE) and the International Brotherhood of Electrical Workers (IBEW) provided for a 5-percent pay increase on December 1, followed by 3-percent increases on December 1 of 1983 and 1984. The employees also will continue to receive automatic semiannual cost-of-living adjustments of 1 cent an hour for each 0.2-percent rise in the Consumer Price Index for Urban Wage Earners and Clerical Workers.

The employees' concern over job cutbacks was eased by an improvement in income extension aid assuring half pay to age 55 for 30-year employees terminated because of plant closings or product discontinuance. Thereafter, they will receive pensions computed at full benefit rates. Pension benefits were increased—in March 1983, the new minimum rate will be $12 a month for each year of credited service, increasing to $14 in March 1984; the maximum rate was raised to $16 plus one-twelfth of 1.6 percent of all preretirement average annual earnings in excess of $15,600. As before, employees have the option of a lump-sum payment at retirement instead of regular monthly benefits.

The IUE now represents 5,200 workers at RCA plants in New Jersey and Pennsylvania, compared with 8,000 in 1979, and an earlier peak of 24,000. The IBEW now represents 10,500 workers, down from 14,000 in 1979.

Duffy elected to head Air Line Pilots

Delegates to the Air Line Pilot Association's biennial board of directors meeting elected Henry A. Duffy to

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head the union. The weighted vote tally by the 300 delegates was 13,753 for Duffy, a Delta Air Lines pilot; 10,284 for John J. O'Donnell, the incumbent president; and 3,209 for John Gratz, a Trans World Airlines pilot. The delegates also elected Thomas M. Ashwood of TWA as executive vice president, succeeding Gerry Pryde who did not seek reelection; Charles J. Pierce of United Airlines will succeed Ashwood as secretary.

Discussion at the meeting focused on the condition of the industry. Duffy called for formation of a government-industry-labor committee to seek corrective measures. The delegates also approved resolutions on a number of pilot concerns, including job security, air safety, and forced early retirements.

Logging workers' pay based on production

In a major innovation in the forest products industry, Crown Zellerbach Corp. and the Woodworkers' union negotiated a 5-year contract that replaced traditional hourly wage scales with a system under which 500 logging employees will be treated more or less as contractors, that is, they will be paid according to their output. In return, the employees at the six Washington and Oregon operations were given a voice in corporate decisionmaking. This will be accomplished through joint committees at each location.

Wilson J. Hubbell, first vice president of the union's Western Regional Council, indicated that one purpose of the change in pay method was to stem the company's increasing use of nonunion contract loggers. An official of Crown Zellerbach said the agreement "gives us the flexibility to involve them [employees] to the maximum."

According to the company, Joint Operations Committees will be involved in activities such as resolving pricing and pay issues; promoting worker productivity; identifying and meeting training needs; reviewing periodic operating, financial, quality, and safety reports; and setting and implementing affirmative action goals.

Under the "pay for production" system, crews of workers will be paid strictly according to output. Also, job classification will be abolished for the crew members, meaning that all members will receive the same pay and will engage in all types of work within the crew. In another change, the Joint Operations Committees will plan time off according to the interests and needs of individuals or groups, rather than adhering to the previous rigid holiday and vacation schedules. Crown Zellerbach will continue to provide insurance and pension benefits, as well as equipment for the workers.

The new contract will become effective June 1, 1983, the expiration date of the current agreement. At that time, contracts between the Western Council and a number of forest products concerns will expire for 25,000 workers in eight Western States.

Truck workers trade wages for share of profits

Members of the Auto Workers union at Mack Trucks, Inc., agreed to a 2-year contract that did not provide for any specified wage increases. In return for these and other provisions intended to improve Mack's competitive position, the company agreed to a new profit-sharing plan and additional job security for the employees. The accord affected 8,500 active and laid-off workers at plants in Hagerstown, Md., Bridgewater, N.J., and Allentown and Macungie, Pa.

UAW Vice President Stephen Yokich pointed out that the new profit-sharing plan provides for Mack employees to share in all company profits, unlike some contracts the union negotiated in the automobile industry, where workers only begin to share after profits attain specified levels.

Other provisions included elimination of eight paid days off (workers will receive 14 paid holidays each year); seniority and recall rights on a companywide basis; plant closing protections for workers; additional restrictions on "outsourcing" (subcontracting); restoration of all contract concessions at the end of the term; a provision for reopening bargaining if Mack's pretax income exceeds $75 million for two successive quarters; union access to the company's board of directors; and an equality of sacrifice provision requiring Mack to impose similar wage-and-benefit restrictions on its nonunion employees. The new agreement will expire in October 1984.

Steel workers accept cuts to save company

The way was cleared for the purchase of the financially beleaguered McLouth Steel Corp. when members of two Steelworkers' locals in Detroit agreed to a number of wage-and-benefit concessions. Tang Industries Inc. had indicated that it would buy the plant only if the workers accepted the cuts. In January 1982, the McLouth employees had agreed to concessions in an effort to keep the company in business. (See *Monthly Labor Review*, March 1982, p. 48.) McLouth had earlier filed for protection under Chapter 11 of the Bankruptcy Code, which allows a company to continue operating under court protection from creditors.

The second round of worker concessions included a $1.56 cut in hourly pay; suspension of automatic quarterly cost-of-living pay adjustments until February 1985; termination of optical and dental care plans and three annual paid holidays; loss of a week's paid vacation and the Extended Vacation Program; a 25-percent reduction in sickness and accident benefits; elimination of 168 specific jobs; a pledge not to strike for 6 years; and removal of restrictions on the contracting out of work. In exchange, the 1,500 workers each gained about $375 in McLouth stock. There is a provision for re-

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opening bargaining in 1986, subject to arbitration of any deadlocked issues.

Wage cuts at Kroger will save jobs

Employees of 40 Kroger Co. grocery stores in Western Pennsylvania agreed to $1.10 an hour in wage-and-benefit cuts in exchange for a company promise to complete and open five stores under construction in the Pittsburgh area. The stores are expected to employ about 500 members of Local 590 of the United Food and Commercial Workers. The company also agreed to end its plan to sell seven existing stores, which would have eliminated about 365 jobs.

The company had begun pressing the United Food and Commercial Workers for concessions about 3 months earlier, after the union agreed to concessions with financially troubled Giant Eagle Markets, a competitor.

The Kroger terms included a waiver of a recent 16-cent-an-hour automatic cost-of-living pay adjustment; a 3-month extension of the current agreement, to January 8, 1984, and a wage freeze extending to that date; 7 annual paid holidays, instead of 12; and time and one-half pay for work on Sundays and holidays, instead of double time.

In a separate vote, members of Local 590 agreed to remove 12 Ohio and West Virginia stores from the bargaining unit. These stores were generally more profitable than the Pennsylvania stores and their employees were not asked to accept the concessions.

'Early out' program popular at Monsanto

Monsanto Co. announced that a larger than expected number of its salaried employees had accepted an inducement to retire early as part of a plan to reduce and reorganize operations. The company said that 60 percent of nearly 2,000 eligible employees had opted to retire November 1. Under the offer, which was limited to workers over age 55 whose age plus years of service totaled at least 80, participants received one-time incentive payments ranging from 50 to 140 percent of a year's salary.

Recovery program for union construction

The organized construction industry's efforts to counter the inroads of nonunion firms was bolstered by a new joint plan of the AFL-CIO's Building and Construction Trades Department and the National Construction Employers Council. The major provision of the new "Market Recovery Program for Union Construction" calls for the establishment of local joint committees to cooperate in mutually beneficial efforts to increase the share of work performed by union workers.

In general, the local committees' aims will be to assure the availability of skilled union trades workers, increase productivity, increase competitiveness in gaining more work, eliminate nonessential work rules, use the latest tools and methods, and to publicize their efforts to become more productive.

'Equal benefits for equal contributions,' says court

In a decision with implications for many retirement plans, a Federal appeals court ordered two retirement plans to pay men and women equal benefits for equal contributions. The decision applied to Teachers Insurance and Annuity Association and College Retirement Equities, the principal retirement plans for 3,400 colleges and universities.

The case arose in 1974, when a female professor at Long Island University challenged the funds' practice of paying smaller monthly benefits to women than to men, contending that it violated the Civil Rights Act of 1964. The funds maintained that the practice was warranted because actuarial studies showed that women usually live longer than men.

In its ruling, the Second Circuit Court of Appeals found that the practice was, in fact, a violation of Title VII (the equal pay provision) of the Civil Rights Act. The court rejected the plans' contention that they were not covered by Federal law because they were in the insurance business, which is exempt from Federal regulation. This reversed the finding of a lower court, which had ruled that Teachers Insurance and Annuity Association was exempt from Title VII.

The appeals court said that its decision, which was limited to people who retire after May 1, 1980, would not require "the wholesale removal of money" from the funds' reserves, declaring that equal benefit payments could be determined without changing the total expected obligations of the funds. The court also said that its decision to limit recovery to teachers retiring after May 1, 1980, "postponed full conversion to gender-neutral (actuarial) tables for as much as 30 to 40 years."

An official of one of the funds said that the decision would be appealed because the issue of equal benefits involves the "entire pension and insurance industries."

Postal Service to pay $400 million in back wages

The U.S. Postal Service agreed to pay as much as $400 million in back wages to 800,000 current and former employees to settle 1978 lawsuits in which the Department of Labor and groups of employees alleged violations of Federal wage law. Postal officials said the settlement, the largest in the history of the Fair Labor Standards Act, will not affect postal rates because the agency had been building a contingency fund since the beginning of the action.

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The distribution of money will apply to work performed from May 1974, when the Postal Service was brought under the act, to May 1978, when it adopted procedures to ensure proper payment for the disputed work time.

In general, the suits contended that the agency did not include some wage premiums, such as night shift differentials, in pay calculations; did not pay employees for some work in excess of 40 hours a week; and did not pay employees for required after-hours training. Under the consent degree, affected employees will receive a maximum of $736.

Con Ed to pay $3.7 million in age bias suit

In New York State, Consolidated Edison Co. settled an age discrimination suit by agreeing to pay $3.7 million in back wages and extra pension benefits, according to the Equal Employment Opportunity Commission. The utility did not admit any guilt, saying it had settled only to avoid "substantial legal expenses." The award will be paid to the 136 persons remaining in the suit. The case originated in 1980 when the commission charged the company with age discrimination for terminating workers as part of a reduction of its management work force. According to the commission, the firings were improper because the employees' annual performance ratings had generally been satisfactory or better. The commission had initiated the case under provisions of the Age Discrimination in Employment Act, which covers employees between 40 and 65 years.

Airline found guilty of sex bias

In Washington, D.C., a Federal judge ordered Northwest Airlines to pay $52.5 million in backpay and interest to a group of female flight attendants who had sued the company 12 years earlier for employment discrimination. According to lawyers involved in the case, the award was the largest ever in such a suit. Northwest Airlines had been found guilty in 1973, but the final judgment had been delayed by appeals by the company and by negotiations on the size of the award.

In the suit, originated by 40 employees and then broadened to include an additional 3,324, the female attendants charged that, from 1967 to 1976, they were paid $2,000 to $3,000 less a year than male attendants for performing essentially identical duties. The women also charged that they were (1) required to double up in hotel rooms while men had single rooms; (2) denied uniform cleaning allowances paid to the men; and (3) required to meet rigid weight restrictions that did not apply to men. (After the 1973 decision, the airline raised female flight attendants' pay to match that of male flight attendants, eliminated weight requirements, and extended single hotel rooms and uniform cleaning allowances to women attendants.)

The outcome of the case was still not final, as Northwest announced plans to appeal. According to the company's attorney, Northwest will continue to press its argument that there was no discrimination and that the male attendants—who were called pursers when the suit was filed—performed different tasks than the female attendants.

Port, union ordered to register women

Women seeking employment as longshore workers at the Los Angeles-Long Beach, Calif., port settled a class-action suit against stevedoring companies and the International Longshoremen's and Warehousemen's Union. The plaintiffs had charged that the union and the companies had discriminated against them in registering new longshore workers and marine clerks. Lawyers for the plaintiffs said that the settlement eventually will result in the hiring of 700 women at the port. When the suit was filed in 1980, only about 6 of more than 2,500 registered longshore workers at the port were women and only one of 350 marine clerks was a woman. □

'Right-to-work' error in BLS Bulletin 1425–21

State 'right-to-work' laws prohibit labor-management agreements that make union membership a condition of employment. Such laws or court interpretations of them also bar agency shop agreements under which payments in lieu of union dues are required. A statement to the effect that the agency shop is permitted under some 'right-to-work' laws, on page 3 of BLS Bulletin 1425–21, published in May 1982, is in error.

Bulletin 1425–21, *Major Collective Bargaining Agreements: Union Security and Dues Checkoff Provisions*, is the last in a series of BLS studies of collective bargaining agreements. Copies of Bulletin 1425–21, $4.75, and other bulletins in the collective bargaining agreement series, are available from the U.S. Government Printing Office, Washington, D.C. 20402.

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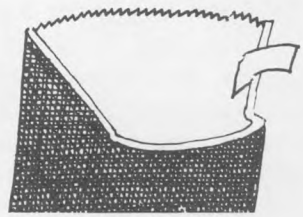

Book Reviews

Measuring economic hardship

Hardship—The Welfare Consequences of Labor Market Problems: A Policy Discussion Paper. By Robert Taggart. Kalamazoo, Mich., The W. E. Upjohn Institute for Employment Research, 1982. 440 pp. $13.95.

During the past 20 years, a number of economists have developed hardship indexes showing the extent of economic hardship caused by unemployment, low wages, job market discouragement, and other labor market problems. None of these indexes has gained wide acceptance as an economic indicator. In this book, Robert Taggart presents a new set of hardship indexes that he characterizes as a "measurement and assessment system" for analyzing the effect of labor market problems on economic well-being.

Taggart's indexes are based on the work experience, earnings, and income data collected in the March 1982 supplement to the Current Population Survey (CPS). Basically, he constructs a matrix of workers with inadequate individual earnings, inadequate family earnings, and inadequate family income cross-classified by their annual work experience patterns. The Federal Government's poverty lines and minimum wage are used as income and earnings standards. From his matrix spring a myriad of primary indicators, interpretive indexes, and supplementary measures relating to hardship.

According to Taggart's primary indicators, hardship declined between the 1974–75 recession and 1979 but then rose in 1980 when the economy slumped again. A major point of this book is that hardship is not only a cyclical problem but a structural one. He shows that even in 1979 when the Nation's jobless rate averaged only 5.8 percent, there were 28.3 million workers with inadequate earnings. Moreover, there were 13.3 million workers living in families with inadequate family earnings. And lastly, when other income (interest, unemployment compensation, welfare, and so forth) is added to earnings, the number of workers in families with inadequate incomes totaled 7.1 million.

Taggart's measurement and evaluation system is a mammoth statistical compilation that has been intricately designed. He has virtually ransacked the March CPS files for relevant hardship data. To make the system operate, however, he has had to include many decision rules and assumptions.

Putting aside the usual criticisms of the minimum wage and poverty lines as standards of inadequacy, my major concern is whether Taggart pushes the CPS too far. The March CPS is a rich data base, but it cannot do everything. For example, it is well known that employment in low-wage jobs is common among the poor and a cause of economic hardship, but the March CPS does not contain any wage data. It reports annual earnings for the previous year. Taggart gets around this by comparing a worker's annual earnings with an "earnings standard" obtained by multiplying the minimum wage times the estimated hours the worker was *available for work* (not the hours actually worked) during the year. That is, if a worker in 1981 was employed for 40 hours a week for 40 weeks and was also unemployed for 10 weeks, the worker's earnings standard would be $6,700, or $3.35 (the minimum wage) times 2,000 hours of work availability. If the worker's earnings were below $6,700, Taggart would call them inadequate.

There are two problems with this. First, unless the worker was employed all year at a full-time job, it is not possible to tell whether the worker's earnings were inadequate because of a low wage, insufficient working hours, or a combination of both. As mentioned earlier, wage data are not available from the March CPS; furthermore, accurate estimates of the hours available for work are not possible because of the lack of precise weekly hours information. Second, Taggart's estimate of workers with inadequate earnings includes many who would not take a minimum wage job because their reservation wage is above that wage level. Should their earnings be labeled as inadequate as his system does? Or should we recognize that either the inability to find a job, or labor market choices determine annual earnings?

Another area in which the CPS data is weak is labor market discouragement. Much has been written about those workers who have withdrawn from the labor force because of the lack of job opportunities. In the March CPS supplement, it is not possible to identify part-year workers who may have experienced labor market discouragement sometime during the year. Taggart only counts as discouraged those persons who did not work

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at all in the previous year because they indicated they could not find work and spent at least 4 weeks looking. Obviously, he has missed a significant group of persons with a labor market problem.

Lastly, the vast number of decision rules and assumptions which he uses in his system is disquieting and also a reflection, I believe, of the data gaps in the March CPS. Taggart's estimates of annual hours of work availability are based on some tenuous assumptions, which, if off base, would alter his hardship indexes. For example, annual hours of work availability for his discouraged workers who did not work in the previous year were assumed to be 2,000. That seems high. Given assumptions of this type, the precision with which Taggart calculates his hardship indexes may be unwarranted.

I also have some minor problems with Taggart's style of presentation. The book is loaded with tables and numbers, and, in some places, the reading becomes tedious. In addition, some tables are difficult to understand. In table B-1, which shows the full matrix, it is not clear that some of the columns are components of other columns. This is because Taggart's work experience typology is unorthodox. Furthermore, in reading the book, I looked for a summary table that presents the number of workers with different labor market problems and their economic hardship status. I did not find it; a book of this type needs such a table.

Despite these criticisms, anyone interested in labor market economic hardship should read this book. Compared to previous work in this area, Taggart's book represents an enormous effort. He has built upon past research and demonstrated that not only does he know the issues involved in measuring hardship, he also knows the ins and outs of the March CPS.

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Labor market problems

Workers, Jobs, and Inflation. Edited by Martin Neil Baily. Washington, The Brookings Institution, 1982. 365 pp. $31.95, cloth; $12.95, paper.

The eight papers in this volume, presented at a Brookings conference on November 7–8, 1980, focus on three major issues: the relatively high unemployment of the 1970's, measurement of labor market tightness, and the relationship between unemployment and variables such as wage rates and unemployment insurance. The papers are all empirical; one uses Canadian data, the others use U.S. data. The first six use macroeconomic data, the last two rely on individual observations.

Martin Baily argues that the unusually high unemployment of the 1970's reflects structural factors and that other contemporaneous indexes of tightness, such as help-wanted ads and labor turnover (for the manufacturing sector), reflect labor markets generally no less slack than those of earlier periods. James Medoff and Katharine Abraham reinforce the use of alternative measures of labor market tightness by finding a stronger relationship between wage inflation and the manufacturing quit rate and a help-wanted index than between wage inflation and the official or prime age male unemployment rate. Pierre Fortin and Keith Newton incorporate several measures of labor market tightness—unemployment adjusted to hold constant the age-sex composition of the labor force, the adult male unemployment rate, and the vacancy rate—in their overall study of recent Canadian unemployment and inflation.

Robert Gordon includes factors in his Phillips curve analysis, such as food and energy prices and the dollar foreign exchange rate, that are not often found in labor economics research. He also presents simulation results under alternative policy scenarios. John Geweke, in the most econometrically sophisticated paper in this volume, finds a much different inflation-labor market activity relationship in 1955–71 than in 1971–78.

Daniel Mitchell and Larry Kimbell provide a good introduction to the history and recent theory of wage determination in the union and nonunion sectors. Using a simple four-equation model and the UCLA macroeconometric model, they also study the effects of long-term contracts and cost-of-living escalators on inflation. Kim Clark and Lawrence Summers and Nicholas Kiefer and George Neumann analyze movements of individuals between employment, unemployment, and nonparticipation in the labor force. The Clark-Summers paper highlights the effect of unemployment insurance on labor market transition probabilities.

Most of this book can be easily read by economists who are not specialists in this subject area. Yet, active researchers should find some of the details of the empirical analyses and comments of the discussants to be useful.

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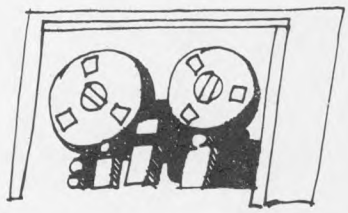
Current Labor Statistics



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NOTES ON CURRENT LABOR STATISTICS

This section of the *Review* presents the principal statistical series collected and calculated by the Bureau of Labor Statistics. A brief introduction to each group of tables provides definitions, notes on the data, sources, and other material usually found in footnotes.

Readers who need additional information are invited to consult the BLS regional offices listed on the inside front cover of this issue of the *Review*. Some general notes applicable to several series are given below.

Seasonal adjustment. Certain monthly and quarterly data are adjusted to eliminate the effect of such factors as climatic conditions, industry production schedules, opening and closing of schools, holiday buying periods, and vacation practices, which might otherwise mask short-term movements of the statistical series. Tables containing these data are identified as "seasonally adjusted." Seasonal effects are estimated on the basis of past experience. When new seasonal factors are computed each year, revisions may affect seasonally adjusted data for several preceding years.

Seasonally adjusted labor force data in tables 2–7, revised in the February 1983 issue of the *Review*, to reflect experience through 1982.

Beginning in January 1980, the BLS introduced two major modifications in the seasonal adjustment methodology for labor force data. First, the data are being seasonally adjusted with a new procedure called X-11/ARIMA, which was developed at Statistics Canada as an extension of the standard X-11 method. A detailed description of the procedure appears in *The X-11 ARIMA Seasonal Adjustment Method* by Estela Bee Dagum (Statistics Canada Catalogue No. 12-564E, February 1980). The second change is that seasonal factors are now being calculated for use during the first 6 months of the year, rather than for the entire year, and then are calculated at mid-year for the July-December period. Revisions of historical data continue to be made only at the end of each calendar year.

Annual revision of the seasonally adjusted payroll data shown in tables 10, 12, and 14 were made in August 1981 using the X-11 ARIMA seasonal adjustment methodology. New seasonal factors for productivity data in tables 28 and 29 are usually introduced in the September issue. Seasonally adjusted indexes and percent changes from month to month and from quarter to quarter are published for numerous Consumer and Producer Price Index series. However, seasonally adjusted indexes are not published for the U.S. average All Items CPI. Only seasonally adjusted percent changes are available for this series.

Adjustments for price changes. Some data are adjusted to eliminate the effect of changes in price. These adjustments are made by dividing current dollar values by the Consumer Price Index or the appropriate component of the index, then multiplying by 100. For example, given a current hourly wage rate of $3 and a current price index number of 150, where 1967 = 100, the hourly rate expressed in 1967 dollars is $2 ($3/150 × 100 = $2). The resulting values are described as "real," "constant," or "1967" dollars.

Availability of information. Data that supplement the tables in this section are published by the Bureau of Labor Statistics in a variety of sources. Press releases provide the latest statistical information published by the Bureau; the major recurring releases are published according to the schedule given below. More information from household and establishment surveys is provided in *Employment and Earnings*, a monthly publication of the Bureau. Comparable household information from 1970 is published in a two-volume data book–*Labor Force Statistics Derived From the Current Population Survey*, Bulletin 2096. Comparable establishment information appears in two data books–*Employment and Earnings, United States*, and *Employment and Earnings, States and Areas*, and their annual supplements. More detailed information on wages and other aspects of collective bargaining appears in the monthly periodical, *Current Wage Developments*. More detailed price information is published each month in the periodicals, the *CPI Detailed Report* and *Producer Prices and Price Indexes*.

Symbols

p = preliminary. To improve the timeliness of some series, preliminary figures are issued based on representative but incomplete returns.
r = revised. Generally, this revision reflects the availability of later data but may also reflect other adjustments.
n.e.c. = not elsewhere classified.

Schedule of release dates for major BLS statistical series

Series	Release date	Period covered	Release date	Period covered	Release date	Period covered	MLR table number
Productivity and costs:							
Nonfinancial corporations	March 1	4th quarter 1982	.....	.....	.....	.....	26-29
Nonfarm business and manufacturing	.....	.....	January 28	4th quarter 1982	.....	.....	26-29
Employment situation	March 4	February	January 7	December	February 4	January	1-10
Producer Price Index	March 18	February	January 14	December	February 11	January	21-25
Consumer Price Index	March 23	February	January 21	December	February 25	January	17-20
Real earnings	March 23	February	January 21	December	February 25	January	11-15
Major collective bargaining settlements	.....	.....	January 31	4th quarter 1982	.....	.....	33-34
Employment cost index	.....	.....	.....	.....	February 3	4th Quarter 1982	30-32

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EMPLOYMENT DATA FROM THE HOUSEHOLD SURVEY

EMPLOYMENT DATA in this section are obtained from the Current Population Survey, a program of personal interviews conducted monthly by the Bureau of the Census for the Bureau of Labor Statistics. The sample consists of about 60,000 households selected to represent the U.S. population 16 years of age and older. Households are interviewed on a rotating basis, so that three-fourths of the sample is the same for any 2 consecutive months.

Definitions

Employed persons are (1) those who worked for pay any time during the week which includes the 12th day of the month or who worked unpaid for 15 hours or more in a family-operated enterprise and (2) those who were temporarily absent from their regular jobs because of illness, vacation, industrial dispute, or similar reasons. A person working at more than one job is counted only in the job at which he or she worked the greatest number of hours.

Unemployed persons are those who did not work during the survey week, but were available for work except for temporary illness and had looked for jobs within the preceding 4 weeks. Persons who did not look for work because they were on layoff or waiting to start new jobs within the next 30 days are also counted among the unemployed. The **unemployment rate** represents the number unemployed as a percent of the civilian labor force.

The **civilian labor force** consists of all employed or unemployed persons in the civilian noninstitutional population; the **total labor force** includes military personnel. Persons **not in the labor force** are those not classified as employed or unemployed; this group includes persons retired, those engaged in their own housework, those not working while attending school, those unable to work because of long-term illness, those discouraged from seeking work because of personal or job market factors, and those who are voluntarily idle. The **noninstitutional population** comprises all persons 16 years of age and older who are not inmates of penal or mental institutions, sanitariums, or homes for the aged, infirm, or needy.

Full-time workers are those employed at least 35 hours a week; **part-time workers** are those who work fewer hours. Workers on part-time schedules for economic reasons (such as slack work, terminating or starting a job during the week, material shortages, or inability to find full-time work) are among those counted as being on full-time status, under the assumption that they would be working full time if conditions permitted. The survey classifies unemployed persons in full-time or part-time status by their reported preferences for full-time or part-time work.

Notes on the data

From time to time, and especially after a decennial census, adjustments are made in the Current Population Survey figures to correct for estimating errors during the preceding years. These adjustments affect the comparability of historical data presented in table 1. A description of these adjustments and their effect on the various data series appear in the Explanatory Notes of *Employment and Earnings.*

Monthly data in tables 2–7 are seasonally adjusted, based on experience through December 1982.

1. Employment status of the noninstitutional population, 16 years and over, selected years, 1950–81

[Numbers in thousands]

Year	Total noninstitutional population	Total labor force		Civilian labor force							Not in labor force
		Number	Percent of population	Total	Employed				Unemployed		
					Total	Percent of population	Agriculture	Nonagricultural industries	Number	Percent of labor force	
1950	106,645	63,858	59.9	62,208	58,918	55.2	7,160	51,758	3,288	5.3	42,787
1955	112,732	68,072	60.4	65,023	62,170	55.1	6,450	55,722	2,852	4.4	44,660
1960	119,759	72,142	60.2	69,628	65,778	54.9	5,458	60,318	3,852	5.5	47,617
1965	129,236	77,178	59.7	74,455	71,088	55.0	4,361	66,726	3,366	4.5	52,058
1966	131,180	78,893	60.1	75,770	72,895	55.6	3,979	68,915	2,875	3.8	52,288
1967	133,319	80,793	60.6	77,347	74,372	55.8	3,844	70,527	2,975	3.8	52,527
1968	135,562	82,272	60.7	78,737	75,920	56.0	3,817	72,103	2,817	3.6	53,291
1969	137,841	84,240	61.1	80,734	77,902	56.5	3,606	74,296	2,832	3.5	53,602
1970	140,272	85,959	61.3	82,771	78,678	56.1	3,463	75,215	4,093	4.9	54,315
1971	143,033	87,198	61.0	84,382	79,367	55.5	3,394	75,972	5,016	5.9	55,834
1972	146,574	89,484	61.1	87,034	82,153	56.0	3,484	78,669	4,882	5.6	57,091
1973	149,423	91,756	61.4	89,429	85,064	56.9	3,470	81,594	4,365	4.9	57,667
1974	152,349	94,179	61.8	91,949	86,794	57.0	3,515	83,279	5,156	5.6	58,171
1975	155,333	95,955	61.8	93,775	85,846	55.3	3,408	82,438	7,929	8.5	59,377
1976	158,294	98,302	62.1	96,158	88,752	56.1	3,331	85,421	7,406	7.7	59,991
1977	161,166	101,142	62.8	99,009	92,017	57.1	3,283	88,734	6,991	7.1	60,025
1978	164,027	104,368	63.6	102,251	96,048	58.6	3,387	92,661	6,202	6.1	59,659
1979	166,951	107,050	64.1	104,962	98,824	59.2	3,347	95,477	6,137	5.8	59,900
1980	169,848	109,042	64.2	106,940	99,303	58.5	3,364	95,938	7,637	7.1	60,806
1981	172,272	110,812	64.3	108,670	100,397	58.3	3,368	97,030	8,273	7.6	61,460
1982	174,451	112,384	64.4	110,204	99,526	57.1	3,401	96,125	10,678	9.7	62,067

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2. Employment status by sex, age, race, and Hispanic origin, seasonally adjusted

[Numbers in thousands]

Employment status	Annual average		1981	1982											
	1981	1982	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
TOTAL															
Total noninstitutional population[1]	172,272	174,451	173,330	173,495	173,657	173,843	174,020	174,201	174,364	174,544	174,707	174,889	175,069	175,238	175,380
Armed Forces[1]	2,142	2,179	2,164	2,159	2,168	2,175	2,176	2,175	2,173	2,180	2,196	2,198	2,188	2,180	2,182
Civilian noninstitutional population[1]	170,130	172,271	171,166	171,335	171,489	171,667	171,844	172,026	172,190	172,364	172,511	172,690	172,881	173,058	173,199
Civilian labor force	108,670	110,204	109,066	109,034	109,364	109,478	109,740	110,378	110,147	110,416	110,614	110,858	110,752	111,042	111,129
Participation rate	63.9	64.0	63.7	63.6	63.8	63.8	63.9	64.2	64.0	64.1	64.1	64.2	64.1	64.2	64.2
Employed	100,397	99,526	99,677	99,688	99,695	99,597	99,484	99,994	99,681	99,588	99,683	99,543	99,176	99,136	99,093
Employment-population ratio[2]	58.3	57.1	57.5	57.5	57.4	57.3	57.2	57.4	57.2	57.1	57.1	56.9	56.6	56.6	56.5
Agriculture	3,368	3,401	3,219	3,379	3,367	3,367	3,356	3,446	3,371	3,445	3,429	3,363	3,413	3,466	3,411
Nonagricultural industries	97,030	96,125	96,458	96,309	96,328	96,230	96,128	96,548	96,310	96,143	96,254	96,180	95,763	95,670	95,682
Unemployed	8,273	10,678	9,389	9,346	9,669	9,881	10,256	10,384	10,466	10,828	10,931	11,315	11,576	11,906	12,036
Unemployment rate	7.6	9.7	8.6	8.6	8.8	9.0	9.3	9.4	9.5	9.8	9.9	10.2	10.5	10.7	10.8
Not in labor force	61,460	62,067	62,100	62,301	62,125	62,189	62,104	61,648	62,043	61,948	61,897	61,832	62,129	62,016	62,070
Men, 20 years and over															
Civilian noninstitutional population[1]	72,419	73,644	73,020	73,120	73,209	73,287	73,392	73,499	73,585	73,685	73,774	73,867	73,984	74,094	74,236
Civilian labor force	57,197	57,980	57,535	57,461	57,581	57,633	57,794	58,008	57,959	58,055	58,064	58,354	58,363	58,454	58,443
Participation rate	79.0	78.7	78.8	78.6	78.7	78.6	78.7	78.9	78.8	78.8	78.7	79.0	78.9	78.9	78.7
Employed	53,582	52,891	53,168	53,099	53,130	53,026	53,024	53,190	52,943	52,905	52,832	52,776	52,649	52,589	52,534
Agriculture	2,384	2,422	2,330	2,386	2,388	2,392	2,417	2,446	2,424	2,462	2,433	2,436	2,444	2,434	2,389
Nonagricultural industries	51,199	50,469	50,838	50,713	50,742	50,634	50,607	50,744	50,519	50,443	50,399	50,340	50,205	50,155	50,145
Unemployed	3,615	5,089	4,367	4,362	4,451	4,607	4,770	4,818	5,016	5,150	5,232	5,578	5,714	5,865	5,909
Unemployment rate	6.3	8.8	7.6	7.6	7.7	8.0	8.3	8.3	8.7	8.9	9.0	9.6	9.8	10.0	10.1
Women, 20 years and over															
Civilian noninstitutional population[1]	81,497	82,864	82,151	82,260	82,367	82,478	82,591	82,707	82,811	82,926	83,035	83,152	83,271	83,385	83,383
Civilian labor force	42,485	43,699	42,911	42,926	43,111	43,285	43,355	43,632	43,819	43,983	44,039	43,996	43,936	44,112	44,286
Participation rate	52.1	52.7	52.2	52.2	52.3	52.5	52.5	52.8	52.9	53.0	53.0	52.9	52.8	52.9	53.1
Employed	39,590	40,086	39,737	39,817	39,825	39,883	39,827	40,064	40,254	40,311	40,368	40,286	40,112	40,123	40,215
Agriculture	604	601	565	626	620	625	600	614	586	598	590	588	578	590	628
Nonagricultural industries	38,986	39,485	39,172	39,191	39,205	39,258	39,227	39,450	39,668	39,713	39,778	39,698	39,534	39,533	39,587
Unemployed	2,895	3,613	3,174	3,109	3,286	3,402	3,528	3,568	3,565	3,672	3,671	3,710	3,824	3,989	4,071
Unemployment rate	6.8	8.3	7.4	7.2	7.6	7.9	8.1	8.2	8.1	8.3	8.3	8.4	8.7	9.0	9.2
Both sexes, 16 to 19 years															
Civilian noninstitutional population[1]	16,214	15,763	15,995	15,955	15,913	15,902	15,861	15,820	15,794	15,753	15,702	15,671	15,625	15,579	15,580
Civilian labor force	8,988	8,526	8,620	8,647	8,672	8,560	8,591	8,738	8,369	8,378	8,511	8,508	8,453	8,476	8,400
Participation rate	55.4	54.1	53.9	54.2	54.5	53.8	54.2	55.2	53.0	53.2	54.2	54.3	54.1	54.4	53.9
Employed	7,225	6,549	6,772	6,772	6,740	6,688	6,633	6,740	6,484	6,372	6,483	6,481	6,415	6,424	6,344
Agriculture	380	378	324	367	359	350	339	386	361	385	406	339	391	442	394
Nonagricultural industries	6,845	6,171	6,448	6,405	6,381	6,338	6,294	6,354	6,123	5,987	6,077	6,142	6,024	5,982	5,950
Unemployed	1,763	1,977	1,848	1,875	1,932	1,872	1,958	1,998	1,885	2,006	2,028	2,027	2,038	2,052	2,056
Unemployment rate	19.6	23.2	21.4	21.7	22.3	21.9	22.8	22.9	22.5	23.9	23.8	23.8	24.1	24.2	24.5
White															
Civilian noninstitutional population[1]	147,908	149,441	148,755	148,842	148,855	149,132	149,249	149,250	149,429	149,569	149,536	149,652	149,838	149,887	150,056
Civilian labor force	95,052	96,143	95,448	95,289	95,459	95,602	95,941	96,405	96,165	96,385	96,375	96,640	96,453	96,719	96,864
Participation rate	64.3	64.3	64.2	64.0	64.1	64.1	64.3	64.6	64.4	64.4	64.4	64.6	64.4	64.5	64.6
Employed	88,709	87,903	88,153	88,078	88,080	88,033	88,011	88,350	88,089	88,021	87,979	87,872	87,477	87,435	87,443
Unemployed	6,343	8,241	7,295	7,211	7,379	7,569	7,930	8,055	8,076	8,364	8,396	8,768	8,976	9,284	9,421
Unemployment rate	6.7	8.6	7.6	7.6	7.7	7.9	8.3	8.4	8.4	8.7	8.7	9.1	9.3	9.6	9.7
Black															
Civilian noninstitutional population[1]	18,219	18,584	18,392	18,423	18,450	18,480	18,511	18,542	18,570	18,600	18,626	18,659	18,692	18,723	18,740
Civilian labor force	11,086	11,331	11,205	11,184	11,219	11,228	11,201	11,318	11,267	11,341	11,400	11,443	11,398	11,475	11,522
Participation rate	60.8	61.0	60.9	60.7	60.8	60.8	60.5	61.0	60.7	61.0	61.2	61.3	61.0	61.3	61.5
Employed	9,355	9,189	9,281	9,295	9,260	9,209	9,135	9,209	9,171	9,211	9,220	9,172	9,102	9,159	9,127
Unemployed	1,731	2,142	1,924	1,889	1,959	2,019	2,066	2,109	2,096	2,130	2,180	2,271	2,296	2,316	2,395
Unemployment rate	15.6	18.9	17.2	16.9	17.5	18.0	18.4	18.6	18.6	18.8	19.1	19.8	20.1	20.2	20.8
Hispanic origin															
Civilian noninstitutional population[1]	9,310	9,400	9,519	9,400	9,341	9,297	9,235	9,297	9,428	9,521	9,689	9,464	9,474	9,355	9,301
Civilian labor force	5,972	5,983	6,075	6,048	6,051	6,015	5,966	6,004	5,965	5,972	6,045	5,961	5,973	5,923	5,898
Participation rate	64.1	63.6	63.8	64.3	64.8	64.7	64.6	64.6	63.3	62.7	62.4	63.0	63.0	63.3	63.4
Employed	5,348	5,158	5,393	5,325	5,297	5,253	5,211	5,182	5,155	5,136	5,162	5,097	5,075	5,012	4,998
Unemployed	624	825	682	723	754	762	755	822	810	836	883	864	898	911	900
Unemployment rate	10.4	13.8	11.2	12.0	12.5	12.7	12.7	13.7	13.6	14.0	14.6	14.5	15.0	15.4	15.3

[1] The population and Armed Forces figures are not seasonally adjusted.

[2] Civilian employment as a percent of the total noninstitutional population (including Armed Forces).

NOTE: Monthly data have been revised based on seasonal experience through December 1982.

Detail for racial and Hispanic-origin groups will not sum to totals because data for the "other races" group are not presented, and Hispanics are included in both the white and black population groups.

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3. Selected employment indicators, seasonally adjusted

[Numbers in thousands]

Selected categories	Annual average		1981	1982											
	1981	1982	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
CHARACTERISTIC															
Total employed, 16 years and over	100,397	99,526	99,677	99,688	99,695	99,597	99,484	99,994	99,681	99,588	99,683	99,543	99,176	99,136	99,093
Men	57,397	56,271	56,746	56,667	56,670	56,499	56,444	56,724	56,249	56,127	56,159	56,073	55,932	55,892	55,809
Women	43,000	43,256	42,931	43,021	43,025	43,098	43,040	43,270	43,432	43,461	43,524	43,471	43,244	43,244	43,284
Married men, spouse present	38,882	38,074	38,410	38,306	38,326	38,227	38,212	38,274	38,254	38,177	38,121	37,998	37,852	37,641	37,507
Married women, spouse present	23,915	24,053	23,723	23,803	23,807	23,933	23,891	24,112	24,331	24,173	24,235	24,159	24,081	23,985	24,155
Women who maintain families	4,998	5,099	5,081	5,095	5,157	5,094	5,093	4,991	5,120	5,200	5,208	5,118	5,107	5,025	4,985
OCCUPATION															
White-collar workers	52,949	53,470	53,022	52,825	52,933	52,876	53,213	53,658	53,552	53,710	53,660	53,875	53,687	53,759	53,909
Professional and technical	16,420	16,951	16,744	16,767	16,662	16,715	16,854	16,867	17,010	17,262	17,014	16,961	17,061	17,095	17,150
Managers and administrators, except farm	11,540	11,493	11,362	11,112	11,292	11,352	11,470	11,512	11,516	11,416	11,575	11,625	11,616	11,651	11,780
Salesworkers	6,425	6,580	6,476	6,513	6,538	6,602	6,582	6,581	6,563	6,571	6,643	6,534	6,604	6,632	6,605
Clerical workers	18,564	18,446	18,440	18,433	18,441	18,207	18,307	18,698	18,463	18,461	18,428	18,755	18,406	18,381	18,374
Blue-collar workers	31,261	29,597	30,394	30,303	30,356	30,335	29,966	29,886	29,706	29,569	29,364	29,143	29,148	28,769	28,668
Craft and kindred workers	12,662	12,272	12,497	12,424	12,460	12,483	12,459	12,314	12,232	12,220	12,267	12,230	12,152	12,136	11,909
Operatives, except transport	10,540	9,429	10,114	9,990	9,948	9,830	9,701	9,593	9,611	9,416	9,259	9,001	9,003	8,856	8,990
Transport equipment operatives	3,476	3,377	3,382	3,424	3,502	3,406	3,401	3,411	3,404	3,424	3,271	3,361	3,335	3,293	3,275
Nonfarm laborers	4,587	4,518	4,401	4,465	4,446	4,616	4,405	4,568	4,459	4,509	4,567	4,551	4,658	4,484	4,474
Service workers	13,438	13,736	13,665	13,696	13,614	13,557	13,595	13,727	13,771	13,678	13,876	13,998	13,750	13,839	13,741
Farmworkers	2,749	2,723	2,612	2,775	2,768	2,717	2,672	2,732	2,680	2,740	2,717	2,716	2,711	2,745	2,726
MAJOR INDUSTRY AND CLASS OF WORKER															
Agriculture:															
Wage and salary workers	1,464	1,505	1,375	1,402	1,430	1,428	1,442	1,530	1,457	1,523	1,548	1,537	1,576	1,584	1,547
Self-employed workers	1,638	1,636	1,613	1,662	1,613	1,645	1,656	1,679	1,661	1,655	1,620	1,569	1,621	1,628	1,627
Unpaid family workers	266	261	229	348	334	270	266	251	254	254	255	254	229	241	224
Nonagricultural industries:															
Wage and salary workers	89,543	88,462	89,016	88,825	88,702	88,620	88,454	88,872	88,548	88,491	88,576	88,562	88,064	87,936	87,976
Government	15,689	15,516	15,592	15,546	15,515	15,491	15,464	15,454	15,614	15,471	15,562	15,681	15,436	15,514	15,477
Private industries	73,853	72,945	73,424	73,279	73,187	73,129	72,990	73,418	72,934	73,020	73,014	72,881	72,628	72,422	72,499
Households	1,208	1,207	1,318	1,239	1,181	1,218	1,196	1,204	1,205	1,200	1,227	1,220	1,216	1,221	1,163
Other	72,645	71,738	72,106	72,040	72,006	71,911	71,794	72,214	71,729	71,820	71,787	71,661	71,412	71,201	71,336
Self-employed workers	7,097	7,262	7,072	7,004	7,097	7,150	7,246	7,262	7,301	7,286	7,338	7,422	7,332	7,349	7,335
Unpaid family workers	390	401	408	416	410	431	410	392	398	393	408	378	403	382	383
PERSONS AT WORK [1]															
Nonagricultural industries	91,377	90,552	91,010	90,301	90,087	90,579	90,755	91,082	90,917	90,414	90,486	90,884	90,232	90,238	90,219
Full-time schedules	74,339	72,245	73,360	72,916	73,026	72,699	72,562	72,869	72,545	72,288	72,045	71,723	71,394	71,442	71,499
Part time for economic reasons	4,499	5,852	5,325	5,066	5,489	5,611	5,750	5,731	5,561	5,577	5,820	6,495	6,903	6,411	6,425
Usually work full time	1,738	2,169	2,169	1,808	2,155	2,187	2,197	2,195	2,126	2,047	2,100	2,519	2,381	2,228	2,153
Usually work part time	2,761	3,683	3,156	3,258	3,334	3,424	3,553	3,536	3,435	3,530	3,720	3,976	4,022	4,183	4,272
Part time for noneconomic reasons	12,539	12,455	12,325	12,319	12,352	12,269	12,443	12,482	12,811	12,549	12,621	12,666	12,435	12,385	12,295

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

NOTE: Monthly data have been revised based on the seasonal experience through December 1982.

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4. Selected unemployment indicators, seasonally adjusted

[Unemployment rates]

Selected categories	Annual average		1981	1982											
	1981	1982	Dec.	Jan.	Feb.	Mar.	April	May	June	June	Aug.	Sept.	Oct.	Nov.	Dec.
CHARACTERISTIC															
Total, 16 years and over	7.6	9.7	8.6	8.6	8.8	9.0	9.3	9.4	9.5	9.8	9.9	10.2	10.4	10.7	10.8
Both sexes, 16 to 19 years	19.6	23.2	21.4	21.7	22.3	21.9	22.8	22.9	22.5	23.9	23.8	23.8	24.1	24.2	24.5
Men, 20 years and over	6.3	8.8	7.6	7.6	7.7	8.0	8.3	8.3	8.7	8.9	9.0	9.6	9.8	10.0	10.1
Women, 20 years and over	6.8	8.3	7.4	7.2	7.6	7.9	8.1	8.2	8.1	8.3	8.3	8.4	8.7	9.0	9.2
White, total	6.7	8.6	7.6	7.6	7.7	7.9	8.3	8.4	8.4	8.7	8.7	9.1	9.3	9.6	9.7
Both sexes, 16 to 19 years	17.3	20.4	19.0	19.4	19.7	19.2	20.4	19.9	19.7	20.9	20.8	20.7	21.5	21.2	21.6
Men, 16 to 19 years	17.9	21.7	20.2	20.6	20.4	20.4	21.9	20.9	21.2	22.5	22.5	22.2	23.0	22.6	22.8
Women, 16 to 19 years	16.6	19.0	17.7	18.1	19.0	17.9	18.8	18.7	18.0	19.1	18.9	19.1	19.9	19.8	20.4
Men, 20 years and over	5.6	7.8	6.8	6.6	6.7	7.0	7.3	7.5	7.7	7.9	8.0	8.6	8.8	9.1	9.2
Women, 20 years and over	5.9	7.3	6.4	6.4	6.6	6.8	7.1	7.2	7.1	7.3	7.2	7.5	7.6	8.0	8.1
Black, total	15.6	18.9	17.2	16.9	17.5	18.0	18.4	18.6	18.6	18.8	19.1	19.8	20.1	20.2	20.8
Both sexes, 16 to 19 years	41.4	48.0	42.7	42.1	43.5	46.3	48.0	49.4	51.2	49.3	51.2	48.6	47.7	49.8	49.5
Men, 16 to 19 years	40.7	48.9	40.4	38.2	42.2	47.6	48.4	49.7	55.7	48.9	50.5	51.0	49.2	53.0	52.5
Women, 16 to 19 years	42.2	47.1	45.5	46.3	45.0	44.9	47.7	49.1	46.0	49.7	52.1	45.9	45.9	46.2	46.2
Men, 20 years and over	13.5	17.8	16.1	16.0	16.2	16.3	17.0	17.1	17.3	17.4	17.6	19.2	19.6	19.2	20.5
Women, 20 years and over	13.4	15.4	14.1	13.7	14.5	15.1	15.4	15.3	15.1	15.5	15.4	15.7	16.2	16.5	16.5
Hispanic origin, total	10.4	13.8	11.2	12.0	12.5	12.7	12.7	13.7	13.6	14.0	14.6	14.5	15.0	15.4	15.3
Married men, spouse present	4.3	6.5	5.6	5.3	5.4	5.6	6.0	6.1	6.4	6.6	6.8	7.2	7.5	7.6	7.8
Married women, spouse present	6.0	7.4	6.6	6.3	6.9	7.0	7.6	7.3	7.1	7.4	7.3	7.6	7.9	8.2	8.2
Women who maintain families	10.4	11.7	10.3	10.4	10.4	10.8	11.5	11.9	12.1	12.0	11.7	12.4	11.3	12.5	13.2
Full-time workers	7.3	9.6	8.5	8.4	8.5	8.9	9.1	9.2	9.4	9.6	9.7	10.2	10.5	10.6	10.8
Part-time workers	9.4	10.5	9.1	9.7	10.4	10.0	10.8	10.5	10.0	11.2	10.4	10.6	10.3	11.3	11.1
Unemployed 15 weeks and over	2.1	3.2	2.2	2.2	2.5	2.7	2.8	3.0	3.2	3.2	3.3	3.5	3.8	4.1	4.3
Labor force time lost[1]	8.5	11.0	10.1	9.9	9.9	10.3	10.4	10.7	10.4	10.7	10.9	11.7	12.0	12.4	12.7
OCCUPATION															
White-collar workers	4.0	4.9	4.5	4.3	4.6	4.7	4.8	4.8	4.9	4.9	4.9	4.9	5.2	5.5	5.6
Professional and technical	2.8	3.3	3.3	2.9	3.1	3.2	3.2	3.3	3.3	3.3	3.2	3.3	3.5	3.7	3.7
Managers and administrators, except farm	2.7	3.5	3.0	2.9	3.1	3.0	3.3	3.4	3.7	3.6	3.7	3.6	3.6	3.9	4.0
Salesworkers	4.6	5.6	4.9	4.7	4.9	5.5	5.5	5.3	5.7	5.4	5.6	6.1	6.1	6.3	6.4
Clerical workers	5.7	7.0	6.2	6.3	6.6	6.7	7.0	6.7	6.9	6.9	6.9	7.2	7.2	7.8	8.0
Blue-collar workers	10.3	14.2	12.6	12.4	12.5	13.0	13.5	13.6	14.0	14.4	14.4	15.8	15.8	16.2	16.3
Craft and kindred workers	7.5	10.2	9.2	8.9	8.7	9.2	9.6	9.7	10.3	10.8	10.8	11.1	11.1	11.9	11.9
Operatives, except transport	12.2	17.7	15.5	15.2	15.4	16.0	16.7	16.5	16.8	17.5	17.8	20.7	20.7	20.9	20.5
Transport equipment operatives	8.7	11.7	10.3	10.2	10.3	10.6	10.8	11.8	12.9	11.7	12.5	12.7	12.7	13.3	13.4
Nonfarm laborers	14.7	18.5	16.8	17.0	17.7	17.7	18.7	18.3	18.3	18.6	17.8	19.6	19.6	19.5	20.4
Service workers	8.9	10.6	9.5	9.4	9.8	10.2	11.0	10.8	10.0	10.5	10.6	10.7	10.7	11.2	12.2
Farmworkers	5.3	6.5	6.2	6.6	5.2	5.6	6.0	8.1	6.6	6.3	6.7	6.6	6.6	7.4	7.7
INDUSTRY															
Nonagricultural private wage and salary workers[2]	7.7	10.1	9.0	8.8	9.0	9.4	9.8	9.8	10.0	10.2	10.2	11.0	11.0	11.4	11.6
Construction	15.6	20.0	18.0	18.5	18.3	18.2	19.3	18.9	19.5	20.3	20.4	22.3	22.3	21.8	22.0
Manufacturing	8.3	12.3	10.8	10.3	10.6	10.7	11.3	11.5	12.2	12.1	12.4	14.1	14.1	14.8	14.8
Durable goods	8.2	13.3	11.6	10.9	11.2	10.8	11.9	12.2	13.1	12.8	13.3	16.0	16.0	17.0	17.1
Nondurable goods	8.4	10.8	9.6	9.5	9.6	10.6	10.6	10.4	11.1	11.0	11.0	11.2	11.2	11.4	11.4
Transportation and public utilities	5.2	6.8	6.0	6.2	5.9	5.7	6.7	6.4	6.8	6.6	7.1	7.9	7.9	8.3	8.0
Wholesale and retail trade	8.1	10.0	8.9	8.8	9.1	10.1	9.9	10.2	9.7	10.3	10.0	10.4	10.4	10.6	11.0
Finance and service industries	5.9	6.9	6.3	6.0	6.5	6.8	7.0	6.8	6.9	7.0	7.0	7.1	7.1	7.7	7.9
Government workers	4.7	4.9	4.9	4.8	5.1	4.8	5.2	4.9	4.7	4.7	4.7	4.9	4.9	5.1	5.1
Agricultural wage and salary workers	12.1	14.7	14.2	15.3	13.4	14.0	14.6	18.1	15.0	14.1	14.2	13.3	13.3	15.6	16.5

[1] Aggregate hours lost by the unemployed and persons on part time for economic reasons as a percent of potentially available labor force hours.

[2] Includes mining, not shown separately.

NOTE: Monthly data have been revised based on seasonal experience through December 1982.

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5. Unemployment rates, by sex and age, seasonally adjusted

Sex and age	Annual average		1981	1982											
	1981	1982	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Total, 16 years and over	7.6	9.7	8.6	8.6	8.8	9.0	9.3	9.4	9.5	9.8	9.9	10.2	10.5	10.7	10.8
16 to 19 years	19.6	23.2	21.4	21.7	22.3	21.9	22.8	22.9	22.5	23.9	23.8	23.8	24.1	24.2	24.5
16 to 17 years	21.4	24.9	21.7	22.3	22.9	23.2	24.4	25.1	23.6	25.8	25.8	26.5	26.1	26.3	27.4
18 to 19 years	18.4	22.1	21.2	21.1	21.8	21.3	21.8	21.4	22.0	22.6	22.5	22.0	22.9	22.8	22.7
20 to 24 years	12.3	14.9	13.4	13.6	14.1	14.1	14.5	14.5	14.5	14.7	15.3	15.3	15.8	16.3	16.0
25 years and over	5.4	7.4	6.4	6.3	6.5	6.8	7.0	7.1	7.3	7.5	7.5	7.9	8.1	8.3	8.6
25 to 54 years	5.8	7.9	6.8	6.8	6.9	7.2	7.4	7.6	7.7	8.0	8.0	8.6	8.7	8.9	9.1
55 years and over	3.6	5.0	4.2	4.2	4.3	4.6	4.9	4.9	5.1	5.3	5.2	5.2	5.5	5.7	5.8
Men, 16 years and over	7.4	9.9	8.7	8.7	8.8	9.1	9.4	9.5	9.7	10.0	10.2	10.7	10.9	11.1	11.2
16 to 19 years	20.1	24.4	22.3	22.2	22.6	23.3	24.1	23.8	24.3	25.2	25.1	25.4	25.6	25.7	25.8
16 to 17 years	22.0	26.4	22.6	23.2	23.3	24.5	24.8	26.3	25.4	27.7	27.4	29.0	28.8	28.2	29.0
18 to 19 years	18.8	23.1	22.3	21.5	22.1	22.6	23.7	22.2	23.7	23.4	23.4	23.0	23.4	24.1	24.0
20 to 24 years	13.2	16.4	14.6	14.9	15.3	15.6	15.9	15.8	15.9	16.2	16.6	17.3	17.4	18.0	17.8
25 years and over	5.1	7.5	6.3	6.3	6.4	6.7	6.9	7.0	7.4	7.5	7.7	8.2	8.5	8.6	8.8
25 to 54 years	5.5	8.0	6.8	6.7	6.8	7.1	7.3	7.5	7.9	8.1	8.2	9.0	9.1	9.2	9.4
55 years and over	3.5	5.1	4.4	4.3	4.3	4.7	5.0	4.7	4.9	4.9	5.5	5.5	6.0	6.2	6.3
Women, 16 years and over	7.9	9.4	8.5	8.4	8.9	8.9	9.3	9.3	9.2	9.6	9.5	9.6	9.9	10.2	10.3
16 to 19 years	19.0	21.9	20.4	21.1	21.9	20.3	21.3	21.8	20.6	22.6	22.5	22.1	22.5	22.6	23.0
16 to 17 years	20.7	23.2	20.7	21.2	22.4	21.7	24.0	23.6	21.6	23.8	23.9	23.8	22.9	24.2	25.6
18 to 19 years	17.9	21.0	20.0	20.7	21.6	19.9	19.8	20.6	20.2	21.9	21.5	20.9	22.3	21.4	21.3
20 to 24 years	11.2	13.2	12.1	12.0	12.6	12.5	13.0	12.9	13.0	13.1	13.7	13.1	14.0	14.4	14.0
25 years and over	5.9	7.3	6.4	6.3	6.6	6.9	7.1	7.3	7.2	7.4	7.1	7.5	7.6	7.9	8.2
25 to 54 years	6.3	7.7	6.9	6.8	7.0	7.4	7.5	7.8	7.5	7.7	7.7	8.0	8.2	8.5	8.8
55 years and over	3.8	4.8	3.9	4.1	4.3	4.7	4.7	5.0	5.4	5.8	4.8	4.8	4.8	4.9	5.1

6. Unemployed persons, by reason for unemployment, seasonally adjusted

[Numbers in thousands]

Reason for unemployment	Annual average		1981	1982											
	1981	1982	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
NUMBER OF UNEMPLOYED															
Lost last job	4,267	6,268	5,315	5,243	5,246	5,628	5,889	5,938	6,181	6,323	6,446	6,979	7,325	7,369	7,295
On layoff	1,430	2,127	2,004	1,852	1,777	1,858	1,967	1,956	2,097	2,126	2,218	2,625	2,519	2,531	2,468
Other job losers	2,837	4,141	3,311	3,391	3,469	3,770	3,922	3,982	4,084	4,197	4,228	4,354	4,806	4,838	4,827
Left last job	923	840	904	842	942	885	901	864	826	819	814	786	803	794	826
Reentered labor force	2,102	2,384	2,188	2,133	2,272	2,261	2,342	2,393	2,378	2,478	2,440	2,437	2,322	2,546	2,629
Seeking first job	981	1,185	1,036	1,055	1,096	1,061	1,096	1,159	1,091	1,230	1,304	1,303	1,296	1,244	1,288
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	100.0	100.0
Job losers	51.6	58.7	56.3	56.5	54.9	57.2	57.6	57.3	59.0	58.3	58.6	60.7	62.4	61.6	60.6
On layoff	17.3	19.9	21.2	20.0	18.6	18.9	19.2	18.9	20.0	19.6	20.2	22.8	21.4	21.2	20.5
Other job losers	34.3	38.8	35.1	36.6	36.3	38.3	38.3	38.5	39.0	38.7	38.4	37.8	40.9	40.5	40.1
Job leavers	11.2	7.9	9.6	9.1	9.9	9.0	8.8	8.3	7.9	7.5	7.4	6.8	6.8	6.6	6.9
Reentrants	25.4	22.3	23.2	23.0	23.8	23.0	22.9	23.1	22.7	22.8	22.2	21.2	19.8	21.3	21.8
New entrants *	11.9	11.1	11.0	11.4	11.5	10.8	10.7	11.2	10.4	11.3	11.9	11.3	11.0	10.4	10.7
PERCENT OF CIVILIAN LABOR FORCE															
Job losers	3.9	5.7	4.9	4.8	4.8	5.1	5.4	5.4	5.6	5.7	5.8	6.3	6.6	6.6	6.6
Job leavers	.8	.8	.8	.8	.9	.8	.8	.8	.7	.7	.7	.7	.7	.7	.7
Reentrants	1.9	2.2	2.0	2.0	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.1	2.3	2.4
New entrants	.9	1.1	.9	1.0	1.0	1.0	1.0	1.1	1.0	1.1	1.2	1.2	1.2	1.1	1.2

7. Duration of unemployment, seasonally adjusted

[Numbers in thousands]

Weeks of unemployment	Annual average		1981	1982											
	1981	1982	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Less than 5 weeks	3,449	3,883	4,040	3,830	3,807	3,831	3,930	3,871	3,605	3,959	3,933	4,004	3,930	3,963	4,019
5 to 14 weeks	2,539	3,311	3,028	3,079	3,068	3,098	3,255	3,281	3,398	3,249	3,346	3,549	3,511	3,549	3,460
15 weeks and over	2,285	3,485	2,407	2,402	2,750	2,962	3,080	3,267	3,517	3,569	3,637	3,856	4,167	4,524	4,732
15 to 26 weeks	1,122	1,708	1,224	1,209	1,479	1,605	1,582	1,633	1,683	1,780	1,808	1,830	1,951	2,191	2,125
27 weeks and over	1,162	1,776	1,183	1,193	1,271	1,357	1,498	1,634	1,834	1,789	1,829	2,026	2,216	2,333	2,607
Mean duration, in weeks	13.7	15.6	12.9	13.4	14.0	13.9	14.3	14.9	16.3	15.6	16.1	16.6	17.1	17.3	18.0
Median duration, in weeks	6.9	8.7	6.8	7.3	7.4	7.7	8.3	8.6	9.8	8.3	8.3	9.4	9.6	10.0	10.1

NOTE: Monthly data have been revised based on seasonal experience though December 1982.

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EMPLOYMENT, HOURS, AND EARNINGS DATA FROM ESTABLISHMENT SURVEYS

EMPLOYMENT, HOURS, AND EARNINGS DATA in this section are compiled from payroll records reported monthly on a voluntary basis to the Bureau of Labor Statistics and its cooperating State agencies by 177,000 establishments representing all industries except agriculture. In most industries, the sampling probabilities are based on the size of the establishment; most large establishments are therefore in the sample. (An establishment is not necessarily a firm; it may be a branch plant, for example, or warehouse.) Self-employed persons and others not on a regular civilian payroll are outside the scope of the survey because they are excluded from establishment records. This largely accounts for the difference in employment figures between the household and establishment surveys.

Definitions

Employed persons are all persons who received pay (including holiday and sick pay) for any part of the payroll period including the 12th of the month. Persons holding more than one job (about 5 percent of all persons in the labor force) are counted in each establishment which reports them.

Production workers in manufacturing include blue-collar worker supervisors and all nonsupervisory workers closely associated with production operations. Those workers mentioned in tables 11–15 include production workers in manufacturing and mining; construction workers in construction; and nonsupervisory workers in transportation and public utilities; in wholesale and retail trade; in finance, insurance, and real estate; and in services industries. These groups account for about four-fifths of the total employment on private nonagricultural payrolls.

Earnings are the payments production or nonsupervisory workers receive during the survey period, including premium pay for overtime or late-shift work but excluding irregular bonuses and other special payments. **Real earnings** are earnings adjusted to reflect the effects of changes in consumer prices. The deflator for this series is derived from the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W). The **Hourly Earnings Index** is calculated from average hourly earnings data adjusted to exclude the effects of two types of changes that are unrelated to underlying wage-rate developments: fluctuations in overtime premiums in manufacturing (the only sector for which overtime data are available) and the effects of changes and seasonal factors in the proportion of workers in high-wage and low-wage industries.

Hours represent the average weekly hours of production or nonsupervisory workers for which pay was received and are different from standard or scheduled hours. **Overtime hours** represent the portion of gross average weekly hours which were in excess of regular hours and for which overtime premiums were paid.

Notes on the data

Establishment data collected by the Bureau of Labor Statistics are periodically adjusted to comprehensive counts of employment (called "benchmarks"). The latest complete adjustment was made with the release of May 1982 data, published in the July 1982 issue of the *Review.* Consequently, data published in the *Review* prior to that issue are not necessarily comparable to current data. Earlier comparable unadjusted and seasonally adjusted data are published in a Supplement to *Employment and Earnings* (unadjusted data from April 1977 through February 1982 and seasonally adjusted data from January 1974 through February 1982) and in *Employment and Earnings, United States, 1909–78,* BLS Bulletin 1312–11 (for prior periods).

A comprehensive discussion of the differences between household and establishment data on employment appears in Gloria P. Green, "Comparing employment estimates from household and payroll surveys," *Monthly Labor Review,* December 1969, pp. 9–20. See also *BLS Handbook of Methods for Surveys and Studies,* Bulletin 1910 (Bureau of Labor Statistics, 1976).

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8. Employment by industry, selected years, 1950–81

[Nonagricultural payroll data, in thousands]

Year	Total	Private sector	Goods-producing				Service-producing									
			Total	Mining	Construction	Manufacturing	Total	Transportation and public utilities	Wholesale and retail trade			Finance, insurance, and real estate	Services	Government		
									Total	Wholesale trade	Retail trade			Total	Federal	State and local
1950	45,197	39,170	18,506	901	2,364	15,241	26,691	4,034	9,386	2,635	6,751	1,888	5,357	6,026	1,928	4,098
1955	50,641	43,727	20,513	792	2,839	16,882	30,128	4,141	10,535	2,926	7,610	2,298	6,240	6,914	2,187	4,727
1960[1]	54,189	45,836	20,434	712	2,926	16,796	33,755	4,004	11,391	3,143	8,248	2,629	7,378	8,353	2,270	6,083
1964	58,283	48,686	21,005	634	3,097	17,274	37,278	3,951	12,160	3,337	8,823	2,911	8,660	9,596	2,348	7,248
1965	60,765	50,689	21,926	632	3,232	18,062	38,839	4,036	12,716	3,466	9,250	2,977	9,036	10,074	2,378	7,696
1966	63,901	53,116	23,158	627	3,317	19,214	40,743	4,158	13,245	3,597	9,648	3,058	9,498	10,784	2,564	8,220
1967	65,803	54,413	23,308	613	3,248	19,447	42,495	4,268	13,606	3,689	9,917	3,185	10,045	11,391	2,719	8,672
1968	67,897	56,058	23,737	606	3,350	19,781	44,160	4,318	14,099	3,779	10,320	3,337	10,567	11,839	2,737	9,102
1969	70,384	58,189	24,361	619	3,575	20,167	46,023	4,442	14,705	3,907	10,798	3,512	11,169	12,195	2,758	9,437
1970	70,880	58,325	23,578	623	3,588	19,367	47,302	4,515	15,040	3,993	11,047	3,645	11,548	12,554	2,731	9,823
1971	71,214	58,331	22,935	609	3,704	18,623	48,278	4,476	15,352	4,001	11,351	3,772	11,797	12,881	2,696	10,185
1972	73,675	60,341	23,668	628	3,889	19,151	50,007	4,541	15,949	4,113	11,836	3,908	12,276	13,334	2,684	10,649
1973	76,790	63,058	24,893	642	4,097	20,154	51,897	4,656	16,607	4,277	12,329	4,046	12,857	13,732	2,663	11,068
1974	78,265	64,095	24,794	697	4,020	20,077	53,471	4,725	16,987	4,433	12,554	4,148	13,441	14,170	2,724	11,446
1975	76,945	62,259	22,600	752	3,525	18,323	54,345	4,542	17,060	4,415	12,645	4,165	13,892	14,686	2,748	11,937
1976	79,382	64,511	23,352	779	3,576	18,997	56,030	4,582	17,755	4,546	13,209	4,271	14,551	14,871	2,733	12,138
1977	82,471	67,344	24,346	813	3,851	19,682	58,125	4,713	18,516	4,708	13,808	4,467	15,303	15,127	2,727	12,399
1978	86,697	71,026	25,585	851	4,229	20,505	61,113	4,923	19,542	4,969	14,573	4,724	16,252	15,672	2,753	12,919
1979	89,823	73,876	26,461	958	4,463	21,040	63,363	5,136	20,192	5,204	14,989	4,975	17,112	15,947	2,773	13,147
1980	90,406	74,166	25,658	1,027	4,346	20,285	64,748	5,146	20,310	5,275	15,035	5,160	17,890	16,241	2,866	13,375
1981	91,105	75,081	25,481	1,132	4,176	20,173	65,625	5,157	20,551	5,359	15,192	5,301	18,592	16,024	2,772	13,253

[1]Data include Alaska and Hawaii beginning in 1959.

9. Employment by State

[Nonagricultural payroll data, in thousands]

State	November 1981	October 1982	Nov. 1982[p]	State	November 1981	October 1982	Nov. 1982[p]
Alabama	1,353.4	1,315.9	1,319.9	Montana	291.4	282.7	281.7
Alaska	179.0	191.7	188.6	Nebraska	630.9	611.3	610.3
Arizona	1,055.5	1,033.2	1,039.6	Nevada	420.9	416.9	412.7
Arkansas	739.3	732.8	725.7	New Hampshire	397.2	392.5	390.2
California	10,147.2	9,955.6	9,944.8	New Jersey	3,107.7	3,065.3	3,062.9
Colorado	1,297.6	1,284.1	1,283.7	New Mexico	476.6	477.2	475.8
Connecticut	1,446.0	1,416.5	1,419.0	New York	7,354.9	7,283.3	7,286.1
Delaware	257.4	258.7	255.4	North Carolina	2,405.3	2,351.3	2,348.0
District of Columbia	606.1	602.0	604.5	North Dakota	255.0	254.2	252.8
Florida	3,776.3	3,755.1	3,811.8	Ohio	4,342.7	4,204.0	4,190.2
Georgia	2,190.7	2,157.4	2,156.5	Oklahoma	1,217.0	1,195.9	1,190.3
Hawaii	403.3	397.5	401.0	Oregon	1,008.9	973.4	964.2
Idaho	325.4	317.1	313.4	Pennsylvania	4,735.5	4,479.2	4,473.8
Illinois	4,775.7	4,577.7	4,568.0	Rhode Island	404.9	394.6	394.3
Indiana	2,106.6	2,010.5	1,993.6	South Carolina	1,197.7	1,178.8	1,178.9
Iowa	1,093.5	1,050.2	1,044.4	South Dakota	237.1	233.0	230.5
Kansas	954.9	918.9	917.9	Tennessee	1,748.0	1,705.8	1,700.1
Kentucky	1,201.6	1,149.2	1,149.5	Texas	6,274.9	6,201.2	6,203.3
Louisiana	1,650.5	1,613.7	1,613.6	Utah	569.3	564.4	565.1
Maine	413.9	413.3	409.4	Vermont	202.2	204.5	201.4
Maryland	1,709.0	1,680.3	1,688.5	Virginia	2,174.7	2,168.4	2,172.2
Massachusetts	2,676.6	2,621.8	2,626.5	Washington	1,588.2	1,568.1	1,559.9
Michigan	3,381.1	3,215.3	3,208.1	West Virginia	633.5	597.4	597.0
Minnesota	1,769.5	1,710.1	1,700.0	Wisconsin	1,931.8	1,878.2	1,867.9
Mississippi	821.9	796.2	794.6	Wyoming	216.2	215.2	210.5
Missouri	1,986.5	1,962.4	1,957.9				
				Virgin Islands	36.6	34.6	35.0

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10. Employment by industry division and major manufacturing group, seasonally adjusted

[Nonagricultural payroll data, in thousands]

Industry division and group	Annual average		1981	1982											
	1980	1981	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov. p	Dec. p
TOTAL	90,406	91,105	90,642	90,460	90,459	90,304	90,083	90,166	89,839	89,535	89,312	89,267	88,860	88,684	88,518
PRIVATE SECTOR	74,166	75,081	74,725	74,596	74,609	74,445	74,231	74,313	74,007	73,900	73,640	73,504	73,118	72,953	72,783
GOODS-PRODUCING	25,658	25,481	24,908	24,684	24,631	24,450	24,289	24,255	23,994	23,840	23,657	23,530	23,239	23,082	22,988
Mining	1,027	1,132	1,206	1,201	1,203	1,197	1,182	1,152	1,124	1,100	1,086	1,075	1,058	1,051	1,036
Construction	4,346	4,176	4,026	3,966	3,974	3,934	3,938	3,988	3,940	3,927	3,899	3,883	3,856	3,848	3,818
Manufacturing	20,285	20,173	19,676	19,517	19,454	19,319	19,169	19,115	18,930	18,813	18,672	18,572	18,325	18,183	18,134
Production workers	14,214	14,021	13,488	13,431	13,290	13,179	13,042	13,008	12,852	12,760	12,647	12,566	12,335	12,206	12,173
Durable goods	12,187	12,117	11,724	11,622	11,575	11,490	11,375	11,332	11,203	11,133	10,993	10,900	10,666	10,555	10,533
Production workers	8,442	8,301	7,885	7,793	7,759	7,685	7,576	7,553	7,443	7,388	7,272	7,191	6,979	6,877	6,853
Lumber and wood products	690.5	668.7	615	607	611	607	615	617	615	614	614	616	614	618	619
Furniture and fixtures	465.8	467.3	457	452	449	446	443	443	442	439	443	439	434	433	435
Stone, clay, and glass products	662.1	638.2	610	596	596	590	584	586	580	579	574	571	565	556	553
Primary metal industries	1,142.2	1,121.1	1,053	1,038	1,024	1,007	976	945	926	906	889	865	831	815	806
Fabricated metal products	1,613.1	1,592.4	1,529	1,515	1,505	1,496	1,481	1,472	1,452	1,446	1,427	1,414	1,381	1,367	1,364
Machinery, except electrical	2,494.0	2,507.0	2,486	2,459	2,446	2,419	2,389	2,377	2,322	2,274	2,230	2,208	2,142	2,109	2,095
Electric and electronic equipment	2,090.6	2,092.2	2,049	2,055	2,048	2,038	2,034	2,034	2,026	2,018	2,011	1,995	1,969	1,962	1,939
Transportation equipment	1,899.7	1,892.6	1,791	1,777	1,778	1,774	1,748	1,755	1,745	1,759	1,719	1,709	1,658	1,633	1,664
Instruments and related products	711.3	726.8	725	720	718	716	713	713	708	708	702	701	694	688	685
Miscellaneous manufacturing	418.0	410.7	409	403	400	397	392	390	387	390	384	382	378	374	373
Nondurable goods	8,098	8,056	7,952	7,895	7,879	7,829	7,794	7,783	7,727	7,680	7,679	7,672	7,659	7,628	7,601
Production workers	5,772	5,721	5,603	5,548	5,531	5,494	5,466	5,455	5,409	5,372	5,375	5,375	5,356	5,329	5,320
Food and kindred products	1,708.0	1,674.3	1,661	1,657	1,663	1,658	1,643	1,652	1,637	1,643	1,628	1,629	1,644	1,642	1,632
Tobacco manufactures	68.9	69.8	68	69	68	68	67	67	67	65	65	63	63	61	63
Textile mill products	847.7	822.5	794	780	777	760	773	759	741	741	737	735	735	725	720
Apparel and other textile products	1,263.5	1,244.0	1,222	1,201	1,201	1,186	1,165	1,165	1,161	1,126	1,145	1,143	1,141	1,136	1,128
Paper and allied products	692.8	687.3	677	674	670	668	664	661	658	657	653	657	650	652	650
Printing and publishing	1,252.1	1,265.8	1,276	1,275	1,276	1,278	1,274	1,274	1,269	1,267	1,269	1,269	1,268	1,266	1,265
Chemicals and allied products	1,107.4	1,107.3	1,100	1,095	1,093	1,088	1,082	1,079	1,073	1,068	1,070	1,066	1,061	1,058	1,055
Petroleum and coal products	197.9	215.6	214	210	208	207	206	207	205	205	205	209	208	206	206
Rubber and miscellaneous plastics products	726.8	736.1	716	712	708	703	706	708	704	700	699	694	684	677	679
Leather and leather products	232.9	233.0	224	222	215	213	214	211	212	208	208	207	205	205	203
SERVICE-PRODUCING	64,748	65,625	65,734	65,776	65,828	65,854	65,794	65,911	65,845	65,695	65,655	65,737	65,621	65,602	65,530
Transportation and public utilities	5,146	5,157	5,128	5,125	5,115	5,100	5,094	5,101	5,078	5,044	5,025	5,031	5,007	4,994	4,979
Wholesale and retail trade	20,310	20,551	20,524	20,630	20,670	20,655	20,584	20,652	20,595	20,615	20,550	20,492	20,441	20,390	20,297
Wholesale trade	5,275	5,359	5,357	5,346	5,343	5,336	5,323	5,331	5,307	5,299	5,278	5,272	5,254	5,230	5,203
Retail trade	15,035	15,192	15,167	15,284	15,327	15,319	15,261	15,321	15,288	15,316	15,272	15,220	15,187	15,160	15,094
Finance, insurance, and real estate	5,160	5,301	5,331	5,326	5,326	5,336	5,335	5,342	5,352	5,359	5,360	5,367	5,357	5,362	5,376
Services	17,890	18,592	18,834	18,831	18,867	18,904	18,929	18,963	18,988	19,042	19,048	19,084	19,074	19,125	19,143
Government	16,241	16,024	15,917	15,864	15,850	15,859	15,852	15,853	15,832	15,635	15,672	15,763	15,742	15,731	15,735
Federal	2,866	2,772	2,756	2,741	2,737	2,736	2,730	2,728	2,739	2,737	2,739	2,734	2,723	2,726	2,728
State and local	13,375	13,253	13,161	13,123	13,113	13,123	13,122	13,125	13,093	12,898	12,933	13,029	13,019	13,005	13,007

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11. Hours and earnings, by industry division, selected years, 1950–81

[Gross averages, production or nonsupervisory workers on nonagricultural payrolls]

Year	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings
	Private sector			Mining			Construction			Manufacturing		
1950	$53.13	39.8	$1.335	$67.16	37.9	$1.772	$69.68	37.4	$1.863	$58.32	40.5	$1.440
1955	67.72	39.6	1.71	89.54	40.7	2.20	90.90	37.1	2.45	75.30	40.7	1.85
1960[1]	80.67	38.6	2.09	105.04	40.4	2.60	112.67	36.7	3.07	89.72	39.7	2.26
1964	91.33	38.7	2.36	117.74	41.9	2.81	132.06	37.2	3.55	102.97	40.7	2.53
1965	95.45	38.8	2.46	123.52	42.3	2.92	138.38	37.4	3.70	107.53	41.2	2.61
1966	98.82	38.6	2.56	130.24	42.7	3.05	146.26	37.6	3.89	112.19	41.4	2.71
1967	101.84	38.0	2.68	135.89	42.6	3.19	154.95	37.7	4.11	114.49	40.6	2.82
1968	107.73	37.8	2.85	142.71	42.6	3.35	164.49	37.3	4.41	122.51	40.7	3.01
1969	114.61	37.7	3.04	154.80	43.0	3.60	181.54	37.9	4.79	129.51	40.6	3.19
1970	119.83	37.1	3.23	164.40	42.7	3.85	195.45	37.3	5.24	133.33	39.8	3.35
1971	127.31	36.9	3.45	172.14	42.4	4.06	211.67	37.2	5.69	142.44	39.9	3.57
1972	136.90	37.0	3.70	189.14	42.6	4.44	221.19	36.5	6.06	154.71	40.5	3.82
1973	145.39	36.9	3.94	201.40	42.4	4.75	235.89	36.8	6.41	166.46	40.7	4.09
1974	154.76	36.5	4.24	219.14	41.9	5.23	249.25	36.6	6.81	176.80	40.0	4.42
1975	163.53	36.1	4.53	249.31	41.9	5.95	266.08	36.4	7.31	190.79	39.5	4.83
1976	175.45	36.1	4.86	273.90	42.4	6.46	283.73	36.8	7.71	209.32	40.1	5.22
1977	189.00	36.0	5.25	301.20	43.4	6.94	295.65	36.5	8.10	228.90	40.3	5.68
1978	203.70	35.8	5.69	332.88	43.4	7.67	318.69	36.8	8.66	249.27	40.4	6.17
1979	219.91	35.7	6.16	365.07	43.0	8.49	342.99	37.0	9.27	269.34	40.2	6.70
1980	235.10	35.3	6.66	397.06	43.3	9.17	367.78	37.0	9.94	288.62	39.7	7.27
1981	255.20	35.2	7.25	439.19	43.7	10.05	398.52	36.9	10.80	318.00	39.8	7.99
	Transportation and public utilities			Wholesale and retail trade			Finance, insurance, and real estate			Services		
1950	.....	.....	.....	$44.55	40.5	$1.100	$50.52	37.7	$1.340	.....	.....	.....
1955	.....	.....	.....	55.16	39.4	1.40	63.92	37.6	1.70	.....	.....	.....
1960[1]	.....	.....	.....	66.01	38.6	1.71	75.14	37.2	2.02	.....	.....	.....
1964	$118.78	41.1	$2.89	74.66	37.9	1.97	85.79	37.3	2.30	$70.03	36.1	$1.94
1965	125.14	41.3	3.03	76.91	37.7	2.04	88.91	37.2	2.39	73.60	35.9	2.05
1966	128.13	41.2	3.11	79.39	37.1	2.14	92.13	37.3	2.47	77.04	35.5	2.17
1967	130.82	40.5	3.23	82.35	36.6	2.25	95.72	37.1	2.58	80.38	35.1	2.29
1968	138.85	40.6	3.42	87.00	36.1	2.41	101.75	37.0	2.75	83.97	34.7	2.42
1969	147.74	40.7	3.63	91.39	35.7	2.56	108.70	37.1	2.93	90.57	34.7	2.61
1970	155.93	40.5	3.85	96.02	35.3	2.72	112.67	36.7	3.07	96.66	34.4	2.81
1971	168.82	40.1	4.21	101.09	35.1	2.88	117.85	36.6	3.22	103.06	33.9	3.04
1972	187.86	40.4	4.65	106.45	34.9	3.05	122.98	36.6	3.36	110.85	33.9	3.27
1973	203.31	40.5	5.02	111.76	34.6	3.23	129.20	36.6	3.53	117.29	33.8	3.47
1974	217.48	40.2	5.41	119.02	34.2	3.48	137.61	36.5	3.77	126.00	33.6	3.75
1975	233.44	39.7	5.88	126.45	33.9	3.73	148.19	36.5	4.06	134.67	33.5	4.02
1976	256.71	39.8	6.45	133.79	33.7	3.97	155.43	36.4	4.27	143.52	33.3	4.31
1977	278.90	39.9	6.99	142.52	33.3	4.28	165.26	36.4	4.54	153.45	33.0	4.65
1978	302.80	40.0	7.57	153.64	32.9	4.67	178.00	36.4	4.89	163.67	32.8	4.99
1979	325.58	39.9	8.16	164.96	32.6	5.06	190.77	36.2	5.27	175.27	32.7	5.36
1980	351.25	39.6	8.87	176.46	32.2	5.48	209.60	36.2	5.79	190.71	32.6	5.85
1981	382.18	39.4	9.70	190.95	32.2	5.93	229.05	36.3	6.31	208.97	32.6	6.41

[1] Data include Alaska and Hawaii beginning in 1959.

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12. Weekly hours, by industry division and major manufacturing group, seasonally adjusted

[Gross averages, production or nonsupervisory workers on private nonagricultural payrolls]

Industry division and group	Annual average		1981	1982											
	1980	1981	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov. p	Dec. p
PRIVATE SECTOR	35.3	35.2	35.0	34.4	35.0	34.9	34.9	35.0	34.9	34.9	34.8	34.8	34.7	34.7	34.6
MANUFACTURING	39.7	39.8	39.1	37.6	39.4	39.0	39.0	39.1	39.2	39.2	39.0	38.8	38.8	38.9	38.9
Overtime hours	2.8	2.8	2.4	2.3	2.4	2.3	2.4	2.3	2.4	2.4	2.4	2.3	2.3	2.3	2.3
Durable goods	40.1	40.2	39.5	38.2	39.8	39.5	39.5	39.6	39.7	39.7	39.4	38.9	39.0	39.2	39.2
Overtime hours	2.8	2.8	2.3	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.1	2.0	2.1	2.1
Lumber and wood products	38.5	38.7	37.7	35.0	37.9	37.6	37.6	38.5	38.7	38.6	38.2	38.5	38.0	38.7	38.5
Furniture and fixtures	38.1	38.4	37.9	33.6	37.7	37.3	37.4	37.5	37.8	37.6	37.9	37.4	37.5	37.6	37.4
Stone, clay, and glass products	40.8	40.6	39.7	38.6	40.1	40.0	40.0	40.2	40.4	40.6	40.3	40.2	40.2	40.2	39.6
Primary metal industries	40.1	40.5	39.2	38.3	39.4	38.8	38.5	38.5	38.9	38.9	38.8	37.8	38.0	38.2	38.0
Fabricated metal products	40.4	40.3	39.5	38.1	39.7	39.5	39.4	39.5	39.4	39.5	39.2	38.8	38.9	38.9	39.0
Machinery, except electrical	41.0	40.9	40.4	39.3	40.7	40.2	40.1	39.8	39.6	39.8	39.5	39.0	39.2	39.2	39.3
Electric and electronic equipment	39.8	39.9	39.5	38.3	39.8	39.4	39.3	39.4	39.5	39.8	39.3	38.8	39.0	39.2	39.3
Transportation equipment	40.6	40.9	39.7	39.0	40.5	40.4	41.1	41.1	41.6	41.0	40.5	39.8	40.1	40.8	40.2
Instruments and related products	40.5	40.4	39.9	39.0	39.9	39.9	39.9	40.2	40.2	40.1	40.1	39.8	39.4	39.3	40.1
Miscellaneous manufacturing	38.7	38.8	38.5	37.3	38.6	38.6	38.5	38.7	38.6	38.7	38.6	38.3	38.6	38.6	38.4
Nondurable goods	39.0	39.1	38.6	36.8	38.9	38.5	38.4	38.5	38.6	38.6	38.5	38.6	38.5	38.5	38.5
Overtime hours	2.8	2.8	2.6	2.5	2.6	2.5	2.6	2.5	2.5	2.6	2.6	2.6	2.6	2.5	2.5
Food and kindred products	39.7	39.7	39.8	39.1	40.2	39.5	39.4	39.4	39.5	39.5	39.1	39.4	39.7	39.5	39.2
Textile mill products	40.1	39.6	37.8	32.3	38.3	37.6	37.7	37.9	37.8	37.7	38.2	38.1	38.2	38.5	38.5
Apparel and other textile products	35.4	35.7	35.1	31.4	35.5	35.0	34.7	34.8	35.1	35.2	35.0	35.2	35.0	35.0	35.0
Paper and allied products	42.2	42.5	41.8	41.3	42.3	41.8	42.1	41.8	42.0	41.9	41.7	41.5	41.7	41.7	41.4
Printing and publishing	37.1	37.3	37.1	36.9	37.4	37.1	37.1	36.8	37.1	37.0	36.8	37.0	36.9	37.1	37.2
Chemicals and allied products	41.5	41.6	41.3	41.0	41.2	40.7	40.7	41.0	41.0	40.9	40.9	41.2	40.8	40.6	40.8
Petroleum and coal products	41.8	43.2	42.7	44.3	43.5	43.5	44.0	44.1	44.1	43.3	43.9	44.0	43.3	44.2	45.4
Rubber and miscellaneous plastics products	40.0	40.3	39.4	37.9	40.0	39.6	39.8	39.9	40.1	40.2	39.7	39.6	39.0	39.2	39.3
Leather and leather products	36.7	36.8	36.1	34.1	35.6	35.8	35.6	35.6	35.7	36.1	36.0	35.7	35.2	36.0	35.6
WHOLESALE AND RETAIL TRADE	32.2	32.2	32.0	31.7	32.0	31.9	31.8	32.0	31.9	31.9	31.9	32.1	31.9	31.8	31.8
WHOLESALE TRADE	38.5	38.6	38.4	38.1	38.5	38.4	38.3	38.5	38.6	38.5	38.5	38.4	38.3	38.4	38.2
RETAIL TRADE	30.2	30.1	29.9	29.7	29.9	29.8	29.8	30.0	29.8	29.9	29.9	30.1	29.9	29.8	29.8
SERVICES	32.6	32.6	32.6	32.5	32.6	32.6	32.7	32.7	32.7	32.6	32.6	32.8	32.6	32.6	32.4

NOTE: The industry divisions of mining; construction; tobacco manufactures (a major manufacturing group, nondurable goods); transportation and public utilities; and finance, insurance, and real estate are no longer shown. This is because the seasonal component in these is small relative to the trend-cycle, or irregular components, or both, and consequently cannot be precisely separated.

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13. Hourly earnings, by industry division and major manufacturing group

[Gross averages, production or nonsupervisory workers on private nonagricultural payrolls]

Industry division and group	Annual average		1981	1982											
	1980	1981	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov. p	Dec. p
PRIVATE SECTOR	$6.66	$7.25	$7.45	$7.55	$7.54	$7.55	$7.58	$7.63	$7.64	$7.67	$7.70	$7.76	$7.79	$7.80	$7.82
Seasonally adjusted	(1)	(1)	7.46	7.52	7.53	7.54	7.59	7.65	7.67	7.71	7.74	7.72	7.77	7.78	7.83
MINING	9.17	10.05	10.41	10.65	10.62	10.62	10.65	10.66	10.82	10.91	10.93	11.04	11.02	11.07	11.09
CONSTRUCTION	9.94	10.80	11.26	11.59	11.32	11.33	11.32	11.46	11.41	11.53	11.60	11.68	11.82	11.65	11.87
MANUFACTURING	7.27	7.99	8.27	8.42	8.34	8.37	8.42	8.45	8.50	8.55	8.51	8.59	8.56	8.61	8.69
Durable goods	7.75	8.53	8.83	8.92	8.89	8.91	8.94	9.01	9.06	9.11	9.09	9.16	9.13	9.17	9.24
Lumber and wood products	6.55	7.00	7.16	7.38	7.27	7.28	7.24	7.41	7.59	7.64	7.61	7.70	7.61	7.64	7.57
Furniture and fixtures	5.49	5.91	6.12	6.28	6.19	6.21	6.21	6.23	6.30	6.34	6.39	6.41	6.41	6.44	6.51
Stone, clay, and glass products	7.50	8.27	8.56	8.70	8.62	8.65	8.72	8.80	8.86	8.93	8.93	9.03	9.04	9.04	9.06
Primary metal industries	9.77	10.81	11.08	11.23	11.20	11.15	11.24	11.23	11.31	11.37	11.49	11.54	11.42	11.51	11.50
Fabricated metal products	7.45	8.20	8.53	8.55	8.57	8.64	8.69	8.79	8.83	8.85	8.85	8.90	8.85	8.90	8.97
Machinery, except electrical	8.00	8.81	9.18	9.19	9.20	9.18	9.24	9.26	9.27	9.30	9.33	9.40	9.34	9.35	9.41
Electric and electronic equipment	6.94	7.62	7.90	7.98	7.96	8.01	8.03	8.05	8.09	8.18	8.24	8.31	8.34	8.38	8.46
Transportation equipment	9.35	10.39	10.76	10.79	10.82	10.89	10.89	11.08	11.21	11.25	11.18	11.24	11.30	11.33	11.51
Instruments and related products	6.80	7.43	7.81	7.93	7.94	8.00	8.07	8.16	8.23	8.31	8.40	8.44	8.48	8.57	8.63
Miscellaneous manufacturing	5.46	5.96	6.19	6.27	6.29	6.32	6.35	6.38	6.41	6.40	6.39	6.49	6.50	6.53	6.63
Nondurable goods	6.55	7.18	7.44	7.67	7.54	7.57	7.65	7.66	7.70	7.77	7.74	7.84	7.81	7.88	7.95
Food and kindred products	6.85	7.43	7.67	7.82	7.74	7.79	7.90	7.92	7.90	7.88	7.85	7.91	7.88	7.99	8.05
Tobacco manufactures	7.74	8.88	8.96	9.21	9.56	9.72	10.05	9.93	10.35	10.42	9.53	9.57	9.50	10.16	10.05
Textile mill products	5.07	5.52	5.72	5.76	5.76	5.76	5.79	5.79	5.79	5.81	5.82	5.86	5.87	5.92	5.99
Apparel and other textile products	4.56	4.96	5.04	5.18	5.13	5.15	5.18	5.16	5.18	5.17	5.18	5.20	5.19	5.23	5.26
Paper and allied products	7.84	8.60	8.96	9.06	8.99	9.03	9.11	9.14	9.28	9.41	9.45	9.63	9.54	9.59	9.61
Printing and publishing	7.53	8.18	8.48	8.58	8.56	8.59	8.59	8.61	8.66	8.74	8.79	8.90	8.87	8.91	8.97
Chemicals and allied products	8.30	9.12	9.53	9.68	9.68	9.71	9.81	9.83	9.95	10.02	10.03	10.20	10.24	10.26	10.36
Petroleum and coal products	10.10	11.38	11.59	11.91	12.29	12.32	12.50	12.52	12.53	12.42	12.42	12.62	12.57	12.71	12.71
Rubber and miscellaneous plastics products	6.52	7.16	7.38	7.51	7.49	7.45	7.52	7.56	7.64	7.65	7.64	7.76	7.72	7.79	7.86
Leather and leather products	4.58	4.99	5.15	5.19	5.22	5.24	5.32	5.32	5.36	5.30	5.33	5.41	5.39	5.41	5.45
TRANSPORTATION AND PUBLIC UTILITIES	8.87	9.70	10.06	10.10	10.13	10.07	10.14	10.17	10.20	10.29	10.43	10.46	10.48	10.55	10.60
WHOLESALE AND RETAIL TRADE	5.48	5.93	6.02	6.17	6.16	6.16	6.18	6.20	6.20	6.21	6.22	6.26	6.30	6.32	6.28
WHOLESALE TRADE	6.96	7.57	7.81	7.94	7.94	7.93	7.97	8.03	8.01	8.07	8.11	8.14	8.17	8.18	8.23
RETAIL TRADE	4.88	5.25	5.31	5.43	5.42	5.43	5.44	5.47	5.47	5.48	5.48	5.52	5.54	5.58	5.54
FINANCE, INSURANCE, AND REAL ESTATE	5.79	6.31	6.47	6.56	6.62	6.59	6.64	6.77	6.71	6.78	6.87	6.90	6.97	7.01	7.08
SERVICES	5.85	6.41	6.66	6.79	6.79	6.77	6.81	6.85	6.84	6.87	6.90	6.99	7.05	7.08	7.10

[1] Not available.

p=preliminary.

14. Hourly Earnings Index, for production workers on private nonagricultural payrolls, by industry

[1977=100]

Industry	Not seasonally adjusted					Seasonally adjusted						
	Dec. 1981	Oct. 1982	Nov. 1982 p	Dec. 1982 p	Percent change from: Dec. 1981 to Dec. 1982	Dec. 1981	Aug. 1982	Sept. 1982	Oct. 1982	Nov. 1982 p	Dec. 1982 p	Percent change from: Nov. 1982 to Dec. 1982
PRIVATE SECTOR (in current dollars)	143.5	150.9	151.2	151.9	5.9	143.5	149.9	150.1	150.8	151.1	151.9	0.6
Mining	153.4	162.6	163.3	163.7	6.7	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Construction	136.7	144.0	141.6	143.7	5.1	136.6	140.7	140.4	142.3	140.9	143.6	1.9
Manufacturing	147.4	154.7	155.3	156.2	6.0	146.9	154.2	154.7	154.6	155.3	155.6	.2
Transportation and public utilities	145.0	151.9	152.8	153.5	5.9	144.3	150.3	149.9	151.1	151.5	152.8	.8
Wholesale and retail trade	140.9	147.1	147.5	147.4	4.6	141.7	146.5	146.8	147.6	148.0	148.3	.2
Finance, insurance, and real estate	141.5	152.1	152.7	153.9	8.8	142.0	150.6	151.3	152.9	152.7	154.5	1.2
Services	142.3	150.5	151.0	151.6	6.5	142.6	149.7	149.7	150.8	150.8	151.9	.7
PRIVATE SECTOR (in constant dollars)	92.6	93.3	93.6	(2)	(2)	92.3	93.2	93.2	93.2	93.3	(2)	(2)

[1] This series is not seasonally adjusted because the seasonal component is small relative to the trend-cycle, irregular components, or both, and consequently cannot be separated with sufficient precision.

[2] Not available.

p = preliminary.

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15. Weekly earnings, by industry division and major manufacturing group

[Gross averages, production or nonsupervisory workers on private nonagricultural payrolls]

Industry division and group	Annual average		1981	1982											
	1980	1981	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov. p	Dec. p
PRIVATE SECTOR															
Current dollars	$235.10	$255.20	$262.24	$255.95	$262.39	$261.99	$262.27	$265.52	$267.40	$269.98	$271.04	$270.05	$270.31	$270.66	$272.14
Seasonally adjusted	(1)	(1)	261.10	258.69	263.55	263.15	264.89	267.75	267.68	269.08	269.35	268.66	269.62	269.97	270.92
Constant (1977) dollars	172.74	170.13	169.30	164.70	168.31	168.37	167.80	168.16	167.33	167.90	168.24	167.42	167.06	167.59	
MINING	397.06	439.19	466.37	456.89	463.03	465.16	454.76	454.12	463.10	463.68	463.43	462.58	461.74	$460.51	$466.89
CONSTRUCTION	367.78	398.52	417.75	385.95	406.39	419.21	415.44	429.75	427.88	438.14	436.16	430.99	438.52	420.57	434.44
MANUFACTURING															
Current dollars	288.62	318.00	329.97	312.38	326.93	327.27	325.85	329.55	334.05	332.60	331.89	334.15	333.84	338.37	344.99
Constant (1977) dollars	212.06	212.00	213.02	201.02	209.70	210.33	208.48	208.71	209.04	206.84	206.40	207.16	206.33	209.52	
Durable goods	310.78	342.91	356.73	336.28	352.93	352.84	350.45	355.90	360.59	357.11	356.33	357.24	357.90	$363.13	$370.52
Lumber and wood products	252.18	270.90	272.80	248.71	272.63	273.73	270.05	285.29	297.53	294.90	295.27	298.76	292.22	295.67	294.47
Furniture and fixtures	209.17	226.94	238.07	204.10	231.51	233.50	230.39	231.76	238.77	233.31	243.46	241.66	244.22	245.36	249.98
Stone, clay, and glass products	306.00	335.76	343.26	325.38	337.90	344.27	347.93	355.52	361.49	362.56	362.56	365.72	367.02	367.02	362.40
Primary metal industries	391.78	437.81	438.77	431.23	443.52	434.85	434.99	430.11	439.96	437.75	440.07	438.52	431.68	440.83	440.45
Fabricated metal products	300.98	330.46	345.47	323.19	337.66	342.14	338.91	346.33	349.67	344.27	346.04	346.21	346.04	349.77	358.80
Machinery except electrical	328.00	360.33	381.89	360.25	374.44	370.87	367.75	367.62	367.09	363.63	364.80	367.54	365.19	370.26	380.16
Electric and electronic equipment	276.21	304.04	319.16	304.04	316.81	316.40	313.17	315.56	319.56	319.84	322.18	322.43	326.09	331.85	340.09
Transportation equipment	379.61	424.95	445.46	414.34	437.13	439.96	441.05	455.39	466.34	456.75	447.20	443.98	457.65	466.80	481.12
Instruments and related products	275.40	300.17	317.87	306.10	317.60	320.80	318.77	327.22	330.85	328.25	335.16	335.91	334.96	341.94	352.97
Miscellaneous manufacturing	211.30	231.25	242.03	229.48	241.54	244.58	242.57	245.63	247.43	244.48	246.65	250.51	253.50	255.32	258.57
Nondurable goods	255.45	280.74	291.65	277.65	291.04	289.93	291.47	294.14	297.99	299.15	299.54	304.19	302.25	306.53	310.85
Food and kindred products	271.95	294.97	309.87	302.63	307.28	303.81	306.52	312.05	312.05	312.05	310.86	315.61	312.84	318.00	319.59
Tobacco manufactures	294.89	344.54	341.38	332.48	366.15	362.56	367.83	369.40	397.44	383.46	363.09	379.93	370.50	386.08	376.88
Textile mill products	203.31	218.59	220.79	179.71	219.46	217.15	215.39	219.44	220.60	216.13	222.91	223.85	227.17	230.88	235.41
Apparel and other textile products	161.42	177.07	178.92	155.40	180.58	180.77	178.19	180.08	183.89	183.02	183.37	182.52	183.21	184.62	186.20
Paper and allied products	330.85	365.50	382.59	374.18	377.58	376.55	380.80	379.31	389.76	391.46	393.12	401.57	397.82	402.78	406.50
Printing and publishing	279.36	305.11	321.39	312.31	317.58	318.69	316.11	315.99	319.55	322.51	326.11	331.08	328.19	332.34	340.86
Chemicals and allied products	344.45	379.39	398.35	394.94	397.85	395.20	399.27	401.06	406.96	407.81	408.22	420.24	417.79	420.66	427.87
Petroleum and coal products	422.18	491.62	493.73	514.51	518.64	522.37	550.00	549.63	553.83	546.48	546.48	572.95	555.59	569.41	575.76
Rubber and miscellaneous plastics products	260.80	288.55	295.94	283.88	298.85	295.77	297.04	300.13	306.36	302.94	303.31	307.30	303.40	307.71	314.40
Leather and leather products	168.09	183.63	187.46	172.83	184.27	186.54	187.26	191.52	196.71	191.33	192.95	192.06	190.27	195.30	195.66
TRANSPORTATION AND PUBLIC UTILITIES	351.25	382.18	395.36	388.85	397.10	392.73	393.43	394.60	399.84	403.37	409.90	405.85	406.62	409.34	411.28
WHOLESALE AND RETAIL TRADE	176.46	190.95	194.45	191.89	194.66	194.66	195.91	197.78	199.02	202.45	202.77	200.95	200.97	200.98	201.59
WHOLESALE TRADE	267.96	292.20	302.25	300.13	303.31	303.72	304.45	308.35	309.19	312.31	313.05	312.58	314.55	314.93	316.86
RETAIL TRADE	147.38	158.03	160.89	157.47	159.35	159.64	161.02	163.01	164.65	168.24	168.24	166.70	165.09	165.73	167.31
FINANCE, INSURANCE, AND REAL ESTATE	209.60	229.05	234.21	237.47	239.64	239.22	240.37	245.75	242.23	245.44	249.38	249.09	252.31	253.76	254.88
SERVICES	190.71	208.97	217.12	219.32	220.68	220.03	221.33	222.63	224.35	227.40	227.70	228.57	229.13	230.10	230.04

[1] Not available.

p = preliminary.

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UNEMPLOYMENT INSURANCE DATA

NATIONAL UNEMPLOYMENT INSURANCE DATA are compiled monthly by the Employment and Training Administration of the U.S. Department of Labor from monthly reports of unemployment insurance activity prepared by State agencies. Railroad unemployment insurance data are prepared by the U.S. Railroad Retirement Board.

Definitions

Data for **all programs** represent an unduplicated count of insured unemployment under State programs, Unemployment Compensation for Ex-Servicemen, and Unemployment Compensation for Federal Employees, and the Railroad Insurance Act.

Under both State and Federal unemployment insurance programs for civilian employees, insured workers must report the completion of at least 1 week of unemployment before they are defined as unemployed. Persons not covered by unemployment insurance (about 10 percent of the labor force) and those who have exhausted or not yet earned benefit rights are excluded from the scope of the survey. **Initial claims** are notices filed by persons in unemployment insurance programs to indicate they are out of work and wish to begin receiving compensation. A claimant who continued to be unemployed a full week is then counted in the insured unemployment figure. The **rate of insured unemployment** expresses the number of insured unemployed as a percent of the average insured employment in a 12-month period.

An **application** for benefits is filed by a railroad worker at the beginning of his first period of unemployment in a benefit year; no application is required for subsequent periods in the same year. **Number of payments** are payments made in 14-day registration periods. The **average amount of benefit payment** is an average for all compensable periods, not adjusted for recovery of overpayments or settlement of underpayments. However, **total benefits** paid have been adjusted.

16. Unemployment insurance and employment service operations

[All items except average benefits amounts are in thousands]

Item	1981		1982										
	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov. p
All programs:													
Insured unemployment	3,228	3,935	4,681	4,723	4,892	4,760	4,388	r4,327	4,495	4,398	4,283	4,391	4,635
State unemployment insurance program:[1]													
Initial claims[2]	2,286	3,272	3,328	2,272	2,418	2,347	1,989	2,399	2,655	2,358	r2,342	2,443	2,641
Insured unemployment (average weekly volume)	3,061	3,778	4,470	4,376	4,282	4,067	3,729	3,707	r3,912	3,831	r3,712	3,828	4,156
Rate of insured unemployment	3.5	4.3	5.1	5.0	4.9	4.6	4.3	4.3	4.6	4.4	4.2	4.4	4.7
Weeks of unemployment compensated	10,052	14,592	15,962	15,631	18,144	16,158	13,679	14,648	14,655	15,015	r14,547	13,786	15,108
Average weekly benefit amount for total unemployment	$110.52	$112.83	$114.83	$116.95	$117.10	$117.61	$118.08	$118.64	$117.28	r$118.97	r$120.78	$122.75	$123.22
Total benefits paid	$1,080,810	$1,592,546	$1,764,206	$1,781,830	$2,072,642	$1,849,881	$1,573,444	r$1,692,150	$1,679,378	$1,746,195	r$1,710,573	$1,646,554	$1,810,302
State unemployment insurance program:[1] (Seasonally adjusted data)													
Initial claims[2]	2,233	2,106	2,304	2,354	2,521	2,442	2,379	2,528	2,317	2,814	r2,902	2,688	....
Insured unemployment (average weekly volume)	3,403	3,593	3,604	3,644	3,777	3,939	3,925	3,995	3,959	4,137	r4,446	4,680	....
Rate of insured unemployment	3.9	4.1	4.1	4.2	4.3	4.5	4.5	4.6	4.5	4.7	5.1	5.3	....
Unemployment compensation for ex-servicemen:[3]													
Initial claims[1]	9	11	8	8	10	9	8	10	10	11	11	10	17
Insured unemployment (average weekly volume)	22	19	16	13	11	10	9	8	7	7	8	9	14
Weeks of unemployment compensated	91	93	65	49	48	37	31	29	25	24	25	28	33
Total benefits paid	$10,043	$10,155	$7,098	$5,304	$5,141	$4,013	$3,395	$3,314	$2,821	$2,793	$2,900	$3,378	$3,970
Unemployment compensation for Federal civilian employees:[4]													
Initial claims	16	17	17	12	13	13	11	14	13	12	13	16	14
Insured unemployment (average weekly volume)	36	39	40	40	38	33	29	28	29	27	26	28	31
Weeks of unemployment compensated	127	174	162	154	172	146	120	123	120	118	111	109	125
Total benefits paid	$13,491	$18,891	$18,040	$17,517	$19,677	$16,806	$13,526	$13,922	$13,445	$13,140	$12,303	$12,119	$13,894
Railroad unemployment insurance:													
Applications	13	19	22	11	9	5	5	36	68	68	14	20	17
Insured unemployment (average weekly volume)	44	54	75	67	65	57	44	44	55	55	61	82	81
Number of payments	83	117	153	140	154	130	95	93	100	100	137	159	162
Average amount of benefit payment	$207.08	$212.33	$213.39	$214.07	$215.71	$209.48	$200.75	$199.15	$202.54	$202.54	$216.14	$212.35	$216.55
Total benefits paid	$16,377	$25,292	$30,544	$28,011	$33,853	$26,262	$19,110	$18,574	$17,998	$17,998	$31,123	$31,638	$35,061
Employment service:[5]													
New applications and renewals	....	4,081	....	....	7,439	....	....	10,965	....	....	p13,346	....	....
Nonfarm placements	....	731	....	....	1,232	....	....	1,902	....	....	p2,629	....	....

[1] Initial claims and State insured unemployment include data under the program for Puerto Rican sugarcane workers.

[2] Excludes transition claims under State programs.

[3] Excludes data on claims and payments made jointly with other programs.

[4] Excludes data on claims and payments made jointly with State programs.

[5] Cumulative total for fiscal year (October 1-September 30). Data computed quarterly.

NOTE: Data for Puerto Rico and the Virgin Islands included. Dashes indicate data not available.
p= preliminary.
r= revised.

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PRICE DATA

PRICE DATA are gathered by the Bureau of Labor Statistics from retail and primary markets in the United States. Price indexes are given in relation to a base period (1967 = 100, unless otherwise noted).

Definitions

The **Consumer Price Index** is a monthly statistical measure of the average change in prices in a fixed market basket of goods and services. Effective with the January 1978 index, the Bureau of Labor Statistics began publishing CPI's for two groups of the population. One index, a new CPI for All Urban Consumers, covers 80 percent of the total noninstitutional population; and the other index, a revised CPI for Urban Wage Earners and Clerical Workers, covers about half the new index population. The All Urban Consumers index includes, in addition to wage earners and clerical workers, professional, managerial, and technical workers, the self-employed, short-term workers, the unemployed, retirees, and others not in the labor force.

The CPI is based on prices of food, clothing, shelter, fuel, drugs, transportation fares, doctor's and dentist's fees, and other goods and services that people buy for day-to-day living. The quantity and quality of these items is kept essentially unchanged between major revisions so that only price changes will be measured. Prices are collected from over 18,000 tenants, 24,000 retail establishments, and 18,000 housing units for property taxes in 85 urban areas across the country. All taxes directly associated with the purchase and use of items are included in the index. Because the CPI's are based on the expenditures of two population groups in 1972–73, they may not accurately reflect the experience of individual families and single persons with different buying habits.

Though the CPI is often called the "Cost-of-Living Index," it measures only price change, which is just one of several important factors affecting living costs. Area indexes do not measure differences in the level of prices among cities. They only measure the average change in prices for each area since the base period.

Producer Price Indexes measure average changes in prices received in primary markets of the United States by producers of commodities in all stages of processing. The sample used for calculating these indexes contains about 2,800 commodities and about 10,000 quotations per month selected to represent the movement of prices of all commodities produced in the manufacturing, agriculture, forestry, fishing, mining, gas and electricity, and public utilities sectors. The universe includes all commodities produced or imported for sale in commercial transactions in primary markets in the United States.

Producer Price Indexes can be organized by stage of processing or by commodity. The stage of processing structure organizes products by degree of fabrication (that is, finished goods, intermediate or semifinished goods, and crude materials). The commodity structure organizes products by similarity of end-use or material composition.

To the extent possible, prices used in calculating Producer Price Indexes apply to the first significant commercial transaction in the United States, from the production or central marketing point. Price data are generally collected monthly, primarily by mail questionnaire. Most prices are obtained directly from producing companies on a voluntary and confidential basis. Prices generally are reported for the Tuesday of the week containing the 13th day of the month.

In calculating Producer Price Indexes, price changes for the various commodities are averaged together with implicit quantity weights representing their importance in the total net selling value of all commodities as of 1972. The detailed data are aggregated to obtain indexes for stage of processing groupings, commodity groupings, durability of product groupings, and a number of special composite groupings.

Price indexes for the output of selected SIC industries measure average price changes in commodities produced by particular industries, as defined in the *Standard Industrial Classification Manual 1972* (Washington, U.S. Office of Management and Budget, 1972). These indexes are derived from several price series, combined to match the economic activity of the specified industry and weighted by the value of shipments in the industry. They use data from comprehensive industrial censuses conducted by the U.S. Bureau of the Census and the U.S. Department of Agriculture.

Notes on the data

Beginning with the May 1978 issue of the *Review,* regional CPI's cross classified by population size, were introduced. These indexes will enable users in local areas for which an index is not published to get a better approximation of the CPI for their area by using the appropriate population size class measure for their region. The cross-classified indexes will be published bimonthly. (See table 19.)

For further details about the new and the revised indexes and a comparison of various aspects of these indexes with the old unrevised CPI, see *Facts About the Revised Consumer Price Index,* a pamphlet in the Consumer Price Index Revision 1978 series. See also *The Consumer Price Index: Concepts and Content Over the Years,* Report 517, revised edition (Bureau of Labor Statistics, May 1978).

For interarea comparisons of living costs at three hypothetical standards of living, see the family budget data published in the *Handbook of Labor Statistics, 1977,* Bulletin 1966 (Bureau of Labor Statistics, 1977), tables 122–133. Additional data and analysis on price changes are provided in the *CPI Detailed Report* and *Producer Prices and Price Indexes,* both monthly publications of the Bureau.

As of January 1976, the Wholesale Price Index (as it was then called) incorporated a revised weighting structure reflecting 1972 values of shipments. From January 1967 through December 1975, 1963 values of shipments were used as weights.

For a discussion of the general method of computing consumer, producer, and industry price indexes, see *BLS Handbook of Methods for Surveys and Studies,* Bulletin 1910 (Bureau of Labor Statistics, 1976), chapters 13–15. See also John F. Early, "Improving the measurement of producer price change," *Monthly Labor Review,* April 1978, pp. 7–15. For industry prices, see also Bennett R. Moss, "Industry and Sector Price Indexes," *Monthly Labor Review,* August 1965, pp. 974–82.

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17. Consumer Price Index for Urban Wage Earners and Clerical Workers, annual averages and changes, 1967–81

[1967=100]

Year	All items		Food and beverages		Housing		Apparel and upkeep		Transportation		Medical care		Entertainment		Other goods and services	
	Index	Percent change	Index	Percent change	Index	Percent change	Index	Percent change	Index	Percent change	Index	Percent change	Index	Percent change	Index	Percent change
1967	100.0	...	100.0	...	100.0	...	100.0	...	100.0	...	100.0	...	100.0	...	100.0	...
1968	104.2	4.2	103.6	3.6	104.0	4.0	105.4	5.4	103.2	3.2	106.1	6.1	105.7	5.7	105.2	5.2
1969	109.8	5.4	108.8	5.0	110.4	6.2	111.5	5.8	107.2	3.9	113.4	6.9	111.0	5.0	110.4	4.9
1970	116.3	5.9	114.7	5.4	118.2	7.1	116.1	4.1	112.7	5.1	120.6	6.3	116.7	5.1	116.8	5.8
1971	121.3	4.3	118.3	3.1	123.4	4.4	119.8	3.2	118.6	5.2	128.4	6.5	122.9	5.3	122.4	4.8
1972	125.3	3.3	123.2	4.1	128.1	3.8	122.3	2.1	119.9	1.1	132.5	3.2	126.5	2.9	127.5	4.2
1973	133.1	6.2	139.5	13.2	133.7	4.4	126.8	3.7	123.8	3.3	137.7	3.9	130.0	2.8	132.5	3.9
1974	147.7	11.0	158.7	13.8	148.8	11.3	136.2	7.4	137.7	11.2	150.5	9.3	139.8	7.5	142.0	7.2
1975	161.2	9.1	172.1	8.4	164.5	10.6	142.3	4.5	150.6	9.4	168.6	12.0	152.2	8.9	153.9	8.4
1976	170.5	5.8	177.4	3.1	174.6	6.1	147.6	3.7	165.5	9.9	184.7	9.5	159.8	5.0	162.7	5.7
1977	181.5	6.5	188.0	6.0	186.5	6.8	154.2	4.5	177.2	7.1	202.4	9.6	167.7	4.9	172.2	5.8
1978	195.3	7.6	206.2	9.7	202.6	8.6	159.5	3.4	185.8	4.9	219.4	8.4	176.2	5.1	183.2	6.4
1979	217.7	11.5	228.7	10.9	227.5	12.3	166.4	4.3	212.8	14.5	240.1	9.4	187.6	6.5	196.3	7.2
1980	247.0	13.5	248.7	8.7	263.2	15.7	177.4	6.6	250.5	17.7	267.2	11.3	203.7	8.5	213.6	8.8
1981	272.3	10.2	267.8	7.7	293.2	11.4	186.6	5.2	281.3	12.3	295.1	10.4	219.0	7.5	233.3	9.2

18. Consumer Price Index for All Urban Consumers and revised CPI for Urban Wage Earners and Clerical Workers, U.S. city average—general summary and groups, subgroups, and selected items

[1967=100 unless otherwise specified]

General summary	All Urban Consumers							Urban Wage Earners and Clerical Workers (revised)						
	1981	1982						1981	1982					
	Nov.	June	July	Aug.	Sept.	Oct.	Nov.	Nov.	June	July	Aug.	Sept.	Oct.	Nov.
All items	280.7	290.6	292.2	292.8	293.3	294.1	293.6	280.4	290.1	291.8	292.4	292.8	293.6	293.2
Food and beverages	269.9	280.2	280.8	279.9	280.1	279:6	279.1	270.3	280.5	281.2	280.2	280.4	279.9	279.4
Housing	304.2	317.5	319.2	320.1	319.7	320.7	319.0	303.8	317.5	319.3	320.5	320.0	321.2	319.6
Apparel and upkeep	191.3	190.8	189.7	191.8	194.9	195.5	194.4	190.5	189.6	188.7	190.7	194.1	194.6	194.4
Transportation	289.1	292.8	296.1	296.2	295.3	295.5	295.8	290.8	294.5	297.9	298.0	296.9	297.0	297.3
Medical care	308.2	326.4	330.0	333.3	336.0	338.7	342.2	307.1	324.8	328.1	331.3	333.9	336.5	339.8
Entertainment	226.8	235.6	236.6	237.4	238.3	240.3	239.9	224.3	232.3	233.5	233.9	234.8	236.5	236.1
Other goods and services	245.9	255.8	257.2	258.3	266.6	271.2	273.8	233.1	253.1	254.5	255.7	262.8	267.8	270.9
Commodities	258.0	265.1	266.5	266.4	266.6	267.5	267.8	258.5	265.4	266.9	266.8	267.0	267.9	268.2
Commodities less food and beverages	248.3	254.0	255.7	255.9	256.1	257.6	258.2	249.1	254.5	256.3	256.5	256.8	258.3	258.9
Nondurables less food and beverages	266.7	266.3	268.2	268.8	269.9	271.0	271.4	269.0	268.2	270.3	270.7	271.8	272.9	273.3
Durables	233.2	243.2	244.7	244.6	244.1	246.0	246.6	232.3	242.3	243.9	244.0	243.6	245.4	246.2
Services	320.6	334.9	337.0	338.9	339.7	340.3	338.6	321.1	335.7	337.9	340.0	340.5	341.2	339.3
Rent, residential	215.0	222.6	224.8	226.0	226.9	228.9	230.2	214.5	222.1	224.3	225.5	226.4	228.4	229.7
Household services less rent	389.2	407.7	409.4	411.7	410.4	409.2	404.1	393.6	413.3	415.3	418.1	416.5	415.6	410.4
Transportation services	283.2	294.7	297.2	297.8	298.7	300.5	299.9	282.3	293.2	295.7	296.5	296.9	298.4	297.5
Medical care services	333.7	353.0	357.3	361.0	364.0	366.9	371.0	332.0	350.7	354.7	358.3	361.1	363.9	367.7
Other services	248.7	257.0	258.0	259.7	266.3	268.4	269.2	247.2	255.5	256.6	258.4	264.0	266.1	266.8
Special indexes:														
All items less food	280.1	289.7	291.5	292.5	292.9	294.0	293.6	280.1	289.4	291.4	292.4	292.8	293.9	293.5
All items less mortgage interest costs	264.2	273.6	275.1	275.6	276.7	278.0	278.2	264.6	273.7	275.3	275.8	276.7	277.9	278.1
Commodities less food	246.2	251.9	253.5	253.8	253.9	255.4	256.0	247.0	252.4	254.1	254.4	254.7	256.1	256.7
Nondurables less food	261.1	261.2	263.0	263.6	264.6	265.7	266.1	263.4	263.0	265.0	265.4	266.5	267.5	267.9
Nondurables less food and apparel	300.1	301.0	304.3	304.2	304.2	305.5	306.2	302.0	302.4	305.8	305.5	305.6	306.9	307.5
Nondurables	269.5	274.4	275.7	275.5	276.2	276.5	276.4	270.7	275.4	276.8	276.5	277.2	277.4	277.4
Services less rent	340.8	356.5	358.5	360.5	361.3	361.6	359.3	341.6	357.7	359.9	362.2	362.5	362.9	360.4
Services less medical care	316.9	330.7	332.5	334.1	334.8	335.1	332.9	317.5	331.7	333.6	335.6	335.8	336.3	334.0
Domestically produced farm foods	258.3	270.3	270.7	268.4	268.0	266.6	265.3	257.8	269.2	269.7	267.4	267.0	265.5	264.4
Selected beef cuts	271.9	289.1	287.4	280.8	279.3	272.0	271.9	273.2	290.6	288.8	281.9	280.7	273.2	273.2
Energy	414.1	418.6	424.5	424.5	424.2	425.0	422.6	417.3	420.4	426.5	426.1	425.6	426.0	423.7
All items less energy	270.4	280.7	282.0	282.7	283.1	284.0	283.6	269.2	279.4	280.8	281.5	281.9	282.8	282.5
All items less food and energy	267.2	277.3	278.7	279.8	280.4	281.5	281.2	265.9	276.0	277.6	278.7	279.2	280.4	280.2
Commodities less food and energy	223.8	232.1	233.1	233.6	234.1	236.0	236.6	223.0	231.3	232.4	232.8	233.6	235.4	236.2
Energy commodities	448.2	430.8	438.2	436.6	433.3	431.9	431.6	449.0	431.6	439.0	437.3	433.8	432.3	431.8
Services less energy	317.7	329.9	331.8	333.6	334.2	334.4	333.1	318.2	330.6	332.6	334.7	334.8	335.2	333.7
Purchasing power of the consumer dollar, 1967 = $1	$0.356	$0.344	$0.342	$0.342	$0.341	$0.340	$0.341	$0.357	$0.345	$0.343	$0.342	$0.342	$0.341	$0.341

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18. Continued—Consumer Price Index—U.S. city average

[1967=100 unless otherwise specified]

General summary	All Urban Consumers							Urban Wage Earners and Clerical Workers (revised)						
	1981	1982						1981	1982					
	Nov.	June	July	Aug.	Sept.	Oct.	Nov.	Nov.	June	July	Aug.	Sept.	Oct.	Nov.
FOOD AND BEVERAGES	269.9	280.2	280.8	279.9	280.1	279.6	279.1	270.3	280.5	281.2	280.2	280.4	279.9	279.4
Food	277.1	287.8	288.5	287.4	287.6	287.0	286.4	277.4	288.0	288.6	287.5	287.7	287.2	286.6
Food at home	271.0	282.6	282.8	280.8	280.6	279.4	278.3	270.4	281.6	281.9	279.8	279.7	278.5	277.4
Cereals and bakery products	276.3	283.6	284.3	284.8	284.6	285.0	285.5	275.5	282.3	283.0	283.4	283.4	283.7	284.1
Cereals and cereal products (12/77 = 100)	149.9	154.5	154.8	154.5	154.3	154.0	153.2	152.1	155.5	155.8	155.5	155.2	154.9	154.1
Flour and prepared flour mixes (12/77 = 100)	138.4	142.1	143.5	141.6	141.4	139.9	139.2	140.2	142.5	144.0	142.1	141.8	140.3	139.5
Cereal (12/77 = 100)	157.4	166.1	166.3	166.5	166.9	167.5	167.2	158.9	168.2	168.5	168.6	169.0	169.7	169.4
Rice, pasta, and cornmeal (12/77 = 100)	149.6	149.4	148.9	149.3	148.2	147.6	146.1	153.9	150.6	150.0	150.5	149.4	148.7	147.3
Bakery products (12/77 = 100)	144.9	148.6	149.0	149.4	149.4	149.7	150.3	143.7	147.4	147.8	148.1	148.2	148.6	149.1
White bread	241.3	242.4	246.1	246.6	246.1	246.7	246.8	237.6	238.3	241.9	242.5	241.9	242.6	242.6
Other breads (12/77 = 100)	142.8	145.6	145.1	146.2	147.1	146.5	147.3	144.9	147.5	147.0	148.2	149.0	148.4	149.4
Fresh biscuits, rolls, and muffins (12/77 = 100)	145.2	149.9	148.9	150.5	149.5	151.0	150.9	141.9	146.2	145.4	146.6	145.6	147.1	146.9
Fresh cakes and cupcakes (12/77 = 100)	145.0	149.2	148.9	149.5	150.3	150.1	150.5	143.2	147.5	147.2	147.6	148.7	148.5	148.8
Cookies (12/77 = 100)	146.3	150.7	150.0	149.6	150.9	152.2	153.6	146.8	151.5	150.9	150.6	152.1	153.2	154.5
Crackers, bread, and cracker products (12/77 = 100)	133.1	140.9	141.8	141.3	140.8	141.9	143.3	133.4	142.3	143.2	142.6	142.3	143.3	144.6
Fresh sweetrolls, coffeecake, and donuts (12/77 = 100)	144.8	148.9	148.5	148.9	149.2	148.7	149.6	145.8	151.5	151.1	151.5	151.8	151.4	152.3
Frozen and refrigerated bakery products and fresh pies, tarts, and turnovers (12/77 = 100)	149.2	156.3	156.2	156.6	154.7	154.4	155.8	143.1	149.4	149.2	149.5	148.1	147.6	148.6
Meats, poultry, fish, and eggs	254.2	266.0	268.5	265.4	267.8	265.1	263.6	254.0	265.8	268.3	265.1	267.7	265.0	263.5
Meats, poultry, and fish	259.2	274.3	276.2	273.7	275.3	272.4	270.8	258.8	273.9	275.8	273.3	275.1	272.1	270.6
Meats	259.6	277.2	278.8	276.5	278.4	274.9	273.6	259.3	276.5	278.2	275.8	277.9	274.6	273.2
Beef and veal	271.5	288.2	286.7	280.5	279.1	272.2	272.0	272.2	289.0	287.4	280.8	279.8	272.7	272.5
Ground beef other than canned	266.1	274.6	272.5	268.1	265.4	262.4	263.0	268.0	275.9	273.9	269.0	267.0	263.7	264.2
Chuck roast	282.6	295.4	296.2	289.7	286.9	281.9	281.7	292.6	304.9	305.3	298.9	295.9	290.4	290.3
Round roast	245.0	257.0	251.8	245.0	245.4	237.9	241.4	248.2	260.1	254.7	247.9	249.2	240.5	244.3
Round steak	256.7	278.8	271.2	263.4	262.0	253.4	257.1	254.8	277.2	269.4	261.1	260.6	251.0	255.1
Sirloin steak	262.0	294.1	295.6	285.5	285.2	266.3	259.8	260.7	295.5	298.0	286.8	286.7	268.0	260.6
Other beef and veal (12/77 = 100)	161.1	173.3	173.3	169.7	169.3	164.9	164.1	159.2	171.9	171.7	168.0	167.6	163.4	162.4
Pork	235.6	259.5	265.4	268.2	277.1	277.9	274.2	235.9	258.9	264.9	267.6	276.3	277.0	273.4
Bacon	238.1	280.7	283.9	295.6	315.5	312.4	298.7	242.9	285.3	288.7	300.4	320.7	317.7	304.0
Chops	217.0	241.2	248.9	248.0	252.5	252.3	249.0	216.2	239.6	247.3	246.3	250.6	250.0	247.0
Ham other than canned (12/77 = 100)	108.9	112.6	115.3	116.8	122.1	126.5	127.3	106.6	109.6	112.4	113.8	119.1	123.4	124.2
Sausage	298.1	326.3	331.9	332.2	341.2	342.1	337.7	299.2	327.2	332.9	333.5	342.5	343.2	338.5
Canned ham	243.1	253.2	255.3	257.6	259.7	267.2	270.5	247.0	256.4	258.7	261.1	263.5	271.4	275.0
Other pork (12/77 = 100)	131.1	145.4	150.3	150.8	153.8	151.3	149.6	130.9	144.7	149.5	150.0	153.0	150.5	148.6
Other meats	260.5	268.5	272.0	272.8	272.1	272.2	271.6	259.9	267.8	271.3	272.3	271.7	272.2	271.5
Frankfurters	259.9	268.8	274.2	275.6	275.3	274.8	274.4	260.9	268.3	273.4	274.9	274.7	274.0	273.8
Bologna, liverwurst, and salami (12/77 = 100)	146.7	154.6	156.5	157.5	156.6	158.5	156.6	145.9	154.6	156.6	157.6	156.6	158.5	156.4
Other lunchmeats (12/77 = 100)	132.1	135.5	137.3	138.3	138.9	140.1	141.3	130.6	133.4	135.1	136.1	136.7	137.9	139.1
Lamb and organ meats (12/77 = 100)	141.7	143.1	143.9	142.3	140.5	137.0	135.4	144.6	146.5	147.3	145.6	143.6	140.6	138.5
Poultry	192.3	197.5	199.6	196.2	196.2	195.4	192.0	190.6	195.8	197.8	194.4	194.2	193.2	190.0
Fresh whole chicken	190.9	199.1	201.2	193.8	194.8	192.6	189.3	188.5	197.0	198.8	191.8	192.5	190.3	187.4
Fresh and frozen chicken parts (12/77 = 100)	127.3	129.3	129.4	128.2	127.1	126.8	125.3	126.5	127.5	127.9	126.5	125.4	124.9	123.5
Other poultry (12/77 = 100)	122.2	124.6	127.3	127.7	127.9	128.5	125.4	121.5	124.3	126.9	127.4	127.4	128.0	124.6
Fish and seafood	358.9	365.2	370.2	367.6	369.4	367.1	366.6	356.6	364.2	368.7	365.8	368.4	366.0	365.3
Canned fish and seafood (12/77 = 100)	141.5	139.9	140.5	139.4	139.3	138.6	139.0	141.0	139.4	139.9	138.8	138.7	138.1	138.4
Fresh and frozen fish and seafood (12/77 = 100)	133.9	138.6	141.3	140.4	141.5	140.5	140.0	132.7	138.3	140.8	139.7	141.3	140.2	139.6
Eggs	194.7	162.5	173.6	161.2	175.2	175.8	175.0	196.7	163.4	174.7	162.3	176.1	176.7	176.2
Dairy products	245.0	246.3	247.5	247.5	247.0	247.1	247.4	244.7	245.7	246.8	246.8	246.3	246.4	246.7
Fresh milk and cream (12/77 = 100)	134.9	135.2	135.6	135.4	135.1	135.0	135.1	134.6	134.7	135.1	134.8	134.5	134.5	134.6
Fresh whole milk	220.8	221.3	221.6	221.2	220.8	220.8	220.9	220.1	220.4	220.7	220.3	219.9	220.0	220.1
Other fresh milk and cream (12/77 = 100)	134.9	135.4	136.2	136.0	135.6	135.3	135.4	134.9	134.9	135.7	135.5	135.0	134.7	134.9
Processed dairy products (12/77 = 100)	143.5	144.9	145.9	146.3	146.1	146.2	146.6	144.0	145.2	146.2	146.6	146.3	146.5	146.9
Butter	248.0	250.9	251.1	252.1	252.2	252.6	252.5	250.2	253.4	253.7	254.6	254.7	255.1	255.1
Cheese (12/77 = 100)	141.1	143.2	144.2	144.8	144.9	144.7	144.5	141.1	143.6	144.5	145.1	145.2	145.0	144.8
Ice cream and related products (12/77 = 100)	149.3	149.6	150.4	150.6	149.3	150.4	152.4	149.4	148.7	149.6	149.6	148.4	149.6	151.5
Other dairy products (12/77 = 100)	138.7	138.7	141.3	140.7	141.1	141.0	140.9	140.2	139.4	142.0	141.6	141.8	141.7	141.5
Fruits and vegetables	272.0	305.6	299.7	291.4	284.1	280.7	276.1	268.1	301.0	295.3	286.7	278.8	275.0	271.3
Fresh fruits and vegetables	267.8	325.9	313.8	296.9	283.5	277.4	268.3	261.9	318.6	307.1	289.7	275.2	268.4	261.0
Fresh fruits	276.1	340.8	332.4	336.1	329.0	317.1	288.9	266.0	327.0	320.5	323.2	313.6	300.4	275.4
Apples	248.7	321.4	331.8	314.5	285.5	250.7	239.4	249.1	321.9	333.3	316.7	286.6	251.9	239.9
Bananas	249.4	267.9	245.4	233.7	240.7	227.8	243.7	248.3	265.5	243.6	231.3	238.5	226.7	241.9
Oranges	314.0	406.8	438.2	473.0	516.3	520.8	399.6	286.0	367.5	399.9	433.5	466.8	465.7	360.4
Other fresh fruits (12/77 = 100)	144.7	177.1	161.6	163.9	152.1	148.0	143.3	139.7	170.3	156.1	158.1	146.4	142.4	137.5
Fresh vegetables	260.1	311.9	296.4	260.2	241.0	240.2	249.1	258.2	311.1	295.0	259.6	240.6	239.7	248.1
Potatoes	286.3	344.9	370.9	328.1	272.4	243.8	240.8	281.5	339.7	366.0	323.4	269.6	240.5	235.9
Lettuce	257.1	269.1	254.5	246.3	236.1	259.2	259.2	247.4	270.0	253.0	247.5	237.9	260.9	259.8
Tomatoes	206.9	275.6	270.2	194.3	184.9	210.5	242.9	209.7	279.9	274.9	198.2	187.9	213.7	246.6
Other fresh vegetables (12/77 = 100)	145.0	177.5	155.6	138.3	134.0	131.5	137.6	145.8	177.0	154.8	137.8	133.5	131.0	137.1
Processed fruits and vegetables	279.2	285.9	[c]286.8	288.0	287.4	286.8	287.3	277.3	283.9	284.8	285.9	285.3	284.6	285.1
Processed fruits (12/77 = 100)	145.1	148.0	148.5	148.7	149.0	149.2	149.7	144.6	147.6	148.1	148.2	148.6	148.8	149.4
Frozen fruit and fruit juices (12/77 = 100)	144.9	144.4	143.5	142.8	144.1	144.8	145.6	144.1	143.4	142.6	141.7	143.2	144.0	144.7
Fruit juices other than frozen (12/77 = 100)	148.6	151.7	152.2	153.0	152.0	152.5	153.4	147.4	150.7	151.0	151.9	151.0	151.4	152.6
Canned and dried fruits (12/77 = 100)	141.6	147.0	148.8	148.9	149.8	149.2	149.1	141.8	147.6	149.4	149.6	150.4	149.8	149.7
Processed vegetables (12/77 = 100)	135.4	139.3	139.7	140.7	139.8	139.1	139.0	134.7	138.2	138.6	139.6	138.6	137.9	137.8
Frozen vegetables (12/77 = 100)	137.4	145.6	146.7	147.7	148.1	147.7	149.0	139.2	146.9	148.0	149.0	149.5	148.8	150.4

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18. Continued—Consumer Price Index—U.S. city average

[1967=100 unless otherwise specified]

General summary	All Urban Consumers							Urban Wage Earners and Clerical Workers (revised)						
	1981	1982						1981	1982					
	Nov.	June	July	Aug.	Sept.	Oct.	Nov.	Nov.	June	July	Aug.	Sept.	Oct.	Nov.
FOOD AND BEVERAGES—Continued														
Food—Continued														
Food at home—Continued														
Fruits and vegetables—Continued														
Cut corn and canned beans except lima (12/77=100)	138.3	141.1	141.0	143.6	141.3	140.8	140.8	136.0	138.8	138.6	141.2	138.8	138.4	138.4
Other canned and dried vegetables (12/77=100)	133.1	135.2	135.4	135.6	134.8	133.9	133.0	131.8	133.8	134.1	134.2	133.3	132.4	131.6
Other foods at home	326.0	332.6	332.2	333.3	333.6	334.8	334.3	327.0	333.5	333.1	334.0	334.5	335.7	335.1
Sugar and sweets	359.1	366.8	369.5	370.1	371.2	370.6	370.3	359.0	366.9	369.7	370.3	371.3	370.6	370.1
Candy and chewing gum (12/77=100)	149.3	150.4	150.5	150.0	149.7	149.4	149.6	148.9	150.5	150.6	150.1	149.8	149.3	149.5
Sugar and artificial sweeteners (12/77=100)	155.2	161.4	164.6	166.7	167.5	167.3	165.2	157.0	162.8	166.1	168.2	169.0	168.8	166.6
Other sweets (12/77=100)	144.9	148.9	149.8	149.6	151.1	151.0	152.5	143.1	146.9	147.9	147.5	148.9	148.9	150.2
Fats and oils (12/77=100)	262.2	260.7	259.3	258.3	258.4	258.4	258.6	263.1	260.7	259.3	258.2	258.3	258.4	258.5
Margarine	255.2	261.2	258.4	257.9	259.3	258.4	257.5	254.9	260.8	258.0	257.3	258.5	257.8	256.8
Nondairy substitutes and peanut butter (12/77=100)	163.0	156.5	154.9	154.2	151.2	151.2	152.0	163.0	154.9	153.1	152.4	149.5	149.5	150.3
Other fats, oils, and salad dressings (12/77=100)	129.8	129.1	129.2	128.5	129.4	129.7	129.8	130.4	129.7	129.7	129.0	130.0	130.2	130.3
Nonalcoholic beverages	413.4	424.8	422.8	423.8	424.2	427.5	426.2	415.2	426.6	424.4	425.3	425.9	429.2	427.9
Cola drinks, excluding diet cola	298.8	305.9	302.9	304.3	305.0	308.9	308.8	296.1	303.3	300.4	301.7	302.8	306.2	306.2
Carbonated drinks, including diet cola (12/77=100)	141.4	143.1	143.3	144.8	144.6	146.2	144.8	139.3	141.2	141.1	142.6	142.3	144.0	142.4
Roasted coffee	341.0	365.1	364.3	365.5	362.9	362.0	360.0	337.3	360.1	359.3	360.4	357.9	357.2	354.8
Freeze dried and instant coffee	330.8	344.3	344.9	344.9	343.1	343.6	344.2	333.2	343.8	344.4	344.4	342.5	343.2	343.7
Other noncarbonated drinks (12/77=100)	136.4	140.0	139.2	137.7	138.8	139.1	138.8	136.4	140.2	139.5	137.8	139.0	139.3	139.1
Other prepared foods	262.7	267.8	268.0	269.9	269.9	270.5	270.2	264.5	269.5	269.8	271.5	271.7	272.2	271.9
Canned and packaged soup (12/77=100)	133.4	136.3	136.9	137.9	137.4	136.8	136.6	136.1	138.3	138.9	140.0	139.5	138.7	138.5
Frozen prepared foods (12/77=100)	146.5	147.3	146.7	149.1	148.9	148.5	149.7	145.1	146.8	146.0	148.5	148.4	147.9	149.2
Snacks (12/77=100)	152.5	153.2	152.7	153.1	153.0	153.3	153.1	155.6	155.2	154.8	155.1	155.0	155.4	155.2
Seasonings, olives, pickles, and relish (12/77=100)	148.9	153.3	152.7	154.1	155.3	156.5	157.1	147.4	152.4	152.1	153.2	154.4	155.6	156.2
Other condiments (12/77=100)	145.0	150.6	151.4	151.9	152.2	152.1	151.7	146.5	152.4	153.2	153.6	154.0	153.9	153.4
Miscellaneous prepared foods (12/77=100)	144.8	148.3	149.3	150.2	149.7	151.4	150.2	145.2	148.5	149.5	150.3	149.9	151.6	150.3
Other canned and packaged prepared foods (12/77=100)	141.8	144.5	144.6	145.4	145.9	145.8	145.0	143.0	145.8	145.9	146.8	147.3	147.2	146.4
Food away from home	297.2	305.9	307.6	308.7	309.8	310.7	311.4	299.6	309.0	310.7	311.8	312.9	313.8	314.6
Lunch (12/77=100)	144.4	148.9	149.6	150.3	150.7	151.2	151.6	145.6	150.5	151.2	152.0	152.3	152.8	153.2
Dinner (12/77=100)	143.6	147.4	148.1	148.6	149.2	149.5	149.7	145.1	149.1	149.8	150.3	150.9	151.2	151.4
Other meals and snacks (12/77=100)	144.6	149.2	150.5	150.7	151.5	152.1	152.7	145.1	149.9	151.1	151.3	152.1	152.7	153.3
Alcoholic beverages	202.3	208.4	209.2	210.1	210.1	210.6	210.9	204.6	210.4	211.3	212.1	212.2	212.8	213.0
Alcoholic beverages at home (12/77=100)	131.2	135.0	135.5	136.1	135.9	136.2	136.2	132.8	136.3	136.9	137.4	137.2	137.6	137.5
Beer and ale	204.0	210.6	211.4	211.9	211.4	212.7	212.5	203.6	209.6	210.5	210.9	210.5	211.8	211.7
Whiskey	144.8	148.3	148.9	149.6	149.8	150.0	150.7	146.2	149.1	149.8	150.4	150.5	150.7	151.2
Wine	227.5	235.3	236.5	238.9	237.5	236.4	235.9	237.4	242.7	245.0	247.1	246.2	244.8	243.7
Other alcoholic beverages (12/77=100)	117.3	119.7	119.6	120.3	120.3	120.3	120.4	116.8	119.6	119.6	120.5	120.4	120.3	120.4
Alcoholic beverages away from home (12/77=100)	135.7	140.3	140.8	141.2	142.5	142.7	143.6	136.6	141.6	142.1	142.4	143.9	144.0	144.8
HOUSING	304.2	317.5	319.2	320.1	319.7	320.7	319.0	303.8	317.5	319.3	320.5	320.0	321.2	319.6
Shelter	327.2	340.9	342.8	344.2	342.6	342.8	340.7	328.5	342.6	344.6	346.5	344.7	345.2	343.0
Rent, residential	215.0	222.6	224.8	226.0	226.9	228.9	230.2	214.5	222.1	224.3	225.5	226.4	228.4	229.7
Other rental costs	305.3	327.3	330.0	333.9	343.0	341.6	337.8	305.0	326.3	329.4	333.3	341.1	339.5	335.6
Lodging while out of town	318.6	352.2	356.5	362.0	363.1	358.0	351.6	317.9	349.4	354.2	359.5	360.7	355.6	349.3
Tenants' insurance (12/77=100)	140.4	145.5	145.6	147.5	147.3	149.3	150.1	140.3	144.8	144.8	146.6	146.3	148.3	149.1
Homeownership	367.2	382.8	384.5	385.9	383.0	382.8	379.5	369.8	386.0	388.0	390.1	387.0	387.1	383.7
Home purchase	270.2	285.6	287.7	287.9	286.8	289.9	290.4	268.6	284.4	286.8	287.3	286.4	289.7	290.4
Financing, taxes, and insurance	505.6	521.8	524.3	527.3	519.9	514.3	504.8	511.9	529.7	532.4	536.8	528.9	524.3	514.6
Property insurance	393.3	400.6	401.5	402.5	404.8	405.8	406.9	395.5	402.7	403.7	404.6	407.4	408.5	409.7
Property taxes	208.0	218.8	219.3	221.8	223.7	224.5	225.5	210.0	220.7	221.1	223.7	225.6	226.4	227.5
Contracted mortgage interest cost	666.8	686.7	690.4	694.0	681.2	672.0	656.4	667.7	690.0	694.0	699.6	686.3	678.8	663.4
Mortgage interest rates	244.1	238.3	237.3	238.8	235.3	230.0	224.3	245.3	240.2	239.2	241.2	237.5	232.4	226.6
Maintenance and repairs	322.8	336.1	334.7	335.9	338.4	339.4	339.0	319.8	332.4	331.5	332.5	334.6	335.4	334.9
Maintenance and repair services	353.8	369.1	366.9	368.5	372.5	374.1	373.4	354.9	370.0	368.1	369.6	373.4	374.9	374.0
Maintenance and repair commodities	249.7	258.3	258.7	258.8	257.7	257.3	257.8	244.5	252.1	252.9	253.0	251.8	251.2	251.6
Paint and wallpaper, supplies, tools, and equipment (12/77=100)	146.5	153.3	153.4	154.2	153.0	152.8	153.1	140.0	146.0	146.5	147.3	145.9	145.7	145.9
Lumber, awnings, glass, and masonry (12/77=100)	124.1	124.7	125.0	124.1	123.6	122.8	123.3	121.8	122.1	122.5	121.7	121.3	120.4	120.8
Plumbing, electrical, heating, and cooling supplies (12/77=100)	133.1	136.2	137.1	136.3	136.1	135.4	135.8	132.4	136.0	136.6	135.6	135.3	134.6	135.3
Miscellaneous supplies and equipment (12/77=100)	131.6	138.4	138.3	138.8	139.0	139.4	139.4	134.2	140.6	140.5	140.9	141.2	141.8	141.6
Fuel and other utilities	329.8	352.2	354.7	356.3	359.5	363.4	362.2	330.9	353.6	356.2	357.7	361.0	364.7	363.6
Fuels	417.6	448.4	452.0	454.0	458.5	464.5	461.9	417.4	448.3	451.9	453.8	458.4	464.0	461.7
Fuel oil, coal, and bottled gas	676.1	656.6	659.9	659.9	662.8	677.2	691.3	679.3	659.7	662.9	662.7	665.4	679.7	693.7
Fuel oil	706.8	684.8	688.6	686.8	685.9	699.1	712.8	709.6	687.5	691.1	689.1	688.1	[c]701.2	714.7
Other fuels (6/78 = 100)	167.7	165.6	166.0	169.2	176.8	183.7	189.0	169.1	166.9	167.4	170.5	178.0	184.8	190.3
Gas (piped) and electricity	358.3	398.9	402.1	404.4	409.2	413.4	407.6	357.5	398.2	401.5	403.7	408.6	412.4	406.9
Electricity	298.6	327.5	330.5	333.7	332.5	327.0	318.4	297.7	327.7	330.8	333.7	332.5	326.3	317.3
Utility (piped) gas	437.0	497.2	500.2	500.6	517.6	542.0	543.1	436.0	493.8	496.9	497.5	514.5	538.8	541.6

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18. Continued—Consumer Price Index—U.S. city average

[1967 = 100 unless otherwise specified]

General summary	All Urban Consumers							Urban Wage Earners and Clerical Workers (revised)						
	1981	1982						1981	1982					
	Nov.	June	July	Aug.	Sept.	Oct.	Nov.	Nov.	June	July	Aug.	Sept.	Oct.	Nov.
HOUSING—Continued														
Fuel and other utilities—Continued														
Other utilities and public services	190.7	200.4	201.4	202.4	203.6	204.5	205.1	191.0	201.1	202.1	203.1	204.3	205.3	205.9
Telephone services	155.6	163.2	163.8	164.2	165.5	166.2	166.6	155.8	163.5	164.2	164.6	165.9	166.6	167.0
Local charges (12/77 = 100)	123.5	131.2	131.9	132.5	134.3	135.2	135.4	123.8	131.6	132.3	132.9	134.8	135.7	135.9
Interstate toll calls (12/77 = 100)	116.7	119.6	119.7	119.7	119.7	119.7	119.7	116.8	120.1	120.1	120.1	120.1	120.2	120.2
Intrastate toll calls (12/77 = 100)	105.3	109.8	110.0	110.0	110.1	110.4	111.1	105.0	109.4	109.6	109.6	109.7	110.1	110.9
Water and sewerage maintenance	306.1	324.9	327.7	331.9	332.4	334.1	335.1	307.9	328.0	330.8	334.8	335.4	337.1	338.2
Household furnishings and operations	227.2	233.7	234.1	233.4	234.2	235.4	235.1	223.6	230.4	230.9	230.0	231.0	232.3	231.8
Housefurnishings	189.4	194.7	194.7	193.3	194.3	195.9	195.1	187.3	192.6	192.7	191.3	192.4	193.9	193.0
Textile housefurnishings	211.7	220.2	218.6	220.4	222.1	223.2	222.6	214.7	223.3	221.1	222.9	225.0	226.4	225.8
Household linens (12/77 = 100)	130.8	134.6	131.9	132.9	135.4	136.4	133.8	131.9	135.9	133.3	134.1	136.4	137.6	135.0
Curtains, drapes, slipcovers, and sewing materials (12/77 = 100)	133.1	140.1	140.8	142.2	141.6	142.0	144.0	136.1	143.0	143.2	144.7	144.8	145.3	147.5
Furniture and bedding	209.2	214.4	214.2	210.3	213.3	215.8	214.1	205.3	210.9	210.5	206.9	210.3	212.3	210.3
Bedroom furniture (12/77 = 100)	139.6	143.0	144.8	141.4	145.5	146.7	146.2	135.2	139.7	141.2	137.3	142.1	143.5	142.1
Sofas (12/77 = 100)	118.7	117.5	117.7	117.0	117.2	119.4	116.4	118.8	118.2	118.1	117.5	117.7	119.6	117.0
Living room chairs and tables (12/77 = 100)	118.8	123.2	121.9	121.1	123.1	122.6	122.1	118.9	123.3	122.0	121.4	123.4	122.9	122.5
Other furniture (12/77 = 100)	137.1	142.3	140.9	137.1	137.8	140.6	140.1	133.1	137.7	136.3	133.3	134.1	136.0	135.3
Appliances including TV and sound equipment	148.2	151.4	151.6	151.3	151.5	152.0	151.7	147.7	151.2	151.5	151.2	151.4	151.9	151.5
Television and sound equipment (12/77 = 100)	109.0	108.6	108.7	108.3	108.2	108.5	108.1	108.3	107.7	107.8	107.5	107.4	107.6	107.3
Television	104.8	104.4	104.0	103.9	103.7	103.5	102.9	103.6	103.1	102.7	102.7	102.6	102.1	101.7
Sound equipment (12/77 = 100)	113.9	113.5	114.0	113.3	113.2	114.1	113.9	113.4	112.7	113.2	112.6	112.5	113.3	113.1
Household appliances	176.1	183.8	184.2	184.1	184.7	185.4	185.2	175.9	184.2	184.8	184.6	185.1	185.9	185.6
Refrigerators and home freezers	178.7	187.7	187.4	187.4	190.2	191.1	192.7	182.7	193.2	192.9	192.9	196.1	196.9	198.4
Laundry equipment (12/77 = 100)	130.7	136.7	137.3	137.3	137.6	140.0	140.0	130.8	136.9	137.5	137.5	137.9	140.4	140.3
Other household appliances (12/77 = 100)	119.4	123.9	124.4	124.3	124.0	123.5	122.7	117.4	122.3	123.0	122.7	122.0	121.7	120.7
Stoves, dishwashers, vacuums, and sewing machines (12/77 = 100)	118.7	123.1	123.3	122.7	123.4	122.9	120.7	116.8	121.6	122.2	121.4	121.5	121.4	119.2
Office machines, small electric appliances, and air conditioners (12/77 = 100)	120.1	124.8	125.6	126.0	124.6	124.0	124.7	118.1	123.0	123.9	124.2	122.5	122.0	122.4
Other household equipment (12/77 = 100)	134.4	139.0	139.6	138.2	137.8	139.6	139.1	132.4	136.9	137.5	136.0	135.6	137.6	137.1
Floor and window coverings, infants', laundry, cleaning, and outdoor equipment (12/77 = 100)	136.1	142.3	142.7	142.9	143.3	143.4	142.6	129.7	134.9	135.4	135.4	135.9	136.0	134.5
Clocks, lamps, and decor items (12/77 = 100)	129.5	132.2	132.3	129.8	129.7	131.3	131.3	125.2	128.2	128.3	125.1	124.9	126.4	126.8
Tableware, serving pieces, and nonelectric kitchenware (12/77 = 100)	141.2	145.6	145.9	143.8	141.6	145.1	144.6	137.5	141.4	141.9	140.0	137.6	141.3	141.0
Lawn equipment, power tools, and other hardware (12/77 = 100)	126.9	131.9	133.2	132.3	133.4	134.8	134.2	131.6	137.1	138.5	137.2	138.8	140.1	139.5
Housekeeping supplies	275.4	286.5	288.4	288.7	289.2	290.1	290.3	271.9	283.1	285.0	284.9	285.7	286.7	287.1
Soaps and detergents	269.7	280.8	281.4	279.4	282.8	283.5	283.5	265.2	277.0	277.6	275.4	278.9	279.7	279.9
Other laundry and cleaning products (12/77 = 100)	137.3	143.8	145.3	144.6	145.6	146.8	147.3	137.0	142.7	144.2	143.6	144.5	145.7	146.2
Cleansing and toilet tissue, paper towels and napkins (12/77 = 100)	143.6	146.5	147.7	148.5	148.0	148.9	148.2	143.9	146.1	147.4	148.3	147.9	148.9	148.1
Stationery, stationery supplies, and gift wrap (12/77 = 100)	128.5	132.5	134.3	135.4	136.8	137.6	138.3	131.3	136.0	137.8	138.6	140.0	140.7	141.4
Miscellaneous household products (12/77 = 100)	143.0	150.2	150.3	150.7	150.2	150.9	151.6	137.4	144.9	145.1	145.5	145.0	145.6	146.2
Lawn and garden supplies (12/77 = 100)	136.8	144.0	145.3	145.7	143.8	142.3	141.9	129.6	136.7	138.1	138.1	136.4	135.1	134.9
Housekeeping services	305.2	311.7	312.5	312.9	313.4	313.8	314.3	303.9	310.9	311.6	312.2	312.7	313.2	313.7
Postage	337.5	337.5	337.5	337.5	337.5	337.5	337.5	337.5	337.5	337.5	337.5	337.5	337.5	337.5
Moving, storage, freight, household laundry, and drycleaning services (12/77 = 100)	147.0	154.2	155.3	156.1	156.6	157.0	157.7	146.7	154.5	155.4	156.4	156.8	157.2	157.8
Appliance and furniture repair (12/77 = 100)	132.3	137.0	137.5	137.7	138.3	139.0	139.5	131.2	135.5	136.0	136.1	136.7	137.4	137.9
APPAREL AND UPKEEP	191.3	190.8	189.7	191.8	194.9	195.5	195.4	190.5	189.6	188.7	190.7	194.1	194.6	194.4
Apparel commodities	181.8	180.0	178.6	180.8	184.1	184.6	184.3	181.5	179.4	178.2	180.3	183.8	184.1	183.8
Apparel commodities less footwear	177.9	175.6	174.0	176.9	180.4	180.9	180.6	177.3	174.7	173.4	176.2	179.9	180.2	179.8
Men's and boys'	183.6	183.1	182.4	183.7	186.5	188.6	189.0	183.2	183.2	182.6	183.5	186.6	188.6	188.9
Men's (12/77 = 100)	115.9	115.4	114.9	115.9	117.7	119.0	119.3	115.9	115.8	115.4	116.2	118.2	119.4	119.7
Suits, sport coats, and jackets (12/77 = 100)	109.9	107.3	105.5	108.0	110.6	111.6	111.5	102.0	100.6	99.2	101.2	103.5	104.3	104.2
Coats and jackets (12/77 = 100)	102.8	99.5	98.2	99.1	103.7	103.7	103.4	105.1	101.1	99.8	100.3	106.4	106.4	105.4
Furnishings and special clothing (12/77 = 100)	133.6	138.0	138.7	138.4	138.6	141.0	142.4	129.8	134.7	135.3	134.9	135.8	137.7	139.1
Shirts (12/77 = 100)	123.0	121.5	121.6	121.9	123.8	125.2	125.8	125.4	123.8	123.6	123.9	126.2	128.1	128.7
Dungarees, jeans, and trousers (12/77 = 100)	109.8	109.7	109.5	110.5	111.4	112.4	112.6	115.5	115.2	115.0	116.0	116.9	118.0	118.1
Boys' (12/77 = 100)	118.0	118.5	118.6	118.4	120.2	121.7	121.6	116.5	116.9	116.9	116.7	118.3	119.8	119.7
Coats, jackets, sweaters, and shirts (12/77 = 100)	111.6	110.7	109.0	110.5	113.7	114.5	113.7	112.8	111.5	109.7	111.3	114.6	115.3	114.6
Furnishings (12/77 = 100)	127.0	131.9	132.1	131.1	132.6	133.6	132.6	123.3	128.0	128.2	127.2	128.6	129.5	128.5
Suits, trousers, sport coats, and jackets (12/77 = 100)	119.3	119.4	120.7	119.5	120.3	122.7	123.4	116.9	117.1	118.3	117.1	117.3	119.7	120.5
Women's and girls'	160.6	157.3	154.6	159.2	163.6	163.0	162.2	162.1	158.4	156.2	160.9	165.7	164.7	163.8
Women's (12/77 = 100)	106.3	104.4	102.1	105.4	108.7	108.1	107.3	107.6	105.4	103.5	106.9	110.5	109.8	108.8
Coats and jackets	164.0	156.4	154.9	163.0	169.7	170.5	169.5	166.3	162.9	161.8	171.0	176.9	176.8	173.2
Dresses	165.0	160.1	152.8	158.5	165.1	162.6	161.4	151.9	145.4	138.4	145.9	151.2	149.2	147.7
Separates and sportswear (12/77 = 100)	101.1	100.2	96.7	98.3	101.4	102.0	100.1	101.9	101.0	97.6	99.1	102.6	102.9	100.9
Underwear, nightwear, and hosiery (12/77 = 100)	124.1	127.9	127.7	129.3	129.7	129.9	130.6	124.0	127.6	127.4	129.0	129.4	129.6	130.2
Suits (12/77 = 100)	89.5	78.6	77.6	85.6	92.7	88.6	87.4	108.5	92.7	93.1	99.8	111.9	106.7	105.8
Girls' (12/77 = 100)	109.2	105.8	106.3	108.2	109.6	109.9	110.4	108.4	105.2	105.4	107.4	108.9	108.7	109.6
Coats, jackets, dresses, and suits (12/77 = 100)	100.3	95.1	98.8	101.4	102.5	104.5	103.9	99.9	92.4	96.0	99.4	100.5	102.3	102.2
Separates and sportswear (12/77 = 100)	111.3	106.0	103.6	105.8	107.8	106.0	106.0	110.2	107.7	104.1	105.9	108.5	105.2	105.9
Underwear, nightwear, hosiery, and accessories (12/77 = 100)	120.0	122.9	123.8	124.0	124.4	126.0	129.3	119.0	121.9	122.7	123.0	123.5	125.1	128.1

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18. Continued—Consumer Price Index—U.S. city average

[1967 = 100 unless otherwise specified]

General summary	All Urban Consumers							Urban Wage Earners and Clerical Workers (revised)						
	1981	1982						1981	1982					
	Nov.	June	July	Aug.	Sept.	Oct.	Nov.	Nov.	June	July	Aug.	Sept.	Oct.	Nov.
APPAREL AND UPKEEP—Continued														
Apparel commodities—Continued														
Apparel commodities less footwear—Continued														
Infants' and toddlers'	264.9	268.7	268.8	272.4	276.8	275.8	274.2	274.1	278.2	277.8	283.0	288.1	286.8	285.5
Other apparel commodities	214.8	209.9	209.7	210.8	212.6	213.1	212.7	206.1	198.9	198.7	199.5	201.2	201.7	201.4
Sewing materials and notions (12/77 = 100)	118.6	119.2	120.0	121.5	121.9	119.3	120.0	116.4	117.6	118.5	119.6	120.0	117.7	118.2
Jewelry and luggage (12/77 = 100)	147.5	142.8	142.2	142.6	144.1	145.6	144.9	141.0	133.6	133.1	133.3	134.7	136.2	135.7
Footwear	205.4	206.6	206.4	204.4	206.2	206.8	206.9	206.2	206.7	206.7	204.1	205.9	206.7	206.7
Men's (12/77 = 100)	130.3	132.1	132.3	130.9	132.4	133.2	132.5	132.3	134.1	134.3	132.7	134.1	135.0	134.2
Boys' and girls' (12/77 = 100)	132.1	132.1	131.7	128.7	129.4	129.5	129.3	134.0	134.8	134.4	131.3	131.9	132.1	131.8
Women's (12/77 = 100)	125.2	125.8	125.6	125.4	126.5	126.9	127.6	122.9	121.6	121.5	121.1	122.4	122.8	123.6
Apparel services	264.6	275.3	276.6	277.4	279.2	281.3	282.0	262.3	273.0	274.3	275.2	277.2	279.7	280.3
Laundry and drycleaning other than coin operated (12/77 = 100)	158.2	164.8	165.4	165.6	166.7	167.2	167.9	156.3	163.3	163.8	164.1	165.2	165.8	166.4
Other apparel services (12/77 = 100)	137.9	143.1	144.1	145.0	145.9	148.2	148.1	138.6	143.4	144.6	145.5	146.6	149.3	149.2
TRANSPORTATION	289.1	292.8	296.1	296.2	295.3	295.5	295.8	290.8	294.5	297.9	298.0	296.9	297.0	297.3
Private	285.8	288.9	292.3	292.4	291.1	291.1	291.4	288.3	291.6	295.1	295.2	293.8	293.8	294.1
New cars	195.3	198.1	198.6	198.7	197.7	197.7	199.0	195.2	197.9	198.5	198.6	197.5	197.4	198.7
Used cars	281.4	298.2	302.4	304.4	304.6	306.7	310.5	281.4	298.2	302.4	304.4	304.6	306.7	310.5
Gasoline	409.5	392.3	400.3	398.4	394.2	390.6	388.1	410.9	393.8	401.6	399.7	395.5	391.9	389.5
Automobile maintenance and repair	302.8	316.0	318.0	319.2	320.6	321.9	322.3	303.4	316.8	318.7	320.0	321.3	322.6	323.1
Body work (12/77 = 100)	149.9	156.3	157.5	158.2	159.4	160.4	161.0	148.3	154.7	156.0	156.8	158.1	159.4	159.8
Automobile drive train, brake, and miscellaneous mechanical repair (12/77 = 100)	144.2	151.6	151.9	152.5	153.1	153.2	153.7	147.3	155.7	156.1	156.6	157.1	157.2	157.8
Maintenance and servicing (12/77 = 100)	140.9	146.8	147.9	148.5	148.9	149.3	149.3	140.5	146.2	147.3	147.8	148.2	148.6	148.6
Power plant repair (12/77 = 100)	144.9	150.8	151.7	152.4	153.3	154.3	154.4	144.7	150.3	151.2	151.9	152.8	153.8	153.9
Other private transportation	249.5	258.7	260.8	260.8	260.0	261.4	260.7	253.0	261.8	264.0	263.9	263.0	264.1	262.9
Other private transportation commodities	213.4	217.5	216.3	214.8	213.9	214.4	215.1	216.8	220.0	218.8	217.1	216.3	216.9	217.7
Motor oil, coolant, and other products (12/77 = 100)	148.5	150.7	151.5	153.2	152.5	151.9	153.3	146.7	149.0	150.3	151.8	151.2	151.0	152.3
Automobile parts and equipment (12/77 = 100)	136.4	139.2	138.2	136.8	136.3	136.7	137.0	139.2	141.2	140.1	138.6	138.1	138.6	139.0
Tires	189.7	192.8	191.8	189.5	188.5	189.6	190.4	195.1	196.4	195.5	193.0	192.1	193.2	194.0
Other parts and equipment (12/77 = 100)	134.1	138.3	136.6	135.8	135.8	135.4	135.1	134.1	138.6	136.8	136.0	135.8	135.4	135.4
Other private transportation services	261.5	272.2	275.1	275.5	274.7	276.4	275.3	265.1	275.5	278.5	278.9	277.9	279.1	277.5
Automobile insurance	265.4	274.0	275.4	275.8	276.9	283.9	286.9	265.0	273.5	274.9	275.2	276.3	283.2	286.1
Automobile finance charges (12/77 = 100)	188.7	192.0	193.6	193.5	189.6	185.2	178.9	187.6	191.2	192.6	192.9	188.9	184.6	178.1
Automobile rental, registration, and other fees (12/77 = 100)	120.7	133.3	137.4	138.0	138.9	138.8	139.2	121.1	133.8	138.4	138.8	140.0	139.8	140.0
State registration	149.0	174.3	183.6	183.8	183.7	183.7	183.8	149.0	173.9	183.2	183.4	183.3	183.2	183.4
Drivers' licenses (12/77 = 100)	110.4	127.7	132.8	132.8	132.8	132.8	132.8	110.3	127.9	133.1	133.1	133.1	133.1	133.1
Vehicle inspection (12/77 = 100)	128.4	126.7	128.5	128.5	128.5	128.5	128.5	129.0	128.3	129.9	129.9	129.9	129.9	129.8
Other vehicle-related fees (12/77 = 100)	141.3	149.3	151.0	151.9	154.5	154.2	155.0	148.6	156.3	158.7	159.4	163.0	162.7	162.9
Public	333.2	345.6	347.2	348.1	353.3	356.3	356.0	328.2	337.9	339.8	341.0	345.4	348.2	348.2
Airline fare	374.5	396.0	397.4	397.5	409.5	413.7	411.6	373.1	392.4	393.2	393.5	407.0	411.1	408.8
Intercity bus fare	362.2	363.7	368.3	370.5	368.9	370.6	373.8	362.9	365.4	370.6	372.3	371.0	372.5	375.7
Intracity mass transit	304.4	309.2	311.0	312.8	312.6	315.2	316.1	303.6	307.9	310.3	312.3	312.1	314.7	315.7
Taxi fare	291.3	298.0	299.3	299.7	299.8	300.2	300.5	300.4	307.6	308.7	309.3	309.3	309.9	310.1
Intercity train fare	319.2	338.2	338.4	338.6	338.4	338.4	348.3	318.9	338.2	338.4	338.6	338.4	338.4	349.3
MEDICAL CARE	308.2	326.4	330.0	333.3	336.0	338.7	342.2	307.1	324.8	328.1	331.3	333.9	336.5	339.8
Medical care commodities	193.1	205.6	206.5	208.2	209.9	211.6	212.9	193.8	206.3	207.1	208.8	210.5	212.1	213.4
Prescription drugs	179.6	191.8	193.4	195.6	197.2	199.4	201.0	180.3	192.7	194.4	196.6	198.2	200.5	202.1
Anti-infective drugs (12/77 = 100)	136.3	143.3	144.2	146.0	147.5	149.1	150.1	138.9	145.1	146.0	147.5	149.2	151.2	152.3
Tranquilizers and sedatives (12/77 = 100)	143.6	154.9	156.1	157.6	158.8	161.5	163.5	143.3	154.7	155.8	157.4	158.6	161.1	163.2
Circulatories and diuretics (12/77 = 100)	130.4	138.4	139.3	140.7	141.5	143.0	144.0	131.0	138.2	139.1	140.6	141.3	142.8	143.9
Hormones, diabetic drugs, biologicals, and prescription medical supplies (12/77 = 100)	163.3	177.2	179.6	181.6	182.3	183.5	183.9	164.1	178.6	181.1	183.1	183.8	185.1	185.2
Pain and symptom control drugs (12/77 = 100)	144.9	154.6	155.4	157.6	159.5	161.7	164.0	145.4	156.0	157.1	159.3	161.4	163.6	166.0
Supplements, cough and cold preparations, and respiratory agents (12/77 = 100)	137.5	146.3	147.9	149.6	150.8	152.3	153.4	136.8	146.4	148.1	149.8	150.9	152.4	153.6
Nonprescription drugs and medical supplies (12/77 = 100)	137.8	146.3	146.4	147.2	148.4	149.2	149.9	138.5	147.1	147.1	147.9	149.1	149.8	150.5
Eyeglasses (12/77 = 100)	127.8	131.6	131.6	131.6	131.9	132.6	132.9	126.7	130.4	130.4	130.3	130.5	131.4	131.6
Internal and respiratory over-the-counter drugs	218.6	235.2	234.9	236.6	239.3	240.7	241.9	220.2	236.8	236.2	237.9	240.6	241.9	243.0
Nonprescription medical equipment and supplies (12/77 = 100)	133.7	141.1	142.2	142.9	143.5	144.1	145.2	134.7	142.0	143.2	144.2	144.8	145.1	146.2
Medical care services	333.7	353.0	357.3	361.0	364.0	366.9	371.0	332.0	350.7	354.7	358.3	361.1	363.9	367.7
Professional services	288.4	301.2	302.8	304.4	305.9	306.6	308.3	288.2	301.3	302.9	304.6	306.1	306.9	308.4
Physicians' services	311.3	326.4	328.7	330.4	332.3	334.2	335.3	314.1	329.4	331.6	333.5	335.4	337.4	338.6
Dental services	272.3	283.9	284.8	286.4	287.7	287.0	289.2	270.1	282.1	282.9	284.4	285.7	285.0	287.0
Other professional services (12/77 = 100)	139.5	143.8	144.8	145.6	145.9	146.1	147.2	136.2	140.7	141.5	142.5	142.7	143.0	143.9
Other medical care services	388.4	415.7	423.2	429.4	434.1	439.8	446.8	386.2	412.1	419.4	425.4	429.9	435.6	442.3
Hospital and other medical services (12/77 = 100)	161.9	171.6	174.7	177.1	178.3	180.0	182.6	160.6	170.0	172.9	175.2	176.5	178.3	180.7
Hospital room	515.4	546.8	557.8	565.5	570.1	576.8	586.6	509.6	539.4	549.7	557.6	562.1	569.1	578.7
Other hospital and medical care services (12/77 = 100)	159.2	168.5	171.2	173.6	174.7	176.0	178.1	158.3	167.5	170.0	172.2	173.3	174.7	176.7

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18. Continued—Consumer Price Index—U.S. city average

[1967=100 unless otherwise specified]

General summary	All Urban Consumers							Urban Wage Earners and Clerical Workers (revised)						
	1981	1982						1981	1982					
	Nov.	June	July	Aug.	Sept.	Oct.	Nov.	Nov.	June	July	Aug.	Sept.	Oct.	Nov.
ENTERTAINMENT	226.8	235.6	236.6	237.4	238.3	240.3	239.9	224.3	232.3	233.5	233.9	234.8	236.5	236.1
Entertainment commodities	230.3	239.6	241.1	240.5	240.8	242.9	241.4	225.5	233.8	235.5	234.4	235.0	236.6	235.4
Reading materials (12/77 = 100)	139.8	149.4	150.4	149.4	150.1	153.1	153.4	139.3	148.6	149.7	148.9	149.6	152.4	152.7
Newspapers	267.6	283.9	285.9	286.3	288.5	290.4	290.9	267.5	283.4	285.6	286.0	288.2	290.1	290.5
Magazines, periodicals, and books (12/77 = 100)	143.9	155.0	156.1	153.8	153.9	159.2	159.6	143.7	154.8	156.0	153.6	153.8	159.2	159.6
Sporting goods and equipment (12/77 = 100)	130.2	132.7	132.8	133.2	132.9	134.3	132.1	122.8	125.3	125.7	124.9	125.0	125.8	124.7
Sport vehicles (12/77 = 100)	132.4	135.7	135.4	135.7	135.3	137.1	133.8	120.4	123.9	124.1	122.4	122.8	123.6	122.2
Indoor and warm weather sport equipment (12/77 = 100)	119.6	119.6	120.3	119.7	120.5	120.6	119.9	118.2	117.1	118.0	117.5	118.1	118.3	117.6
Bicycles	194.3	197.6	198.3	199.4	199.0	198.7	198.3	196.3	198.8	199.4	200.4	200.0	199.9	199.5
Other sporting goods and equipment (12/77 = 100)	126.7	127.9	129.4	130.3	129.4	131.9	131.5	126.9	128.3	129.8	130.9	129.8	132.1	131.3
Toys, hobbies, and other entertainment (12/77 = 100)	131.3	136.1	137.3	136.9	137.1	137.1	136.4	130.8	134.9	136.1	135.7	136.0	136.1	135.2
Toys, hobbies, and music equipment (12/77 = 100)	129.7	135.9	137.2	136.4	136.4	136.4	135.5	126.7	132.4	133.7	132.8	132.9	133.0	131.8
Photographic supplies and equipment (12/77 = 100)	125.5	130.3	130.8	130.2	130.1	129.6	129.0	127.5	131.5	131.9	131.4	131.3	130.6	130.1
Pet supplies and expenses (12/77 = 100)	138.3	140.6	142.0	142.5	143.4	143.9	143.4	140.1	141.5	143.0	143.6	144.6	145.0	144.5
Entertainment services	222.3	230.5	230.8	233.5	235.2	237.2	238.2	223.4	230.9	231.3	234.2	235.8	237.6	238.4
Fees for participant sports (12/77 = 100)	137.3	142.5	141.8	143.4	146.0	148.0	149.0	139.1	143.8	143.0	144.8	147.4	149.4	150.1
Admissions (12/77 = 100)	128.9	133.5	135.5	137.4	136.4	136.6	136.9	128.3	132.6	134.6	136.5	135.5	135.6	135.9
Other entertainment services (12/77 = 100)	123.4	127.9	127.8	128.3	128.8	129.6	129.8	124.1	128.7	128.8	129.2	129.6	130.5	130.7
OTHER GOODS AND SERVICES	245.9	255.8	257.2	258.3	266.6	271.2	273.8	242.5	253.1	254.5	255.7	262.8	267.8	270.9
Tobacco products	226.2	237.8	239.2	240.1	246.8	257.3	264.0	225.4	237.0	238.3	239.3	246.1	256.6	263.4
Cigarettes	228.9	240.7	242.2	243.1	250.6	262.3	269.8	228.1	239.9	241.3	242.3	249.8	261.4	268.8
Other tobacco products and smoking accessories (12/77 = 100)	134.7	141.8	142.1	142.4	142.6	142.9	142.8	135.0	142.0	142.2	142.5	142.8	143.1	143.0
Personal care	237.7	247.8	249.4	250.6	251.1	252.9	254.2	235.5	246.0	247.5	248.8	249.3	250.9	252.1
Toilet goods and personal care appliances	232.5	246.3	247.7	249.5	249.1	251.5	253.5	233.1	247.0	248.6	250.5	250.0	252.1	254.1
Products for the hair, hairpieces, and wigs (12/77 = 100)	135.4	143.2	145.0	145.0	144.6	147.8	148.3	133.3	142.6	144.2	144.4	144.0	146.9	147.3
Dental and shaving products (12/77 = 100)	140.5	150.5	150.9	153.1	153.3	155.2	157.2	139.3	148.9	149.5	151.6	151.8	153.5	155.4
Cosmetics, bath and nail preparations, manicure and eye makeup implements (12/77 = 100)	131.8	139.6	139.9	141.3	140.7	141.4	141.7	132.2	140.1	140.5	142.0	141.4	142.1	142.3
Other toilet goods and small personal care appliances (12/77 = 100)	134.3	140.8	141.8	142.5	142.4	142.2	144.7	139.1	144.4	145.4	146.2	146.2	145.8	148.4
Personal care services	243.1	250.1	251.8	252.5	253.8	255.1	255.8	238.1	245.4	246.9	247.6	248.9	250.0	250.6
Beauty parlor services for women	244.8	252.3	254.4	255.0	256.3	258.3	258.9	237.8	245.9	247.9	248.7	249.8	251.6	252.1
Haircuts and other barber shop services for men (12/77 = 100)	135.9	139.4	139.8	140.2	141.1	141.0	141.4	134.9	138.2	138.5	139.0	139.9	139.8	140.3
Personal and educational expenses	284.9	293.3	294.5	295.8	316.1	319.3	320.0	285.6	295.2	296.4	297.9	317.4	320.4	321.3
Schoolbooks and supplies	254.6	264.6	264.8	265.3	280.5	283.0	283.1	258.3	268.8	269.0	269.6	284.3	286.8	286.8
Personal and educational services	292.1	300.3	301.7	303.1	324.4	327.7	328.6	292.5	302.0	303.4	305.1	325.6	328.7	329.8
Tuition and other school fees	149.1	151.5	152.0	152.6	165.6	167.2	167.2	149.4	152.1	152.5	153.2	166.2	167.7	167.7
College tuition (12/77 = 100)	148.3	151.2	151.8	151.9	164.9	166.8	166.8	148.1	151.4	152.0	152.0	165.0	166.9	166.9
Elementary and high school tuition (12/77 = 100)	152.0	152.2	152.2	154.6	168.7	168.6	168.7	152.7	152.9	152.9	155.6	169.6	169.6	169.7
Personal expenses (12/77 = 100)	152.8	164.5	166.0	167.4	169.4	171.9	174.1	152.1	164.6	166.1	167.6	169.6	171.7	174.0
Special indexes:														
Gasoline, motor oil, coolant, and other products	403.9	387.3	395.0	393.2	389.2	385.7	383.5	405.1	388.6	396.2	394.4	390.3	386.9	384.8
Insurance and finance	422.2	436.5	439.1	441.3	436.0	432.9	426.2	420.9	436.0	438.8	441.7	436.3	433.9	427.2
Utilities and public transportation	292.6	316.6	318.7	320.3	323.8	326.5	324.1	291.5	315.6	317.8	319.4	322.8	325.4	323.2
Housekeeping and home maintenance services	339.6	351.2	350.3	351.4	353.8	355.0	354.8	339.9	351.8	351.0	352.2	354.6	355.7	355.4

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19. Consumer Price Index for All Urban Consumers: Cross classification of region and population size class by expenditure category and commodity and service group

[December 1977 = 100]

Category and group	Size class A (1.25 million or more)			Size class B (385,000–1.250 million)			Size class C (75,000–385,000)			Size class D (75,000 or less)		
	1982			1982			1982			1982		
	June	Aug.	Oct.	June	Aug.	Oct.	June	Aug.	Oct.	June	Aug.	Oct.
	Northeast											
EXPENDITURE CATEGORY												
All items	147.7	149.0	151.8	155.5	155.8	156.6	163.5	161.2	160.7	156.9	155.3	155.8
Food and beverages	145.9	144.9	145.1	144.1	143.4	142.4	148.8	148.9	147.0	142.9	142.9	141.9
Housing	151.6	153.3	157.7	165.2	164.5	164.9	182.1	174.5	172.9	169.3	163.7	163.0
Apparel and upkeep	118.6	119.6	122.2	122.8	122.4	127.0	128.3	128.4	128.5	123.4	124.8	131.4
Transportation	157.2	159.4	160.7	164.6	166.5	166.6	162.2	164.7	165.2	161.2	163.7	164.6
Medical care	147.5	150.0	151.4	150.2	156.1	158.1	152.7	157.2	161.5	155.4	156.1	157.0
Entertainment	136.5	139.7	140.6	137.5	137.4	139.9	136.4	136.8	138.1	141.1	143.8	144.8
Other goods and services	139.8	141.7	150.0	142.1	143.2	151.4	146.7	148.1	154.3	144.0	144.6	153.4
COMMODITY AND SERVICE GROUP												
Commodities	144.6	145.3	147.7	151.5	151.6	152.4	153.8	152.3	152.0	150.6	149.8	150.9
Commodities less food and beverages	143.8	145.5	149.3	155.1	155.6	157.2	156.2	153.9	154.3	154.3	153.1	155.2
Services	151.8	153.8	157.1	161.9	162.4	163.3	179.1	175.6	175.0	166.8	163.8	163.5
	North Central Region											
EXPENDITURE CATEGORY												
All items	159.6	162.2	163.1	155.3	157.0	158.9	155.2	158.9	155.9	156.4	160.2	159.0
Food and beverages	144.1	143.7	143.5	142.8	142.7	142.6	145.0	144.9	143.8	148.7	149.2	149.2
Housing	175.1	179.8	181.2	163.3	165.6	168.5	162.1	169.4	162.6	164.0	171.4	167.8
Apparel and upkeep	114.0	117.0	118.8	123.0	124.1	128.7	124.7	126.7	127.8	120.5	120.1	121.9
Transportation	165.1	166.1	164.5	163.2	165.0	164.1	165.7	166.7	165.0	163.1	164.1	163.1
Medical care	153.0	155.8	157.9	155.2	161.2	162.7	155.6	157.7	160.9	158.3	161.0	163.7
Entertainment	137.1	138.8	140.7	129.5	131.7	133.5	139.2	139.9	142.5	131.5	131.4	133.3
Other goods and services	141.4	142.3	150.5	152.5	153.3	161.4	141.2	142.8	148.1	148.3	150.2	157.3
COMMODITY AND SERVICE GROUP												
Commodities	149.4	150.9	151.9	148.5	148.8	149.7	148.8	150.8	148.2	147.9	149.1	147.6
Commodities less food and beverages	151.9	154.2	155.8	150.9	151.3	152.6	150.5	153.4	150.1	147.6	149.0	147.0
Services	174.8	179.0	179.7	166.2	170.3	173.7	165.6	172.0	168.6	169.8	177.8	177.0
	South											
EXPENDITURE CATEGORY												
All items	156.3	156.9	158.1	158.4	159.1	159.6	157.6	158.6	159.1	156.5	158.8	159.8
Food and beverages	146.7	147.2	146.8	146.9	146.5	146.4	146.0	146.0	145.6	147.7	147.5	147.5
Housing	165.2	165.0	166.1	167.2	167.9	167.5	167.0	167.8	167.3	164.6	168.4	169.7
Apparel and upkeep	124.9	124.0	127.5	123.6	122.6	125.3	118.6	121.0	123.7	109.4	107.9	112.4
Transportation	163.4	165.3	164.7	167.0	168.6	167.7	165.1	166.4	166.0	163.3	165.6	164.5
Medical care	152.8	156.2	160.9	154.5	157.3	161.3	162.5	166.2	169.4	166.6	169.3	173.9
Entertainment	132.0	131.7	135.5	143.1	145.0	147.3	142.7	142.1	144.5	145.2	148.1	149.7
Other goods and services	144.1	145.6	152.9	143.3	143.6	152.5	144.5	145.2	153.3	150.4	152.3	153.2
COMMODITY AND SERVICE GROUP												
Commodities	149.1	149.7	150.1	150.9	150.9	151.7	149.2	149.6	149.9	149.7	149.6	150.6
Commodities less food and beverages	150.1	150.8	151.6	152.6	152.8	154.0	150.6	151.2	151.8	150.5	150.5	152.0
Services	166.5	166.9	169.2	169.8	171.5	171.5	170.6	172.4	173.2	166.8	172.6	173.6
	West											
EXPENDITURE CATEGORY												
All items	160.8	160.3	160.3	158.6	159.9	160.1	149.7	153.3	152.6	159.9	158.5	158.1
Food and beverages	146.4	147.5	148.3	148.9	148.6	148.6	145.1	144.9	145.7	149.9	150.6	150.8
Housing	170.1	167.7	166.9	165.6	166.6	166.0	150.3	155.6	153.4	165.5	160.5	158.7
Apparel and upkeep	120.0	119.8	120.7	125.2	124.9	126.5	122.3	122.8	123.8	140.5	138.5	138.6
Transportation	167.7	169.9	169.4	165.9	169.7	169.8	163.5	167.0	166.0	162.8	166.2	165.7
Medical care	164.4	167.1	168.9	159.5	163.3	165.1	159.6	167.0	168.8	166.2	168.5	169.6
Entertainment	138.5	135.8	136.6	139.4	141.0	142.4	134.2	135.7	136.2	150.6	153.1	154.9
Other goods and services	147.0	149.3	155.4	149.1	149.8	155.0	139.9	141.7	148.0	153.3	154.4	164.2
COMMODITY AND SERVICE GROUP												
Commodities	147.8	148.8	149.4	149.5	151.0	151.6	147.5	149.9	150.6	151.3	149.2	147.7
Commodities less food and beverages	148.4	149.4	149.9	149.7	152.1	152.9	148.5	152.0	152.6	152.0	148.7	146.4
Services	178.1	175.5	174.8	171.1	172.1	171.8	152.8	158.1	155.4	172.5	172.1	173.4

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20. Consumer Price Index—U.S. city average, and selected areas

[1967=100 unless otherwise specified]

Area[1]	All Urban Consumers							Urban Wage Earners and Clerical Workers (revised)						
	1981	1982						1981	1982					
	Nov.	June	July	Aug.	Sept.	Oct.	Nov.	Nov.	June	July	Aug.	Sept.	Oct.	Nov.
U.S. city average[2]	280.7	290.6	292.2	292.8	293.3	294.1	293.6	280.4	290.1	291.8	292.4	292.8	293.6	293.2
Anchorage, Alaska (10/67=100)	253.7	...	263.6	...	263.4	...	257.2	249.3	...	259.1	...	258.9	...	254.4
Atlanta, Ga.	...	291.1	...	295.6	...	297.8	...	...	282.9	...	297.1	...	298.7	...
Baltimore, Md.	280.7	...	286.1	...	289.2	...	290.1	280.9	...	287.0	...	288.8	...	289.7
Boston, Mass.	274.2	...	279.2	...	282.9	...	285.0	274.3	...	278.7	...	282.7	...	284.4
Buffalo, N.Y.	...	265.8	...	267.7	...	277.1	...	...	264.1	...	265.5	...	274.3	...
Chicago, Ill.-Northwestern Ind.	277.0	291.8	293.1	293.2	294.0	294.4	294.3	277.3	291.5	292.7	292.5	292.9	293.2	293.1
Cincinnati, Ohio-Ky.-Ind.	276.6	...	293.3	...	300.2	...	304.2	279.0	...	295.9	...	302.8	...	307.1
Cleveland, Ohio	...	297.8	...	312.2	...	316.6	...	...	297.0	...	310.6	...	314.1	...
Dallas-Ft. Worth, Tex.	...	304.8	...	304.3	...	306.7	...	...	300.5	...	300.2	...	302.5	...
Denver-Boulder, Colo.	297.8	...	319.9	...	324.5	...	326.2	302.8	...	326.3	...	331.3	...	332.5
Detroit, Mich.	279.6	289.1	292.4	292.7	294.9	295.2	296.0	276.4	286.0	289.3	289.3	291.2	291.2	292.1
Honolulu, Hawaii	...	269.0	...	269.4	...	275.2	...	...	268.9	...	269.5	...	274.7	...
Houston, Tex.	...	313.9	...	318.6	...	317.6	...	...	310.9	...	315.3	...	314.9	...
Kansas City, Mo.-Kansas	...	281.6	...	285.0	...	289.3	...	...	280.1	...	283.6	...	287.3	...
Los Angeles-Long Beach, Anaheim, Calif.	281.6	290.1	289.3	289.1	288.2	289.5	288.5	285.3	293.9	293.0	292.8	291.7	292.8	291.6
Miami, Fla. (11/77=100)	153.6	...	155.1	...	156.1	...	156.8	154.7	...	156.9	...	157.5	...	158.6
Milwaukee, Wis.	287.5	...	296.5	...	302.4	...	303.1	291.5	...	299.6	...	306.3	...	306.9
Minneapolis-St. Paul, Minn.-Wis.	...	304.1	...	313.8	...	307.7	...	...	303.8	...	313.3	...	307.6	...
New York, N.Y.-Northeastern N.J.	267.8	276.7	277.3	278.5	280.7	284.5	283.6	266.9	275.3	276.1	277.1	278.9	282.7	281.9
Northeast, Pa. (Scranton)	272.2	...	275.1	...	276.0	...	279.4	275.2	...	277.3	...	277.1	...	280.6
Philadelphia, Pa.-N.J.	274.1	279.7	281.1	281.3	283.0	281.8	282.9	274.5	279.1	280.9	280.7	282.1	281.2	282.0
Pittsburgh, Pa.	...	285.1	...	291.4	...	300.7	...	...	285.9	...	291.8	...	300.3	...
Portland, Oreg.-Wash.	278.7	...	292.5	...	288.2	...	285.6	276.3	...	290.6	...	285.8	...	283.5
St. Louis, Mo.-Ill.	273.8	...	290.2	...	294.1	...	290.0	273.0	...	289.2	...	293.1	...	288.9
San Diego, Calif.	321.3	...	334.8	...	325.6	...	321.7	315.1	...	329.4	...	321.1	...	318.2
San Francisco-Oakland, Calif.	...	304.6	...	304.3	...	302.4	...	...	303.4	...	302.8	...	301.3	...
Seattle-Everett, Wash.	289.2	...	296.6	...	302.2	...	297.5	285.7	...	292.9	...	298.3	...	294.1
Washington, D.C.-Md.-Va.	275.5	...	281.3	...	286.5	...	286.3	279.3	...	286.3	...	291.9	...	291.6

[1]The areas listed include not only the central city but the entire portion of the Standard Metropolitan Statistical Area, as defined for the 1970 Census of Population, except that the Standard Consolidated Area is used for New York and Chicago.

[2]Average of 85 cities.

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21. Producer Price Indexes, by stage of processing

[1967=100]

Commodity grouping	Annual average 1981	1981	1982											
		Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.[1]	Sept.	Oct.	Nov.	Dec.
FINISHED GOODS														
Finished goods	269.8	275.4	277.9	277.9	277.3	277.3	277.8	279.9	281.7	r282.3	281.4	284.1	284.9	285.1
Finished consumer goods	271.3	275.8	278.3	278.6	277.7	277.3	277.7	280.1	282.1	r282.8	282.0	284.2	285.2	285.1
Finished consumer foods	253.6	252.9	256.4	258.2	257.1	260.0	262.3	263.4	260.6	r259.7	259.9	257.8	257.6	258.2
Crude	263.8	273.9	280.6	282.5	263.3	266.6	259.9	254.7	241.0	r239.2	227.8	232.0	235.6	247.2
Processed	250.6	249.0	252.1	254.0	254.5	257.3	260.3	262.0	260.2	r259.4	260.6	258.0	257.4	257.1
Nondurable goods less foods	319.6	326.3	329.3	330.3	328.8	325.7	324.3	328.7	335.3	r337.2	338.4	339.7	342.4	341.4
Durable goods	218.6	225.4	226.2	224.0	223.9	224.1	225.0	225.9	226.7	r227.5	223.2	231.1	230.8	231.5
Consumer nondurable goods less food and energy	208.8	213.9	217.4	219.6	220.5	222.3	223.1	223.5	223.7	r224.3	225.4	227.4	228.1	228.3
Capital equipment	264.3	274.1	276.2	275.0	275.8	277.2	278.1	279.2	280.2	r280.7	279.5	283.8	284.0	285.1
INTERMEDIATE MATERIALS														
Intermediate materials, supplies, and components	306.0	309.4	311.0	311.1	310.6	309.9	309.8	309.9	311.1	r310.8	310.7	310.0	310.1	310.2
Materials and components for manufacturing	286.1	289.3	290.4	290.9	290.4	290.6	291.4	289.8	289.2	r288.7	290.2	289.5	288.9	288.7
Materials for food manufacturing	260.4	245.6	250.7	252.8	252.0	254.4	260.0	260.7	259.7	r258.0	257.6	254.7	251.4	250.1
Materials for nondurable manufacturing	285.8	288.8	289.0	289.3	288.8	287.6	287.6	285.4	283.1	r282.6	282.4	280.3	279.5	278.2
Materials for durable manufacturing	312.1	314.0	313.6	313.1	310.9	311.0	311.0	307.5	308.0	r306.5	310.2	310.0	309.8	309.8
Components for manufacturing	259.3	267.8	269.8	270.9	271.8	272.6	273.6	273.6	273.9	r274.3	276.1	276.9	277.0	277.7
Materials and components for construction	287.6	291.1	292.0	293.0	293.3	294.0	293.7	294.5	294.3	r293.5	293.4	293.2	293.0	294.5
Processed fuels and lubricants	595.4	598.1	604.4	596.8	593.0	579.9	570.9	581.1	600.7	603.8	593.2	590.2	594.3	593.6
Manufacturing industries	498.6	499.0	505.9	497.8	496.1	487.5	481.4	491.7	506.9	r510.7	497.4	496.9	502.5	500.4
Nonmanufacturing industries	680.8	685.6	691.3	684.2	678.3	661.1	649.5	659.5	683.0	r685.5	677.5	672.1	674.9	675.5
Containers	276.1	280.2	282.5	285.5	286.3	287.0	287.0	286.5	286.3	r285.4	285.5	285.1	284.7	284.6
Supplies	263.8	268.3	269.8	270.4	270.6	272.1	273.4	273.4	273.1	r272.6	272.5	272.3	273.0	273.2
Manufacturing industries	253.1	261.0	262.6	263.3	264.5	265.3	266.7	266.7	266.8	r266.5	267.3	267.4	267.2	267.4
Nonmanufacturing industries	269.6	272.4	273.8	274.4	274.1	276.0	277.2	277.1	276.7	r276.0	275.5	275.1	276.3	276.5
Feeds	230.4	214.6	214.8	212.0	208.1	213.1	214.2	213.1	210.3	r203.1	198.4	193.3	199.5	204.9
Other supplies	276.4	284.1	285.7	287.3	287.9	288.9	290.1	290.4	290.5	r291.1	291.5	292.1	292.2	291.3
CRUDE MATERIALS														
Crude materials for further processing	329.0	311.5	318.4	321.6	320.0	322.6	328.3	325.6	323.4	r319.8	316.3	312.2	313.4	312.6
Foodstuffs and feedstuffs	257.4	233.7	242.6	248.3	247.9	254.4	262.6	259.9	255.5	r249.6	242.9	236.3	236.3	237.0
Nonfood materials	482.3	478.6	481.5	479.3	475.2	469.9	470.2	467.7	469.8	r471.0	474.3	475.4	479.0	475.0
Nonfood materials except fuel	413.7	396.2	399.5	394.8	387.1	378.8	376.6	370.0	369.2	r369.5	369.6	372.2	369.5	366.0
Manufacturing industries	429.4	409.8	413.2	407.5	398.4	389.0	386.3	378.9	378.4	378.9	379.1	382.4	379.3	375.0
Construction	261.8	265.2	267.6	270.5	273.2	273.3	274.5	274.2	271.4	r270.3	269.1	267.1	267.3	269.4
Crude fuel	751.2	813.0	812.9	824.5	839.7	851.2	864.8	883.9	901.3	906.9	926.3	919.4	955.3	949.5
Manufacturing industries	864.9	942.5	940.3	954.4	974.7	989.1	1006.7	1,032.0	1,053.9	r1,061.1	1,086.1	1,077.5	1,124.8	1,117.0
Nonmanufacturing industries	674.0	724.0	725.6	735.4	746.6	755.8	766.4	780.5	794.5	798.9	813.9	808.3	835.2	830.9
SPECIAL GROUPINGS														
Finished goods excluding foods	273.3	280.9	283.0	282.4	281.9	281.1	281.0	283.4	286.7	287.9	286.6	290.8	291.9	292.0
Finished consumer goods excluding foods	276.5	283.2	285.2	284.9	284.0	282.3	281.8	284.8	288.8	r290.2	289.1	293.3	294.6	294.3
Finished consumer goods less energy	233.6	237.6	240.5	241.3	241.3	243.0	244.3	245.1	244.5	r252.0	243.8	246.4	246.5	254.7
Intermediate materials less foods and feeds	310.1	314.9	316.4	316.4	316.0	315.1	314.6	314.7	316.1	r316.0	316.0	315.5	315.7	315.7
Intermediate materials less energy	285.2	288.7	289.9	290.7	290.5	291.0	291.6	290.8	290.4	r289.7	290.6	290.1	289.9	290.2
Intermediate foods and feeds	250.3	235.2	238.8	239.4	237.7	240.9	245.0	245.1	243.6	r240.2	238.4	234.8	234.6	235.4
Crude materials less agricultural products	545.6	543.5	546.1	543.9	538.4	531.6	531.5	529.1	531.5	r532.0	536.2	537.9	542.3	537.0
Crude materials less energy	254.0	231.6	239.1	243.4	242.8	247.3	252.8	248.7	245.1	r240.7	235.6	230.0	229.3	229.9

[1] Data for August 1982 have been revised to reflect the availability of late reports and corrections by respondents. All data are subject to revision 4 months after original publication.

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22. Producer Price Indexes, by commodity groupings

[1967=100 unless otherwise specified]

Code	Commodity group and subgroup	Annual average 1981	1981	1982											
			Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.[1]	Sept.	Oct.	Nov.	Dec.
	All commodities	293.4	295.8	298.3	298.6	298.0	298.0	298.6	299.3	300.4	r300.2	299.5	299.9	300.4	300.6
	All commodities (1957–59 = 100)	311.3	313.8	316.5	316.8	316.2	316.2	316.8	317.6	318.7	r318.5	317.8	318.2	318.7	318.9
	Farm products and processed foods and feeds	251.5	241.0	246.0	248.4	247.5	251.6	255.8	255.3	252.4	r249.6	247.5	243.9	244.0	244.8
	Industrial commodities	304.1	310.0	311.8	311.6	311.0	309.9	309.6	310.6	312.8	r313.2	312.9	314.4	315.1	315.0
	FARM PRODUCTS AND PROCESSED FOODS AND FEEDS														
01	Farm products	254.9	234.6	242.2	247.1	244.7	250.6	256.5	252.7	246.6	r240.8	234.4	229.1	230.6	232.5
01–1	Fresh and dried fruits and vegetables	267.3	280.5	289.2	290.1	257.3	267.6	271.5	264.5	239.1	r238.6	220.3	222.3	232.5	248.1
01–2	Grains	248.4	213.6	225.2	223.2	220.9	226.0	228.2	225.7	212.8	197.2	187.3	183.2	198.6	202.3
01–3	Livestock	248.0	225.0	236.8	251.2	255.6	267.6	282.9	277.5	270.3	268.4	259.0	248.5	239.1	237.2
01–4	Live poultry	201.2	171.4	186.8	197.3	197.7	186.2	192.7	207.2	212.5	189.3	196.5	177.1	181.6	177.8
01–5	Plant and animal fibers	242.0	188.4	198.2	193.5	199.5	207.4	214.1	203.1	220.8	207.5	196.8	198.1	195.3	200.6
01–6	Fluid milk	287.4	286.7	287.6	285.8	282.5	280.3	278.8	278.9	279.0	278.8	281.9	285.0	285.9	285.5
01–7	Eggs	187.1	195.5	187.0	200.6	204.0	192.1	164.3	159.3	171.7	171.7	173.3	177.9	172.5	170.0
01–8	Hay, hayseeds, and oilseeds	274.1	218.8	218.4	217.6	213.7	222.8	227.3	219.3	220.0	r204.5	201.8	194.3	204.8	209.0
01–9	Other farm products	273.8	280.2	280.1	273.7	273.0	274.2	273.9	271.8	265.5	274.4	276.8	274.0	276.3	280.1
02	Processed foods and feeds	248.7	243.6	247.1	248.1	248.1	251.1	254.4	255.8	254.6	r253.5	253.6	251.0	250.4	250.6
02–1	Cereal and bakery products	255.5	255.1	256.6	253.3	253.3	253.5	252.8	252.7	253.0	r252.7	254.1	253.2	254.6	256.6
02–2	Meats, poultry, and fish	246.2	236.1	243.7	247.9	250.0	258.2	267.6	271.2	266.0	r262.2	265.7	256.9	251.5	249.9
02–3	Dairy products	245.6	247.2	247.7	248.0	248.0	248.4	248.5	248.7	248.6	r248.8	249.3	250.0	250.2	250.8
02–4	Processed fruits and vegetables	261.2	271.8	273.2	276.3	275.9	275.2	273.8	275.8	274.4	r274.1	273.2	273.7	273.1	273.0
02–5	Sugar and confectionery	275.9	247.6	256.8	257.2	255.0	256.0	265.3	269.1	275.7	r285.5	279.1	276.7	281.1	280.8
02–6	Beverages and beverage materials	248.0	251.9	253.9	255.1	256.4	256.6	256.5	256.7	256.9	r258.0	256.8	258.4	258.9	259.0
02–7	Fats and oils	227.4	219.1	216.6	216.8	213.7	218.1	222.3	221.8	221.3	r215.6	211.6	214.9	209.0	204.3
02–8	Miscellaneous processed foods	250.1	250.1	251.0	250.9	249.5	249.6	248.0	248.6	248.1	245.9	246.9	247.7	247.9	248.6
02–9	Prepared animal feeds	230.2	217.2	217.4	214.9	211.4	216.3	217.4	216.4	213.9	r207.5	204.5	200.1	205.7	210.5
	INDUSTRIAL COMMODITIES														
03	Textile products and apparel	199.7	203.4	205.0	205.6	205.0	205.4	205.4	205.0	204.1	r204.2	203.8	202.6	203.5	202.4
03–1	Synthetic fibers (12/75 = 100)	156.3	161.5	162.9	163.2	161.3	163.0	163.4	162.8	161.5	r162.2	163.4	162.0	162.1	160.6
03–2	Processed yarns and threads (12/75 = 100)	138.0	139.6	139.2	140.7	140.5	140.4	141.0	139.4	135.9	135.9	136.6	129.5	136.7	136.7
03–3	Gray fabrics (12/75 = 100)	146.8	147.2	148.2	147.3	146.6	146.3	145.9	146.0	144.9	r144.6	143.5	143.6	143.0	143.3
03–4	Finished fabrics (12/75 = 100)	125.2	125.6	126.8	127.1	125.6	125.4	125.2	124.0	123.8	r124.3	123.8	123.4	123.1	122.9
03–81	Apparel	186.0	191.0	192.7	193.2	193.4	194.1	194.5	195.0	194.8	r195.1	193.5	193.5	193.8	191.7
03–82	Textile housefurnishings	226.7	233.6	237.6	240.8	241.4	241.8	239.5	239.7	238.2	r236.4	242.5	240.5	240.5	240.5
04	Hides, skins, leather, and related products	260.9	260.7	261.8	261.6	260.6	263.4	263.2	261.8	263.1	r262.0	264.8	264.7	264.3	265.2
04–2	Leather	319.8	312.3	319.0	317.7	313.3	310.6	309.8	307.7	307.4	r304.9	309.2	309.5	312.8	314.3
04–3	Footwear	240.9	240.1	238.9	238.6	239.8	244.8	244.5	244.2	247.3	r247.7	248.2	249.2	249.1	248.2
04–4	Other leather and related products	241.8	245.4	247.5	248.1	248.1	248.1	248.1	245.6	246.9	r244.9	252.9	252.4	250.9	253.1
05	Fuels and related products and power	694.5	702.5	705.1	697.8	689.7	670.6	662.2	677.3	701.1	r705.6	701.8	699.6	707.3	702.6
05–1	Coal	497.2	515.2	525.3	529.9	529.6	532.6	534.0	533.6	538.0	r539.0	541.4	539.7	540.3	540.3
05–2	Coke	456.4	469.7	469.7	469.7	467.5	467.5	467.5	462.0	460.3	r459.1	460.7	453.0	452.3	452.3
05–3	Gas fuels[2]	939.4	1,003.7	987.9	987.6	990.5	992.7	1,001.2	1,027.5	1,054.3	r1,074.6	1,116.6	1,133.6	1,190.9	1,177.4
05–4	Electric power	367.2	384.2	392.8	392.9	403.7	406.3	407.1	405.7	416.0	r414.9	415.4	409.1	405.2	410.3
05–61	Crude petroleum[3]	803.5	787.2	787.2	770.3	744.8	717.9	717.8	718.2	718.4	r718.4	718.8	735.8	734.1	720.4
05–7	Petroleum products, refined[4]	805.9	798.6	801.9	789.7	770.6	733.5	713.2	739.4	776.5	r781.7	763.1	754.9	759.9	753.0
06	Chemicals and allied products	287.6	291.8	292.9	293.6	294.6	294.3	295.0	293.3	291.6	291.6	291.4	290.4	290.5	289.3
06–1	Industrial chemicals[5]	363.3	362.8	362.9	362.2	361.4	357.8	357.1	351.2	349.1	r349.1	349.3	347.6	345.8	342.9
06–21	Prepared paint	249.8	256.4	258.9	258.9	258.9	258.9	264.7	264.7	264.7	r264.7	265.1	265.1	265.1	265.1
06–22	Paint materials	300.1	305.8	306.6	306.4	306.8	306.7	306.9	304.9	304.5	r302.5	303.0	303.0	302.3	301.5
06–3	Drugs and pharmaceuticals	193.5	198.9	202.2	204.4	205.9	208.9	209.9	209.7	210.0	r211.2	212.6	214.7	215.4	216.0
06–4	Fats and oils, inedible	295.6	280.4	272.8	274.2	290.1	282.6	288.4	287.5	278.2	254.2	254.1	242.3	239.6	240.8
06–5	Agricultural chemicals and chemical products	285.0	294.9	296.8	298.0	297.1	295.8	294.8	294.1	291.5	r290.8	290.1	289.4	287.3	286.2
06–6	Plastic resins and materials	289.2	294.2	286.1	287.3	285.5	286.0	283.2	282.1	280.9	r282.2	281.5	281.6	281.4	281.4
06–7	Other chemicals and allied products	254.2	260.0	263.8	264.9	268.5	270.0	272.7	273.8	271.1	r272.3	270.7	268.1	271.7	270.2
07	Rubber and plastic products	232.6	238.3	237.3	239.3	240.8	241.1	242.1	242.5	242.0	r242.6	243.3	243.0	242.6	243.0
07–1	Rubber and rubber products	256.2	264.6	262.5	266.0	266.7	266.6	269.0	269.3	268.8	r270.1	271.7	271.1	270.2	270.5
07–11	Crude rubber	281.8	280.8	281.8	282.1	283.5	283.3	283.7	282.5	280.3	r278.7	276.5	272.4	270.8	271.0
07–12	Tires and tubes	250.6	255.4	253.6	256.7	253.7	253.4	254.9	255.3	255.0	r257.8	255.7	255.8	254.8	256.2
07–13	Miscellaneous rubber products	251.4	267.2	263.8	268.8	274.3	274.7	278.8	279.5	279.4	r279.7	287.5	287.1	286.5	285.5
07–2	Plastic products (6/78 = 100)	128.5	130.6	130.5	131.0	132.3	132.6	132.5	132.8	132.5	r132.5	132.5	132.4	132.4	132.8
08	Lumber and wood products	292.8	285.4	285.5	285.2	285.3	286.5	284.6	289.0	288.6	r284.2	283.0	279.6	279.9	284.8
08–1	Lumber	325.1	309.9	310.0	308.1	308.2	312.4	310.5	315.8	319.2	r311.6	311.3	306.8	305.1	311.0
08–2	Millwork	273.4	273.7	277.1	278.6	276.5	276.6	276.3	280.5	282.3	280.2	279.5	278.6	280.3	286.1
08–3	Plywood	245.7	239.7	237.4	235.1	236.5	234.0	230.5	239.2	232.4	r229.0	228.4	224.0	227.8	231.2
08–4	Other wood products	239.1	239.4	238.2	238.7	238.6	237.7	237.4	236.0	236.0	235.6	235.6	235.8	233.1	231.3

See footnotes at end of table.

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22. Continued—Producer Price Indexes, by commodity groupings

[1967=100 unless otherwise specified]

Code	Commodity group and subgroup	Annual average 1981	1981	1982											
			Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.[1]	Sept.	Oct.	Nov.	Dec.
	INDUSTRIAL COMMODITIES—Continued														
09	Pulp, paper, and allied products	273.8	281.0	285.5	286.3	287.4	288.5	289.6	289.5	289.1	r289.3	289.2	289.2	289.6	289.5
09-1	Pulp, paper, and products, excluding building paper and board	270.8	275.6	276.1	276.8	276.6	275.3	274.8	274.1	272.6	r272.2	271.8	270.4	269.9	269.1
09-11	Woodpulp	397.1	413.7	410.3	410.3	411.6	389.9	393.3	388.0	368.3	r367.0	367.2	352.5	349.4	349.3
09-12	Wastepaper	175.7	143.4	135.2	128.8	129.2	128.1	121.5	115.2	115.6	116.0	116.0	116.0	116.0	116.0
09-13	Paper	279.8	287.2	289.2	289.8	289.6	289.4	288.2	287.8	286.3	r285.3	286.0	285.6	281.7	280.0
09-14	Paperboard	258.1	260.0	259.7	261.4	261.1	261.2	258.8	255.9	255.0	r255.4	250.7	248.0	247.6	244.5
09-15	Converted paper and paperboard products	258.8	263.2	263.9	264.7	264.5	264.3	264.3	264.5	264.4	r264.3	264.2	263.9	265.0	264.9
09-2	Building paper and board	231.7	230.3	233.8	231.4	239.6	236.3	240.2	240.0	239.8	r244.4	242.8	241.5	240.4	241.4
10	Metals and metal products	300.4	303.3	304.7	304.2	302.9	303.1	302.8	299.3	299.5	r299.2	301.8	302.1	301.0	300.9
10-1	Iron and steel	333.8	339.9	343.1	342.9	342.5	342.8	341.3	338.3	337.5	r337.1	336.6	337.6	336.3	333.3
10-17	Steel mill products	337.6	348.9	350.6	350.3	350.5	352.2	352.1	349.9	349.0	r348.6	348.4	349.8	349.3	345.5
10-2	Nonferrous metals	285.8	277.1	274.4	273.6	267.2	266.1	263.6	253.4	256.4	r255.7	263.4	263.2	262.0	264.0
10-3	Metal containers	315.6	316.8	324.3	326.2	327.2	330.0	330.2	329.9	330.0	328.8	328.7	328.7	327.0	325.7
10-4	Hardware	263.2	272.0	274.1	274.8	278.2	278.5	278.9	280.3	281.2	r282.6	280.4	280.8	280.8	283.5
10-5	Plumbing fixtures and brass fittings	267.5	274.0	274.6	276.4	279.1	280.3	281.0	282.6	283.3	r274.6	277.0	277.8	278.2	279.1
10-6	Heating equipment	224.2	229.9	233.4	233.1	235.4	236.0	237.2	238.5	238.9	r238.4	239.3	238.7	238.9	239.3
10-7	Fabricated structural metal products	295.5	303.0	303.4	304.0	304.5	305.2	304.9	305.3	303.9	r304.3	304.2	303.7	302.8	304.6
10-8	Miscellaneous metal products	270.5	278.3	281.2	278.7	279.0	279.7	284.5	283.9	283.2	r283.3	289.3	289.7	288.5	288.7
11	Machinery and equipment	263.3	272.0	274.1	275.4	276.2	277.6	278.2	278.6	279.6	r279.9	280.3	280.9	281.3	281.8
11-1	Agricultural machinery and equipment	288.3	302.8	303.1	304.6	306.4	306.8	308.2	309.7	311.0	r312.2	313.6	317.0	318.1	319.9
11-2	Construction machinery and equipment	320.8	332.0	337.0	337.9	339.2	341.5	343.5	343.9	346.1	r346.5	347.5	346.6	347.8	347.9
11-3	Metalworking machinery and equipment	301.3	312.9	315.9	317.2	317.8	319.6	320.7	321.2	322.5	r322.8	322.6	322.4	323.0	323.1
11-4	General purpose machinery and equipment	288.7	297.9	300.0	301.3	302.0	303.4	303.8	303.5	304.8	r304.9	304.5	305.5	306.0	306.6
11-6	Special industry machinery and equipment	307.9	316.4	320.4	320.7	321.3	322.9	323.9	325.0	327.1	r326.7	327.0	327.9	329.1	330.1
11-7	Electrical machinery and equipment	220.2	227.0	228.7	229.5	230.3	231.7	231.3	231.5	231.6	r231.8	232.5	233.0	233.0	233.3
11-9	Miscellaneous machinery	252.6	260.4	261.4	264.0	264.9	266.1	267.9	268.5	269.5	r270.9	271.1	270.9	271.7	272.0
12	Furniture and household durables	198.5	202.9	203.5	204.6	205.5	206.0	206.5	207.0	206.8	r208.1	207.7	208.4	208.3	208.6
12-1	Household furniture	219.7	226.6	227.5	227.4	227.6	229.7	230.0	230.2	230.0	r230.4	231.6	231.3	231.6	231.8
12-2	Commercial furniture	257.5	263.9	266.7	271.2	273.6	274.2	275.2	276.0	277.4	r278.1	278.6	278.8	279.1	279.0
12-3	Floor coverings	178.7	181.4	180.3	180.6	180.6	181.1	181.3	181.9	181.2	r181.0	180.3	180.3	180.2	180.1
12-4	Household appliances	187.3	191.3	193.4	195.3	197.3	197.8	198.9	199.6	200.2	r201.0	200.4	200.5	200.3	200.7
12-5	Home electronic equipment	89.2	89.6	89.3	89.6	89.1	87.9	88.0	88.4	87.2	88.0	87.7	88.0	87.3	87.2
12-6	Other household durable goods	281.0	286.2	283.4	283.7	285.0	285.9	285.4	286.1	285.1	r291.8	288.1	293.8	294.5	295.4
13	Nonmetallic mineral products	309.5	313.5	315.6	319.0	319.9	320.2	321.2	320.9	321.1	r320.5	320.2	321.2	321.5	320.9
13-11	Flat glass	212.6	216.1	216.2	216.2	216.2	216.2	226.4	226.4	226.1	r221.1	221.1	221.1	225.3	225.3
13-2	Concrete ingredients	296.3	298.7	306.2	308.4	309.8	309.5	312.5	312.7	311.8	r311.2	311.2	311.9	311.7	309.3
13-3	Concrete products	291.2	293.6	295.5	295.9	296.3	297.7	298.2	298.5	298.8	r299.0	298.6	298.7	298.1	298.5
13-4	Structural clay products, excluding refractories	249.8	257.5	257.5	257.7	257.7	258.1	258.6	258.9	259.3	r263.9	259.5	259.5	264.3	264.3
13-5	Refractories	302.4	311.3	316.8	335.1	337.4	338.7	339.5	340.4	340.4	r340.7	341.3	341.3	337.7	337.7
13-6	Asphalt roofing	407.5	405.6	401.3	400.4	394.4	386.7	385.5	396.4	399.8	r400.1	400.2	405.1	397.5	395.4
13-7	Gypsum products	256.2	249.7	250.4	255.0	260.7	263.2	259.4	256.4	255.8	253.9	253.9	255.1	254.9	253.9
13-8	Glass containers	328.7	335.5	335.4	352.2	356.0	358.1	358.1	358.1	358.1	r358.0	357.9	358.4	358.5	358.5
13-9	Other nonmetallic minerals	463.8	474.7	474.7	478.7	479.6	479.1	471.3	465.2	466.6	r466.0	466.2	470.4	471.3	470.6
14	Transportation equipment (12/68 = 100)	235.4	246.8	248.6	245.2	245.2	245.8	247.5	249.1	249.8	r250.6	245.0	256.4	256.1	257.5
14-1	Motor vehicles and equipment	237.6	249.5	250.8	246.8	246.8	247.2	249.2	251.1	252.0	r252.8	245.0	258.1	257.5	257.9
14-4	Railroad equipment	336.1	340.1	345.8	345.8	346.3	343.5	342.8	342.8	342.6	r347.7	354.7	357.5	357.5	357.5
15	Miscellaneous products	265.7	267.6	268.3	273.5	272.7	273.2	272.2	271.5	273.4	r272.0	280.3	285.9	285.7	290.3
15-1	Toys, sporting goods, small arms, ammunition	211.9	213.3	218.4	220.1	220.7	221.0	221.8	221.9	222.0	r223.5	224.7	223.7	223.7	223.2
15-2	Tobacco products	268.3	278.2	278.2	306.6	306.6	306.7	307.0	307.0	311.5	r311.5	328.8	366.0	365.1	383.5
15-3	Notions	259.8	269.7	270.3	270.4	271.5	271.5	280.1	280.1	280.1	r280.1	280.3	280.3	280.1	280.1
15-4	Photographic equipment and supplies	210.0	209.1	209.9	210.5	212.1	214.2	210.6	210.4	208.9	r208.9	211.6	210.2	210.2	210.3
15-5	Mobile homes (12/74 = 100)	156.8	159.3	159.5	159.6	161.9	162.2	162.5	162.4	162.6	r162.8	162.8	161.5	161.4	161.5
15-9	Other miscellaneous products	347.4	344.6	342.2	341.1	334.5	334.1	331.3	328.6	333.7	r327.0	344.7	344.7	344.6	351.0

[1] Data for August 1982 have been revised to reflect the availability of late reports and corrections by respondents. All data are subject to revision 4 months after original publication.

[2] Prices for natural gas are lagged 1 month.

[3] Includes only domestic production.

[4] Most prices for refined petroleum products are lagged 1 month.

[5] Some prices for industrial chemicals are lagged 1 month.

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23. Producer Price Indexes, for special commodity groupings

[1967=100 unless otherwise specified]

Commodity grouping	Annual average 1981	1981	1982											
		Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.[1]	Sept.	Oct.	Nov.	Dec.
All commodities — less farm products	295.7	300.0	302.0	301.9	301.4	300.9	301.2	302.2	303.9	r304.1	303.9	304.7	305.2	305.2
All foods	251.8	247.6	251.6	253.2	251.6	254.7	257.9	259.0	256.6	r255.8	255.4	252.9	252.1	252.7
Processed foods	252.1	246.5	250.5	251.9	252.1	255.1	259.0	260.8	259.5	r258.7	259.3	256.5	255.0	254.8
Industrial commodities less fuels	263.7	269.4	271.1	271.5	271.7	272.3	272.8	272.4	272.5	r272.6	272.6	274.4	274.4	274.8
Selected textile mill products (Dec. 1975 = 100)	135.8	137.9	139.3	139.7	139.0	139.0	138.7	138.2	137.6	r137.8	137.7	137.3	137.1	136.6
Hosiery	134.3	136.7	136.9	136.9	137.5	138.0	138.5	138.5	138.5	138.5	138.7	138.7	139.7	139.7
Underwear and nightwear	203.4	206.3	213.9	215.6	215.9	215.9	215.9	217.4	218.6	r218.6	219.0	219.2	219.4	219.5
Chemicals and allied products, including synthetic rubber and fibers and yarns	278.4	283.1	284.3	285.1	285.6	285.6	286.1	284.5	282.9	r283.3	283.2	282.3	282.4	281.2
Pharmaceutical preparations	186.9	193.3	196.8	199.3	201.1	204.5	205.8	205.4	205.9	r207.4	209.3	211.5	212.3	213.0
Lumber and wood products, excluding millwork	303.0	290.7	289.9	287.9	288.5	290.5	288.1	294.5	294.6	r288.3	287.9	283.4	283.5	288.6
Steel mill products, including fabricated wire products	337.6	348.9	350.6	350.3	350.5	352.2	352.1	349.9	348.4	r348.1	348.1	349.4	348.5	344.8
Finished steel mill products, excluding fabricated wire products	336.2	347.5	349.3	348.9	349.2	351.0	350.9	348.6	347.7	347.3	347.0	348.6	348.0	344.0
Finished steel mill products, including fabricated wire products	336.2	347.5	349.3	348.9	349.2	351.0	350.9	348.6	347.0	r346.7	346.7	348.2	347.2	343.3
Special metals and metal products	279.4	286.6	287.9	286.0	285.3	285.6	286.3	285.2	285.7	r285.8	284.2	289.9	289.0	289.2
Fabricated metal products	280.0	287.1	289.4	289.0	289.9	290.8	292.6	292.8	292.0	r291.9	294.1	294.1	293.1	294.0
Copper and copper products	203.8	195.4	194.5	194.1	190.8	191.6	193.0	179.7	179.2	r179.8	181.4	179.2	181.8	182.1
Machinery and motive products	256.7	266.9	268.9	268.1	268.5	269.6	270.7	271.7	272.8	273.3	270.8	276.3	276.7	277.6
Machinery and equipment, except electrical	288.5	298.4	300.7	302.3	303.1	304.6	305.7	306.2	307.6	r308.1	308.3	308.9	309.6	310.3
Agricultural machinery, including tractors	297.3	314.7	315.1	316.0	318.4	319.0	319.9	321.3	321.8	r322.8	324.6	329.8	331.3	333.7
Metalworking machinery	329.7	341.2	343.8	344.9	346.4	348.8	349.3	350.1	352.6	r353.1	353.6	354.2	354.3	354.2
Numerically controlled machine tools (Dec. 1971 = 100)	239.3	242.0	240.1	239.8	239.9	239.9	239.9	240.0	239.2	r239.2	239.8	239.8	239.8	239.8
Total tractors	324.7	342.3	346.9	346.9	349.1	352.4	353.6	354.1	354.8	r355.5	358.9	360.8	360.7	363.2
Agricultural machinery and equipment less parts	289.8	305.8	306.5	307.4	309.7	310.3	311.0	312.2	312.8	r313.6	315.1	319.5	320.8	323.1
Farm and garden tractors less parts	300.1	319.7	319.7	319.7	323.5	323.5	325.0	325.8	325.4	r326.0	331.8	334.9	334.9	339.1
Agricultural machinery, excluding tractors less parts	295.2	310.9	311.6	313.2	314.6	315.6	316.1	317.9	319.1	r320.4	319.1	325.9	328.6	329.6
Industrial valves	315.9	325.3	328.6	330.2	330.5	331.1	331.2	330.6	332.7	r332.7	329.4	329.3	329.6	330.6
Industrial fittings	302.1	304.1	304.1	304.1	304.1	309.1	309.1	309.1	310.2	310.2	309.2	307.3	307.3	307.3
Construction materials	283.0	285.2	286.6	286.9	287.5	288.2	288.2	289.5	289.2	r288.3	287.9	287.7	287.6	288.3

[1] Data for August 1982 have been revised to reflect the availability of late reports and corrections by respondents. All data are subject to revision 4 months after original publication.

r=revised.

24. Producer Price Indexes, by durability of product

[1967=100]

Commodity grouping	Annual average 1981	1981	1982											
		Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.[1]	Sept.	Oct.	Nov.	Dec.
Total durable goods	269.8	276.0	277.6	277.4	277.4	278.1	278.5	278.3	278.9	r278.8	278.7	281.4	281.2	282.0
Total nondurable goods	312.4	311.4	314.7	315.4	314.2	313.6	314.5	316.0	317.6	r317.1	315.9	314.3	315.5	315.1
Total manufactures	286.0	289.9	291.9	292.0	291.4	291.1	291.3	292.4	293.7	r293.8	293.1	293.9	294.0	294.1
Durable	269.7	276.5	278.0	277.8	277.8	278.7	279.2	279.3	279.9	r279.8	279.7	282.4	282.4	283.2
Nondurable	303.6	304.3	306.8	307.2	305.9	304.1	304.0	306.3	308.5	308.6	307.3	305.9	306.3	305.6
Total raw or slightly processed goods	330.7	323.6	328.9	330.6	329.7	331.9	335.1	333.4	333.2	r331.1	330.3	328.2	331.1	331.5
Durable	271.2	247.8	253.8	253.7	250.1	245.3	239.7	225.4	225.3	r225.0	227.0	225.1	220.0	218.2
Nondurable	334.0	328.2	333.4	335.2	334.5	337.2	341.1	340.3	340.1	r337.9	336.9	334.8	338.2	338.8

[1] Data for August July 1982 have been revised to reflect the availability of late reports and corrections by respondents. All data are subject to revision 4 months after original publication.

r=revised.

25. Producer Price Indexes for the output of selected SIC industries

[1967=100 unless otherwise specified]

1972 SIC code	Industry description	Annual average 1981	1981	1982										
			Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.[1]	Sept.	Oct.	Nov.	Dec.
	MINING														
1011	Iron ores (12/75 = 100)	167.6	171.3	171.3	171.3	171.3	171.3	177.1	177.1	177.1	177.1	177.1	177.1	177.1	177.1
1092	Mercury ores (12/75 = 100)	346.0	343.7	347.9	313.7	325.0	327.0	308.3	307.5	306.2	287.5	289.4	312.5	308.3	312.5
1211	Bituminous coal and lignite	493.7	510.3	520.9	525.8	524.9	527.9	529.9	530.0	533.5	r535.0	536.3	536.0	536.3	536.0
1311	Crude petroleum and natural gas	898.6	921.7	919.7	913.9	905.4	893.3	901.2	914.3	924.3	926.7	938.4	946.7	969.0	956.0
1442	Construction sand and gravel	277.4	280.7	287.4	289.9	293.1	292.6	295.0	295.8	296.0	r297.1	296.0	297.3	297.8	297.6
1455	Kaolin and ball clay (6/76 = 100)	138.7	143.4	149.6	149.6	149.6	151.7	151.7	151.7	151.7	151.7	151.7	151.7	151.7	151.7
	MANUFACTURING														
2011	Meatpacking plants	243.1	234.1	237.6	244.4	247.3	254.0	264.7	265.8	258.2	r252.9	253.1	242.6	238.3	236.4
2013	Sausages and other prepared meats	241.4	247.0	245.6	251.0	248.6	253.0	266.2	274.0	272.6	r275.7	282.3	277.5	272.5	268.8
2016	Poultry dressing plants	192.0	166.7	(2)	(2)	(2)	(2)	(2)	(2)	(2)	N.A.	(2)	(2)	(2)	N.A.
2021	Creamery butter	274.8	275.0	275.0	276.4	276.8	275.3	274.9	274.9	275.0	276.3	276.8	276.8	276.5	277.8

See footnotes at end of table.

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25. Continued—Producer Price Indexes for the output of selected SIC industries

[1967 = 100 unless otherwise specified]

1972 SIC code	Industry description	Annual average 1981	1981	1982										
			Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.[1]	Sept.	Oct.	Nov.	Dec.
	MANUFACTURING—Continued														
2022	Cheese, natural and processed (12/72 = 100)	215.7	218.4	218.6	217.9	216.7	216.5	217.1	218.1	218.0	r218.3	218.7	221.2	221.0	221.0
2024	Ice cream and frozen desserts (12/72 = 100)	211.9	212.7	212.8	212.8	210.9	214.2	214.2	214.2	213.6	213.6	216.5	216.5	216.5	216.5
2033	Canned fruits and vegetables	248.5	258.9	260.8	262.6	262.4	262.3	262.6	265.1	263.9	r262.2	260.1	261.1	260.9	261.5
2034	Dehydrated food products (12/73 = 100)	177.6	182.1	184.0	181.8	181.5	181.5	178.5	178.5	180.4	180.0	179.6	181.0	181.0	180.2
2041	Flour mills (12/71 = 100)	196.0	189.2	191.5	187.5	187.3	192.5	188.4	189.1	185.5	180.2	182.2	179.6	184.8	185.5
2044	Rice milling	277.2	215.1	205.9	192.2	183.5	177.9	183.0	180.3	177.6	183.0	183.0	183.0	175.2	196.1
2048	Prepared foods, n.e.c. (12/75 = 100)	124.5	116.0	116.0	115.9	114.6	115.4	116.7	115.6	114.7	r112.6	109.6	107.6	108.1	110.6
2061	Raw cane sugar	273.5	230.8	247.6	245.1	233.0	242.9	269.2	286.7	311.5	r318.2	295.6	291.3	293.0	293.4
2063	Beet sugar	314.3	250.5	266.4	272.2	272.2	269.7	277.3	277.3	287.9	r294.3	300.8	298.1	299.5	304.8
2067	Chewing gum	309.8	303.2	303.3	303.3	303.3	303.4	303.4	303.4	303.3	304.7	304.7	304.8	306.0	306.1
2074	Cottonseed oil mills	199.0	182.4	184.9	170.5	158.1	164.7	167.9	170.2	174.6	173.1	164.5	157.6	164.2	169.4
2075	Soybean oil mills	245.8	221.9	223.1	220.4	216.6	225.8	232.0	226.4	224.1	r206.4	200.6	198.3	205.6	205.1
2077	Animal and marine fats and oils	288.0	266.6	260.4	262.6	271.8	273.3	271.5	272.3	264.3	242.4	241.2	232.1	239.7	240.3
2083	Malt	282.5	275.4	267.1	267.1	267.1	259.1	259.8	259.8	259.8	259.8	251.2	251.2	240.6	240.6
2085	Distilled liquor, except brandy (12/75 = 100)	134.7	137.9	140.1	137.9	140.2	140.2	139.8	139.8	139.8	140.4	140.4	140.4	141.3	141.3
2091	Canned and cured seafoods (12/73 = 100)	187.8	188.5	187.2	187.0	187.7	188.2	188.0	188.4	187.8	184.3	186.2	186.3	186.4	186.6
2092	Fresh or frozen packaged fish	369.1	369.5	396.8	389.2	419.1	432.2	425.9	441.3	417.4	r424.7	446.7	453.9	457.9	467.2
2095	Roasted coffee (12/72 = 100)	238.1	240.4	245.1	247.7	248.8	250.6	248.0	247.8	246.7	r247.5	244.7	246.0	247.7	250.5
2098	Macaroni and spaghetti	252.0	259.5	259.5	259.5	259.5	259.5	259.5	259.5	259.5	259.5	259.5	255.5	255.5	255.5
2111	Cigarettes	277.7	288.4	288.4	319.7	319.7	319.8	319.9	319.9	324.9	324.9	345.1	387.4	387.0	407.6
2121	Cigars	170.0	174.5	174.5	178.6	178.6	179.6	179.6	179.6	179.6	r179.6	176.8	176.8	176.8	176.8
2131	Chewing and smoking tobacco	320.7	326.1	326.1	349.4	349.4	349.4	353.6	353.6	358.4	r358.4	358.5	375.1	358.5	373.8
2211	Weaving mills, cotton (12/72 = 100)	232.7	227.6	227.3	227.1	226.4	226.3	226.4	224.4	222.0	r222.1	218.6	215.4	220.7	220.5
2221	Weaving mills, synthetic (12/77 = 100)	136.7	139.5	139.8	139.7	140.0	139.2	138.5	137.9	137.2	137.1	136.4	136.3	135.1	134.9
2251	Women's hosiery, except socks (12/75 = 100)	113.5	115.2	115.6	115.6	116.1	116.2	116.9	116.9	116.8	r116.9	117.0	116.8	118.5	118.4
2254	Knit underwear mills	210.2	213.0	225.2	225.2	225.9	226.0	226.1	228.8	230.9	r231.2	231.2	231.4	231.4	231.4
2257	Circular knit fabric mills (6/76 = 100)	110.9	111.8	112.4	113.2	110.7	110.2	109.9	108.3	108.7	r108.8	108.6	108.0	107.7	107.4
2261	Finishing plants, cotton (6/76 = 100)	144.9	141.4	140.5	140.3	140.8	141.6	141.5	141.4	140.3	139.8	138.4	136.8	136.2	136.1
2262	Finishing plants, synthetics, silk (6/76 = 100)	126.5	128.6	129.4	129.9	128.5	128.5	128.4	127.6	126.8	r129.0	128.1	127.4	127.7	127.2
2272	Tufted carpets and rugs	154.2	156.7	155.5	155.7	155.7	156.1	156.4	157.2	156.3	r156.1	156.1	156.1	155.9	155.9
2281	Yarn mills, except wool (12/71= 100)	221.7	217.2	216.3	215.7	215.4	214.4	214.7	213.8	213.2	r213.0	213.1	211.8	212.5	211.8
2282	Throwing and winding mills (6/76 = 100)	139.3	146.0	145.7	150.3	150.0	151.0	152.7	149.4	140.6	r140.5	142.5	124.4	143.7	144.4
2284	Thread mills (6/76 = 100)	151.4	156.8	156.8	156.8	156.8	156.7	156.6	156.6	156.5	158.0	158.0	157.9	157.8	157.8
2298	Cordage and twine (12/77 = 100)	134.8	140.7	141.0	141.0	141.0	141.0	141.0	141.0	141.0	141.0	142.6	142.6	142.6	142.6
2311	Men's and boys' suits and coats	224.0	230.5	233.7	233.6	233.8	234.4	234.6	236.3	237.2	239.8	240.0	240.0	240.1	241.0
2321	Men's and boys' shirts and nightwear	209.5	213.4	173.4	215.9	216.9	217.3	217.5	217.8	218.1	r218.2	219.4	219.4	220.9	220.4
2322	Men's and boys' underwear	230.6	233.0	246.9	246.9	247.4	247.4	247.4	251.2	251.2	r250.7	250.7	251.3	252.1	250.0
2323	Men's and boys' neckwear (12/75 = 100)	114.6	113.9	115.3	117.3	117.3	117.3	117.3	121.3	121.3	121.3	121.3	121.3	121.3	121.3
2327	Men's and boys' separate trousers	186.2	187.1	188.4	188.4	188.4	194.1	195.8	195.9	195.6	195.6	195.6	195.5	192.9	193.8
2328	Men's and boys' work clothing	248.6	253.3	252.5	254.2	254.9	255.2	254.7	254.1	252.9	253.1	252.3	252.0	251.5	251.6
2331	Women's and misses' blouses and waists (6/78 = 100)	120.6	126.7	126.5	126.5	126.5	126.5	126.5	126.6	126.4	r126.7	123.8	123.8	125.5	124.8
2335	Women's and misses' dresses (12/77 = 100)	121.3	122.7	123.0	123.0	123.1	122.9	122.9	123.7	123.7	123.6	122.7	122.8	122.9	123.1
2341	Women's and children's underwear (12/72 = 100)	169.7	171.6	174.7	174.8	175.0	175.0	176.6	178.8	178.8	r177.5	178.1	178.6	177.1	177.1
2342	Brassieres and allied garments (12/75 = 100)	136.7	140.1	145.1	148.8	148.8	148.8	148.1	148.1	148.0	r148.0	150.2	149.8	149.7	149.9
2361	Children's dresses and blouses (12/77 = 100)	120.9	123.2	123.2	123.2	123.2	122.2	122.2	122.2	119.4	120.3	118.6	118.6	117.0	117.0
2381	Fabric dress and work gloves	289.3	289.2	293.8	297.4	295.5	295.5	295.5	294.5	294.5	288.2	288.2	287.4	287.4	287.4
2394	Canvas and related products (12/77 = 100)	132.0	139.7	144.9	144.9	147.2	145.7	145.9	143.1	143.1	r143.1	145.4	148.0	148.0	148.0
2396	Automotive and apparel trimmings (12/77 = 100)	131.0	131.0	131.0	131.0	131.0	131.0	131.0	131.0	131.0	131.0	131.0	131.0	131.0	131.0
2421	Sawmills and planing mills (12/71 = 100)	228.2	218.6	218.0	216.9	216.9	218.8	217.4	220.1	221.9	r217.2	216.3	213.5	211.7	214.2
2436	Softwood veneer and plywood (12/75 = 100)	142.0	134.5	132.5	130.5	131.8	129.1	125.9	133.6	129.6	r126.5	128.6	124.7	128.0	131.1
2439	Structural wood members, n.e.c. (12/75 = 100)	156.6	153.2	153.9	153.5	152.6	153.4	152.8	154.2	156.1	r155.2	154.4	154.1	153.8	153.5
2448	Wood pallets and skids (12/75 = 100)	152.5	149.9	149.8	149.0	148.2	145.9	144.7	144.2	144.1	r143.9	143.8	144.3	144.1	144.5
2451	Mobile homes (12/74 = 100)	156.9	160.3	160.4	160.5	162.7	163.0	163.3	163.2	163.5	r163.7	163.7	162.6	162.4	162.6
2492	Particleboard (12/75 = 100)	173.6	170.3	172.6	170.7	177.7	178.2	178.0	178.1	176.7	r175.7	175.3	173.4	173.7	175.1
2511	Wood household furniture (12/71 = 100)	197.4	202.8	203.6	204.3	205.1	207.4	207.7	208.0	208.2	r208.1	208.0	208.8	209.1	209.4
2512	Upholstered household furniture (12/71 = 100)	174.0	182.1	184.4	179.3	179.3	181.8	182.3	182.3	181.3	r182.7	185.9	183.2	183.7	184.1
2515	Mattresses and bedsprings	192.3	198.0	204.4	205.6	205.6	205.7	205.9	205.9	205.7	r205.9	210.4	210.3	210.3	210.3
2521	Wood office furniture	254.2	257.6	261.9	270.7	270.8	270.8	270.8	270.8	270.9	r271.3	272.4	272.4	272.4	272.4
2611	Pulp mills (12/73 = 100)	252.4	262.5	258.6	258.6	260.7	253.6	249.7	244.3	236.5	r235.3	235.4	232.6	229.4	229.4
2621	Paper mills, except building (12/74 = 100)	156.2	159.6	162.0	162.0	162.0	161.3	160.3	160.6	160.1	r159.5	159.8	159.8	159.1	158.2
2631	Paperboard mills (12/74 = 100)	151.7	152.7	152.5	153.4	153.0	152.8	151.3	149.8	148.9	r149.2	146.5	144.8	144.6	143.1
2647	Sanitary paper products	343.4	344.6	344.6	344.6	344.5	344.5	343.6	346.2	346.9	r351.5	350.0	349.5	358.5	356.6
2654	Sanitary food containers	244.8	253.3	254.0	256.9	260.0	259.9	259.9	259.9	259.9	r259.9	262.2	263.2	263.1	263.2
2655	Fiber cans, drums, and similar products (12/75 = 100)	163.0	170.0	176.4	176.5	176.5	176.5	176.7	176.7	176.7	177.5	177.5	177.8	180.7	183.8
2812	Alkalies and chlorine (12/73 = 100)	305.9	324.8	329.4	335.2	335.6	322.0	341.1	334.8	324.1	325.8	324.3	313.4	311.1	303.8
2821	Plastics materials and resins (6/76 = 100)	150.8	154.3	150.7	152.6	151.0	152.6	150.9	150.3	150.1	r151.0	151.1	150.7	151.0	150.7
2822	Synthetic rubber	293.3	302.7	303.9	306.1	306.7	306.6	307.1	303.8	301.8	299.9	298.8	296.6	295.7	295.3
2824	Organic fiber, noncellulosic	155.6	161.9	161.8	162.9	161.6	162.5	161.6	161.3	159.4	r159.6	160.1	157.6	159.8	158.8
2873	Nitrogenous fertilizers (12/75 = 100)	142.8	142.9	142.4	142.6	142.2	141.7	140.5	139.5	135.9	r135.9	135.6	134.6	134.5	133.5
2874	Phosphatic fertilizers	254.1	259.0	261.0	263.5	261.6	258.2	256.2	257.3	255.9	r247.9	245.9	247.1	240.0	238.7
2875	Fertilizers, mixing only	270.7	270.5	274.3	276.8	278.4	278.7	278.6	279.0	278.4	r277.8	275.4	274.7	271.4	270.7
2892	Explosives	311.9	315.6	314.9	317.6	320.5	327.2	326.1	326.5	324.4	r324.6	337.3	335.6	335.4	335.2
2911	Petroleum refining (6/76 = 100)	294.4	293.1	293.0	289.1	281.7	267.4	259.2	267.9	281.5	283.7	280.3	278.5	280.5	278.4
2951	Paving mixtures and blocks (12/75 = 100)	194.3	196.0	197.0	198.0	198.1	197.1	196.3	195.0	194.8	r194.1	194.8	196.7	197.2	196.8
2952	Asphalt felts and coatings (12/75 = 100)	176.9	176.1	174.2	173.8	171.2	168.1	168.4	173.1	174.7	r174.4	174.5	176.5	173.1	172.3
3011	Tires and inner tubes (12/73 = 100)	215.8	221.2	222.0	222.4	220.3	216.7	221.3	221.5	221.3	226.2	221.7	221.9	221.0	222.1

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25. Continued—Producer Price Indexes for the output of selected SIC industries

[1967=100 unless otherwise specified]

1972 SIC code	Industry description	Annual average 1981	1981	1982											
			Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.[1]	Sept.	Oct.	Nov.	Dec.
3021	Rubber and plastic footwear (12/71 = 100)	184.4	185.2	186.1	188.4	189.1	189.0	186.6	187.0	187.1	186.8	185.9	185.9	185.8	186.3
3031	Reclaimed rubber (12/73 =100)	194.1	200.3	200.3	200.4	207.2	209.2	209.5	210.7	209.9	r209.7	207.6	207.5	207.0	206.5
3079	Miscellaneous plastic products (6/78 = 100)	128.9	131.0	131.1	131.6	132.8	133.2	133.0	133.1	132.9	r132.9	132.7	132.7	132.6	133.0
3111	Leather tanning and finishing (12/77 = 100)	150.7	147.5	150.8	149.3	147.9	146.8	147.4	147.3	147.4	146.5	148.5	148.7	149.6	149.8
3143	Men's footwear, except athletic (12/75 = 100)	169.3	171.3	173.1	172.2	173.5	174.9	175.1	171.6	175.3	175.5	175.7	175.8	175.8	174.7
3144	Women's footwear, except athletic	217.1	212.4	208.5	209.8	210.3	217.0	216.2	220.1	220.8	r221.2	222.2	223.3	223.3	223.1
3171	Women's handbags and purses (12/75 = 100)	155.5	158.4	158.4	158.4	158.4	158.4	158.4	158.4	158.5	157.8	159.0	159.0	159.3	162.5
3211	Flat glass (12/71 = 100)	175.3	177.4	177.5	177.5	177.5	177.5	187.9	187.9	187.7	r186.3	186.3	186.3	187.8	187.8
3221	Glass containers	328.6	335.4	335.3	352.1	355.8	358.0	358.0	358.0	358.0	r357.8	357.7	358.3	358.3	358.3
3241	Cement, hydraulic	329.6	330.3	339.6	341.5	341.5	341.1	341.9	341.9	339.8	r338.3	335.1	336.2	335.4	330.0
3251	Brick and structural clay tile	296.5	300.5	298.9	299.4	299.4	303.4	304.5	305.0	305.9	r313.8	307.5	307.5	316.9	316.9
3253	Ceramic wall and floor tile (12/75 = 100)	133.4	140.4	140.4	140.4	140.4	140.6	140.6	140.6	140.6	r140.7	138.0	138.0	138.0	138.0
3255	Clay refractories	310.2	319.9	329.6	354.4	355.6	355.2	355.5	356.2	356.3	r356.8	357.9	357.9	351.2	351.2
3259	Structural clay products, n.e.c.	222.6	236.6	225.6	226.0	225.9	215.9	215.8	215.9	215.9	r219.0	219.5	219.5	219.4	219.5
3261	Vitreous plumbing fixtures	254.9	260.1	261.1	260.6	260.8	261.8	265.4	265.5	264.2	263.9	267.1	269.1	270.3	269.7
3262	Vitreous china food utensils	335.0	344.7	347.7	347.7	347.3	346.5	355.5	360.2	360.2	r360.2	349.8	350.3	359.4	366.8
3263	Fine earthenware food utensils	309.1	315.0	315.1	315.1	315.0	314.9	316.2	316.9	316.9	r316.9	314.8	321.3	322.7	323.7
3269	Pottery products, n.e.c. (12/75 = 100)	160.1	163.7	164.3	164.3	164.2	164.0	166.3	167.4	167.4	r167.4	164.8	166.9	169.1	170.9
3271	Concrete block and brick	270.4	275.1	274.9	276.4	276.4	276.5	276.7	277.0	277.5	r277.5	276.8	276.9	275.2	275.1
3273	Ready-mixed concrete	298.7	299.6	301.9	301.9	302.5	303.9	305.5	305.5	306.3	r305.8	305.4	306.1	305.6	306.0
3274	Lime (12/75 = 100)	172.5	173.8	178.8	183.7	185.7	186.3	188.0	188.3	188.0	r188.0	188.2	188.1	187.8	186.0
3275	Gypsum products	256.9	250.6	250.9	253.9	260.5	262.5	258.8	256.2	256.5	254.3	254.7	255.8	253.1	251.3
3291	Abrasive products (12/71 = 100)	232.9	241.0	241.3	248.3	249.8	250.2	251.7	252.1	252.1	252.3	252.3	252.3	252.3	252.3
3297	Nonclay refractories (12/74 = 100)	185.3	190.3	191.2	198.3	200.4	202.3	203.2	203.8	203.8	203.8	203.8	203.8	203.7	203.6
3312	Blast furnaces and steel mills	342.8	353.3	354.7	354.4	354.4	356.1	355.9	353.7	353.3	r352.5	352.3	354.0	353.4	349.6
3313	Electrometallurgical products (12/75 = 100)	121.8	125.3	125.3	123.4	120.3	120.3	120.3	120.4	120.4	121.4	121.4	121.3	121.3	121.2
3316	Cold finishing of steel shapes	316.2	326.7	327.0	327.0	327.0	327.1	327.3	325.6	326.2	r326.1	325.1	324.3	322.5	322.1
3317	Steel pipes and tubes	341.5	363.0	363.7	364.1	365.8	365.9	365.9	365.7	364.1	360.9	361.0	361.0	360.6	358.9
3321	Gray iron foundries (12/68 = 100)	299.7	306.1	307.9	310.0	311.5	311.9	311.1	311.5	311.4	309.6	309.7	314.4	314.2	314.2
3333	Primary zinc	326.3	315.7	308.6	311.2	292.0	273.4	256.6	259.7	266.4	277.0	291.6	302.9	304.8	288.2
3334	Primary aluminum	333.1	332.8	324.1	320.2	320.8	312.4	308.8	307.9	305.7	r306.0	304.4	303.5	306.0	305.1
3351	Copper rolling and drawing	212.3	207.1	204.8	203.9	198.4	196.4	197.4	190.0	189.5	r190.0	190.9	191.3	193.8	194.4
3353	Aluminum sheet, plate, and foil (12/75 = 100)	175.8	180.8	181.8	181.7	181.2	179.9	178.6	178.0	178.0	r176.9	177.2	176.3	175.8	175.9
3354	Aluminum extruded products (12/75 = 100)	180.1	181.1	180.8	180.8	180.5	180.2	180.2	180.1	179.6	r178.8	178.0	177.7	175.4	175.1
3355	Aluminum rolling, drawing, n.e.c. (12/75 = 100)	159.1	166.1	166.1	166.5	166.3	162.9	163.0	165.4	164.7	164.5	165.9	160.0	160.7	161.8
3411	Metal cans	305.1	304.9	310.8	314.0	313.6	318.6	318.7	318.7	318.6	r318.1	318.1	318.0	316.7	313.2
3425	Hand saws and saw blades (12/72 = 100)	201.4	206.0	211.6	214.8	214.9	215.3	221.3	221.4	221.5	r221.6	221.2	221.2	221.4	221.2
3431	Metal sanitary ware	265.5	271.8	271.3	272.8	275.1	275.8	275.5	276.1	276.9	r276.7	276.4	278.1	278.1	278.5
3465	Automotive stampings (12/75 = 100)	146.0	149.1	150.1	144.7	144.2	144.3	144.5	144.5	144.5	r144.9	153.5	154.1	153.7	153.7
3482	Small arms ammunition (12/75 = 100)	159.0	163.9	167.5	167.5	167.5	166.3	166.3	170.3	170.3	r170.3	175.9	175.9	175.9	174.8
3493	Steel springs, except wire	245.9	256.1	255.8	257.4	256.4	254.3	254.5	254.4	252.5	253.5	253.5	253.7	253.7	253.7
3494	Valves and pipe fittings (12/71 = 100)	248.9	255.7	257.7	258.9	259.1	260.3	260.9	260.6	261.8	r261.8	260.0	259.8	259.9	260.6
3498	Fabricated pipe and fittings	361.3	379.3	378.6	377.7	379.8	385.5	385.4	385.4	383.8	r385.1	382.4	383.2	382.1	379.5
3519	Internal combustion engines, n.e.c.	311.9	325.4	329.4	332.0	332.6	334.2	338.4	339.1	341.1	r345.4	347.1	347.3	347.5	347.7
3531	Construction machinery (12/76 = 100)	156.8	159.7	162.5	162.4	163.3	164.3	165.2	165.4	166.5	166.7	166.8	166.2	167.1	167.1
3532	Mining machinery (12/72 = 100)	282.5	292.9	295.5	297.8	300.9	302.4	304.0	304.2	304.5	r304.0	304.5	305.4	306.4	306.5
3533	Oilfield machinery and equipment	395.8	420.3	427.2	429.2	435.8	439.3	438.4	438.7	439.3	439.6	439.1	436.9	437.0	436.4
3534	Elevators and moving stairways	253.9	265.6	264.3	269.8	271.6	271.8	275.5	275.5	273.5	r275.3	275.3	274.2	277.7	278.8
3542	Machine tools, metal forming types (12/71 = 100)	306.9	319.3	319.7	322.8	324.5	325.2	325.5	326.5	333.6	333.6	333.3	333.5	334.0	334.2
3546	Power driven hand tools (12/76 = 100)	147.3	150.0	153.3	153.2	153.9	154.7	156.3	156.3	158.4	r158.6	157.2	157.5	158.3	158.3
3552	Textile machinery (12/69 = 100)	243.5	249.9	252.3	253.5	255.0	256.2	257.3	259.2	260.1	r259.2	259.3	261.3	262.0	262.0
3553	Woodworking machinery (12/72 = 100)	225.0	229.1	233.7	232.9	233.4	234.7	234.7	234.9	230.4	230.6	230.6	230.7	231.1	231.1
3576	Scales and balances, excluding laboratory	226.2	226.5	228.3	228.8	229.8	229.6	229.5	230.6	231.9	231.9	231.9	232.0	232.1	232.8
3592	Carburetors, pistons, rings, valves (6/76 = 100)	178.0	187.3	185.3	189.6	190.4	192.8	195.4	195.9	196.9	r197.4	197.6	198.2	198.2	198.3
3612	Transformers	209.9	222.0	220.5	222.2	222.4	223.3	224.7	225.2	225.0	r226.1	224.6	223.9	223.8	223.9
3623	Welding apparatus, electric (12/72 = 100)	227.5	235.8	236.8	236.9	232.3	237.6	237.6	237.8	241.6	r242.4	237.7	237.8	238.0	238.3
3631	Household cooking equipment (12/75 = 100)	141.2	142.6	146.0	146.8	147.2	146.2	147.1	146.9	148.3	r150.3	151.0	151.1	151.8	151.9
3632	Household refrigerators, freezers (6/76 = 100)	132.8	137.9	140.1	141.1	142.3	142.5	143.2	144.3	145.5	145.9	145.9	145.4	145.4	145.4
3633	Household laundry equipment (12/73 = 100)	174.3	178.8	180.1	180.5	186.2	186.9	188.6	189.0	189.1	189.7	190.1	190.5	190.4	191.5
3635	Household vacuum cleaners	159.1	160.8	165.6	165.2	165.7	165.4	165.5	165.6	165.6	r166.7	159.5	159.2	157.0	157.0
3636	Sewing machines (12/75 = 100)	146.8	156.0	156.0	155.8	155.8	154.3	154.3	154.3	154.3	r153.6	153.0	153.6	153.6	153.6
3641	Electric lamps	277.3	281.3	282.1	286.1	283.6	296.6	294.5	293.9	291.8	r293.7	296.3	302.9	303.0	303.4
3644	Noncurrent-carrying wiring devices (12/72 = 100)	249.6	262.1	257.9	259.0	258.1	260.0	262.7	260.8	260.1	260.3	261.3	261.9	261.6	263.6
3646	Commercial lighting fixtures (12/75 = 100)	154.8	159.2	159.2	161.1	162.4	163.5	167.7	166.5	165.9	r165.6	165.4	165.7	165.9	169.3
3648	Lighting equipment, n.e.c. (12/75 = 100)	155.9	163.1	162.8	167.8	168.8	170.9	171.2	171.1	171.1	171.2	171.2	171.2	171.2	171.5
3671	Electron tubes receiving type	309.7	342.2	374.1	374.2	374.4	374.5	374.4	374.5	375.4	r375.4	380.7	380.8	414.5	414.5
3674	Semiconductors and related devices	r90.9	91.7	90.9	90.2	90.0	89.5	89.3	89.5	90.6	r88.2	90.8	88.4	88.3	88.8
3675	Electronic capacitors (12/75 = 100)	170.3	166.6	167.4	169.7	168.4	167.6	166.6	166.8	165.7	r166.3	165.5	164.4	163.8	163.8
3676	Electronic resistors (12/75 = 100)	141.4	142.8	143.7	144.0	143.4	144.4	145.2	144.9	144.4	144.6	144.8	145.2	145.4	146.3
3678	Electronic connectors (12/75 = 100)	154.9	155.8	155.9	156.2	156.7	156.4	158.3	159.8	159.1	r159.0	159.8	160.9	160.4	161.3
3692	Primary batteries, dry and wet	182.2	182.7	182.0	184.3	190.5	195.5	195.8	196.2	196.3	196.3	196.8	198.1	198.1	198.1
3711	Motor vehicles and car bodies (12/75 = 100)	150.3	159.1	159.8	155.0	154.9	154.9	157.0	159.0	159.1	r159.7	151.4	162.8	162.8	163.1
3942	Dolls (12/75 = 100)	131.3	130.9	135.5	136.6	136.6	136.8	136.8	136.8	136.8	r136.8	136.5	136.5	136.5	136.5
3944	Games, toys, and children's vehicles	221.3	223.9	228.4	232.5	234.1	234.1	234.3	234.3	234.4	r234.4	232.1	232.6	232.8	232.8
3955	Carbon paper and inked ribbons (12/75 = 100)	138.5	140.3	140.3	140.3	140.3	140.3	140.5	140.6	140.4	140.5	139.3	139.3	139.2	139.4
3995	Burial caskets (6/76 = 100)	139.5	142.7	142.7	143.8	145.3	145.3	149.3	149.3	150.8	150.8	150.8	150.8	150.8	150.8
3996	Hard surface floor coverings (12/75 = 100)	151.8	153.7	155.1	155.2	156.1	156.1	156.3	154.3	155.0	155.7	156.9	156.9	156.9	156.8

[1] Data for August 1982 have been revised to reflect the availability of late reports and corrections by respondents. All data are subject to revision 4 months after original publication.

[2] Not available.
r=revised.

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PRODUCTIVITY DATA

PRODUCTIVITY DATA are compiled by the Bureau of Labor Statistics from establishment data and from estimates of compensation and output supplied by the U.S. Department of Commerce and the Federal Reserve Board.

Definitions

Output is the constant dollar gross domestic product produced in a given period. Indexes of **output per hour of labor input,** or labor productivity, measure the value of goods and services produced per hour 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 payments for the self-employed, except for nonfinancial corporations, in which there are no self-employed. **Real compensation per hour** is compensation per hour adjusted by the Consumer Price Index for All Urban Consumers.

Unit labor cost measures the labor compensation cost required to produce one unit of output and is derived by dividing compensation by output. **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 domestic product and dividing by output. In these tables, **unit nonlabor costs** contain all the components of unit nonlabor payments except unit profits. **Unit profits** include 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.

The use of the term "man hours" to identify the labor component of productivity and costs, in tables 26 through 29, has been discontinued. **Hours of all persons** is now used to describe the labor input of payroll workers, self-employed persons, and unpaid family workers. **Output per all-employee hour** is now used to describe labor productivity in nonfinancial corporations where there are no self-employed.

Notes on the data

In the business sector and the nonfarm business sector, the basis for the output measure employed in the computation of output per hour is Gross Domestic Product rather than Gross National Product. Computation of hours includes estimates of nonfarm and farm proprietor hours.

Output data are supplied by the Bureau of Economic Analysis, U.S. Department of Commerce, and the Federal Reserve Board. Quarterly manufacturing output indexes are adjusted by the Bureau of Labor Statistics to annual estimates of output (gross product originating) from the Bureau of Economic Analysis. Compensation and hours data are from the Bureau of Economic Analysis and the Bureau of Labor Statistics.

Beginning with the September 1982 issue of the *Review,* all of the productivity and cost measures contained in these tables are based on revised output and compensation measures released by the Bureau of Economic Analysis in July as part of the regular revision cycle of the National Income and Product Accounts. Measures of labor input have been revised to reflect results of the 1980 census, and seasonal factors have been recomputed for use in the preparation of quarterly measures. The word "private" is no longer being used as part of the series title of one of the two business sector measures prepared by BLS; no change has been made in the definition or content of the measures as a result of this change.

26. Annual indexes of productivity, hourly compensation, unit costs, and prices, selected years, 1950–81

[1977=100]

Item	1950	1955	1960	1965	1970	1974	1975	1976	1977	1978	1979	1980	1981
Business sector:													
Output per hour of all persons	50.4	58.3	65.2	78.3	86.2	92.5	94.5	97.6	100.0	100.6	99.6	98.9	100.7
Compensation per hour	20.0	26.4	33.9	41.7	58.2	78.0	85.5	92.9	100.0	108.6	119.1	131.4	144.1
Real compensation per hour	50.5	59.6	69.5	80.1	90.8	95.9	96.3	98.9	100.0	100.9	99.4	96.7	96.0
Unit labor cost	39.7	45.2	52.0	53.3	67.5	84.4	90.5	95.1	100.0	108.0	119.5	132.9	143.1
Unit nonlabor payments	43.4	47.6	50.6	57.6	63.2	78.5	90.4	94.0	100.0	106.7	112.8	119.3	135.2
Implicit price deflator	41.0	46.0	51.6	54.7	66.0	82.4	90.5	94.7	100.0	107.5	117.2	128.3	140.4
Nonfarm business sector:													
Output per hour of all persons	56.3	62.8	68.3	80.5	86.8	92.9	94.7	97.8	100.0	100.6	99.3	98.5	99.9
Compensation per hour	21.8	28.3	35.7	42.8	58.7	78.5	86.0	93.0	100.0	108.6	118.8	130.9	143.6
Real compensation per hour	55.0	64.0	73.0	82.2	91.5	96.4	96.8	99.0	100.0	100.9	99.2	96.3	95.7
Unit labor cost	38.8	45.0	52.2	53.2	67.6	84.5	90.8	95.1	100.0	108.0	119.6	133.0	143.8
Unit nonlabor payments	42.7	47.8	50.4	58.0	63.7	75.8	88.5	93.5	100.0	105.3	110.3	119.1	134.8
Implicit price deflator	40.1	46.0	51.6	54.8	66.3	81.6	90.0	94.6	100.0	107.1	116.5	128.3	140.8
Nonfinancial corporations:													
Output per hour of all employees	(1)	(1)	68.0	81.9	87.4	92.8	95.5	98.2	100.0	100.9	100.7	100.3	102.0
Compensation per hour	(1)	(1)	37.0	43.9	59.4	78.5	86.1	92.9	100.0	108.5	118.7	130.9	143.5
Real compensation per hour	(1)	(1)	75.8	84.3	92.7	96.5	96.9	98.9	100.0	100.8	99.1	96.2	95.6
Unit labor cost	(1)	(1)	54.4	53.5	68.0	84.7	90.2	94.6	100.0	107.5	117.8	130.5	140.6
Unit nonlabor payments	(1)	(1)	54.6	60.8	63.1	75.6	90.8	95.0	100.0	104.2	106.9	117.7	134.8
Implicit price deflator	(1)	(1)	54.5	56.1	66.3	81.6	90.4	94.7	100.0	106.4	114.1	126.1	138.6
Manufacturing:													
Output per hour of all persons	49.4	56.4	60.0	74.5	79.1	90.8	93.4	97.5	100.0	100.9	101.5	101.7	104.5
Compensation per hour	21.5	28.8	36.7	42.8	57.6	76.3	85.4	92.3	100.0	108.3	118.9	132.8	146.4
Real compensation per hour	54.0	65.1	75.1	82.3	89.8	93.8	96.2	98.3	100.0	100.6	99.2	97.7	97.5
Unit labor cost	43.4	51.0	61.1	57.5	72.7	84.1	91.5	94.6	100.0	107.4	117.1	130.6	140.0
Unit nonlabor payments	54.3	58.5	61.1	69.3	65.0	69.3	87.3	93.7	100.0	102.5	99.9	97.1	108.8
Implicit price deflator	46.6	53.2	61.1	61.0	70.5	79.8	90.3	94.4	100.0	106.0	112.0	120.8	130.8

[1] Not available.

r= revised.

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27. Annual changes in productivity, hourly compensation, unit costs, and prices, 1971–81

Item	Year											Annual rate of change	
	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1950-81	1960-81
Business sector:													
Output per hour of all persons	3.6	3.5	2.6	−2.4	2.2	3.3	2.4	0.6	−0.9	−0.7	1.8	2.5	2.1
Compensation per hour	6.6	6.5	8.0	9.4	9.6	8.6	7.7	8.6	9.7	10.4	9.6	6.2	7.3
Real compensation per hour	2.2	3.1	1.6	−1.4	0.5	2.6	1.2	0.9	−1.4	−2.8	−0.7	2.4	1.8
Unit labor cost	2.9	2.9	5.3	12.1	7.3	5.1	5.1	8.0	10.7	11.2	7.7	3.6	5.0
Unit nonlabor payments	7.6	4.5	5.9	4.4	15.1	4.0	6.4	6.7	5.7	5.8	13.3	3.5	4.7
Implicit price deflator	4.4	3.4	5.5	9.5	9.8	4.7	5.6	7.5	9.0	9.4	9.5	3.6	4.9
Nonfarm business sector:													
Output per hour of all persons	3.3	3.7	2.4	−2.5	2.0	3.2	2.2	0.6	−1.3	−0.9	1.4	2.2	1.9
Compensation per hour	6.6	6.7	7.6	9.4	9.6	8.1	7.5	8.6	9.3	10.2	9.7	5.9	7.0
Real compensation per hour	2.2	3.3	1.3	−1.4	0.4	2.2	1.0	0.9	−1.7	−2.9	−0.7	2.1	1.5
Unit labor cost	3.2	2.9	5.0	12.2	7.5	4.7	5.2	8.0	10.7	11.2	8.1	3.7	5.0
Unit nonlabor payments	7.4	3.2	1.3	5.9	16.7	5.7	6.9	5.3	4.7	8.0	13.1	3.5	4.6
Implicit price deflator	4.5	3.0	3.8	10.2	10.3	5.0	5.7	7.1	8.8	10.2	9.7	3.6	4.9
Nonfinancial corporations:													
Output per hour of all employees	4.7	2.9	2.4	−3.7	2.9	2.9	1.8	0.9	−0.2	−0.4	1.7	(1)	r1.8
Compensation per hour	6.4	5.7	7.5	9.4	9.6	7.9	7.6	8.5	9.4	10.3	9.6	(1)	r6.7
Real compensation per hour	2.0	2.4	1.2	−1.5	0.4	2.0	1.1	0.8	−1.7	−2.9	−0.7	(1)	r1.3
Unit labor cost	1.6	2.8	4.9	13.6	6.5	4.9	5.7	7.5	9.6	10.7	7.8	(1)	4.8
Unit nonlabor payments	7.4	2.7	1.5	7.1	20.1	4.6	5.3	4.2	2.6	10.1	14.6	(1)	4.1
Implicit price deflator	3.5	2.8	3.8	11.4	10.9	4.8	5.6	6.4	7.2	10.5	10.0	(1)	4.6
Manufacturing:													
Output per hour of all persons	6.1	5.0	5.4	−2.4	2.9	4.4	2.5	0.9	0.7	0.2	2.8	2.6	2.7
Compensation per hour	6.1	5.4	7.2	10.6	11.9	8.0	8.3	8.3	9.7	11.8	10.2	5.8	6.9
Real compensation per hour	1.8	2.0	0.9	−0.3	2.5	2.1	1.8	0.6	−1.4	−1.6	−0.2	2.0	1.4
Unit labor cost	0.0	0.3	1.7	13.3	8.8	3.4	5.7	7.4	9.0	11.6	7.2	3.1	4.1
Unit nonlabor payments	11.2	0.8	−3.3	−1.8	25.9	7.4	6.7	2.5	−2.6	−2.7	12.0	2.1	2.7
Implicit price deflator	3.1	0.5	0.3	9.0	13.1	4.6	6.0	6.0	5.7	7.8	8.4	2.8	3.7

[1] Not available. r = revised.

28. Quarterly indexes of productivity, hourly compensation, unit costs, and prices, seasonally adjusted

[1977=100]

Item	Annual average		Quarterly indexes										
			1980				1981				1982		
	1980	1981	I	II	III	IV	I	II	III	IV	I	II	III
Business sector:													
Output per hour of all persons	98.9	100.7	99.3	98.2	98.9	99.3	100.7	100.7	101.0	100.2	100.0	100.3	101.4
Compensation per hour	131.4	144.1	126.7	130.0	133.1	136.1	140.0	142.5	145.6	148.2	150.9	153.4	155.7
Real compensation per hour	96.7	96.0	97.0	96.4	96.9	96.2	96.2	96.4	95.7	95.6	96.5	97.1	96.8
Unit labor cost	132.9	143.1	127.6	132.3	134.7	137.0	139.0	141.5	144.2	147.9	150.9	152.9	153.6
Unit nonlabor payments	119.3	135.2	116.0	116.2	120.6	124.6	131.8	133.4	137.4	138.3	136.4	137.0	140.1
Implicit price deflator	128.3	140.4	123.7	126.9	129.9	132.8	136.5	138.8	141.9	144.6	146.0	147.5	149.0
Nonfarm business sector:													
Output per hour of all persons	98.5	99.9	98.7	97.6	98.4	99.2	100.4	100.0	100.0	99.1	99.2	99.4	100.4
Compensation per hour	130.9	143.6	126.2	129.3	132.6	135.7	139.5	142.0	145.1	147.7	150.4	152.7	155.1
Real compensation per hour	96.3	95.7	96.6	96.0	96.5	95.9	96.0	96.0	95.4	95.3	96.3	96.6	96.4
Unit labor cost	133.0	143.8	127.8	132.5	134.7	136.8	139.0	141.9	145.1	149.0	151.6	153.5	154.5
Unit nonlabor payments	119.1	134.8	115.2	116.7	120.3	124.4	131.5	132.8	136.7	138.4	136.7	137.2	140.3
Implicit price deflator	128.3	140.8	123.6	127.2	129.9	132.7	136.5	138.9	142.3	145.5	146.6	148.1	149.8
Nonfinancial corporations:													
Output per hour of all employees	100.3	102.0	100.2	99.3	100.6	101.1	102.3	102.2	102.2	101.6	101.6	102.3	103.5
Compensation per hour	130.9	143.5	126.1	129.3	132.6	135.6	139.6	141.9	144.8	147.7	150.7	153.0	155.2
Real compensation per hour	96.2	95.6	96.5	95.9	96.6	95.8	96.0	96.0	95.2	95.3	96.5	96.8	96.4
Total unit costs	131.0	143.4	125.0	130.4	132.9	135.8	138.3	141.7	144.7	149.1	151.8	153.8	154.8
Unit labor cost	130.5	140.6	125.8	130.2	131.9	134.1	136.5	138.9	141.7	145.4	148.3	149.5	150.0
Unit nonlabor costs	132.5	151.4	122.7	131.0	135.7	140.7	143.4	149.6	153.1	159.6	161.8	166.0	168.5
Unit profits	87.9	101.6	91.1	81.9	87.8	90.5	104.7	98.8	105.2	97.6	86.1	82.3	88.7
Implicit price deflator	126.1	138.6	121.1	124.8	127.7	130.6	134.5	136.8	140.2	143.2	144.3	145.6	147.2
Manufacturing:													
Output per hour of all persons	101.7	104.5	102.6	100.4	100.3	103.6	105.2	105.0	105.0	102.8	102.1	102.3	104.2
Compensation per hour	132.8	146.4	127.1	130.9	135.2	138.4	142.6	144.9	147.3	150.7	154.7	157.6	160.0
Real compensation per hour	97.7	97.5	97.3	97.1	98.5	97.8	98.0	97.9	96.8	97.2	99.0	99.7	99.4
Unit labor cost	130.6	140.0	123.9	130.3	134.9	133.6	135.5	138.0	140.3	146.6	151.5	154.0	153.6

r= revised. p= preliminary.

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29. Percent change from preceding quarter and year in productivity, hourly compensation, unit costs, and prices, seasonally adjusted at annual rate

[1977=100]

Item	Quarterly percent change at annual rate						Percent change from same quarter a year ago					
	I 1981 to II 1981	II 1981 to III 1981	III 1981 to IV 1981	IV 1981 to I 1982	I 1982 to II 1982	II 1982 to III 1982	II 1980 to II 1981	III 1980 to III 1981	IV 1980 to IV 1981	I 1981 to I 1982	II 1981 to II 1982	III 1981 to III 1982
Business sector:												
Output per hour of all persons	0.0	1.1	−2.9	−1.0	1.4	4.2	2.5	2.2	0.9	−0.7	−0.4	0.4
Compensation per hour	7.5	9.0	7.4	7.3	6.9	6.1	9.7	9.4	8.9	7.8	7.6	6.9
Real compensation per hour	0.5	−2.6	−0.4	3.9	2.2	−1.4	−0.1	−1.3	−0.6	0.3	0.8	1.1
Unit labor costs	7.5	7.8	10.6	8.4	5.5	1.8	6.9	7.1	7.9	8.6	8.1	6.5
Unit nonlabor payments	4.9	12.5	2.9	−5.4	1.7	9.3	14.8	13.9	11.0	3.5	2.7	2.0
Implicit price deflator	6.6	9.3	8.0	3.8	4.3	4.1	9.4	9.2	8.9	6.9	6.3	5.0
Nonfarm business sector:												
Output per hour of all persons	−1.3	−0.3	−3.5	0.6	0.8	4.0	2.5	1.6	−0.1	−1.1	−0.6	0.4
Compensation per hour	7.1	9.0	7.3	7.7	6.1	6.6	9.8	9.4	8.8	7.8	7.5	6.9
Real compensation per hour	0.1	−2.6	−0.5	4.3	1.4	−0.9	0.0	−1.2	−0.6	0.3	0.6	1.1
Unit labor costs	8.6	9.3	11.2	7.1	5.2	2.6	7.1	7.7	8.9	9.0	8.2	6.5
Unit nonlabor payments	4.0	12.1	5.1	−4.6	1.3	9.5	13.8	13.6	11.2	4.0	3.3	2.7
Implicit price deflator	7.1	10.2	9.2	3.3	4.0	4.7	9.2	9.6	9.6	7.4	6.6	5.3
Nonfinancial corporations:												
Output per hour of all employees	−0.4	0.2	−2.4	0.3	2.7	4.6	2.9	1.6	0.5	−0.6	r0.2	1.3
Compensation per hour	6.8	8.4	8.2	8.4	6.2	5.9	9.8	9.2	8.9	8.0	r7.8	7.2
Real compensation per hour	−0.1	−3.1	0.3	5.0	1.6	−1.6	0.0	−1.4	−0.5	0.5	r0.9	1.3
Total unit costs	10.2	8.6	12.8	7.4	5.4	2.6	8.7	8.9	9.8	9.7	8.5	7.0
Unit labor costs	7.3	8.2	10.9	8.1	3.4	1.2	6.7	7.5	8.4	8.6	7.6	5.8
Unit nonlabor costs	18.5	9.8	17.8	5.7	10.7	6.4	14.2	12.9	13.4	12.8	10.9	10.1
Unit profits	−20.8	28.4	−35.9	−39.4	−16.7	35.4	20.7	19.7	7.9	−17.8	−16.7	−15.6
Implicit price deflator	7.1	10.2	8.9	3.0	3.8	4.6	9.6	9.7	9.6	7.3	6.4	5.0
Manufacturing:												
Output per hour of all persons	−0.7	−0.1	−8.2	−2.4	0.8	7.3	4.5	4.7	−0.8	−2.9	−2.5	−0.8
Compensation per hour	6.6	6.8	9.6	11.1	7.8	6.2	10.7	8.9	8.9	8.5	8.8	8.7
Real compensation per hour	−0.4	−4.6	1.6	7.6	3.1	−1.3	0.9	−1.7	−0.6	1.0	1.8	2.7
Unit labor costs	7.3	6.8	19.4	13.9	6.9	−1.0	5.9	4.0	9.8	11.7	11.6	9.5

r= revised. p= preliminary.

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DATA FOR THE EMPLOYMENT COST INDEX are reported to the Bureau of Labor Statistics by a sample of 2,000 private nonfarm establishments and 750 State and local government units selected to represent total employment in those sectors. On average, each reporting unit provides wage and compensation information on five well-specified occupations.

Data on negotiated wage and benefit changes are obtained from contracts on file at the Bureau, direct contact with the parties, and secondary sources.

Definitions

The **Employment Cost Index** (ECI) is a quarterly measure of the average change in the cost of employing labor. The rate of total compensation, which comprises wages, salaries, and employer costs for employee benefits, is collected for workers performing specified tasks. Employment in each occupation is held constant over time for all series produced in the ECI, except those by region, bargaining status, and area. As a consequence, only changes in compensation are measured. Industry and occupational employment data from the 1970 Census of Population are used in deriving constant weights for the ECI. While holding total industry and occupational employment fixed, in the estimation of indexes by region, bargaining status, and area, the employment in those measures is allowed to vary over time in accord with changes in the sample. The rate of change (in percent) is available for wages and salaries, as well as for total compensation. Data are collected for the pay period including the 12th day of the survey months of March, June, September, and December. The statistics are neither annualized nor adjusted for seasonal influence.

Wages and salaries consist of earnings before payroll deductions, excluding premium pay for overtime, work on weekends and holidays, and shift differentials. Production bonuses, incentive earnings, commissions, and cost-of-living adjustments are included; nonproduction bonuses are included with other supplemental pay items in the benefits category; and payments-in-kind, free room and board, and tips are excluded. *Benefits* include supplemental pay, insurance, retirement and savings plans, and hours-related and legally required benefits.

Data on negotiated wage changes apply to private nonfarm industry collective bargaining agreements covering 1,000 workers or more. Data on compensation changes apply only to those agreements covering 5,000 workers or more. *First-year* wage or compensation changes refer to average negotiated changes for workers covered by settlements reached in the period and implemented within the first 12 months after the effective date of the agreement. *Changes over the life of the agreement* refer to all adjustments specified in the contract, expressed as an average annual rate. These measures exclude wage changes that may occur under cost-of-living adjustment clauses, that are triggered by movements in the Consumer Price Index. *Wage-rate changes* are expressed as a percent of straight-time hourly earnings; *compensation changes* are expressed as a percent of total wages and benefits.

Effective wage adjustments reflect all negotiated changes implemented in the reference period, regardless of the settlement date. They include changes from settlements reached during the period, changes deferred from contracts negotiated in an earlier period, and cost-of-living adjustments. The data also reflect contracts providing for no wage adjustment in the period. Effective adjustments and each of their components are prorated over all workers in bargaining units with at least 1,000 workers.

Notes on the data

The Employment Cost Index data series began in the fourth quarter of 1975, with the quarterly percent change in wages and salaries in the private nonfarm sector. Data on employer costs for employee benefits were included in 1980, to produce a measure of the percent change in employers' cost for employees' total compensation. State and local government units were added to the ECI coverage in 1981, providing a measure of total compensation change in the civilian nonfarm economy.

Data for the broad white-collar, blue-collar, and service worker groups, and the manufacturing, nonmanufacturing, and service industry groups are presented in the ECI. Additional occupation and industry detail are provided for the wages and salaries component of total compensation in the private nonfarm sector. For State and local government units, additional industry detail is shown for both total compensation and its wages and salaries component.

Historical indexes (June 1981 = 100) of the quarterly rates of changes presented in the ECI are also available.

For a more detailed discussion of the ECI, see chapter 11, "The Employment Cost Index," of the BLS *Handbook of Methods* (Bulletin 2134–1), and the *Monthly Labor Review* articles: "Employment Cost Index: a measure of change in the 'price of labor,'" July 1975; "How benefits will be incorporated into the Employment Cost Index," January 1978; and "The Employment Cost Index: recent trends and expansion," May 1982.

Additional data for the ECI and other measures of wage and compensation changes appear in *Current Wage Developments*, a monthly publication of the Bureau.

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30. Employment Cost Index, total compensation, by occupation and industry group

[June 1981=100]

Series	1980		1981				1982			Percent change	
										3 months ended	12 months ended
	Sept.	Dec.	March	June	Sept.	Dec.	March	June	Sept.	September 1982	
Civilian nonfarm workers[1]	—	—	—	100.0	102.6	104.5	106.3	107.5	110.1	2.4	7.3
Workers, by occupational group											
White-collar workers	—	—	—	100.0	102.7	104.9	106.5	107.7	110.7	2.8	7.8
Blue-collar workers	—	—	—	100.0	102.3	104.1	105.7	107.1	109.2	2.0	6.7
Service workers	—	—	—	100.0	102.8	104.2	107.2	108.3	110.8	2.3	7.8
Workers, by industry division											
Manufacturing	—	—	—	100.0	102.1	104.0	106.0	107.2	109.3	2.0	7.1
Nonmanufacturing	—	—	—	100.0	102.8	104.8	106.4	107.7	110.5	2.6	7.5
Services	—	—	—	100.0	104.4	107.1	108.2	109.2	113.5	3.9	8.7
Public administration[2]	—	—	—	100.0	104.3	106.0	108.1	109.1	112.8	3.4	8.1
Private nonfarm workers	92.8	94.7	98.1	100.0	102.0	104.0	105.8	107.2	109.3	2.0	7.2
Workers, by occupational group											
White-collar workers	92.6	94.5	98.3	100.0	101.8	104.0	105.8	107.2	109.5	2.1	7.6
Blue-collar workers	93.0	94.9	97.8	100.0	102.2	104.0	105.6	107.0	109.0	1.9	6.7
Service workers	92.7	94.3	99.3	100.0	101.9	103.1	106.7	107.9	109.6	1.6	7.6
Workers, by industry division											
Manufacturing	92.6	94.7	98.0	100.0	102.1	104.0	106.0	107.2	109.3	2.0	7.1
Nonmanufacturing	92.9	94.7	98.2	100.0	102.0	103.9	105.7	107.1	109.3	2.1	7.2
State and local government workers	—	—	—	100.0	105.3	107.4	108.8	109.3	114.3	4.6	8.5
Workers, by occupational group											
White-collar workers	—	—	—	100.0	105.7	107.8	109.1	109.5	114.9	4.9	8.7
Blue-collar workers	—	—	—	100.0	104.2	105.9	108.2	108.9	112.7	3.5	8.2
Workers, by industry division											
Services	—	—	—	100.0	105.8	107.9	109.0	109.4	114.9	5.0	8.6
Schools	—	—	—	100.0	106.0	107.9	108.9	109.1	114.8	5.2	8.3
Elementary and secondary	—	—	—	100.0	106.3	108.3	109.3	109.5	115.6	5.6	8.7
Hospitals and other services[3]	—	—	—	100.0	105.0	107.8	109.5	110.3	115.3	4.5	9.8
Public administration[2]	—	—	—	100.0	104.3	106.0	108.1	109.1	112.8	3.4	8.1

[1]Excludes household and Federal workers.

[2]Consists of legislative, judicial, administrative, and regulatory activities.

[3]Includes, for example, library, social, and health services.

NOTE: Dashes indicate data not available.

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31. Employment Cost Index, wages and salaries, by occupation and industry group

[June 1981=100]

Series	1980		1981				1982			Percent change	
										3 months ended	12 months ended
	Sept.	Dec.	March	June	Sept.	Dec.	March	June	Sept.	September 1982	
Civilian nonfarm workers[1]	—	—	—	100.0	102.5	104.4	106.3	107.3	109.7	2.2	7.0
Workers, by occupational group											
White-collar workers	—	—	—	100.0	102.6	104.7	106.7	107.6	110.4	2.6	7.6
Blue-collar workers	—	—	—	100.0	102.4	104.0	105.5	106.7	108.6	1.8	6.1
Service workers	—	—	—	100.0	102.5	103.6	106.8	107.9	110.1	2.0	7.4
Workers, by industry division											
Manufacturing	—	—	—	100.0	102.1	104.0	105.9	107.0	108.8	1.7	6.6
Nonmanufacturing	—	—	—	100.0	102.7	104.5	106.5	107.5	110.1	2.4	7.2
Services	—	—	—	100.0	104.4	106.6	108.6	109.5	113.2	3.4	8.4
Public administration[2]	—	—	—	100.0	103.8	105.5	107.5	108.4	111.9	3.2	7.8
Private nonfarm workers	93.5	95.4	98.0	100.0	102.0	103.8	105.9	107.1	109.0	1.8	6.9
Workers, by occupational group											
White-collar workers	93.3	95.2	98.1	100.0	101.8	103.9	106.2	107.3	109.4	2.0	7.5
Professional and technical workers	93.2	95.3	98.2	100.0	103.3	105.5	108.0	109.4	111.8	2.2	8.2
Managers and administrators	93.5	94.7	98.6	100.0	101.6	102.8	105.8	107.2	108.5	1.2	6.8
Salesworkers	92.2	94.8	96.2	100.0	98.0	101.9	102.2	101.8	104.5	2.7	6.6
Clerical workers	93.8	95.7	98.6	100.0	102.7	104.2	107.0	108.3	110.3	1.8	7.4
Blue-collar workers	93.8	95.7	97.7	100.0	102.3	103.9	105.4	106.6	108.5	1.8	6.1
Craft and kindred workers	94.0	96.1	97.8	100.0	102.9	104.3	106.2	107.6	109.6	1.9	6.5
Operatives, except transport	93.6	95.5	97.8	100.0	102.1	104.1	105.4	106.6	108.3	1.6	6.1
Transport equipment operatives	93.5	95.3	96.8	100.0	101.0	102.7	103.2	104.1	106.0	1.8	5.0
Nonfarm laborers	93.9	95.7	97.5	100.0	101.5	103.3	104.1	105.1	106.5	1.3	4.9
Service workers	93.4	94.8	99.2	100.0	101.8	102.7	106.7	107.9	109.3	1.3	7.4
Workers, by industry division											
Manufacturing	93.6	95.7	97.9	100.0	102.1	104.0	105.9	107.0	108.8	1.7	6.6
Durables	93.5	95.7	97.9	100.0	102.1	104.5	106.3	107.4	109.0	1.5	6.8
Nondurables	93.8	95.7	97.8	100.0	102.0	103.1	105.3	106.3	108.5	2.1	6.4
Nonmanufacturing	93.4	95.2	98.1	100.0	102.0	103.8	105.9	107.1	109.1	1.9	7.0
Construction	94.5	95.9	97.6	100.0	103.0	104.3	105.9	107.3	109.1	1.7	5.9
Transportation and public utilities	93.1	95.6	97.7	100.0	102.0	103.6	105.7	106.9	109.5	2.4	7.4
Wholesale and retail trade	93.6	95.1	98.2	100.0	101.3	102.3	103.9	105.8	106.5	.7	5.1
Wholesale trade	93.0	95.9	98.5	100.0	102.0	103.4	106.3	108.9	109.0	.1	6.9
Retail trade	93.8	94.8	98.1	100.0	101.0	101.9	103.0	104.5	105.5	1.0	4.5
Finance, insurance, and real estate	91.2	93.1	95.7	100.0	98.3	102.3	103.7	102.4	106.1	3.6	7.9
Services	94.2	95.7	99.6	100.0	103.6	105.8	108.8	110.0	112.5	2.3	8.6
State and local government workers	—	—	—	100.0	105.0	107.0	108.2	108.7	113.5	4.4	8.1
Workers, by occupational group											
White-collar workers	—	—	—	100.0	105.4	107.5	108.5	108.9	114.2	4.9	8.3
Blue-collar workers	—	—	—	100.0	103.9	105.5	107.5	107.9	111.5	3.3	7.3
Workers, by industry division	—	—									
Services			—	100.0	105.5	107.6	108.4	108.8	114.2	5.0	8.2
Schools	—	—	—	100.0	105.7	107.7	108.3	108.5	114.2	5.3	8.0
Elementary and secondary	—	—	—	100.0	106.0	107.9	108.7	108.8	114.9	5.6	8.4
Hospitals and other services[3]	—	—	—	100.0	104.6	107.3	108.8	109.5	114.3	4.4	9.3
Public administration[2]	—	—	—	100.0	103.8	105.5	107.5	108.4	111.9	3.2	7.8

[1] Excludes household and Federal workers.

[2] Consists of legislative, judicial, administrative, and regulatory activities.

[3] Includes, for example, library, social, and health services.

NOTE: Dashes indicate data not available.

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32. Employment Cost Index, private nonfarm workers, by bargaining status, region, and area size

[June 1981 = 100]

Series	1980		1981				1982			Percent change	
										3 months ended	12 months ended
	Sept.	Dec.	March	June	Sept.	Dec.	March	June	Sept.	September 1982	
COMPENSATION											
Workers, by bargaining status[1]											
Union	92.4	94.7	97.6	100.0	102.5	104.8	106.5	108.4	110.6	2.0	7.9
Manufacturing	—	—	—	100.0	102.3	104.6	106.3	108.0	110.3	2.1	7.8
Nonmanufacturing	—	—	—	100.0	102.7	105.0	106.8	108.7	111.0	2.1	8.1
Nonunion	92.8	94.6	98.4	100.0	101.7	103.5	105.3	106.5	108.5	1.9	6.7
Manufacturing	—	—	—	100.0	101.8	103.5	105.7	106.6	108.4	1.7	6.5
Nonmanufacturing	—	—	—	100.0	101.7	103.5	105.2	106.4	108.6	2.1	6.8
Workers, by area size[1]											
Metropolitan areas	92.8	94.7	98.1	100.0	102.1	104.1	105.7	107.2	109.4	2.1	7.1
Other areas	91.9	94.2	98.1	100.0	101.8	103.2	106.2	107.0	108.6	1.5	6.7
WAGES AND SALARIES											
Workers, by bargaining status[1]											
Union	93.5	95.8	97.4	100.0	102.7	105.0	106.5	108.1	110.3	2.0	7.4
Manufacturing	93.8	96.1	97.7	100.0	102.6	104.7	105.9	107.3	109.5	2.1	6.7
Nonmanufacturing	93.1	95.5	97.1	100.0	102.8	105.2	107.0	108.8	111.1	2.1	8.1
Nonunion	93.4	95.1	98.2	100.0	101.6	103.2	105.6	106.5	108.3	1.7	6.6
Manufacturing	93.4	95.4	97.9	100.0	101.7	103.3	105.9	106.7	108.2	1.4	6.4
Nonmanufacturing	93.4	95.0	98.3	100.0	101.6	103.2	105.5	106.4	108.3	1.8	6.6
Workers, by region[1]											
Northeast	94.2	96.0	98.3	100.0	101.7	104.4	106.1	106.7	109.7	2.8	7.9
South	93.2	94.9	98.0	100.0	101.9	102.8	105.7	107.4	108.8	1.3	6.8
North Central	93.3	95.3	98.1	100.0	101.6	103.3	104.7	106.1	107.6	1.4	5.9
West	93.5	95.3	97.9	100.0	103.2	105.1	107.9	108.6	110.7	1.9	7.3
Workers, by area size[1]											
Metropolitan areas	93.5	95.4	97.9	100.0	102.1	104.0	105.9	107.1	109.1	1.9	6.9
Other areas	92.9	95.1	98.3	100.0	101.8	103.1	106.0	106.8	108.3	1.4	6.4

[1] The indexes are calculated differently from those for the occupation and industry groups. For a detailed description of the index calculation, see BLS *Handbook of Methods*, Bulletin 1910.

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33. Wage and compensation change, major collective bargaining settlements, 1977 to date

[In percent]

Measure	Annual average					Quarterly average								
						1980		1981				1982 p		
	1977	1978	1979	1980	1981	III	IV	I	II	III	IV	I	II	III
Total compensation changes covering 5,000 workers or more, all industries:														
First year of contract	9.6	8.3	9.0	10.4	10.2	11.4	8.5	7.7	11.6	10.5	11.0	1.9	2.6	6.5
Annual rate over life of contract	6.2	6.3	6.6	7.1	8.3	7.2	6.1	7.2	10.8	8.1	5.8	1.2	2.1	4.9
Wage rate changes covering at least 1,000 workers, all industries:														
First year of contract	7.8	7.6	7.4	9.5	9.8	10.5	8.3	7.1	11.8	10.8	9.0	3.0	3.4	5.8
Annual rate over life of contract	5.8	6.4	6.0	7.1	7.9	7.4	6.5	6.2	9.7	8.7	5.7	2.8	3.2	4.8
Manufacturing:														
First year of contract	8.4	8.3	6.9	7.4	7.2	8.4	7.8	6.4	8.2	9.0	6.6	2.5	1.7	5.5
Annual rate over life of contract	5.5	6.6	5.4	5.4	6.1	5.6	5.8	5.5	6.7	7.5	5.4	2.7	1.6	4.2
Nonmanufacturing (excluding construction):														
First year of contract	8.0	8.0	7.6	9.5	9.8	9.5	8.2	8.0	11.8	8.6	9.6	2.7	6.2	5.6
Annual rate over life of contract	5.9	6.5	6.2	6.6	7.3	5.9	6.8	7.3	9.1	7.2	5.6	2.1	5.5	4.8
Construction:														
First year of contract	6.3	6.5	8.8	13.6	13.5	15.4	14.3	11.4	12.9	16.4	11.4	9.1	6.2	7.5
Annual rate over life of contract	6.3	6.2	8.3	11.5	11.3	13.0	12.0	10.3	11.1	12.4	11.7	8.9	6.4	7.1

p=preliminary.

34. Effective wage adjustments in collective bargaining units covering 1,000 workers or more, 1977 to date

Measure	Year					Year and quarter								
						1980		1981				1982 p		
	1977	1978	1979	1980	1981	III	IV	I	II	III	IV	I	II	III
Average percent adjustment (including no change):														
All industries	8.0	8.2	9.1	9.9	9.5	3.5	1.3	1.7	3.2	3.3	1.5	1.0	2.0	2.3
Manufacturing	8.4	8.6	9.6	10.2	9.4	2.9	1.7	2.3	2.4	3.1	1.9	.9	.9	1.6
Nonmanufacturing	7.6	7.9	8.8	9.7	9.5	4.0	1.1	1.2	3.8	3.4	1.1	1.0	2.7	2.8
From settlements reached in period	3.0	2.0	3.0	3.6	2.5	1.7	.5	.4	1.1	.5	.4	.2	.4	.5
Deferred from settlements reached in earlier period	3.2	3.7	3.0	3.5	3.8	1.2	.3	.5	1.4	1.5	.4	.5	1.4	1.2
From cost-of-living clauses	1.7	2.4	3.1	2.8	3.2	.7	.6	.7	.7	1.2	.6	.3	.2	.6
Total number of workers receiving wage change (in thousands) [1]	—	—	—	—	8,648	—	—	3,855	4,701	4,364	3,225	2,877	3,425	3,654
From settlements reached in period	—	—	—	—	2,270	—	—	579	909	540	604	203	493	588
Deferred from settlements reached in earlier period	—	—	—	—	6,267	—	—	888	2,055	3,023	882	1,006	1,627	2,378
From cost-of-living clauses	—	—	—	—	4,593	—	—	2,639	2,669	2,934	2,179	1,913	1,550	2,126
Number of workers receiving no adjustments (in thousands)	—	—	—	—	145	—	—	4,937	4,092	4,428	5,568	5,628	5,080	4,851

[1] The total number of workers who received adjustments does not equal the sum of workers that received each type of adjustment, because some workers received more than one type of adjustment during the period.

p=preliminary.

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WORK STOPPAGE DATA

WORK STOPPAGES include all known strikes or lockouts involving 1,000 workers or more and lasting a full shift or longer. Data are based largely on newspaper accounts and cover all workers idle one shift or more in establishments directly involved in a stoppage. They do not measure the indirect or secondary effect on other establishments whose employees are idle owing to material or service shortages.

Estimates of days idle as a percent of estimated working time measures only the impact of larger strikes (1,000 workers or more). Formerly, these estimates measured the impact of strikes involving 6 workers or more; that is, the impact of virtually *all* strikes. Due to budget stringencies, collection of data on strikes involving 6 workers or more was discontinued with the December 1981 data.

35. Work stoppages involving 1,000 workers or more, 1947 to date

Month and year	Number of stoppages		Workers involved		Days idle	
	Beginning in month or year	In effect during month	Beginning in month or year (in thousands)	In effect during month (in thousands)	Number (in thousands)	Percent of estimated working time
1947	270	...	1,629	...	25,720	
1948	245	...	1,435	...	26,127	.22
1949	262	...	2,537	...	43,420	.38
1950	424	...	1,698	...	30,390	.26
1951	415	...	1,462	...	15,070	.12
1952	470	...	2,746	...	48,820	.38
1953	437	...	1,623	...	18,130	.14
1954	265	...	1,075	...	16,630	.13
1955	363	...	2,055	...	21,180	.16
1956	287	...	1,370	...	26,840	.20
1957	279	...	887	...	10,340	.07
1958	332	...	1,587	...	17,900	.13
1959	245	...	1,381	...	60,850	.43
1960	222	...	896	...	13,260	.09
1961	195	...	1,031	...	10,140	.07
1962	211	...	793	...	11,760	.08
1963	181	...	512	...	10,020	.07
1964	246	...	1,183	...	16,220	.11
1965	268	...	999	...	15,140	.10
1966	321	...	1,300	...	16,000	.10
1967	381	...	2,192	...	31,320	.18
1968	392	...	1,855	...	35,567	.20
1969	412	...	1,576	...	29,397	.16
1970	381	...	2,468	...	52,761	.29
1971	298	...	2,516	...	35,538	.19
1972	250	...	975	...	16,764	.09
1973	317	...	1,400	...	16,260	.08
1974	424	...	1,796	...	31,809	.16
1975	235	...	965	...	17,563	.09
1976	231	...	1,519	...	23,962	.12
1977	298	...	1,212	...	21,258	.10
1978	219	...	1,006	...	23,774	.11
1979	235	...	1,021	...	20,409	.09
1980	187	...	795	...	20,844	.09
1981	145	...	729	...	16,908	.07
1981: January	6	12	12.0	29.6	257.9	.01
February	7	10	10.7	20.9	118.5	.01
March	16	20	201.6	207.8	861.8	.04
April	17	27	48.0	223.5	4,085.2	.20
May	18	27	85.1	259.0	4,454.0	.24
June	30	43	200.1	415.1	2,618.3	.13
July	23	38	80.1	125.4	1,575.5	.08
August	9	17	36.2	86.6	1,017.9	.05
September	5	10	26.3	65.2	898.8	.05
October	7	11	13.4	48.3	733.6	.04
November	5	6	11.9	13.5	140.9	.01
December	2	4	3.5	8.8	146.0	.01
1982[p]: January	2	4	6.1	11.4	199.9	.01
February	2	6	2.5	13.9	236.9	.01
March	3	8	8.3	21.3	352.2	.02
April	9	16	35.7	55.3	480.3	.02
May	14	21	43.7	60.3	636.1	.03
June	17	25	41.4	64.5	894.0	.04
July	11	22	36.3	62.2	830.9	.04
August	14	23	40.3	58.2	757.1	.04
September	14	27	390.0	422.0	2,090.8	.11
October	3	13	39.9	69.6	912.6	.05
November	1	6	2.2	43.7	[r]806.5	.04
December	–	2	–	36.4	764.4	.04

p=preliminary. r=revised.

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SALES PUBLICATIONS

BLS Bulletins

BLS Handbook of Methods, Volume 1. Bulletin 2134-1, 154 pp., $6.50 (GPO Stock No. 029-001-02729-0). Presents detailed explanations of how the Bureau of Labor Statistics obtains and prepares the economic data it publishes for all BLS programs except the Consumer Price Index. Also discussed briefly are the Bureau's role, organization, and staff, and its approach to its data collection activities. Chapters for each major Bureau program give a brief account of the program's origin and development followed by comprehensive information on concepts and definitions, sources of data, where the data are published, and their uses and limitations.

New Worklife Estimates. Bulletin 2157, 19 pp., $3.25 (GPO Stock No. 029-001-02730-3). In addition to a discussion of changes in worklife expectancy since 1970—first published in the *Monthly Labor Review* of March 1982—this bulletin contains detailed working life tables for 1977, work-life expectancies for 1970, and a technical appendix.

Occupational Projections and Training Data, 1982 Edition. Bulletin 2202, 123 pp., $6 (GPO Stock No. 029-001-02733-8). Provides detailed statistics on current and projected occupational employment and related information on occupational demand and supply—including new estimates of job openings—for use in these activities. A revision and update of Bulletin 2052 of the same title published in 1980.

Productivity Measures for Selected Industries, 1954-81. Bulletin 2155, 246 pp., $7.50 (GPO Stock No. 029-001-02731-1). Presents indexes of output per employee hour and output per employee for the industries currently included in the U.S. Government's productivity measurement program. Indexes for millwork; office furniture; cosmetics; hand and edge tools; farm and garden machinery; pumps and compressors; and commerical banking are published for the first time.

Tables of Working Life: The Increment-Decrement Model. Bulletin 2135, 66 pp., $5 (GPO Stock No. 029-001-02728-1). Discusses worklife methodology, introducing the"increment-decrement" technique recently adopted by the Bureau of Labor Statistics. Increment-decrement and conventional models are compared, and differences in findings are discussed. New tables of working life for men and women for 1977 are presented together with revised estimates for 1970.

Industry Wage Survey Bulletins

These studies include results from the latest BLS survey of wages and supplemental benefits, with detailed occupation data for the Nation, regions, and selected areas (where available). Data are useful for wage and salary administration, union contract negotiation, arbitration, and Government policy considerations.

Hosiery, August 1981. Bulletin 2151, 38 pp., $4.50 (GPO Stock No. 029-001-02735-4).

Nursing Personal Care Facilities, May 1981. Bulletin 2142, 65 pp., $5 (GPO Stock No. 029-001-02734-6).

Periodicals

CPI Detailed Report. October issue provides a comprehensive report on price movements for the month, questions and answers on upcoming changes in the measurement of homeownership costs, revised data for the Los Angeles and Honolulu metropolitan areas, statistical tables, charts, and technical notes. 114 pp., $5 ($28 per year).

Current Wage Developments. November issue includes employee wage and benefit changes and collective bargaining settlements in October, major agreements expiring in December, statistics on work stoppages and compensation changes, and a special report on collective bargaining settlements in the private sector during the first 9 months of 1982. 54 pp., $4.50 ($23 per year).

Employment and Earnings. December issue covers employment and unemployment developments in November, plus regular statistical tables on national, State, and area employment, unemployment, hours, and earnings. 124 pp., $6 ($39 per year).

Producer Prices and Price Indexes. November issue includes a comprehensive report on price movements for the month and provides information on the availability of computer tape for Producer Price Index revision data, detailed product price indexes, and the phase-out of Industry Sector Price Indexes, plus regular tables and technical notes. 119 pp. October issue features information on the value of quality changes in 1983 model passenger cars. 121 pp. $5 ($34 per year).

FREE PUBLICATIONS

Area Wage Survey Summaries

Charleston-North Charleston-Walterboro, S.C., September 1982. 6 pp.

Connecticut, July 1982. 3 pp.

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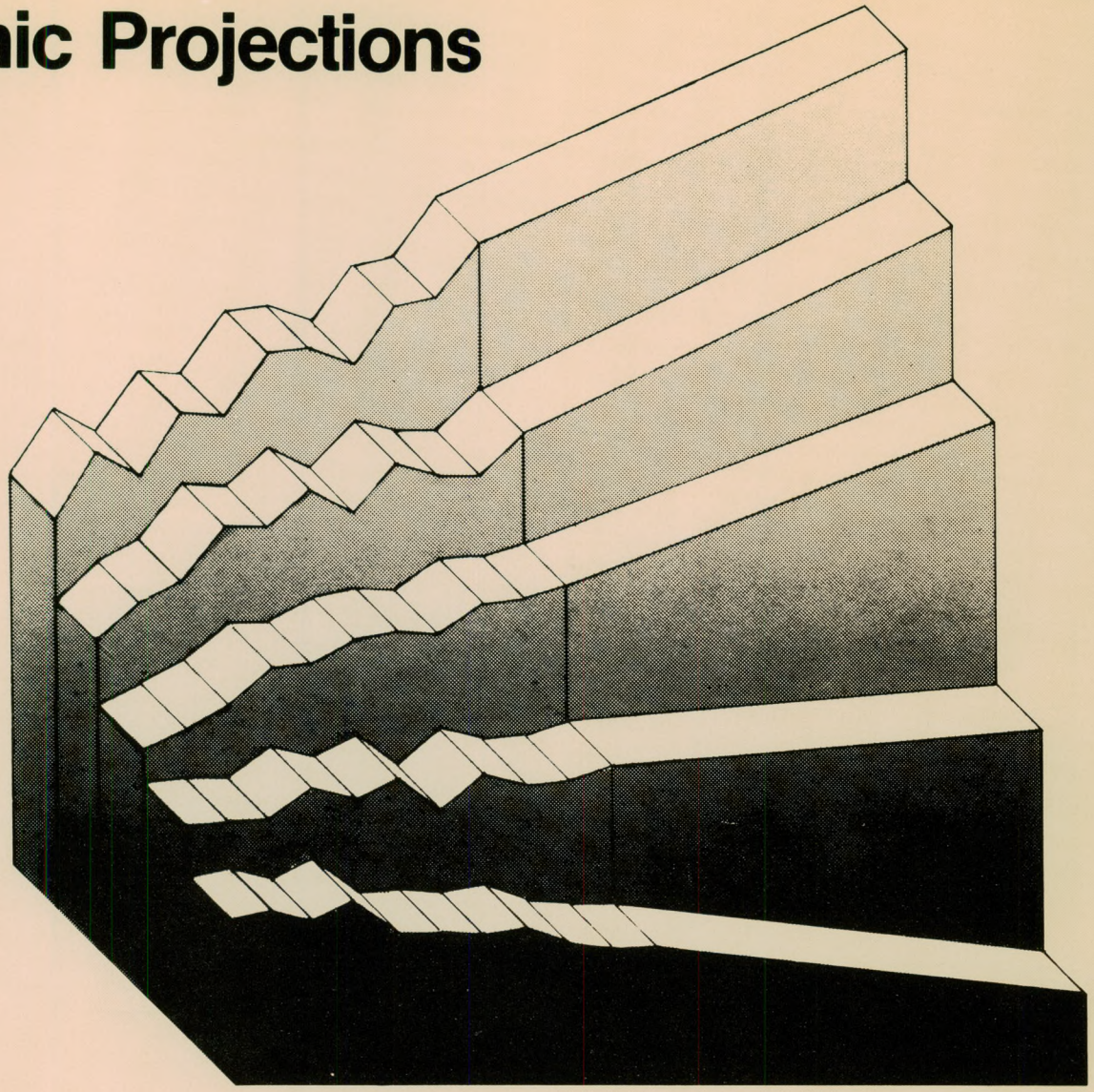

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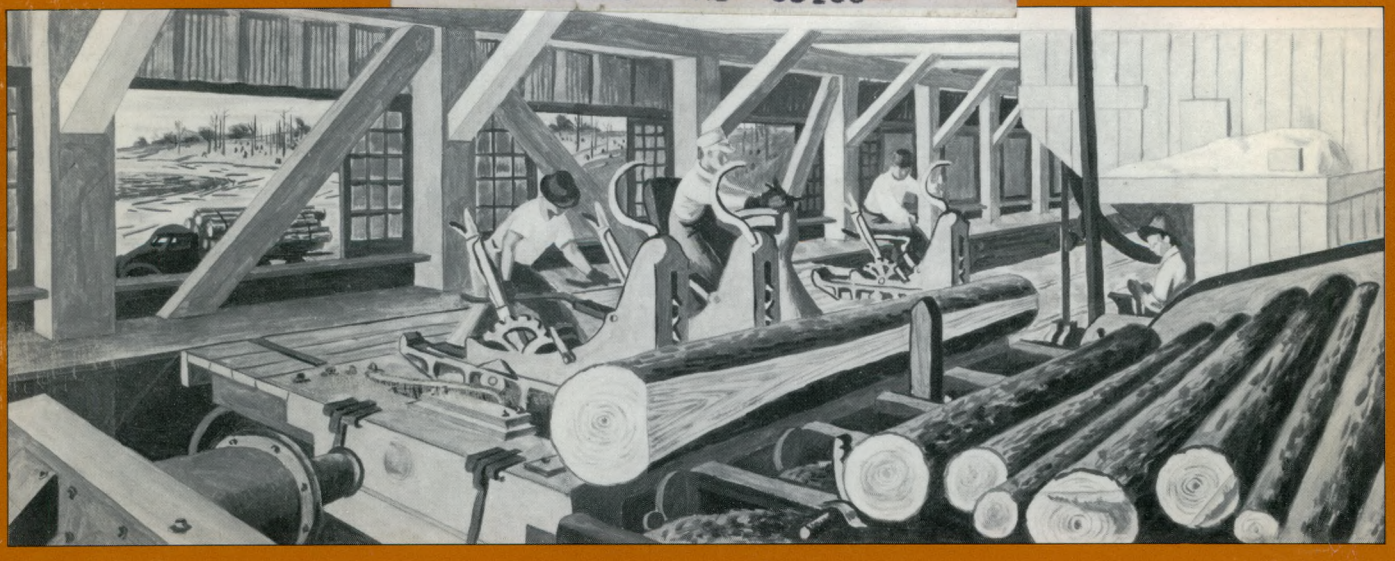

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