

EMPLOYMENT-UNEMPLOYMENT

HEARINGS
BEFORE THE
JOINT ECONOMIC COMMITTEE
CONGRESS OF THE UNITED STATES
NINETY-SIXTH CONGRESS
FIRST SESSION

PART 15

AUGUST 3, SEPTEMBER 7, OCTOBER 5, NOVEMBER 2,
AND DECEMBER 7, 1979

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EMPLOYMENT-UNEMPLOYMENT

FRIDAY, AUGUST 3, 1979

CONGRESS OF THE UNITED STATES,
JOINT ECONOMIC COMMITTEE,
Washington, D.C.

The committee met, pursuant to notice, at 10:05 a.m., in room 6226, Dirksen Senate Office Building, Hon. William Proxmire (member of the committee) presiding.

Present: Senators Proxmire and Sarbanes.

Also present: John M. Albertine, executive director; Richard F. Kaufman, assistant director-general counsel; Lloyd C. Atkinson, William R. Buechner, Paul B. Manchester, and M. Catherine Miller, professional staff members; Mark Borchelt, administrative assistant; and Mark R. Policinski and Peter Turza, minority professional staff members.

OPENING STATEMENT OF SENATOR PROXMIRE, PRESIDING

Senator PROXMIRE. The committee will come to order. Commissioner Norwood and gentlemen, we are delighted to see you. And I want to congratulate you, Commissioner Norwood, on that splendid article in the New York Times about you. I put it in the Congressional Record and it was very laudatory. I hope you saw it, because it indicated what a remarkably fine job you've done as Commissioner and how much in debt we are to you for the way you've handled our economic statistics.

Commissioner, we seem to have two worlds now. On the one hand, the very gloomy statistics, the administration revising their forecasts saying they are in a recession, the new Secretary of the Treasury saying the same, new orders are down, productivity is down, GNP down, retail sales down, construction spending down; and yet on the other hand the statistics you give us, which are probably the deepest and strongest we have on employment and unemployment are reassuring.

Here we have a situation where unemployment has not deteriorated. It remains at about 5.7 and at about the same level it has been at for quite a while. We are still at a record level in the proportion of the Americans who are at work and the number of people at work, of course, is higher than it has ever been. We had an increase of what—450,000 in jobs last month. Now, most of that was outside the establishment sector and the establishment data indicate that there is no change, but that no change seems to contradict everything else. So it is a puzzling situation. Maybe you can reconcile this situation in your answers to our questions.

But it is perplexing and it's difficult for us, who are responsible for tax policies and spending policies and so forth up here on the Hill. We would like very much to have your analysis of what situation we really do confront.

STATEMENT OF HON. JANET L. NORWOOD, COMMISSIONER, BUREAU OF LABOR STATISTICS, DEPARTMENT OF LABOR, ACCOMPANIED BY W. JOHN LAYNG, ASSISTANT COMMISSIONER, OFFICE OF PRICES AND LIVING CONDITIONS; AND ROBERT L. STEIN, ASSISTANT COMMISSIONER, OFFICE OF CURRENT EMPLOYMENT ANALYSIS

Ms. NORWOOD. Thank you very much, Senator. I am certainly glad to have this opportunity to offer a few brief comments to supplement our press release, "The Employment Situation: July 1979," issued this morning at 9 a.m.

Total employment, as measured by the household survey, rose by 450,000 between June and July. The labor force also increased and unemployment was essentially unchanged. Following a sharp drop in April, the employment-population ratio has now returned to its previous alltime peak recorded in March.

Recent monthly changes in nonfarm payroll employment, as measured by the establishment survey, have followed a somewhat different path. Nonfarm payroll employment did not decline in April and advanced only moderately in recent months. From the perspective of the 4 months from March to July, however, nonfarm employment has risen by about one-half million, according to both the payroll and the household surveys. This average monthly gain has been considerably smaller than that which occurred during the job expansion of 1978 and early 1979.

When compared with July 1978, both surveys show an over-the-year increase of about 2.8 million in nonfarm employment. During the 1977-78 period, however, both surveys showed a considerably larger job expansion.

The unemployment rate was 5.7 percent in July, close to the level it has maintained since August 1978. The unemployment rate for adult men edged up over the month while that for women declined slightly. All of the employment growth between June and July was among women. Jobless rates for young workers and for black workers continued to be comparatively high. However, unemployment rates for these groups have shown no tendency to rise in recent months, and, in June and July, were at the lower end of the range that has prevailed during 1978 and 1979.

Although employment has surpassed its March level, the average workweek of production or nonsupervisory workers has remained

below the March level. The index of aggregate hours which reflects trends in both employment and hours in the private nonfarm economy, was unchanged in July, but remained 0.6 point below its previous peak recorded in March.

In the manufacturing sector there have been small but persistent cutbacks in employment since March. About 130,000 employees have been dropped from payrolls and the workweek has been reduced by 0.6 hour, mostly in overtime hours. Aggregate hours of factory production workers have declined by a little more than 2 percent since March. Much of this decline has been in the transportation equipment industry group, primarily automobiles and trucks. Although there was a slight rebound in July, the cumulative decline in aggregate hours in transportation equipment has been about 6 percent since March.

National labor market indicators have been emitting mixed signals in recent months. Total employment from the household survey has risen sharply in June and July, in contrast to the much smaller gains in the payroll employment survey. It appears likely that the household survey data reflect a rebound from the temporarily depressed April level and not a new surge of employment growth. Unemployment increased slightly in July among adult men and full-time workers, but, so far, this has been only a 1-month development, and there have been no new adverse trends among women, teenagers, or blacks, or in long-duration unemployment. On the other hand, there has been a significant decline in the employment and hours of factory production workers since March.

In recent weeks, there has been much speculation in the press about recession, and economists have developed forecasts of the impact of the energy problem on the economic health of the country. In some cases, the standard economic indicators have been difficult to interpret.

The identification of a recession is based upon a technical definition which involves evaluation of a wide range of data over a period of many months. In these circumstances, I would like to provide to the committee my view of the facts now available to us.

Because survey data fluctuate from month to month, an assessment of the employment situation really needs to be made from the perspective of a longer period. Over the last few months, one of the most vigorous employment expansions in our history has slowed down, and some signs of weakening have developed in the economy.

The second quarter's decline in production lowered the already poor productivity performance for the private business sector still further, as employers adjusted their output before reducing their work forces. Since March, employment in manufacturing has been weak, and hours of work, one of the best leading indicators of future labor market developments, declined. Increased unemployment in the motor vehicle industry, if continued, will reduce the demand for the output of industries which supply materials used in automobile production.

In spite of these developments, however, the unemployment rate has remained in the 5.6 to 5.9 percent range for most of the year, as the phenomenal labor force growth of the last few years has slowed considerably. Energy prices have climbed dramatically, contributing still further to the already high rates of inflation, and real earnings have steadily declined.

THE MEASUREMENT OF HOMEOWNERSHIP IN THE CPI

Over the last few weeks, renewed interest has been expressed in the treatment of homeownership costs in the Consumer Price Index. Because complex issues of both concept and measurement techniques are involved, I believe it might be useful for me to review them briefly.

At present, as in the past, changes in the homeownership component of the CPI reflect changes in the price of houses as well as other costs associated with their purchase and use. The relative importance—weight—of owned homes in the CPI reflects the purchase and mortgage interest expenditures for only those houses bought in the base period; expenditures and mortgage interest costs for houses purchased in previous years are not included.

During the recently completed CPI revision program, the BLS staff proposed the use of a flow of services concept to replace the purchase price concept presently used. The principal argument for the change was that the purchase of a home involves both a consumption and an investment decision. The staff proposal was to separate the investment aspect of the purchase of a home from the consumption aspect and to represent only the latter in the CPI.

During the revision period, BLS experimented with two approaches to the measurement of a flow of services concept. The first, a rental equivalency measure, suggests that rents for houses similar to those lived in by their owners be used to measure the cost of shelter provided by owned homes. The second approach—development of a user cost function—made use of actual house prices, but contained adjustments designed to deal with the investment aspects of owning a home.

In accordance with longstanding BLS policy of full public discussion of important and controversial measurement questions, we discussed the homeownership issue in published articles and reviewed the issue with our business and labor advisory groups, as well as with representatives of other Government agencies and of academia.

Although some of those consulted believed that the concept should be changed, few were convinced that the new concept could be effectively measured in the CPI. Under these circumstances, the Bureau decided not to change the treatment of home purchase in the revised CPI. We are, of course, continuing our research in this area.

My colleagues and I will now be glad to answer any questions you may have.

[The table attached to Ms. Norwood's statement, together with the Employment Situation press release referred to, follows:]

UNEMPLOYMENT RATES BY ALTERNATIVE SEASONAL ADJUSTED METHODS

Month and year	Unadjusted rate	Standard X-11 method				X-11 ARIMA method		Range (cols. 2-8)	
		Official	Concurrent	Stable	Total	Residual	Extrapolated		Concurrent
		(1)	(2)	(3)	(4)	(5)	(6)		(7)	(8)	(9)
1978									
July.....	6.3	6.1	6.1	6.1	6.2	6.1	6.1	6.1	0.1
August.....	5.8	5.9	5.9	5.9	5.9	6.0	5.9	5.9	.1
September.....	5.7	5.9	5.9	5.9	5.9	6.0	5.9	5.9	.1
October.....	5.4	5.8	5.8	5.8	5.8	5.9	5.8	5.8	.1
November.....	5.5	5.8	5.8	5.8	5.7	5.8	5.8	5.8	.1
December.....	5.6	5.9	5.9	6.0	5.8	6.0	5.9	5.9	.2
1979									
January.....	6.4	5.8	5.8	5.8	5.7	5.5	5.8	5.8	.3
February.....	6.4	5.7	5.7	5.7	5.7	5.5	5.7	5.8	.3
March.....	6.1	5.7	5.7	5.8	5.7	5.6	5.7	5.7	.2
April.....	5.5	5.8	5.8	5.7	5.7	5.8	5.8	5.8	.1
May.....	5.2	5.8	5.8	5.8	5.8	5.9	5.8	5.7	.2
June.....	6.0	5.6	5.7	5.5	5.7	5.6	5.6	5.7	.2
July.....	5.8	5.7	5.7	5.6	5.8	5.7	5.7	5.7	.2

Source: U.S. Department of Labor, Bureau of Labor Statistics, July 1979.

NOTES TO TABLE COLUMN NUMBERS

- (1) Unadjusted rate—Unemployment rate not seasonally adjusted.
- (2) Official rate (standard X-11 method)—The published seasonally adjusted rate. Each of the 3 major labor force components—agricultural employment, nonagricultural employment and unemployment data—for 4 age-sex groups (males and females under and over 20 years of age) are separately adjusted then added to derive seasonally adjusted total figures. Teenage unemployment and nonagricultural employment are adjusted by the standard X-11 method's additive option, while all other series are adjusted by the multiplicative option. Adult male unemployment is adjusted multiplicatively using the prior trend adjustment feature of the X-11. The rate is computed by adding the 12 components to a civilian labor force total, and dividing and derived civilian labor force into the unemployment total. These series are revised at the end of each year. Factors for the current year are computed at the beginning of the year for the 12 succeeding months, and published in advance.
- The current "implicit" factors for the overall unemployment rate, derived by dividing the original unemployment rate by the seasonally adjusted rate for the months of 1978, are: January (111.1), February (112.0) March (106.7), April (94.6), May (89.5), June (105.6), July (102.1) August (98.5), September (97.3), October (93.1), November (95.7) December (95.5).
- (3) Concurrent (standard X-11 method)—The procedure for computation of the official rate is followed, except that the data are re-seasonally adjusted by the standard X-11 method each month as the most recent data become available, i.e., the rate for January 1979 is based on adjustment of data for the period, January 1967–January 1979. The rates for the current year are shown as first computed, while data for 1978 are as revised to incorporate experience through December 1978.
- (4) Stable (standard X-11 method)—The stable seasonal option of the standard X-11 method uses final seasonal factors computed as an unweighted average of all seasonal-irregular ratios for the entire span of the period, January 1967–December 1978. In essence, this procedure assumes that seasonal patterns are relatively constant from year-to-year. The unweighted average is updated and series revised at the end of each year.
- (5) Total (standard X-11 method)—This is an alternative aggregation procedure, in which total unemployment and labor force levels are directly adjusted by the standard X-11 (multiplicative option) to derive the rate. The series are revised at the end of each year.
- (6) Residual (standard X-11 method)—The labor force and employment levels are adjusted directly, with the level of unemployment derived as a residual. The rate is computed by dividing the residual unemployment level by the directly adjusted civilian labor force. The series are revised at the end of each year.
- (7) Extrapolated (X-11 ARIMA method)—Data for the 12 component groups of the unemployment rate are estimated using ARIMA (autoregressive, integrated, moving average) models. The enlarged series is then seasonally adjusted with the X-11 program, and the rates are computed as in the official procedure. The series are revised at the end of each year. Factors for the current year are extrapolated at the beginning of the year for the 12 succeeding months.
- (8) Concurrent (X-11 ARIMA)—The procedure for computation of the X-11 ARIMA rate is followed, except that the data are re-seasonally adjusted each month as the most recent data become available, i.e., the rate for January 1979 is based on adjustment of data for the period, January 1967–January 1979. The rates for the current year are shown as first computed, while data for 1978 are revised to reflect experience through December 1978.
- Methods of Adjustment—The standard X-11 method was developed by Julius Shiskin at the Bureau of the Census. The method is described in X-11 Variant of the Census Method II Seasonal Adjustment Program, by Julius Shiskin, Alan Young, and John Musgrave (Technical Paper No. 15, Bureau of the Census, 1967).
- The X-11 ARIMA method was developed at Statistics Canada by Estela Bee Dagum and is the official method for seasonally adjusting the Canadian labor force series. A general description of the method is contained in "A Comparison and Assessment of Seasonal Adjustment Methods for Employment and Unemployment Statistics," by Estela Bee Dagum (Background Paper No. 5, U.S. National Commission on Employment and Unemployment Statistics, February 1978).

News

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TRANSMISSION OF MATERIAL IN THIS RELEASE IS
EMBARGOED UNTIL 9:00 A.M. (EDT), FRIDAY,
AUGUST 3, 1979

THE EMPLOYMENT SITUATION: JULY 1979

Total employment rose in July and unemployment was virtually unchanged, the Bureau of Labor Statistics of the U.S. Department of Labor reported today. The Nation's overall unemployment rate was 5.7 percent, little different from the June rate of 5.6 percent and similar to those which have prevailed since August 1978.

Total employment--as measured by the monthly survey of households--rose by 450,000 to 97.2 million. In contrast, nonfarm payroll employment--as measured by the monthly survey of establishments--was about unchanged over the month at 88.8 million. Over the past year and also since March, however, the two surveys have registered comparable net growth in nonagricultural employment.

Unemployment

Both the unemployment rate, 5.7 percent, and the number of unemployed, 5.8 million, were about the same as in June, and have remained near these levels since last August. An increase in the rate of joblessness for adult men (to 4.1 percent) was about offset by a slight decrease in the rate for adult women (to 5.5 percent). Married women and women who head families both experienced slight declines in their unemployment rate, while the rate for married men increased. The jobless rate for teenagers, which had declined 1-1/2 percentage points in June to 15.3 percent, was unchanged in July. The overall unemployment situation for both blacks and whites was about unchanged from June. (See tables A-1 and A-2.)

Among the unemployed, the number who had lost their last job rose by 175,000 in July, while those seeking their first job declined by over 90,000. The median duration of unemployment edged up above 6 weeks, as increases were registered in the number of persons unemployed between 5 and 14 weeks. (See tables A-4 and A-5.)

Total Employment and the Labor Force

Total employment in July advanced by 450,000 to 97.2 million. This increase, coupled with gains in May and June, raised the number of employed persons 370,000 above the March level. The employment-population ratio returned to its February-March record level of 59.4 percent.

The entire July increase in employment took place among adult women, as both white and black women posted strong gains. Adult males of both races had about the same employment levels as they had in June; teenage employment was also about unchanged.

The civilian labor force grew by 530,000 over the month to 103.1 million, 2.4 million above its year-earlier level. Most of this labor force growth occurred before March. At 63.8 percent, the civilian labor force participation rate was a half point above a year earlier. Adult women accounted for most of the over-the-year increase in labor force participation; their participation rate in July was a record 50.7 percent. (See table A-1.)

Table A. Major indicators of labor market activity, seasonally adjusted

Selected categories	Quarterly averages					Monthly data		
	1978			1979		1979		
	II	III	IV	I	II	May	June	July
HOUSEHOLD DATA								
	Thousands of persons							
Civilian labor force.....	100,127	100,753	101,524	102,475	102,295	102,247	102,528	103,059
Total employment.....	94,099	94,726	95,616	96,596	96,415	96,318	96,754	97,210
Unemployment.....	6,028	6,027	5,908	5,878	5,880	5,929	5,774	5,848
Not in labor force.....	58,478	58,482	58,398	58,095	58,886	58,935	58,865	58,545
Discouraged workers.....	851	853	760	724	826	N.A.	N.A.	N.A.
	Percent of labor force							
Unemployment rates:								
All workers.....	6.0	6.0	5.8	5.7	5.7	5.8	5.6	5.7
Adult men.....	4.2	4.1	4.0	4.0	3.9	3.9	3.9	4.1
Adult women.....	6.1	6.1	5.8	5.7	5.7	5.8	5.8	5.5
Teenagers.....	16.1	16.1	16.3	15.8	16.2	16.8	15.3	15.3
White.....	5.2	5.2	5.1	5.0	4.9	5.0	4.9	4.9
Black and other.....	12.1	11.7	11.5	11.4	11.6	11.6	11.3	10.8
Full-time workers.....	5.5	5.5	5.2	5.2	5.2	5.2	5.1	5.3
ESTABLISHMENT DATA								
	Thousands of jobs							
Nonfarm payroll employment.....	85,677	86,115	86,963	87,868	88,499p	88,539	88,709p	88,753p
Goods-producing industries.....	25,376	25,478	25,857	26,241	26,408p	26,423	26,451p	26,445p
Service-producing industries...	60,302	60,637	61,106	61,628	62,090p	62,116	62,258p	62,308p
	Hours of work							
Average weekly hours:								
Total private nonfarm.....	36.0	35.8	35.9	35.8	35.6p	35.7	35.7p	35.7p
Manufacturing.....	40.6	40.4	40.6	40.7	39.8p	40.2	40.1p	40.2p
Manufacturing overtime.....	3.6	3.5	3.7	3.8	3.2p	3.4	3.3p	3.3p

p=preliminary

N.A.=not available

Industry Payroll Employment

Nonfarm payroll employment was essentially unchanged in July at 88.8 million, following moderate growth over the prior 3 months; this was in marked contrast to the sharp job increases which occurred in the 6-month period around the turn of the year. In July, job gains took place in 51 percent of the 172 industries comprising the BLS diffusion index of nonfarm payroll employment. (See tables B-1 and B-6.)

Employment in the goods-producing sector was unchanged from June, as gains in mining and construction (including nearly 10,000 returning strikers) were offset by a reduction in manufacturing. The largest manufacturing declines occurred in nondurable goods, with reductions of 35,000 in food processing and 20,000 in leather. Within the durable goods industries, decreases of 15,000 each took place in the fabricated metal and miscellaneous manufacturing industries, and there was a 10,000 cutback in primary metals. Total factory employment has dropped by about 130,000 since March.

Employment in the service-producing sector was little changed over the month. Small job gains were evident in the services industry and in finance, insurance, and real estate, while the other service-producing industries remained at about June levels.

Hours

The average workweek of production or nonsupervisory workers on private nonagricultural payrolls was 35.7 hours in July, unchanged from both June and May. Manufacturing hours edged up a tenth of an hour over the month, a return to the May level. Factory overtime, at 3.3 hours, was unchanged from June. All three of these indicators were still below March levels. (See table B-2.)

Reflecting the leveling in both employment and weekly hours over the month, the index of aggregate weekly hours was unchanged in July. The index was up 2.9 percent from July 1978, resulting entirely from the strong over-the-year employment growth. (See table B-5.)

Hourly and Weekly Earnings

Average hourly earnings of production or nonsupervisory workers on private nonagricultural payrolls rose 0.7 percent in July and were 8.1 percent above the July 1978 level (seasonally

adjusted). Average weekly earnings also rose 0.7 percent in July and were up 7.5 percent over the year.

Before adjustment for seasonality, average hourly earnings rose 4 cents in July to \$6.15, 46 cents above July 1978; average weekly earnings were \$221.40 in July, \$1.44 above June and \$14.85 above July 1978. (See table B-3.)

The Hourly Earnings Index

The Hourly Earnings Index--earnings adjusted for overtime in manufacturing, seasonality, and the effects of changes in the proportion of workers in high-wage and low-wage industries--was 230.3 (1967=100) in July, 0.7 percent higher than in June. The index was 7.6 percent above July a year ago. During the 12-month period ended in June, the Hourly Earnings Index in dollars of constant purchasing power declined 3.0 percent. (See table B-4.)

Explanatory Note

This release presents and analyzes statistics from two major surveys. Data on labor force, total employment, and unemployment (A tables) are derived from the Current Population Survey—a sample survey of households which is conducted by the Bureau of the Census for the Bureau of Labor Statistics. Beginning in September 1975, the sample was enlarged by 9,000 households in order to provide greater reliability for smaller States and thus permit the publication of annual statistics for all 50 States and the District of Columbia. These supplementary households were added to the 47,000 national household sample in January 1978; thus the sample now consists of about 56,000 households selected to represent the U.S. civilian noninstitutional population 16 years and over.

Statistics on nonagricultural payroll employment, hours, and earnings (B tables) are collected by the Bureau of Labor Statistics, in cooperation with State agencies, from payroll records of a sample of approximately 165,000 establishments. Unless otherwise indicated, data for both statistical series relate to the week containing the 12th day of the specified month.

Comparability of household and payroll employment statistics

Employment data from the household and payroll surveys differ in several basic respects. The household survey provides information on the labor force activity of the entire civilian noninstitutional population, 16 years of age and over, without duplication. Each person is classified as either employed, unemployed, or not in the labor force. The household survey counts employed persons in both agriculture and nonagricultural industries and, in addition to wage and salary workers (including private household workers), counts the self-employed, unpaid family workers, and persons "with a job but not at work" and not paid for the period absent.

The payroll survey relates only to paid wage and salary employees (regardless of age) on the payrolls of nonagricultural establishments. Persons who worked at more than one job during the survey week or otherwise appear on more than one payroll are counted more than once in the establishment survey. Such persons are counted only once in the household survey and are classified in the job at which they worked the greatest number of hours.

Unemployment

To be classified in the household survey as unemployed an individual must: (1) Have been without a

job during the survey week; (2) have made specific efforts to find employment sometime during the prior 4 weeks; and (3) be presently available for work. In addition, persons on layoff and those waiting to begin a new job (within 30 days), neither of whom must meet the jobseeking requirements, are also classified as unemployed. The unemployed total includes all persons who satisfactorily meet the above criteria, regardless of their eligibility for unemployment insurance benefits or any kind of public assistance. The unemployment rate represents the unemployed as a proportion of the civilian labor force (the employed and unemployed combined).

The Bureau regularly publishes a wide variety of labor market measures. See, for example, the demographic, occupational, and industry detail in tables A-2 and A-3 of this release and the comprehensive data package in Employment and Earnings each month. A special grouping of seven unemployment measures is set forth in table A-7. Identified by the symbols U-1 through U-7, these measures represent a range of possible definitions of unemployment and of the labor force—from the most restrictive (U-1) to the most comprehensive (U-7). The official rate of unemployment appears as U-5.

Seasonal adjustment

Nearly all economic phenomena are affected to some degree by seasonal variations. These are recurring, predictable events which are repeated more or less regularly each year—changes in weather, opening and closing of schools, major holidays, industry production schedules, etc. The cumulative effects of these events are often large. For example, on average over the year, they explain about 95 percent of the month-to-month variance in the unemployment figures. Since seasonal variations tend to be large relative to the underlying cyclical trends, it is necessary to use seasonally-adjusted data to interpret short-term economic developments. At the beginning of each year, seasonal adjustment factors for unemployment and other labor force series are calculated for use during the entire year, taking into account the prior year's experience.

All seasonally-adjusted civilian labor force and unemployment rate statistics, as well as the major employment and unemployment estimates, are computed by aggregating independently adjusted series. The official unemployment rate for all civilian workers is derived by dividing the estimate for total unem-

ployment (the sum of four seasonally-adjusted age-sex components) by the civilian labor force (the sum of 12 seasonally-adjusted age-sex components).

For establishment data, the seasonally-adjusted series for all employees, production workers, average weekly hours, and average hourly earnings are adjusted by aggregating the seasonally-adjusted data from the respective component series. These data are also revised annually, often in conjunction with benchmark (comprehensive counts of employment) adjustments. (The most recent revision of seasonally-adjusted data was based on data through May 1978.)

Sampling variability

Both the household and establishment survey statistics are subject to sampling error, which should be taken into account in evaluating the levels of a series as well as changes over time. Because the household survey is based upon a probability sample, the results may differ from the figures that would be obtained if it were possible to take a complete census using the same questionnaires and procedures. The standard error is the measure of sampling variability, that is, of the variation that occurs by chance because a sample rather than the entire population is surveyed. The chances are about 68 out of 100 that an estimate from the survey differs from a figure that would be obtained through a complete census by less than the standard error. Tables A through I in the "Explanatory Notes" of Employment and Earnings provide approximations of the standard errors for unemployment and other labor force categories. To obtain a 90-percent level of confidence, the confidence interval generally used by BLS, the errors should be multiplied by 1.6. The following examples provide an indication of the magnitude of sampling error: For a monthly change in total em-

ployment, the standard error is on the order of plus or minus 182,000. Similarly, the standard error on a change in total unemployment is approximately 115,000. The standard error on a change in the national unemployment rate is 0.12 percentage point.

Although the relatively large size of the monthly establishment survey assures a high degree of accuracy, the estimates derived from it also may differ from the figures obtained if a complete census using the same schedules and procedures were possible. However, since the estimating procedures utilize the previous month's level as the base in computing the current month's level of employment (link-relative technique), sampling and response errors may accumulate over several months. To remove this accumulated error, the employment estimates are adjusted to new benchmarks (comprehensive counts of employment), usually on an annual basis. In addition to taking account of sampling and response errors, the benchmark revision adjusts the estimates for changes in the industrial classification of individual establishments. Employment estimates are currently projected from March 1977 levels.

One measure of the reliability of the employment estimates for individual industries is the root-mean-square error (RMSE). The RMSE is the standard deviation adjusted for the bias in estimates. If the bias is small, the chances are about 68 out of 100 that an estimate from the sample would differ from its benchmark by less than the RMSE. For total nonagricultural employment, the RMSE is on the order of plus or minus 81,000. Measures of reliability (approximations of the RMSE) for establishment-survey data and actual amounts of revision due to benchmark adjustments are provided in tables K through P in the "Explanatory Notes" of Employment and Earnings.

HOUSEHOLD DATA

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Table A-1. Employment status of the noninstitutional population

(Numbers in thousands)

Employment status	Not seasonally adjusted			Seasonally adjusted					
	July	June	July	July	Mar.	Apr.	May	June	July
	1978	1979	1979	1978	1979	1979	1979	1979	1979
TOTAL									
Total noninstitutional population ¹	161,148	163,469	163,685	161,148	162,908	163,008	163,260	163,469	163,685
Armed Forces ²	2,116	2,076	2,082	2,116	2,090	2,082	2,076	2,076	2,082
Civilian noninstitutional population ¹	159,032	161,393	161,604	159,032	160,819	160,926	161,182	161,393	161,604
Civilian labor force	102,639	104,153	104,995	100,622	102,714	102,111	102,247	102,524	103,059
Employed	64.5	64.5	65.0	63.3	64.4	63.5	63.4	61.5	63.8
Participation rate ³	96,202	97,917	98,891	94,446	96,082	96,776	96,318	96,758	97,210
Employment-population ratio ³	59.7	59.9	60.4	58.6	59.4	59.3	59.0	59.2	59.4
Agriculture	3,997	3,785	3,857	3,377	3,343	3,186	3,194	3,260	3,262
Nonagricultural industries	92,204	94,132	95,034	91,065	93,495	92,987	93,134	93,494	93,940
Unemployed	6,438	6,235	6,104	6,176	5,871	5,937	5,929	4,774	5,488
Unemployment rate	6.3	6.0	5.8	6.1	5.7	5.4	5.8	5.4	5.7
Not in labor force	56,393	57,240	56,690	58,410	58,105	58,815	58,935	58,865	58,545
Men, 20 years and over									
Total noninstitutional population ¹	67,039	69,889	69,995	68,720	69,612	69,663	69,787	69,889	69,987
Civilian noninstitutional population ¹	67,039	69,889	69,995	67,039	67,938	67,987	68,123	68,227	68,310
Civilian labor force	53,956	54,860	55,101	53,801	54,844	54,243	54,261	54,395	54,507
Employed	80.5	80.4	80.7	79.7	80.1	79.7	79.7	79.7	79.9
Participation rate ³	51,880	52,872	52,966	51,214	52,264	52,056	52,157	52,249	52,311
Employment-population ratio ³	75.5	75.6	75.7	74.7	75.1	74.7	74.7	74.1	74.7
Agriculture	2,599	2,509	2,520	2,394	2,155	2,274	2,274	2,301	2,321
Nonagricultural industries	49,281	50,343	50,446	48,819	49,909	49,783	49,883	49,903	49,996
Unemployed	2,076	2,008	2,134	2,187	2,180	2,187	2,105	2,091	2,245
Unemployment rate	3.8	3.7	3.9	4.1	4.0	4.0	3.9	3.4	4.1
Not in labor force	13,083	13,367	13,218	13,638	13,495	13,754	13,862	13,872	13,752
Women, 20 years and over									
Total noninstitutional population ¹	75,643	76,895	77,014	75,643	76,589	76,645	76,782	76,846	77,014
Civilian noninstitutional population ¹	75,537	76,784	76,897	75,537	76,476	76,432	76,670	76,784	76,897
Civilian labor force	36,818	38,251	38,214	37,573	38,642	38,345	38,586	38,596	39,010
Employed	88.7	89.8	89.7	89.7	90.3	90.3	90.3	90.3	90.7
Participation rate ³	34,394	36,058	36,045	35,160	36,440	36,165	36,321	36,373	36,661
Employment-population ratio ³	85.5	86.9	86.8	86.5	87.6	87.2	87.3	87.3	87.4
Agriculture	759	781	788	591	613	600	582	597	588
Nonagricultural industries	33,625	35,116	35,297	34,582	35,027	35,684	35,780	35,781	36,072
Unemployed	2,434	2,194	2,169	2,413	2,201	2,180	2,237	2,223	2,150
Unemployment rate	6.6	5.7	5.7	6.4	5.7	5.7	5.8	5.8	5.5
Not in labor force	38,719	38,533	38,663	37,964	37,834	38,187	38,110	38,188	37,887
Both sexes, 18-19 years									
Total noninstitutional population ¹	16,776	16,684	16,677	16,776	16,709	16,700	16,692	16,684	16,677
Civilian noninstitutional population ¹	16,455	16,381	16,387	16,455	16,404	16,397	16,389	16,381	16,387
Civilian labor force	11,855	11,041	11,680	9,648	9,628	9,521	9,426	9,537	9,481
Employed	72.1	67.4	71.3	58.6	58.7	58.1	57.5	58.2	57.9
Participation rate ³	9,937	9,007	9,879	8,072	8,134	7,951	7,839	8,002	8,031
Employment-population ratio ³	59.2	54.0	59.2	48.1	48.7	47.6	47.0	48.4	48.2
Agriculture	639	535	589	388	375	335	368	362	355
Nonagricultural industries	9,299	8,472	9,290	7,684	7,763	7,616	7,471	7,720	7,676
Unemployed	1,927	2,034	1,001	1,576	1,490	1,570	1,587	1,455	1,450
Unemployment rate	16.2	18.4	15.4	16.3	15.5	16.5	16.8	15.3	15.3
Not in labor force	4,591	5,340	4,707	6,807	6,776	6,874	6,963	6,844	6,906
White									
Total noninstitutional population ¹	141,366	143,137	143,303	141,366	142,720	142,773	142,978	143,137	143,303
Civilian noninstitutional population ¹	139,660	141,492	141,661	139,660	141,063	141,123	141,331	141,492	141,661
Civilian labor force	90,179	91,596	92,185	88,503	90,415	89,923	90,018	90,279	90,554
Employed	64.6	64.7	65.1	63.4	64.1	63.7	63.7	63.8	63.9
Participation rate ³	85,410	86,919	87,607	83,857	85,938	85,479	85,515	85,871	86,093
Employment-population ratio ³	60.4	60.7	61.1	59.3	60.2	59.9	59.8	60.0	60.1
Agriculture	4,769	4,677	4,578	4,486	4,478	4,444	4,503	4,409	4,460
Nonagricultural industries	5.3	5.1	5.0	5.2	5.0	4.9	5.0	4.9	4.9
Unemployment rate	49,481	49,897	49,475	51,157	50,648	51,200	51,313	51,213	51,107
Not in labor force									
Black and other									
Total noninstitutional population ¹	19,782	20,331	20,382	19,782	20,189	20,234	20,282	20,331	20,382
Civilian noninstitutional population ¹	19,371	19,901	19,943	19,371	19,755	19,802	19,850	19,901	19,943
Civilian labor force	12,460	12,557	12,810	12,010	12,251	12,175	12,176	12,272	12,364
Employed	64.3	63.1	64.2	62.0	62.0	61.5	61.3	61.7	62.0
Participation rate ³	10,791	10,998	11,284	10,533	10,878	10,738	10,767	10,883	11,025
Employment-population ratio ³	54.5	54.4	55.4	53.2	53.0	53.1	53.4	54.1	54.1
Agriculture	1,668	1,554	1,525	1,477	1,378	1,482	1,489	1,489	1,488
Nonagricultural industries	13.4	12.4	11.9	12.3	11.2	11.3	11.6	11.3	10.9
Unemployment rate	6,912	7,384	7,133	7,361	7,504	7,627	7,674	7,629	7,578
Not in labor force									

¹ The population and Armed Forces figures are not adjusted for seasonal variations; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.² Civilian employment as a percent of the total noninstitutional population (including Armed Forces).

HOUSEHOLD DATA

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Table A-2. Major unemployment indicators, seasonally adjusted

Selected category	Number of unemployed persons (in thousands)		Unemployment rate						
	July	July	July	Feb.	Apr.	May	June	July	
	1978	1979	1978	1979	1979	1979	1979	1979	
CHARACTERISTICS									
Total, 16 years and over	6,176	5,888	6.1	5.7	5.8	5.8	5.6	5.7	
Men, 20 years and over	2,187	2,299	4.1	4.0	4.0	3.9	3.9	4.1	
Women, 20 years and over	2,413	2,150	6.4	5.7	5.7	5.8	5.8	5.5	
Both sexes, 16-19 years	1,576	1,450	16.3	15.5	16.5	16.8	15.3	15.3	
White, total	4,666	4,460	5.2	5.0	4.9	5.0	4.9	4.9	
Men, 20 years and over	1,718	1,762	3.6	3.4	3.4	3.3	3.4	3.6	
Women, 20 years and over	1,778	1,582	5.5	5.0	4.9	5.1	5.0	4.7	
Both sexes, 16-19 years	1,150	1,116	13.6	13.6	13.9	14.3	13.0	13.4	
Black and other, total	1,477	1,338	12.3	11.2	11.8	11.6	11.3	10.8	
Men, 20 years and over	493	493	8.1	8.8	8.6	8.4	7.9	8.3	
Women, 20 years and over	592	528	11.4	9.8	10.8	9.9	10.8	9.8	
Both sexes, 16-19 years	310	317	36.1	31.5	34.5	36.9	34.0	30.9	
Married men, spouse present	1,075	1,149	2.7	2.6	2.7	2.5	2.6	2.9	
Married women, spouse present	1,279	1,160	5.5	5.1	5.2	5.2	5.2	4.8	
Women who head families	375	407	9.8	8.1	8.4	8.9	9.1	8.1	
Full-time workers	4,890	4,624	5.7	5.1	5.3	5.2	5.1	5.3	
Part-time workers	1,318	1,256	8.9	9.2	8.8	9.6	8.6	8.2	
Unemployed 15 weeks and over ¹	1,314	1,057	1.3	1.3	1.2	1.2	1.1	1.0	
Labor force time lost ²	--	--	6.8	6.1	6.5	6.3	6.3	6.4	
OCCUPATION³									
White-collar workers	1,910	1,629	3.7	3.4	3.3	3.2	3.4	3.2	
Professional and technical	372	391	2.5	2.1	2.2	2.0	2.5	2.5	
Managers and administrators, except farm	226	207	2.2	2.2	2.3	2.2	2.0	1.9	
Sales workers	272	222	4.3	4.1	4.0	4.0	4.5	3.5	
Clerical workers	940	809	5.3	4.9	4.5	4.6	4.6	4.4	
Blue-collar workers	2,257	2,324	6.7	6.6	6.9	6.7	6.5	6.8	
Craft and kindred workers	512	569	4.0	4.6	4.2	4.0	4.2	4.2	
Operatives, except transport	977	987	8.2	7.7	8.6	8.3	7.7	8.3	
Transport equipment operatives	211	198	5.7	5.2	6.0	5.4	5.5	5.2	
Nonfarm laborers	557	570	10.6	10.3	10.5	11.1	10.3	10.9	
Service workers	1,030	982	7.4	7.2	7.4	7.2	7.2	7.2	
Farm workers	113	126	3.9	3.2	3.4	3.5	3.1	4.5	
INDUSTRY⁴									
Nonagricultural private wage and salary workers ⁵	4,366	4,302	6.0	5.5	5.7	5.7	5.6	5.7	
Construction	471	480	9.6	10.2	10.3	9.6	9.6	9.5	
Manufacturing	1,226	1,321	5.5	5.2	5.4	5.4	5.3	5.8	
Durable goods	568	760	5.0	4.3	4.6	4.4	4.8	5.5	
Non-durable goods	568	561	6.3	6.4	6.5	7.0	6.2	6.2	
Transportation and public utilities	216	219	4.1	4.0	2.9	3.5	3.0	3.9	
Wholesale and retail trade	1,272	1,189	6.8	6.2	6.6	6.4	6.8	6.2	
Finance and service industries	1,155	1,088	5.4	4.7	4.8	5.0	4.7	4.9	
Government workers	667	558	4.1	4.1	3.6	3.5	3.6	3.5	
Agricultural wage and salary workers	147	163	9.6	7.7	8.6	9.3	7.7	10.4	

¹ Unemployment rate calculated as a percent of civilian labor force.² Aggregate hours lost by the unemployed and persons on part time for economic reasons as a percent of potentially available labor force hours.³ Unemployment by occupation includes all experienced unemployed persons, whereas that by

industry covers only unemployed wage and salary workers.

⁴ Includes mining, not shown separately.

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Table A-3. Selected employment indicators

Selected categories	Not seasonally adjusted		Seasonally adjusted						
	July	July	July	Aug.	Sept.	Oct.	Nov.	July	
	1978	1979	1978	1979	1979	1979	1979	1979	
CHARACTERISTICS									
Total employed, 18 years and over	96,207	98,891	73,856	97,882	96,176	96,118	96,754	97,210	
Men	57,128	59,150	45,531	56,558	56,267	56,157	56,818	56,494	
Women	18,677	19,591	14,315	18,293	18,407	19,966	40,116	40,415	
Married men, spouse present	36,717	37,120	34,455	39,281	38,817	38,988	38,055	38,161	
Married women, spouse present	21,008	21,020	21,817	22,705	22,755	22,493	22,580	22,480	
OCCUPATION									
White-collar workers	46,896	49,155	47,276	49,113	49,160	48,101	49,165	49,571	
Professional and technical	13,712	14,491	14,249	15,087	15,227	15,277	15,051	15,065	
Managers and administrators, except farm	10,231	10,696	10,212	10,407	10,409	10,174	10,565	10,475	
Sales workers	16,653	16,223	15,957	16,067	16,078	15,911	16,065	16,161	
Clerial workers	16,488	17,744	16,423	17,571	17,446	17,481	17,881	17,671	
Blue-collar workers	32,843	33,534	31,282	32,088	31,582	31,870	31,858	31,948	
Craft and kindred workers	12,755	13,397	12,220	12,609	12,697	12,790	13,008	13,032	
Operatives, except transport	11,058	11,018	10,377	11,340	10,651	10,668	10,759	10,851	
Transport equipment operators	1,490	3,614	1,887	3,465	3,552	3,667	3,496	3,610	
Nonfarm laborers	5,540	5,485	4,678	4,652	4,684	4,706	4,600	4,652	
Service workers	11,131	11,012	12,403	12,856	12,909	12,754	12,846	12,697	
Farm workers	1,339	1,170	2,797	2,803	2,674	2,600	2,481	2,657	
MAJOR INDUSTRY AND CLASS OF WORKER									
Agriculture:									
Wage and salary workers	1,731	1,752	1,186	1,319	1,362	1,419	1,465	1,401	
Self-employed workers	1,787	1,686	1,641	1,495	1,531	1,490	1,525	1,552	
Unpaid family workers	486	420	140	128	282	270	291	294	
Nonagricultural industries:									
Wage and salary workers	85,127	87,583	80,268	86,492	86,195	86,129	86,309	86,277	
Government	15,660	18,288	15,198	15,224	15,356	15,355	15,257	15,340	
Private industries	70,468	72,719	68,890	71,568	70,839	70,894	71,051	70,895	
Private households	1,480	1,278	1,171	1,255	1,160	1,177	1,216	1,217	
Other industries	69,228	71,441	67,509	70,112	69,679	69,317	69,816	69,678	
Self-employed workers	6,386	6,475	6,216	6,585	6,468	6,425	6,470	6,751	
Unpaid family workers	491	536	495	441	471	466	482	529	
PERSONS AT WORK¹									
Nonagricultural industries:									
Full-time schedules	80,885	81,550	86,102	87,955	86,345	87,272	87,481	89,074	
Part-time schedules	67,967	70,066	70,979	72,623	71,554	72,776	72,230	73,138	
Part time for economic reasons	1,918	3,011	3,116	3,199	3,312	3,107	3,416	3,140	
Usually work full time	1,253	1,206	1,197	1,215	1,265	1,246	1,416	1,398	
Usually work part time	2,665	2,635	1,869	1,948	2,048	2,061	2,003	1,948	
Part time for noneconomic reasons	9,000	9,561	11,957	12,158	11,474	11,862	12,198	12,597	

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

Table A-4. Duration of unemployment

Weeks of unemployment	Not seasonally adjusted		Seasonally adjusted						
	July	July	July	Aug.	Sept.	Oct.	Nov.	July	
	1978	1979	1978	1979	1979	1979	1979	1979	
DURATION									
Less than 8 weeks	3,176	2,979	2,967	2,751	2,939	2,787	2,927	2,788	
8 to 14 weeks	2,041	2,187	1,871	1,807	1,874	1,935	1,782	1,970	
15 weeks and over	1,221	977	1,118	1,199	1,236	1,213	1,086	1,052	
15 to 20 weeks	651	610	668	729	692	705	618	600	
27 weeks and over	670	868	686	576	541	508	470	451	
Average (mean) duration, in weeks	11.3	9.7	11.8	11.7	11.0	11.1	10.8	10.0	
Median duration, in weeks	5.1	4.2	6.0	5.7	5.2	5.2	5.6	6.1	
PERCENT DISTRIBUTION									
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
Less than 8 weeks	49.1	44.8	44.2	46.5	48.6	47.0	45.5	48.0	
8 to 14 weeks	31.7	35.2	30.8	31.4	31.0	32.6	30.8	31.9	
15 weeks and over	19.0	16.0	21.4	22.1	20.4	20.4	18.7	18.1	
15 to 20 weeks	9.6	8.1	10.9	12.1	11.4	13.4	10.6	10.3	
27 weeks and over	10.4	17.7	15.5	9.7	9.0	8.6	8.1	7.8	

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Table A-5. Reasons for unemployment

(Numbers in thousands)

Reasons	Not seasonally adjusted		Seasonally adjusted					
	July	July	July	Sec.	Apr.	May	June	July
	1978	1979	1978	1979	1979	1979	1979	1979
NUMBER OF UNEMPLOYED								
Lost last job	2,467	2,403	2,516	2,480	2,521	2,161	2,358	2,532
On layoff	638	728	696	789	886	710	786	791
Other job losses	1,768	1,675	1,440	1,652	1,675	1,652	1,562	1,739
Left last job	907	899	855	863	867	951	867	818
Reentered labor force	1,909	1,771	1,870	1,798	1,790	1,762	1,738	1,737
Seeking first job	1,215	1,038	971	822	811	861	787	698
PERCENT OF DISTRIBUTION								
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Job losses	37.8	39.3	41.4	41.3	42.2	39.9	41.0	43.7
On layoff	9.7	11.4	11.8	11.3	14.2	12.0	13.8	13.7
Other job losses	27.5	27.3	19.0	27.0	28.1	27.9	23.2	30.0
Job leavers	14.1	14.6	13.9	14.6	14.2	14.1	15.1	14.4
Reentrants	29.7	29.0	30.4	30.2	30.0	29.8	30.2	29.9
New entrants	18.9	17.0	18.2	11.9	13.6	18.2	11.7	12.0
UNEMPLOYED AS A PERCENT OF THE CIVILIAN LABOR FORCE								
Job losses	2.1	2.1	2.5	2.4	2.5	2.3	2.3	2.5
Job leavers .....	.9	.8	.8	.8	.8	.9	.8	.8
Reentrants	1.6	1.7	1.9	1.7	1.8	1.7	1.7	1.7
New entrants	1.2	1.0	.9	.8	.8	.8	.8	.7

Table A-6. Unemployment by sex and age, seasonally adjusted

Sex and age	Number of unemployed persons (In thousands)		Unemployment rates					
	July	July	July	Mar.	Apr.	May	June	July
	1978	1979	1978	1979	1979	1979	1979	1979
Total, 16 years and over	6,176	5,988	6.1	5.7	5.8	6.8	5.6	5.7
16 to 19 years	1,576	1,850	18.3	15.5	16.5	16.8	15.3	15.3
18 to 17 years	824	665	20.0	18.9	19.1	19.2	16.7	17.1
18 to 19 years	763	794	11.9	13.1	14.3	15.2	18.1	18.8
20 to 24 years	1,379	1,379	9.9	8.4	8.5	8.9	8.9	9.0
25 years and over	3,152	3,050	6.1	5.9	6.2	7.8	6.1	6.4
25 to 64 years	2,688	2,580	4.3	4.1	4.2	4.0	4.0	4.0
65 years and over	464	477	3.2	3.1	3.1	3.2	2.9	3.2
Men, 16 years and over	2,971	2,997	5.1	5.0	5.1	6.9	4.7	5.0
16 to 19 years	784	748	15.4	16.0	16.2	16.1	14.1	14.9
18 to 17 years	408	311	18.6	19.4	18.0	19.0	15.8	15.2
18 to 19 years	378	435	13.0	13.2	14.2	14.1	13.5	14.9
20 to 24 years	712	723	8.9	8.4	7.8	8.0	8.0	8.4
25 years and over	1,497	1,539	3.1	3.2	3.3	3.1	3.1	3.3
25 to 64 years	1,185	1,231	3.3	3.1	3.4	3.1	3.1	3.3
65 years and over	305	310	3.4	2.8	3.0	2.9	3.1	3.4
Women, 16 years and over	3,205	2,852	7.6	6.7	6.9	7.0	6.9	6.6
16 to 19 years	792	702	17.4	14.8	16.8	17.7	16.6	15.8
18 to 17 years	420	355	21.6	17.8	20.2	19.1	17.7	19.2
18 to 19 years	385	359	14.8	13.0	14.4	16.4	14.8	13.8
20 to 24 years	767	656	11.0	9.4	9.4	9.9	9.9	9.3
25 years and over	1,665	1,512	5.4	4.8	4.9	5.0	4.8	4.7
25 to 64 years	1,463	1,409	5.8	5.2	5.2	5.2	5.3	5.0
65 years and over	160	163	2.9	3.6	3.1	3.7	2.7	2.9

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Table A-7. Range of unemployment measures based on varying definitions of unemployment and the labor force, seasonally adjusted

Measure	Quarterly averages						Monthly data		
	1978			1979			1979		
	II	III	IV	I	II	May	June	July	
U-1—Persons unemployed 15 weeks or longer as a percent of the civilian labor force	1.4	1.3	1.2	1.2	1.2	1.2	1.1	1.0	
U-2—Job losers as a percent of the civilian labor force	2.5	2.4	2.4	2.4	2.4	2.3	2.3	2.5	
U-3—Unemployed persons 25 years and over as a percent of the civilian labor force 25 years and over	4.1	4.1	3.9	3.9	3.9	3.8	3.8	3.9	
U-4—Unemployed full-time jobseekers as a percent of the full-time labor force	5.5	5.5	5.2	5.2	5.2	5.2	5.1	5.3	
U-5—Total unemployed as a percent of the civilian labor force (official measure)	6.0	6.0	5.8	5.7	5.7	5.8	5.6	5.7	
U-6—Total full-time jobseekers plus % part-time jobseekers plus % total on part time for economic reasons as a percent of the civilian labor force less % of the part-time labor force	7.6	7.5	7.2	7.2	7.3	7.3	7.2	7.3	
U-7—Total full-time jobseekers plus % part-time jobseekers plus % total on part time for economic reasons plus discouraged workers as a percent of the civilian labor force plus discouraged workers less % of the part-time labor force	8.4	8.4	8.0	7.9	8.1	N.A.	N.A.	N.A.	

N.A.—not available.

Table A-8. Employment status of the noninstitutional population by race and Hispanic origin, not seasonally adjusted

(Number in thousands)

Employment status	Total		White		Black ¹		Hispanic origin ²	
	July 1978	July 1979	July 1978	July 1979	July 1978	July 1979	July 1978	July 1979
TOTAL								
Civilian noninstitutional population	159,032	161,604	139,660	141,661	16,656	17,032	7,867	8,021
Civilian labor force	102,639	104,995	90,179	92,185	10,630	10,870	5,032	5,178
Percent of population	64.5	65.0	64.6	65.1	63.8	63.8	64.0	64.6
Employment	96,202	98,891	85,810	87,607	9,140	9,447	4,525	4,733
Agriculture	3,597	3,857	3,637	3,525	279	255	288	254
Nonagricultural industries	92,208	95,034	81,773	84,083	8,861	9,192	4,237	4,480
Unemployment	6,438	6,104	4,769	4,578	1,491	1,423	507	485
Unemployment rate	6.3	5.8	5.3	5.0	14.0	13.1	10.1	9.6
Not in labor force	56,393	56,609	49,481	49,476	6,024	6,162	2,835	2,843

¹ Data relate to black workers only. According to the 1970 Census, they comprised about 88 percent of the "black and other" population group.

² Data on persons of Hispanic origin are tabulated separately, without regard to race, which means that they are also included in the data for white and black workers. At the time of the 1970 Census, approximately 88 percent of their population was white.

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Table A-9. Employment status of male Vietnam-era veterans and nonveterans by age, not seasonally adjusted

(Numbers in thousands)

Veteran status and age	Civilian noninstitutional population		Civilian labor force							
			Total		Employed		Unemployed			
							Number		Percent of labor force	
July 1978	July 1979	July 1978	July 1979	July 1978	July 1979	July 1978	July 1979	July 1978	July 1979	
VETERANS¹										
Total, 20 years and over	8,334	8,541	7,874	8,163	7,530	7,849	344	314	4.4	3.8
20 to 24 years	751	508	697	509	629	450	68	59	9.8	11.6
25 to 29 years	6,866	7,140	6,575	6,923	6,317	6,681	258	240	3.9	3.5
30 to 34 years	2,337	1,945	2,197	1,869	2,057	1,773	140	96	6.4	5.1
35 to 39 years	1,394	3,613	3,283	3,505	3,197	3,399	86	106	2.6	3.0
40 years and over	1,135	1,582	1,095	1,540	1,063	1,511	32	38	2.9	2.5
40 years and over	717	853	602	731	584	716	18	15	3.0	2.1
NONVETERANS²										
Total, 25 to 39 years	13,728	14,609	13,132	13,924	12,682	13,006	450	518	3.4	3.7
25 to 29 years	6,116	6,683	5,888	6,363	5,612	6,008	236	262	4.0	4.1
30 to 34 years	3,989	4,188	3,610	4,002	3,692	3,855	118	145	3.1	3.6
35 to 39 years	3,623	3,738	3,474	3,564	3,378	3,453	96	111	2.8	3.1

¹ Vietnam-era veterans are those who served between August 5, 1964 and May 7, 1975.
² Nonveterans are males who have never served in the Armed Forces. Published data are limited to those 25-39 years of age, the group that most closely corresponds to the bulk of the Vietnam-era veteran population.

NOTE: Seasonally-adjusted data are no longer being provided because the changing age composition of the Vietnam-era veterans' population distorts the ability to identify seasonality in the series.

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Table A-10. Employment status of the noninstitutional population for the ten largest States

State and employment status	Not seasonally adjusted ¹					Seasonally adjusted				
	July 1975	June 1979	July 1975	July 1976	Mar. 1975	Apr. 1979	May 1975	June 1979	July 1975	
	1975	1979	1975	1976	1975	1979	1975	1979	1975	
California										
Civilian noninstitutional population ²	16,360	16,676	16,704	16,360	16,622	16,593	16,644	16,676	16,704	
Civilian labor force	10,783	10,878	11,076	10,626	10,783	10,755	10,761	10,883	10,919	
Employed	9,909	10,238	10,385	9,814	10,084	10,071	10,093	10,191	10,290	
Unemployed	874	640	691	812	699	684	668	692	629	
Unemployment rate	8.1	5.9	6.2	7.6	6.5	6.4	6.2	6.0	5.8	
Florida										
Civilian noninstitutional population ²	6,513	6,706	6,723	6,513	6,654	6,671	6,689	6,706	6,723	
Civilian labor force	3,797	3,903	3,953	(2)	(2)	(2)	(2)	(2)	(2)	
Employed	3,538	3,669	3,637	(2)	(2)	(2)	(2)	(2)	(2)	
Unemployed	259	234	256	(2)	(2)	(2)	(2)	(2)	(2)	
Unemployment rate	6.8	6.0	6.6	(2)	(2)	(2)	(2)	(2)	(2)	
Illinois										
Civilian noninstitutional population ²	8,210	8,278	8,284	8,210	8,259	8,265	8,271	8,278	8,284	
Civilian labor force	5,400	5,419	5,480	5,286	5,273	5,269	5,235	5,329	5,376	
Employed	5,056	5,096	5,202	4,985	4,973	4,962	4,944	5,053	5,131	
Unemployed	344	323	278	311	300	307	291	276	245	
Unemployment rate	6.4	6.0	5.1	5.9	5.7	5.8	5.6	5.2	4.6	
Massachusetts										
Civilian noninstitutional population ²	4,329	4,373	4,377	4,329	4,361	4,365	4,369	4,373	4,377	
Civilian labor force	2,927	2,987	2,946	(2)	(2)	(2)	(2)	(2)	(2)	
Employed	2,741	2,797	2,802	2,677	2,754	2,763	2,724	2,764	2,738	
Unemployed	186	150	146	(2)	(2)	(2)	(2)	(2)	(2)	
Unemployment rate	6.3	5.1	5.0	(2)	(2)	(2)	(2)	(2)	(2)	
Michigan										
Civilian noninstitutional population ²	6,649	6,730	6,738	6,649	6,708	6,716	6,723	6,730	6,738	
Civilian labor force	4,238	4,383	4,408	(2)	(2)	(2)	(2)	(2)	(2)	
Employed	3,929	4,066	4,065	(2)	(2)	(2)	(2)	(2)	(2)	
Unemployed	308	317	339	292	293	365	337	301	323	
Unemployment rate	7.3	7.2	7.7	(2)	(2)	(2)	(2)	(2)	(2)	
New Jersey										
Civilian noninstitutional population ²	5,456	5,512	5,517	5,456	5,497	5,502	5,506	5,512	5,517	
Civilian labor force	3,477	3,587	3,610	3,358	3,529	3,477	3,482	3,585	3,530	
Employed	3,202	3,334	3,323	3,105	3,238	3,271	3,215	3,301	3,266	
Unemployed	275	253	287	253	235	206	267	284	264	
Unemployment rate	7.9	7.1	7.9	7.4	6.7	5.9	7.7	6.9	7.5	
New York										
Civilian noninstitutional population ²	13,250	13,294	13,298	13,250	13,282	13,287	13,289	13,294	13,298	
Civilian labor force	7,986	8,057	8,214	7,773	8,022	7,936	7,896	7,931	8,001	
Employed	7,377	7,498	7,604	7,173	7,435	7,380	7,394	7,394	7,400	
Unemployed	610	559	611	600	587	556	502	567	601	
Unemployment rate	7.6	6.9	7.4	7.7	7.3	7.0	6.4	7.1	7.5	
Ohio										
Civilian noninstitutional population ²	7,873	7,943	7,949	7,873	7,924	7,931	7,936	7,943	7,949	
Civilian labor force	5,063	5,066	5,107	4,932	5,063	5,026	5,025	4,984	4,995	
Employed	4,775	4,773	4,769	4,657	4,611	4,746	4,740	4,706	4,650	
Unemployed	288	294	338	275	252	280	285	278	345	
Unemployment rate	5.3	5.8	6.6	5.6	5.0	5.6	5.7	5.6	6.9	
Pennsylvania										
Civilian noninstitutional population ²	8,886	8,907	8,913	8,886	8,891	8,896	8,902	8,907	8,913	
Civilian labor force	5,347	5,363	5,398	5,265	5,295	5,219	5,276	5,249	5,316	
Employed	4,958	4,959	5,058	4,880	4,932	4,889	4,930	4,900	4,980	
Unemployed	389	384	340	385	363	330	348	349	336	
Unemployment rate	7.3	7.2	6.3	7.3	6.9	6.3	6.6	6.6	6.3	
Texas										
Civilian noninstitutional population ²	9,198	9,398	9,416	9,198	9,367	9,383	9,380	9,398	9,416	
Civilian labor force	6,091	6,223	6,287	5,987	6,146	6,136	6,081	6,100	6,183	
Employed	5,778	5,923	5,980	5,691	5,908	5,855	5,798	5,834	5,907	
Unemployed	313	300	297	296	238	281	283	266	276	
Unemployment rate	5.2	4.8	4.7	4.9	3.9	4.6	4.7	4.4	4.5	

¹ The population figures are not adjusted for seasonal variations; therefore, identical numbers appear in the unadjusted and the seasonally adjusted columns.

² These are the official Bureau of Labor Statistics estimates used in the administration of Federal fund allocation programs.

³ Seasonally-adjusted data are not presented for this series, because the variations that are due to seasonal influences cannot be separated with sufficient precision from those which stem from the trend-cycle and irregular components of the original time series.

ESTABLISHMENT DATA

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Table B-1. Employees on nonagricultural payrolls by industry

(in thousands)

Industry	Not seasonally adjusted					Seasonally adjusted				
	JULY 1978	MAY 1979	JUNE 9 1979	JULY 9 1979	JULY 1978	MAY 1979	JUNE 9 1979	JULY 9 1979	JULY 1978	
TOTAL	89,923	88,777	89,849	88,645	86,033	88,263	88,248	88,539	88,709	88,753
GOODS-PRODUCING	25,712	26,386	26,837	26,043	25,501	26,412	26,351	26,423	26,451	26,445
MINING	900	924	948	954	882	922	922	923	931	939
CONSTRUCTION	4,572	4,683	4,821	4,946	4,317	4,526	4,507	4,594	4,622	4,670
MANUFACTURING	20,240	20,619	21,068	20,739	20,302	20,964	20,922	20,906	20,896	20,836
Production workers	14,076	14,937	15,124	14,707	14,549	15,088	15,035	15,006	14,962	14,929
DURABLE GOODS	12,111	12,636	12,777	12,574	12,138	12,699	12,665	12,665	12,653	12,637
Production workers	8,640	9,058	9,150	8,938	8,494	9,131	9,090	9,059	9,050	9,024
Lumber and wood products	749.1	761.6	782.9	777.7	743	768	788	786	786	751
Furniture and fixtures	473.8	476.0	480.7	468.7	485	491	488	483	480	480
Stone, clay, and glass products	713.1	716.0	726.0	723.0	698	714	711	712	712	708
Primary metal industries	1,205.0	1,250.7	1,287.4	1,245.0	1,199	1,254	1,253	1,247	1,250	1,239
Fabricated metal products	1,634.5	1,703.7	1,732.2	1,686.6	1,643	1,712	1,712	1,711	1,709	1,693
Machinery, except electrical	2,331.9	2,492.0	2,521.8	2,500.8	2,345	2,481	2,496	2,499	2,514	2,516
Electrical and electronic equipment	1,997.4	2,038.1	2,086.4	2,068.2	1,977	2,064	2,062	2,064	2,060	2,089
Transportation equipment	1,987.3	2,043.3	2,039.6	1,973.0	1,937	2,047	2,038	2,031	2,005	2,019
Instruments and related products	638.8	696.1	702.0	704.7	600	690	693	692	697	706
Miscellaneous manufacturing	441.2	447.1	455.0	426.0	451	458	454	468	450	436
NONDURABLE GOODS	8,129	8,183	8,291	8,165	8,164	8,265	8,265	8,261	8,285	8,199
Production workers	5,828	5,870	5,968	5,859	5,875	5,957	5,945	5,947	5,932	5,905
Food and kindred products	1,720.5	1,846.8	1,894.3	1,899.0	1,688	1,716	1,709	1,702	1,701	1,667
Textiles mill products	87.5	85.0	86.5	86.3	73	73	73	74	74	72
Textile mill products	893.3	903.0	910.5	882.0	900	909	903	904	901	898
Apparel and other textile products	1,263.6	1,303.2	1,312.2	1,280.4	1,207	1,201	1,209	1,203	1,205	1,203
Paper and allied products	719.9	714.2	725.9	718.2	710	717	719	718	718	717
Printing and publishing	1,183.2	1,219.7	1,227.3	1,227.4	1,187	1,219	1,219	1,222	1,227	1,231
Chemicals and allied products	1,007.8	1,100.9	1,115.7	1,112.9	1,091	1,098	1,101	1,106	1,109	1,196
Petroleum and coal products	213.7	213.1	217.0	214.3	207	214	214	213	212	212
Rubber and mica, plastics products	780.8	772.8	778.3	766.8	749	770	776	779	769	774
Leather and leather products	238.4	242.1	245.9	214.6	243	240	238	240	239	219
SERVICE-PRODUCING	64,211	62,431	62,712	62,002	60,532	61,851	61,897	62,116	62,258	62,308
TRANSPORTATION AND PUBLIC UTILITIES	4,856	5,026	5,116	5,116	4,827	5,025	4,935	5,031	5,075	5,085
WHOLESALE AND RETAIL TRADE	19,469	19,970	20,059	19,951	19,469	19,945	19,959	19,985	19,969	19,950
WHOLESALE TRADE	4,931	5,045	5,128	5,125	4,901	5,055	5,042	5,080	5,097	5,094
RETAIL TRADE	14,538	14,925	14,931	14,826	14,568	14,890	14,897	14,905	14,872	14,856
FINANCE, INSURANCE, AND REAL ESTATE	4,746	4,872	4,933	4,963	4,690	4,839	4,853	4,867	4,889	4,904
SERVICES	16,213	16,705	16,872	16,956	16,989	16,535	16,575	16,622	16,688	16,722
GOVERNMENT	14,929	15,456	15,732	15,916	15,557	15,807	15,578	15,611	15,637	15,647
FEDERAL	2,015	2,773	2,820	2,842	2,765	2,754	2,756	2,770	2,793	2,792
STATE AND LOCAL	12,914	12,683	12,912	12,714	12,792	12,753	12,819	12,841	12,844	12,855

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Table B-2. Average weekly hours of production or nonsupervisory workers, on private nonagricultural payrolls by industry

Industry	Not seasonally adjusted				Seasonally adjusted					
	JULY 1978	MAY 1979	JUNE 1979 ^p	JULY 1979 ^p	JULY 1978	MAR. 1978	APR. 1979	MAY 1979	JUNE 1979 ^p	JULY 1979 ^p
TOTAL PRIVATE	36.3	35.5	36.0	36.0	35.9	35.9	35.4	35.7	35.7	35.7
MINING	43.2	42.7	43.4	42.3	43.0	43.2	43.0	42.7	43.1	42.1
CONSTRUCTION	38.2	37.3	38.0	37.8	37.3	37.8	35.8	37.2	37.4	37.0
MANUFACTURING	40.3	40.1	40.4	40.0	40.5	40.8	39.2	40.2	40.1	40.2
Overtime hours	3.5	3.3	3.4	3.3	3.6	3.8	2.8	3.4	3.3	3.3
DURABLE GOODS	40.9	40.8	41.0	40.4	41.2	41.6	39.6	40.8	40.7	40.8
Overtime hours	3.7	3.6	3.6	3.4	3.8	4.1	2.8	3.6	3.5	3.5
Lumber and wood products	39.9	38.6	40.0	39.3	39.8	40.1	39.2	39.2	39.2	39.2
Furniture and fixtures	39.0	38.2	38.7	38.4	39.3	39.4	38.1	38.4	38.3	38.7
Stone, clay, and glass products	41.9	41.8	42.0	41.4	41.7	42.3	41.3	41.6	41.5	41.2
Primary metal industries	41.8	41.3	41.7	40.7	41.8	41.9	41.7	41.5	41.4	40.7
Fabricated metal products	40.5	40.7	41.0	40.5	41.0	41.5	39.1	40.7	40.7	41.0
Machinery, except electrical	41.5	41.7	42.0	41.5	42.2	42.6	40.5	42.0	42.0	42.2
Electric and electronic equipment	40.1	40.2	40.4	39.2	40.7	40.9	39.0	40.3	40.1	39.8
Transportation equipment	42.1	41.5	41.4	41.1	42.1	42.4	38.0	41.2	40.9	41.1
Instruments and related products	40.3	40.8	40.8	40.8	40.7	41.4	40.2	40.8	40.7	41.0
Miscellaneous manufacturing	38.4	38.5	38.9	39.2	38.8	39.2	37.7	38.5	38.7	39.0
NONDURABLE GOODS	39.5	39.1	39.4	39.3	39.4	39.4	38.7	39.2	39.2	39.3
Overtime hours	3.2	2.9	3.1	3.1	3.2	3.3	2.7	3.0	3.0	3.1
Food and kindred products	40.1	39.8	39.9	40.2	39.8	40.1	39.7	39.8	39.8	39.9
Tobacco manufacturers	38.2	38.9	38.7	35.4	38.6	38.5	37.9	38.9	37.8	37.9
Textile mill products	40.1	40.1	40.4	40.0	40.2	40.6	38.9	40.0	40.0	40.1
Apparel and other textile products	35.9	35.1	35.6	35.5	35.8	35.5	34.3	35.2	35.2	35.4
Paper and allied products	42.9	42.4	42.8	42.8	42.9	42.9	42.3	42.5	42.5	42.8
Printing and publishing	37.5	37.2	37.4	37.3	37.6	37.6	37.2	37.5	37.4	37.4
Chemicals and allied products	41.8	41.8	41.8	41.6	41.8	42.0	41.8	41.9	41.7	41.7
Petroleum and coal products	40.4	41.7	43.4	45.2	43.9	44.2	44.1	43.7	43.2	44.7
Rubber and misc. plastics products	40.6	40.4	40.7	39.8	40.9	41.4	39.8	40.8	40.7	40.1
Leather and leather products	37.5	38.4	37.1	36.8	37.2	38.2	35.8	38.2	36.3	36.5
TRANSPORTATION AND PUBLIC UTILITIES	40.0	39.7	40.0	39.9	39.6	40.2	39.3	39.9	39.8	39.5
WHOLESALE AND RETAIL TRADE	33.7	32.8	33.0	33.4	32.9	32.7	32.8	32.4	32.6	32.6
WHOLESALE TRADE	39.0	38.9	39.0	39.1	38.7	39.1	38.8	38.9	38.8	38.8
RETAIL TRADE	32.0	30.8	31.1	31.6	31.1	30.7	30.9	30.6	30.7	30.7
FINANCE, INSURANCE, AND REAL ESTATE	36.7	36.1	36.1	36.5	36.6	36.3	36.5	36.1	36.1	36.4
SERVICES	33.3	32.5	32.9	33.3	32.8	32.8	32.7	32.7	32.7	32.8

¹ Data relate to production workers in mining and manufacturing; to construction workers in construction; and to nonsupervisory workers in transportation and public utilities, wholesale and retail trade, finance, insurance, and real estate, and services. These groups account for approximately four-fifths of the total employment on private nonagricultural payrolls.

^p = preliminary.

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Table B-3. Average hourly and weekly earnings of production or nonsupervisory workers on private nonagricultural payrolls by industry

Industry	Average hourly earnings				Average weekly earnings			
	JULY 1978	MAY 1979	JUNE 1979 ¹	JULY 1979 ¹	JULY 1978	MAY 1979	JUNE 1979 ¹	JULY 1979 ¹
TOTAL PRIVATE	85.69	86.08	86.11	86.15	8206.55	8215.88	8219.96	8221.40
Seasonally adjusted	5.71	6.09	6.13	6.17	268.99	217.61	210.84	220.27
MINING	7.82	8.43	8.47	8.51	337.82	359.96	367.68	359.07
CONSTRUCTION	8.63	9.13	9.12	9.25	329.67	340.55	346.56	349.65
MANUFACTURING	6.17	6.62	6.66	6.71	248.65	265.46	269.06	268.40
DURABLE GOODS	6.57	7.07	7.11	7.14	268.71	288.46	291.51	288.46
Lumber and wood products	5.71	5.97	6.15	6.18	227.63	236.41	246.00	242.67
Furniture and fixtures	4.66	4.97	5.05	5.04	182.52	189.85	195.44	193.54
Stone, clay, and glass products	6.37	6.77	6.83	6.86	266.90	282.99	286.86	284.00
Primary metal industries	8.19	8.83	8.91	9.01	362.34	346.68	371.55	366.71
Fabricated metal products	6.32	6.77	6.81	6.82	255.96	275.54	279.21	276.21
Machinery, except electrical	6.73	7.24	7.33	7.35	279.30	301.91	307.86	305.03
Electrical and electronic equipment	5.83	6.23	6.26	6.31	233.78	250.45	252.90	247.35
Transportation equipment	7.88	8.55	8.51	8.52	336.06	356.83	358.31	358.17
Instruments and related products	5.79	6.10	6.11	6.15	229.71	248.64	249.29	249.49
Miscellaneous manufacturing	4.70	5.00	4.99	5.03	180.46	192.50	196.11	197.16
NONDURABLE GOODS	5.57	5.91	5.94	6.03	220.02	231.08	234.04	236.98
Food and kindred products	5.80	6.22	6.22	6.30	232.58	246.31	246.10	253.26
Tobacco manufactures	6.58	6.93	7.11	7.20	258.20	269.58	275.16	286.32
Textile mill products	4.32	4.52	4.55	4.66	173.23	181.25	184.73	186.40
Apparel and other textile products	3.62	4.19	4.20	4.21	140.73	147.07	149.52	149.46
Paper and allied products	4.63	4.97	7.05	7.13	204.43	245.35	301.74	305.16
Printing and publishing	6.47	6.81	6.96	6.91	242.63	253.33	256.56	257.74
Chemicals and allied products	7.05	7.46	7.51	7.59	293.99	311.83	313.92	315.74
Petroleum and coal products	8.58	9.36	9.30	9.36	380.95	409.03	403.62	422.17
Rubber and misc. plastics products	5.51	5.88	5.89	5.98	223.71	237.58	239.72	236.41
Leather and leather products	3.69	4.19	4.19	4.25	145.68	152.52	155.45	156.40
TRANSPORTATION AND PUBLIC UTILITIES	7.53	7.93	7.98	8.06	301.20	314.82	319.20	321.59
WHOLESALE AND RETAIL TRADE	4.86	5.00	5.02	5.04	157.04	162.00	165.66	168.34
WHOLESALE TRADE	5.91	6.30	6.34	6.39	230.44	245.07	247.26	249.85
RETAIL TRADE	4.19	4.48	4.56	4.51	134.08	136.19	139.95	142.52
FINANCE, INSURANCE, AND REAL ESTATE	4.93	5.22	5.22	5.30	180.93	188.44	188.44	193.45
SERVICES	4.95	5.28	5.27	5.30	184.84	171.60	173.38	176.49

¹ See footnote 1, table B-2.

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Table B-4. Hourly earnings index for production or nonsupervisory workers on private nonagricultural payrolls by industry division, seasonally adjusted

Industry								Percent change from—	
	JULY 1978	FEB. 1979	MAR. 1979	APR. 1979	MAY 1979	JUNE P 1979	JULY P 1979	JULY 1978—JULY 1979	JUNE 1979—JULY 1979
TOTAL PRIVATE NONFARM:									
Current dollars	214.1	223.9	225.3	227.0	227.4	228.6	230.3	7.6	0.7
Constant (1967) dollars	109.1	107.8	107.3	107.0	106.1	105.6	105.6	(2)	(3)
MINING	284.3	253.3	256.0	268.2	262.6	268.6	266.5	9.1	.7
CONSTRUCTION	207.9	216.3	216.5	218.0	220.7	220.7	222.3	8.9	.7
MANUFACTURING	216.7	227.1	228.8	231.1	232.3	233.6	235.5	8.7	.8
TRANSPORTATION AND PUBLIC UTILITIES	230.8	241.6	242.7	241.9	243.9	245.3	245.5	6.6	-.1
WHOLESALE AND RETAIL TRADE	207.6	218.1	219.8	221.0	220.9	222.3	223.7	7.8	-.6
FINANCE, INSURANCE, AND REAL ESTATE	196.9	203.9	204.3	207.6	207.0	207.7	211.5	7.4	1.8
SERVICES	213.2	222.2	223.5	225.3	224.0	225.3	226.8	6.4	-.7

1 See footnote 1, table B-2.

2 PERCENT CHANGE WAS -3.0 FROM JUNE 1978 TO JUNE 1979, THE LATEST MONTH AVAILABLE.

3 PERCENT CHANGE WAS -5.5 FROM MAY 1979 TO JUNE 1979, THE LATEST MONTH AVAILABLE.

N.A. = not available.

preliminary.

NOTE: All series are in current dollars except where indicated. The index excludes 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 in the proportion of workers in high-wage and low-wage industries.

Table B-5. Indexes of aggregate weekly hours of production or nonsupervisory workers, on private nonagricultural payrolls by industry, seasonally adjusted

Industry division and group	1978						1979						
	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE ^D	JULY ^P
TOTAL PRIVATE	120.6	120.4	120.8	121.6	122.4	122.9	122.6	123.2	124.7	122.4	123.9	124.1	124.1
GOODS-PRODUCING	106.1	105.4	105.5	106.5	108.0	109.1	108.7	109.1	111.0	106.3	109.3	109.3	109.0
MINING	143.5	145.7	144.4	145.2	146.0	149.1	149.2	149.3	150.0	149.1	146.3	150.1	146.6
CONSTRUCTION	126.2	122.6	122.6	123.8	124.3	126.5	126.4	122.4	131.5	124.6	132.3	133.9	133.9
MANUFACTURING	101.6	101.0	101.2	102.1	103.7	104.6	105.2	105.4	106.0	101.6	103.8	103.5	103.3
DURABLE GOODS	104.0	103.5	103.9	105.5	107.1	108.3	108.8	109.4	110.2	104.4	107.3	107.0	106.8
Lumber and wood products	112.3	110.7	111.6	113.9	115.3	116.2	116.6	115.5	116.9	112.5	112.2	112.2	111.6
Furniture and fixtures	100.3	106.4	106.2	107.5	108.6	109.4	110.0	108.6	109.7	105.3	105.1	104.0	105.8
Stone, clay, and glass products	111.1	109.8	110.1	110.8	112.0	113.3	111.5	112.2	115.1	111.6	112.4	112.6	110.6
Primary metal industries	98.8	95.3	95.5	98.9	99.0	99.2	99.7	100.5	99.6	99.0	97.3	97.6	95.4
Fabricated metal products	102.0	101.8	102.0	103.1	105.2	106.8	106.6	106.0	107.9	101.6	105.4	105.4	104.9
Machinery, except electrical	112.1	110.8	111.5	113.6	114.5	116.9	117.0	119.2	119.0	114.6	116.6	119.2	119.9
Electric and electronic equipment	101.6	101.1	100.1	101.4	102.8	103.4	105.1	106.4	107.8	102.6	105.0	104.0	105.0
Transportation equipment	98.2	96.1	97.7	100.4	102.8	103.8	104.7	105.0	104.8	92.3	99.6	96.9	98.1
Instruments and related products	123.4	123.9	123.9	124.5	125.7	126.9	128.8	130.0	131.3	127.0	129.0	129.6	133.0
Miscellaneous manufacturing industry	99.0	100.4	100.3	100.9	101.8	101.5	102.9	102.3	102.8	97.8	96.7	99.5	98.0
NONDURABLE GOODS	98.1	97.2	97.2	98.8	99.1	99.9	99.2	99.6	97.5	98.7	98.4	98.2	98.2
Food and kindred products	93.0	91.4	91.3	92.2	94.6	96.1	97.0	95.3	97.0	95.7	95.3	95.3	93.3
Tobacco manufacturers	78.6	71.5	74.5	73.5	77.6	74.8	73.5	76.4	77.2	82.0	79.6	75.8	75.8
Textile mill products	91.5	91.2	91.8	91.6	92.4	92.2	93.6	91.3	92.3	87.0	90.4	90.2	90.5
Apparel and other textile products	90.1	90.1	90.1	88.7	90.0	89.8	89.6	89.2	88.8	85.9	86.0	87.4	88.5
Paper and allied products	101.9	99.2	99.0	98.2	100.5	100.7	101.7	102.5	103.5	102.2	102.9	102.9	103.8
Printing and publishing	99.1	98.3	97.6	98.5	100.3	100.1	101.1	101.7	102.6	100.8	101.5	101.8	103.1
Chemicals and allied products	106.6	106.0	106.0	106.2	107.2	107.9	107.8	107.4	107.5	107.3	107.4	107.7	107.9
Petroleum and coal products	121.2	123.2	122.7	123.0	124.7	124.2	123.3	124.2	127.4	124.2	124.2	122.8	127.9
Rubber and mac. plastics products	146.2	145.4	145.0	147.0	149.4	152.3	153.9	154.9	154.5	147.8	152.0	149.7	148.7
Leather and leather products	67.1	69.1	69.6	68.8	67.3	66.5	66.7	64.2	63.7	62.8	63.7	63.9	57.9
SERVICE-PRODUCING	130.7	130.8	131.6	132.0	132.3	132.5	132.3	132.9	134.2	133.7	134.0	134.6	134.6
TRANSPORTATION AND PUBLIC UTILITIES	106.5	107.7	108.2	109.9	110.2	110.3	111.2	111.2	112.2	107.5	111.5	112.1	111.3
WHOLESALE AND RETAIL TRADE	127.8	127.2	127.5	128.2	128.4	128.7	127.6	128.4	129.5	129.6	129.2	129.3	129.1
WHOLESALE TRADE	125.7	124.1	127.1	127.4	127.6	128.5	128.8	126.9	130.8	130.0	130.6	130.7	130.5
RETAIL TRADE	126.0	127.7	127.7	128.5	128.7	128.8	127.3	128.2	129.0	129.0	129.6	128.7	128.5
FINANCE, INSURANCE, AND REAL ESTATE	139.0	139.2	139.6	140.5	140.4	140.9	141.7	142.0	142.4	143.6	142.3	143.0	144.6
SERVICES	144.1	144.1	145.1	145.0	145.6	145.4	145.8	146.8	148.8	148.2	148.7	149.4	150.2

1 See footnote 1, table B-2.

preliminary.

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Table B-6. Indexes of diffusion: Percent of industries in which employment¹ increased

Year and month	Over 1-month span	Over 3-month span	Over 6-month span	Over 12-month span
1976				
January	78.2	85.8	87.2	85.2
February	72.4	84.9	85.8	84.0
March	69.5	81.4	82.0	85.2
April	70.1	72.4	75.6	78.8
May	58.1	67.2	68.3	82.6
June	57.8	65.1	71.2	78.9
July	58.4	57.8	63.1	78.5
August	49.1	64.0	65.1	77.6
September	64.8	53.8	66.3	80.2
October	47.1	65.1	73.3	80.8
November	67.4	64.2	74.8	80.8
December	66.6	81.4	81.4	82.6
1977				
January	76.2	83.1	88.1	78.8
February	66.0	86.3	87.8	80.5
March	74.7	81.1	85.2	80.2
April	68.0	79.4	79.4	84.6
May	64.8	76.2	75.9	84.0
June	71.2	68.0	72.1	83.1
July	59.3	63.4	69.8	82.6
August	51.7	58.7	74.1	83.7
September	60.8	62.5	72.1	82.6
October	60.5	73.8	77.9	81.1
November	73.8	75.3	82.0	84.1
December	72.1	79.7	83.1	80.8
1978				
January	69.8	80.2	85.5	80.5
February	70.3	80.2	79.9	79.1
March	70.1	75.9	77.9	77.6
April	62.8	67.4	68.9	78.5
May	56.4	63.7	67.7	80.5
June	67.2	62.5	59.6	82.6
July	54.9	57.0	61.3	82.0
August	51.7	49.7	74.4	77.6
September	57.6	58.7	77.9	75.3
October	70.6	75.6	83.1	74.4
November	80.2	85.5	84.6	75.0
December	79.7	87.2	86.0	71.5p
1979				
January	74.1	82.3	81.7	71.8p
February	85.1	77.9	69.2	
March	62.5	58.4	66.3p	
April	44.2	53.2		
May	48.0	51.7p	53.2p	
June	60.2p	53.3p		
July	50.6p			
August				
September				
October				
November				
December				

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

Chart 1. Civilian labor force and employment
(Seasonally adjusted)

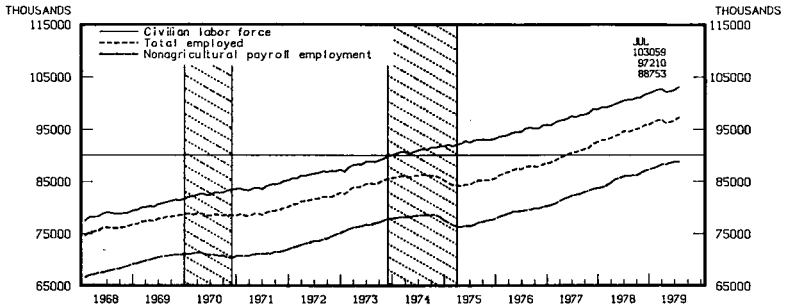


Chart 2. Unemployment rate--all civilian workers

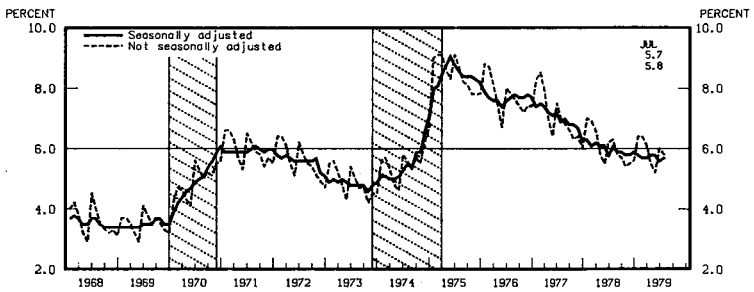
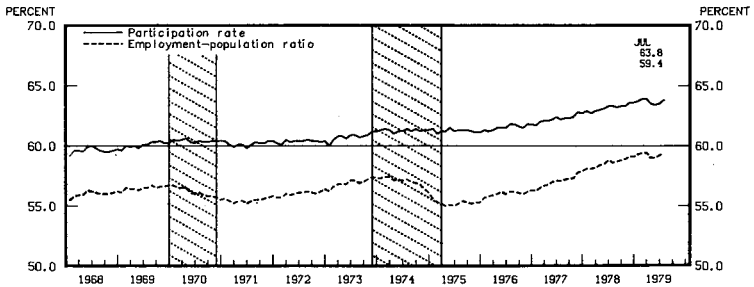


Chart 3. Civilian labor force participation rate
and total employment--population ratio
(Seasonally adjusted)



Note: The shaded areas depict the business cycle peaks and troughs as designated by the National Bureau of Economic Research.

Senator PROXMIRE. Thank you very much. I'm going to ask the staff to time my questions so I don't go over 10 minutes.

Madam Commissioner, in past hearings, you've indicated, as I understand it, that the establishment survey seems more accurate than the household survey in portraying changes in the economy. I'm not sure that I understand that, because the household survey is so enormously comprehensive, it is probably the most comprehensive survey we have. The number of households surveyed is such a very large number compared with the usual polls, it would seem to me to be very accurate, but somehow it doesn't portray the changes as well, in your judgment.

What picture of the employment situation do you get if you just look, then, at the establishment survey, which, as I understand it, is the questioning of the employers as to how many people they've hired, layed off, and so forth, and how many people they employ.

Ms. NORWOOD. The establishment survey, as you correctly suggest, is a survey of employees on establishment payrolls. It is based upon the payroll records. And the establishment survey shows a clear slowdown in employment growth. Over a period of months, however, from March, for example, until July, both the household survey and the establishment survey showed a slowdown in the very vigorous employment growth we have had. There was some slight increase, 500,000 increase in employment over a period of 4 months, a very much slower increase than we have had in recent years.

Senator PROXMIRE. Now, a 500,000 increase over 4 months would be a 1.5 million increase over a year, which is an increase that should accommodate to normal growth in the work force; should it not?

Ms. NORWOOD. Well, I'm not sure what a normal growth in the work force is.

Senator PROXMIRE. The growth in population has been something like that; hasn't it? That would be 1½ percent with a 100 million work force?

Ms. NORWOOD. Mr. Stein suggests that the labor force increase would be somewhat more.

Mr. STEIN. I think, Senator, that if we had only a 1.5 million growth over the course of a year, it probably wouldn't be enough to accommodate the labor force growth that we might expect at this period.

Senator PROXMIRE. It probably wouldn't be. It is fairly close, but there would be at least a creep-up in unemployment?

Ms. NORWOOD. Yes, sir.

Senator PROXMIRE. On the other hand, it may be we've had such a tremendous increase in the work force over the past few years that there might be a tendency for the work force to just naturally not grow quite as rapidly; isn't that right?

Mr. STEIN. That is possible.

Senator PROXMIRE. Now, there were increases in the unemployment rate for adult men, married men, and full-time workers. How significant would you term those increases?

Ms. NORWOOD. They are statistically significant, but they represent a fairly small change. These increases, however, were 1-month movements and were not the continuation of a trend. We did have, also, an increase in the unemployment of workers in manufacturing industries.

Senator PROXMIRE. The unemployment rate for blacks dropped from 11.3 to 10.8 percent. When was the last time the unemployment rate for blacks was that low?

Ms. NORWOOD. We can supply that for the record. I don't have it offhand.

Senator PROXMIRE. Off the top of your head, was it several years ago?

Mr. STEIN. Yes; it was in 1974.

Senator PROXMIRE. There is a rollcall, and Senator Sarbanes is going to vote and come back. And then I will probably have to leave before he gets back, but he will chair the hearings until I return.

And that occurred although the unemployment rate for black men actually increased but the unemployment rate for women and teenagers dropped very sharply. Do you think job programs have had any effect on that?

Ms. NORWOOD. I hope so.

Senator PROXMIRE. Well, we all hope so, but do you have any statistical analysis that would indicate that they have been sufficient to have an effect?

Ms. NORWOOD. Well, our data do not relate the employment situation to those job programs, but the Department of Labor has evaluations of their programs that show that they have created a number of jobs—I don't know exactly how many.

Senator PROXMIRE. Let me ask you a question about inflation. As I understand it, the Producer Price Index does not come out until next week.

Ms. NORWOOD. That's right.

Senator PROXMIRE. But the spot prices for raw industrials has fallen a little bit although prices for foodstuffs continue to go up. How closely do spot prices correspond to the crude materials component in producers' prices?

Ms. NORWOOD. To the crude materials, were you saying? It would be closer to the crude materials than to the finished goods component.

Senator PROXMIRE. Is this a sign that food price increases will be moderate?

Ms. NORWOOD. That is rather hard to determine. I don't think the Spot Price Index is sufficient to make a complete judgment about that.

Senator PROXMIRE. Any indication, or can there be any indication, on the basis of recent statistics of what's going to happen to energy prices? They played such a big part in inflation and they have been so serious in the first 4 or 5 months of this year. They've gone up so rapidly, at an annual rate of over 50 percent.

Is there any indication that is beginning to ease up or ease off, or slacken?

Ms. NORWOOD. No.

Senator PROXMIRE. Is this just unpredictable, based upon developments that are beyond statistical indicators?

Ms. NORWOOD. The statistical indicators only measure what is happening. The policy that the President and the Congress together develop for the pricing of energy will be what determines what happens to the prices of energy in the future.

Senator PROXMIRE. Now, yesterday an administration forecast had a much deeper recession in 1979, a weaker recovery in 1980 than earlier forecasters. For example, the unemployment rate was predicted to be

8.2 percent instead of the 6.9 percent, by the fall of 1980. The bottom of the 1973-75 recession, the unemployment rate reached over 9 percent, 9.1.

Excluding that recession, what comparable drop in economic activity have we had with an unemployment rate over 8 percent? Can you give us an estimate?

Ms. NORWOOD. If we take as the trough the period that the National Bureau officially identified as the trough, the highest was in 1975, which was 8½ percent. Now, the series themselves troughed at a somewhat higher rate, that was but only in that one recession.

Senator PROXMIRE. That was only in the 1973-75 recession?

Ms. NORWOOD. Yes, sir.

Senator PROXMIRE. So we have not had that experience?

Ms. NORWOOD. No, sir, we have not.

Senator PROXMIRE. Now, the administration's new forecast also calls for an inflation rate in 1979 of 11.8 percent instead of the previously published 10.6. What is the rate of price increase in the Consumer Price Index so far this year? Is it 13.4?

Ms. NORWOOD. For the first 6 months of this year, the CPI increased at an annual rate of 13.2 percent.

Senator PROXMIRE. So that even though you have adjusted it, you still may be being optimistic assuming it may be as low as 11.8 percent, which is a pretty shocking figure. How much would the Index need to climb to reach both the new and the previous forecast for inflation? Can you give us any calculation?

Ms. NORWOOD. We can provide you with that for the record.¹ That is a calculation we can easily make.

Senator PROXMIRE. I know you do not engage in forecasting or making policy recommendations, but on the basis of current data, which forecast would be the most reasonable, or what would you say would be a reasonable forecast for inflation in the present year?

Ms. NORWOOD. That's really very hard to answer, because, as you know, unemployment is really one of the late movers in a recession.

Senator PROXMIRE. I am asking now about the inflation expectations.

Ms. NORWOOD. That depends too, of course, on a number of things, but, in particular, on what happens to energy prices and what will happen to food. There is some indication that there may be some problems arising with grain which could have an effect on food prices.

Senator PROXMIRE. But you cannot give us any feel for whether about a 12-percent rate inflation for the year or a 10½ percent is more reasonable?

Ms. NORWOOD. No, sir.

Senator PROXMIRE. Can you list for us an array of other economic factors beyond the employment situation that would indicate the recession will be a severe one?

Ms. NORWOOD. No, I cannot. I think that at this stage, really, what we know is that there are some indicators such as manufacturing hours, factory accession rates, layoff rates—which are indicating weakness.

Senator PROXMIRE. Why isn't that reflected in the unemployment figures? Here we have an unemployment figure which, as you point out, is 5.7 percent. We have had a big growth in overall jobs. It is

¹ For the information referred to, see Mr. Layng's response on p. 33.

beyond me to understand why this generally gloomy element that you refer to here, layoffs and so forth, big layoffs in the automobile industry, isn't reflected. Why not?

Ms. NORWOOD. Well, you will recall, Senator Proxmire, that in the last difficult period, in the last recession period, employment growth continued for quite a long time.

Senator PROXMIRE. Is this fairly typical, the lag involved here? Does employment stay up, and unemployment stay down as we move this far along toward the indications of recession from other figures?

Ms. NORWOOD. Well, unemployment always is very late in moving. It does tend to lag. Employment usually does not.

Senator PROXMIRE. I am going to have to run. I will be back in a very few minutes, and Senator Sarbanes will be chairing until I return.

Senator SARBANES [presiding]. Commissioner, I think we can resume. The Senator will be coming back shortly. I hope you will excuse me if I should repeat a question which he has previously asked, but I think this system of going to vote is probably the best way to do it.

I would like to pursue the point of whether the other economic indicators which people are pointing to, which have led, for instance, to the new internal Carter administration forecast with respect to what's going to happen to the economy. These revised projections which were described in yesterday's paper in a rather lengthy article, pessimistically predicting a much deeper downturn, anticipate the unemployment rate will go to 8.2 percent by the end of 1980.

Is there some anomaly between the figures you keep bringing us on the unemployment rate and these other figures that people keep pointing to to show that the economy is slowing down and is in difficulty?

Chairman Miller says we are already in a recession.

Ms. NORWOOD. A lot of people have said we are already in a recession. I think that soon-to-be-Chairman Volcker has said that there is a fluttering occurring. As an economist, I must admit that forecasting is probably one of the most difficult things that economists do, and there is room for a lot of disagreement about it. It is hard to look at what might be the particular depth of a recession, and many of the forecasters are in considerable disagreement. Some are predicting rather a mild recession, and others are predicting a much deeper recession.

What I am trying to say is that when one looks at the labor force data, the labor market data, in total, one has to recognize that some of the indicators that tend to lead during a period of downturn are weakening, and those are, in particular, manufacturing hours, manufacturing employment, layoff rates, factory accession rates. Those clearly are weakening, and they are signs, clear signs, of difficulty.

The unemployment rates tend to be very late movers, and the timing of a decline in employment itself is hard to predict. In the last recession, employment remained high for a considerable period of time. There are a lot of unusual factors that are present now that have not been present in the past, and they are hard to interpret.

There is a lot of focus on energy, for example. There is a lot of interest in the whole question of the labor force changes, whether people will continue to come into the labor force, whether the dual-earner family, which is now very much more with us than it has been in past recessions, will have an effect.

Senator SARBANES. Well, I note that this internal administration forecast apparently is now predicting that the unemployment rate

will go to 8.2 percent by the end of 1980. Now, this morning you have brought us a 5.7-percent figure.

When was the last time that the unemployment rate increased at that pace over that period of time? In other words, we are talking about a year and a half, about 18 months, and the administration is talking about unemployment going from 5.6 percent or 5.7 percent to 8.2 percent.

Ms. NORWOOD. In 1974, in August, the unemployment rate was 5.4 percent. By May, the following May, May 1975, it had risen to 9.1 percent. So, that is 9 months.

Senator SARBANES. So, in 9 months, from August 1974 to May 1975, it went from 5.4 percent to 9.1 percent?

Ms. NORWOOD. That's right.

Senator SARBANES. Now, apparently, the administration in its last official forecast published July 12, predicted that the unemployment rate would go to 6.9 percent by the end of 1980. Now, approximately 3 weeks later, they predict instead of going to 6.9 percent it's going to go to 8.2 percent.

What economic figures are there that would warrant that very substantial increase in the projected unemployment?

Ms. NORWOOD. Senator, I don't know how the group arrived at the estimates. I have read about them in the newspapers, as I am sure you have. However, I think it is certainly obvious that the changed energy situation was probably not factored into the previous estimates to the extent that they probably have factored them into the estimates now.

In addition, available information for the month of June shows a drop in industrial production, a drop in factory orders, a drop in retail sales, as well as a quarter—at least a preliminary figure—for the gross national product of a fairly sizable negative change.

And I would suppose that the working group, looking at the forecast, would have factored in all of those changes.

Senator SARBANES. Would you quickly go through the movement in the unemployment figures over that 1974-75 period that took it from 5.4 to 9.1 in 9 months?

Ms. NORWOOD. Starting with August 1974, it was 5.4, and then going from that, 5.9, 5.9, 6.6, 7.1, 8.0, 8.1, 8.5, 8.8, 9.1.

Senator SARBANES. Do you regard that as an extraordinary increase in the unemployment rate over a short period of time, or as sort of a normal pattern as we move into a recessionary period? What lessons do we draw?

I must say to you that I was not fully aware of that. My anxiety and concern are greatly deepened by the fact that in the 9-month period the unemployment rate jumped at such a significant pace.

Ms. NORWOOD. I think that was an extraordinary development. The 1973-75 recession, as you know, was really a very serious one, more serious than some of the previous ones in the 1960's and 1950's.

Senator SARBANES. Well, really, the most serious we've had since the 1930's.

Ms. NORWOOD. That's right. That is certainly so.

Senator SARBANES. Well, are there any factors now present, as you see the structure of the labor market and the figures, that would lead you to think that either we are susceptible to a similar rapid increase in the unemployment rate or, to the contrary, that there are factors present that would mitigate against that, that we wouldn't get such a fast escalation in unemployment?

Ms. NORWOOD. There are a number of factors.

Senator SARBANES. These figures for 1974-75 show that in 9 months we went from a situation, at least on the unemployment side, of being relatively sanguine about how the economy was functioning, to having the worst recession on our hands since the 1930's.

Ms. NORWOOD. There are a number of factors that were some what different in the 1973-75 recession, and that may even be different now from that period. We have a very high rate of inflation. Inflationary expectations are rather difficult to evaluate.

If you look at the housing market now, for example, one would have expected that with such high rates of mortgage interest, housing starts would have been reduced long ago. But inflationary expectations have had an important effect there.

It is difficult to know exactly how consumers will react to the rates of inflation or to the energy issue. In 1973 we had—or the beginning of 1974—we had problems with energy when OPEC started the big price increases. Consumers did not seem to react quite in the way they are reacting now in terms of purchases of large cars. They are moving clearly to the purchases of small cars; they did a little of that before but not to this extent. Whether that is going to continue is something that one can only speculate about. But if it does, it will have an important effect on the automobile industry. In the 1973-75 recession, the automobile industry was a very important element.

So, that is another factor. There are a large number of very important industries in manufacturing which are suppliers to the automobile industry and whose employment or unemployment would be very much affected by what happens.

In addition, of course, we have had in the last decade rather phenomenal labor force growth, and we have had, in particular, a large number of women entering the labor force. We therefore have a lot more two-earner households. How that would affect reactions of people is difficult to determine, but I think that is a factor that we have to take into account.

Senator SARBANES. All those factors in a sense only heighten my concern. The inflation is more serious now than it was then. I think the consumer debt situation, as I recall, is more serious now than it was then.

Well, my time is up. I will come back in the next round.

Senator PROXMIRE [presiding]. I want to follow up on what Senator Sarbanes said.

Incidentally, I wanted to present Senator Sarbanes, who is a new member on the committee. He is very valuable, as you all know. He is a Rhodes scholar, a brilliant student at Princeton, a very fine law career, and a very fine career in the House, but more pertinently for this committee, he served on the Council of Economic Advisers as an economist, and he obviously is a professional and an expert in this area. So he is a great addition.

Senator SARBANES. I am glad I asked my questions before I was disqualified from asking them by that introduction. [Laughter.]

Senator PROXMIRE. Let me ask you what effect a series of prospective developments might have on unemployment, whether it be significant or not, and the direction.

First, supposing Chrysler should have to go through bankruptcy. What effect might that have? Can you give us any idea? Some people

argue if they did, the other firms would simply pick up the demand through producing more Fords and General Motors cars and so forth.

Ms. NORWOOD. Well, certainly, whatever were to happen, there would be an initial important large layoff of people. I really don't know what the capacity of other companies would be to pick it up. But there is an important work force employed by the Chrysler Corp., and there are, as indicated before, a large number of important industries—

Senator PROXMIRE. What would this be—150,000? Can you give us any notion?

Ms. NORWOOD. I don't know. We could try to check.

Senator PROXMIRE. Would you do that?

Ms. NORWOOD. Sure.

[The following information was subsequently supplied for the record:]

This information cannot be supplied by BLS because of confidentiality restrictions relating to the provision of data for individual firms.

Senator PROXMIRE. How about a UAW strike. We've had experience with that. We had a strike, what, 3 years ago?

Ms. NORWOOD. Yes.

Senator PROXMIRE. Can you give us, on the basis of that experience, how serious that might be?

Ms. NORWOOD. I don't have the specific figures, but I can give you a list of the industries that might be affected, which is quite large. Metal stampings, iron and steel foundries, blast furnace, basic steel, wholesale trade, automobile repair, handtools, fabricated metal products, tires and tubes, machine shop products, engines, turbines, and generators.

It becomes widespread. Those are the industries which tend to supply the automobile industry. I am not suggesting that there would be immediate reaction. If there were a strike, it would depend upon the length of the strike, obviously.

Senator PROXMIRE. How about the Soviet grain situation? I understand we may sell 8 million tons of wheat to the Soviet Union. They've had a very bad year that could have various effects, of course, upon food prices in this country. Can you give us some idea of what the dimensions of that might be?

Ms. NORWOOD. No; I can't. I really don't know much more than what I have read in the newspaper. The Agriculture Department has been saying that, and I have not seen any real estimates.

Senator PROXMIRE. Let me ask just two others, along that line. No. 1: Suppose we have another sharp OPEC price increase, for whatever reason it may be—because of a disruption in Saudi Arabia or some other country, for whatever reason—can you give us some notion of the effect that would have on employment and unemployment?

Ms. NORWOOD. I think that would depend, to a large extent, on how consumers and producers reacted to the increased costs. There has been a lot of work done on price elasticities of energy, in general. Certainly, it would have to raise costs; it would probably affect production and therefore would inevitably result in increased unemployment.

The tourist industries apparently, though we don't have any hard data, seem to have been affected already by the increased cost of gasoline and the lack of availability of it.

Senator PROXMIRE. But that effect could be more severe?

Ms. NORWOOD. Yes; certainly.

Senator PROXMIRE. Now, how about the effect of the kind of tax reduction that has been advocated by many Members of Congress, a \$20 or a \$30 billion tax cut. In the first place, how prompt would that be likely to be? Is there about a year's lag before that would have a stimulative effect on the economy, or would it be more prompt?

Ms. NORWOOD. I really can't answer that, Senator Proxmire. I think it would depend to a very large extent on exactly how the legislation was put together, and it would be pure speculation on my part to attempt to answer a question like that.

Senator PROXMIRE. Now, to follow up on some of the inquiries that Senator Sarbanes was making. The composite index of leading economic indicators for June fell only one-tenth of 1 percent. That followed a very sharp drop in April of 2.1 percent and a slight rise in May. But the index now stands below the level of April a year ago.

Many economists, as you know, have said that we are in the midst of a recession, including Treasury Secretary Miller, heralded by the 3.3-percent drop in real GNP.

Are the economic indicators still giving us fairly reliable and firm signals, or do you think that they are not as useful as they have been?

Ms. NORWOOD. Well, you know, Senator Proxmire, we have discussed this in recent hearings. And certainly, if you look back over most of the earlier recessions, there was very good predictive value from the leading indicators index. In the last recession, the situation wasn't quite so clear in terms of the number of months following the indicators.

Also, of course, the leading indicators index has been revised several times, and it is hard to tell. But, clearly, a drop in the leading indicators is a worrying sign.

Senator SARBANES. It is very important for us, I think, to understand. When you look at the indicators, what goes through your mind in terms of what to anticipate in the unemployment rate? One day there is a story in the paper that says the economic indicators are off, that GNP is down, and the Secretary of the Treasury says we're in a recession. A few days later, you come in and you give us an unemployment figure just like the unemployment figure for the previous month.

We have to have some sort of chart that gives us some idea. I know you don't want to make predictions; you abjure them rigorously, and I respect that premise that you work from. But let's look back and maybe we can do it that way.

There must be some sort of chart you can show which says, generally speaking, that in the past, given these indicators, we got this kind of movement in the unemployment figures at a certain period thereafter.

Ms. NORWOOD. Well, Senator, the definition of a recession really depends upon a recurring period of decline in a lot of different indicators, and that, in general, has to last over a long period of time. Now, that is a technical approach, and that is why it takes so long for people to be willing to set the peak or the trough of the economy.

But if you look at the whole body of data that are currently available to us, most of them go through the month of June—the employment situation data that we put out are the first ones for July—if you look at the whole series of data for the last quarter, and, in particular, for June, you find a very large number of indicators that are showing declines. And many of those are indicators which tend to lead at the beginning of a period of recession.

The unemployment rate, as such, is affected, of course, by what happens not just to employment in the economy, but also to the labor force, whether people continue to go into the labor force. Some economists maintain that a lot of people are coming into the labor force because jobs are available, and if there are fewer jobs available, fewer of them may come into the labor force.

In general, the unemployment rate, after several months of clear decline in employment, would be expected to show a considerable increase.

If you look at the last recession, it was several months before the unemployment rate really rose steeply. There is a chart at the end of the release which shows this, with the shaded area for the 1973–75 recession. The unemployment rate went up and then went up sharply some months later. But there was a tendency for it to lag.

That has happened in other periods as well.

Senator PROXMIRE. I understand John Layng has had an opportunity to calculate how much inflation would have to decline in order to meet the administration's first forecast and second forecast on inflation, whether it was 10.6 and 11.8.

Mr. LAYNG. That is what I used to make the calculations. Let me say that these are rough and in rather simple terms. But as you indicated, for the first 6 months of this year we've had a rate of increase of 13.2 percent. In order to achieve 11.8 for the year, it would have to drop to about a 10.4-percent rate, or about eight-tenths or nine-tenths of 1 percent per month.

To make 10.6 percent, by comparison, we would have to have about an 8-percent rate in the second half of this year, or an average monthly increase of six-tenths to seven-tenths of 1 percent.

Senator PROXMIRE. Very good. Thank you very much.

Now, Madam Commissioner, I remember very well in April, when you were very emphatic in saying that the drop in employment had not signaled a turnaround in the economy, that the economy was still strong. Would you agree now that April was that turning point? Were you wrong then or were you right then?

Ms. NORWOOD. Let me say that I think that what I said then was that the drop in April was a statistical aberration. And I think that what I have said today is that the increase of 400,000, almost 460,000, is not a turnaround upward.

I think there has been a slowdown, a clear slowdown, I believe that perhaps March is a time to look at, particularly because of the peculiar situation in April.

Senator PROXMIRE. Well, are we in a recession, in your judgment?

Ms. NORWOOD. As I have indicated, Senator, I think that that is something that, in terms of a technical definition of a recession, we have got to wait for a longer time to decide. It will probably be 6 or 8 months before we know whether the technical definition of a recession has been met.

What I do think is happening is serious signs of slowdown, serious signs of weakening, particularly in the manufacturing sector of the economy.

Senator PROXMIRE. Well, you are the top expert in the Government on statistics. It seems to me we have to look to you to give us your judgment on whether we are or are likely to be in recession. We have the top political people, who are very able people, who make their judgment. But they obviously don't have the professional competence that you have.

Ms. NORWOOD. As I have indicated, the definition of a recession is a technical issue, and that is something the National Bureau of Economic Research has always waited months and months and months for, to look at all of the recurring data over a period of time.

What I have said, and I believe very firmly, is that there are serious signs of weakening in the economy.

Senator PROXMIRE. Well, in past recessions, what was the usual timelag between a fall off in employment and a rise in the unemployment rate?

Ms. NORWOOD. Well, before a business cycle peaks, the household survey usually has shown a drop for sometimes 1 or 2 months—a large drop, 4 to 5 months before a peak. And the establishment survey has usually been quite flat, that is, with relatively little change or slight increases.

What is happening now is certainly not inconsistent with that.

Senator PROXMIRE. Can you tell us about—I missed in your statement, if you covered it, the dispersion rate. As I recall, in recent months it has been pretty encouraging. A majority of industries are still hiring. That has been an encouraging element in the economic picture.

Ms. NORWOOD. You missed it in my statement, Senator, because I did not put it in, and the reason I didn't put it in the statement is it is 50.6. I find it very difficult to interpret.

Senator PROXMIRE. Why, isn't that pretty good? After all, we have had, as you say, a rise in employment for a long, long time. And if we still have half of the firms still continuing to increase employment, it seems to me that is a pretty encouraging indicator.

Ms. NORWOOD. Well, it is not particularly discouraging. But I think one of the difficulties is that it has—

Senator PROXMIRE. Well, encouraging in the context of everything else we have heard, that we are slowing down and so forth.

Ms. NORWOOD. It was down as low as 44 in April and it has been up as high as 75 and 80 at the beginning of the year. So 50 percent is certainly much lower than it was at the beginning of the year.

But I think that the April-May fluctuations is very difficult to interpret.

Senator PROXMIRE. My time is up again. Senator Sarbanes.

Senator SARBANES. Commissioner, the indicators show a 3.3-percent drop in real GNP in the second quarter. What happened to the unemployment rate in the past when we were confronted with comparable trends in the indicators and when did it happen? When and over what period of time did it reflect itself in the unemployment rate?

Ms. NORWOOD. I can tell you that this time the second quarter unemployment rate was about the same as the first quarter. So as of now in this period, we have not had much of an effect. And I will supply for the record—I don't have offhand the specifics of the number of months following the GNP drop, but I can provide that.

Senator SARBANES. I think it would be helpful if you could provide some analysis that runs along the following lines, that say: over the last 10 or 20 years, when the indicators showed something comparable to what they are showing now, this is what happened subsequently with respect to the unemployment rate. That is not saying that it will in fact happen this time, but that at least will tell us what happened in the past when we started to get an economy that looked like the economy looks now.

And we also have to factor in the additional elements that are now present. Could one say that in the past we never had a drop of this sort that was not subsequently reflected in a significant increase in the unemployment rate? Would that be an accurate statement to make?

Ms. NORWOOD. Well, we will supply a review of that for the record.

[The following information was subsequently supplied for the record:]

REAL GNP AND UNEMPLOYMENT

During the last recession, November 1973 to March 1975, the unemployment rate rose modestly at first in response to a declining GNP; eventually the rate rose sharply. Real GNP declined 3.9 percent between the fourth quarter of 1973 and the first quarter of 1974. During the entire recession, the real GNP declines averaged 4.5 percent per quarter. The unemployment rate rose 0.3 percentage point between the fourth quarter of 1973 and first quarter of 1974; and averaged 0.8 percentage point per quarter rise through the first quarter of 1975, the cycle trough. The unemployment rate rose an additional 0.7 percentage point between the first and second quarters of 1975.

The magnitude of the decline in real GNP in 1973-75 was exceptional, however. This recession was much deeper than the other post-war recessions. During the 1969-70 recession, real GNP declined an average of 0.8 percent per quarter. Between the third quarter of 1969 and the fourth quarter of 1970, the unemployment rate rose an average of 0.4 percentage point per quarter. In contrast to 1973-75, the 1969-70 recession's real GNP declines were quite modest while the unemployment rate changes were nearly as great. The different relationships between GNP decline and unemployment rate increases exhibited in the last two recessions indicate the difficulty of relating changes in the unemployment rate to changes in real GNP.

THE BUSINESS CYCLE, REAL GROSS NATIONAL PRODUCT AND UNEMPLOYMENT RATE

Business cycle (calendar year quarter)	Gross national product ¹ (1972 dollars) change from preceding quarter (annual rate, percent)	Unemployment rate (seasonally adjusted)	
		Level (percent)	Change from preceding quarter ² (percentage points)
I. 1973-75 period (peak, November 1973; Through, March 1975):			
1973: IV.....	2.0	4.8	0.0
1974:			
I.....	-3.9	5.1	-.3
II.....	-1.8	5.2	-.1
III.....	-2.4	5.6	-.4
IV.....	-5.5	6.6	-1.0
1975:			
I.....	-9.1	8.2	-1.6
II.....	6.4	8.9	-.7
II. 1969-70 period (peak, December 1969; Through, November 1970):			
1969:			
III.....	1.4	3.6	-.2
IV.....	-2.2	3.6	.0
1970:			
I.....	-1.4	4.2	-.6
II.....	.2	4.7	-.5
III.....	3.0	5.2	-.5
IV.....	-3.8	5.8	-.6
III. 1960-61 period (peak, April 1960; Through, February 1961):			
1960:			
I.....	8.2	5.2	.4
II.....	-1.0	5.2	.0
III.....	-1.7	5.6	-.4
IV.....	-2.0	6.3	-.7
1961:			
I.....	2.6	6.8	-.5
II.....	6.9	7.0	-.2
IV. 1957-58 period (peak, August 1957; Through, April 1958):			
1957:			
III.....	2.8	4.2	-.1
IV.....	-5.1	4.9	-.7
1958:			
I.....	-7.6	6.3	-1.4
II.....	2.9	7.4	-1.1

¹ Real GNP's peak preceded the business cycle's peak during 1960-61 and 1969-70 period; real GNP's and cycle's peak coincided during 1957-58 and 1973-75 period.

² Because the unemployment rate rises during a recession and falls during a recovery, the series is inverted * * * a rise in the rate is given a negative value; a fall in rate is given a positive value.

Source: Office of Economic Growth, Bureau of Labor Statistics, Aug. 9, 1979.

Senator SARBANES. I want to ask a couple of questions on the employment-population ratio. First, just a technical question. What is the definition of "population" on the basis of which the ratio is calculated?

Mr. STEIN. The population used there is 16 years of age and over, noninstitutional population, including the Armed Forces.

Senator SARBANES. So that's everyone in the country over 16 not institutionalized?

Mr. STEIN. That's right.

Senator SARBANES. And I take it the 59.4 percent figure, almost 60 percent, is a record?

Mr. STEIN. Yes, it is. It is equal to March and February, but those 3 months are a record.

Senator SARBANES. For our whole history or as long as you have been keeping statistics, is that right?

Mr. STEIN. That's right.

Ms. NORWOOD. It is largely due to women.

Senator SARBANES. How does that compare, looking back to the past? What was the normal figure in the past?

Mr. STEIN. That figure has been rising over a period of time, as the labor force has been growing as well. So I don't think we could really say there was a norm.

Senator SARBANES. What was the figure 10 years ago?

Mr. STEIN. It was 56.5 percent.

Senator SARBANES. What about 20 years ago?

Mr. STEIN. We would have to check the record for that.

Senator SARBANES. I would be interested in that.

[The following information was subsequently supplied for the record:]

The employment-population ratio in 1959 was 54.8 percent. Fully comparable data do not exist before 1948.

Senator SARBANES. And that steady trend rise is almost entirely attributable to women?

Ms. NORWOOD. To a large extent, yes.

Senator SARBANES. How does that figure compare with other countries?

Ms. NORWOOD. That too we can supply for the record, because it differs. The Scandinavian countries have very high participation and some of the other countries, like Italy, have much lower. But we can supply that for the record.

[The following information was subsequently supplied for the record:]

EMPLOYMENT-POPULATION RATIOS¹ APPROXIMATING U.S. CONCEPTS, 1960-78

Year	United States	Canada	Australia	Japan	France	Germany	Italy	Sweden	United Kingdom ²
1960.....	56.1	³ 52.6	(⁴)	66.7	58.6	59.4	55.8	(⁴)	59.4
1961.....	55.4	³ 52.4	(⁴)	66.8	58.1	59.6	55.6	62.2	59.7
1962.....	55.5	³ 52.9	(⁴)	66.0	57.1	59.3	54.7	63.0	59.2
1963.....	55.4	³ 53.1	(⁴)	66.3	56.2	59.2	53.4	63.4	59.0
1964.....	55.7	³ 53.8	57.9	64.1	56.4	58.8	52.5	62.0	59.4
1965.....	56.2	³ 54.5	58.3	63.6	55.7	58.6	50.9	62.1	59.6
1966.....	56.9	55.4	58.8	63.7	55.6	58.0	49.2	62.1	59.6
1967.....	57.3	55.4	59.2	64.0	55.4	56.3	49.5	60.9	58.5
1968.....	57.5	55.0	59.3	64.1	55.1	56.2	48.8	61.0	58.2
1969.....	58.0	55.3	59.5	63.9	55.4	56.6	48.4	61.1	58.0
1970.....	57.4	54.5	60.9	63.8	55.3	56.6	48.0	61.9	57.5
1971.....	56.6	54.5	60.2	63.4	55.0	56.1	47.7	61.6	56.9
1972.....	57.0	54.9	59.9	62.8	54.9	55.3	46.4	61.4	56.9
1973.....	57.8	56.4	60.4	63.2	55.1	54.9	46.2	61.4	58.8
1974.....	57.8	57.3	60.4	62.2	55.0	53.5	46.6	62.6	58.7
1975.....	56.0	56.9	59.2	61.2	53.5	51.6	46.4	63.8	58.1
1976.....	56.8	56.7	59.0	61.1	53.3	50.9	46.3	63.9	58.0
1977.....	57.9	56.6	58.5	61.2	⁵ 53.2	⁵ 51.0	46.3	63.9	⁵ 57.9
1978.....	59.4	57.4	57.3	61.3	⁵ 53.1	⁵ 51.0	46.3	64.0	⁵ 57.8

¹ Civilian employment adjusted to U.S. concepts as a percent of the civilian working age population. The data relate to persons 16 and over in the United States, France, Sweden, and beginning in 1973, Great Britain; 15 and over in Canada. Australia, Japan, Germany, and prior to 1973, Great Britain; and 14 and over in Italy.

² Great Britain only.

³ Estimates by BLS based on new survey definitions. Statistics Canada revised the data for 1966 onward on the new survey basis.

⁴ Not available.

⁵ Preliminary.

Source: U.S. Department of Labor, Bureau of Labor Statistics, Office of Productivity and Technology, Division of Foreign Labor Statistics and Trade, August 1979.

Senator SARBANES. I have just been pointed to the tables in this year's economic report, which show employment as a percent of population. It begins in 1948 at 55.8 percent, and then brings it forward year by year, obviously, and month by month in the most recent 2 years; 59.1 percent in December 1978; and we are at 59.4. Just looking

at this very quickly, with only a couple of exceptions, it seems to have been from 55 to 59 percent over that period of time.

So, to get a much lower figure, which you referred to earlier, we would have to go back really very far, wouldn't we? Before World War II?

Ms. NORWOOD. Probably so.

Senator SARBANES. I know you are going to provide us these other country figures. But is it your impression that our figure is much higher?

Ms. NORWOOD. I think our participation figures are in general higher than some of the other countries, particularly Italy, for example, but are lower than some of the Scandinavian countries. There are some differences in the way in which these figures are developed in other countries. They are not exactly comparable, either.

Senator SARBANES. Well, the 16 years of age may not be a standard. Is it?

Ms. NORWOOD. Well, the definition of employment, too, may be somewhat different. We have done some work in that area. In fact we have a bulletin which includes a discussion of this, and I would be glad to provide that for the record.

Senator SARBANES. Fine.

[The bulletin referred to, together with a supplement, follows:]

International Comparisons of Unemployment



U.S. Department of Labor
Ray Marshall, Secretary
Bureau of Labor Statistics
Julius Shiskin, Commissioner
August 1978

Bulletin 1979

Preface

In 1961, the President's Committee to Appraise Employment and Unemployment Statistics (Gordon Committee) requested that the Bureau of Labor Statistics investigate the international comparability of unemployment statistics. The resulting study described the definitions and concepts used in seven foreign countries and presented unemployment rates adjusted to U.S. concepts for 1960. Subsequent to the Gordon Committee study, the Bureau initiated a continuing program of international labor force comparisons. To date, eight articles on unemployment comparisons have been published. Comparisons are presently made for eight foreign countries and are done on a quarterly and monthly basis as well as on the annual basis of the original study. The primary purposes of this bulletin are to bring together all of the Bureau's work on international unemployment comparisons and to describe in detail the methods of adjusting foreign unemployment rates to U.S. concepts.

Continuing contacts have been maintained with each of the countries covered, and there has also been correspondence and cooperation with international organizations such as the Statistical Office of the European Communities, the International Labour Office (ILO), and the Organization for Economic Cooperation and Development (OECD). A preliminary version of chapter 1 and appendix B of this bulletin was prepared for the OECD in 1975 and was subsequently circulated to all member countries of the Organization. In June 1976, the paper was presented by the author, Constance Sorrentino, to the first meeting of the OECD Working Party on Employment and Unemployment Statistics. Many helpful comments were received from the member countries.

The bulletin was prepared in the Bureau's Office of Productivity and Technology by Constance Sorrentino under the direction of Arthur Neef and John H. Chandler, Chief, Division of Foreign Labor Statistics and Trade. Joyanna Moy assisted in the research, tabulations, and writing of the bulletin. The data presented were those available as of December 1977.

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Introduction

Unemployment, like most phenomena in the social sciences, can be defined in various ways. No single definition could possibly satisfy all analytical and ideological interests. For example, Julius Shiskin has identified an array of seven unemployment rates for the United States, going from a very narrow to a very broad view.¹ The narrowest definition covered only persons unemployed 15 weeks or longer; the broadest included all unemployed persons seeking full-time work and half of those seeking part-time work, half of the total number of persons working part time for economic reasons, and all discouraged workers.

The current official definition of unemployment in the United States represents the total number of persons not working but available for and actively seeking work. This definition has had widespread support from various study groups and was recommended by the Committee to Appraise Employment and Unemployment Statistics (Gordon Committee) established by President Kennedy in 1961.² The definition will be reviewed again by the National Commission on Employment and Unemployment Statistics.³ The Commission has broad responsibility to examine the concepts, methods, and procedures involved in collecting, analyzing, and presenting the employment data and to recommend ways to improve the current system.

This bulletin presents adjustments of foreign unemployment rates to the U.S. concept of unemployment. The U.S. concept was chosen as the basis for comparison because it would furnish comparisons on terms most familiar to American users. Also, U.S. concepts follow closely the international standards recommended by the International Labour Office (ILO).⁴ Most foreign countries have attempted to follow the ILO definitions, but have made adaptations and interpretations to suit national needs.

The basic labor force and unemployment statistics of the foreign countries studied, with the exceptions of Australia and Canada, require adjustments to bring them into closer comparability with U.S. data. Adjustments are made for all known major definitional differences. The accuracy of the adjustments depends on the availability of relevant information; in some instances, it is necessary to make estimates based on incomplete data. Therefore, it is possible to achieve only approximate comparability among countries. Nevertheless, the adjusted figures provide a better basis for international comparisons than the figures regularly published by each country.

The adjustments made to the national data do not

have a very large effect in most cases. Only negligible changes, or none at all, have been made in the unemployment figures for Australia, Canada, Italy, Japan, and Sweden (table 1).⁵ In the case of Germany, the adjustment to U.S. definitions has resulted in a moderate reduction of the official figures on unemployment. Upward revisions of the unemployment figures for Great Britain and France have been substantial, in Britain's case amounting to over 40 percent in years of low unemployment and about 14 percent in recent years of high unemployment. French figures adjusted to U.S. definitions were 50 percent higher than the official French figures in the early 1960's, but the official and the adjusted figures have moved closer to each other over the years and, in 1976, were almost identical.

The adjustments to U.S. concepts do not make a great deal of difference in the ranking of countries according to unemployment rates. The countries at the top and the bottom of the ranking are usually not affected. However, the rankings in the middle of the array are often changed after adjustments are made.

The purpose of the original BLS study for the Gordon Committee was to evaluate the widespread impression that the high rate of unemployment in the United States, as compared to most other industrial countries, was largely due to differences in methods of measurement. The major conclusion drawn from the Bureau's study was that differences in collection procedures and definitions were only a minor factor in accounting for the higher level of unemploy-

¹ Julius Shiskin, "Employment and Unemployment: The Doughnut or the Hole," *Monthly Labor Review*, February 1976, pp. 3-10.

² President's Committee to Appraise Employment and Unemployment Statistics, *Measuring Employment and Unemployment* (Washington, U.S. Government Printing Office, 1962).

³ The Commission was established under the Emergency Jobs Programs Extension Act of 1976, PL 94-444. See John E. Bregger, "Establishment of a New Employment Statistics Review Commission," *Monthly Labor Review*, March 1977, pp. 14-20.

⁴ International Labour Office, Eighth International Conference of Labour Statisticians, *Employment and Unemployment Statistics, Report IV* (Geneva, ILO, 1954).

⁵ Italy made a major revision in survey methods in 1977. The comparative data shown in this study are based on a preliminary analysis of the new Italian data. For a discussion of the problems involved, see appendix B.

Chart 1. Unemployment Rates, Selected Years, 1959-76

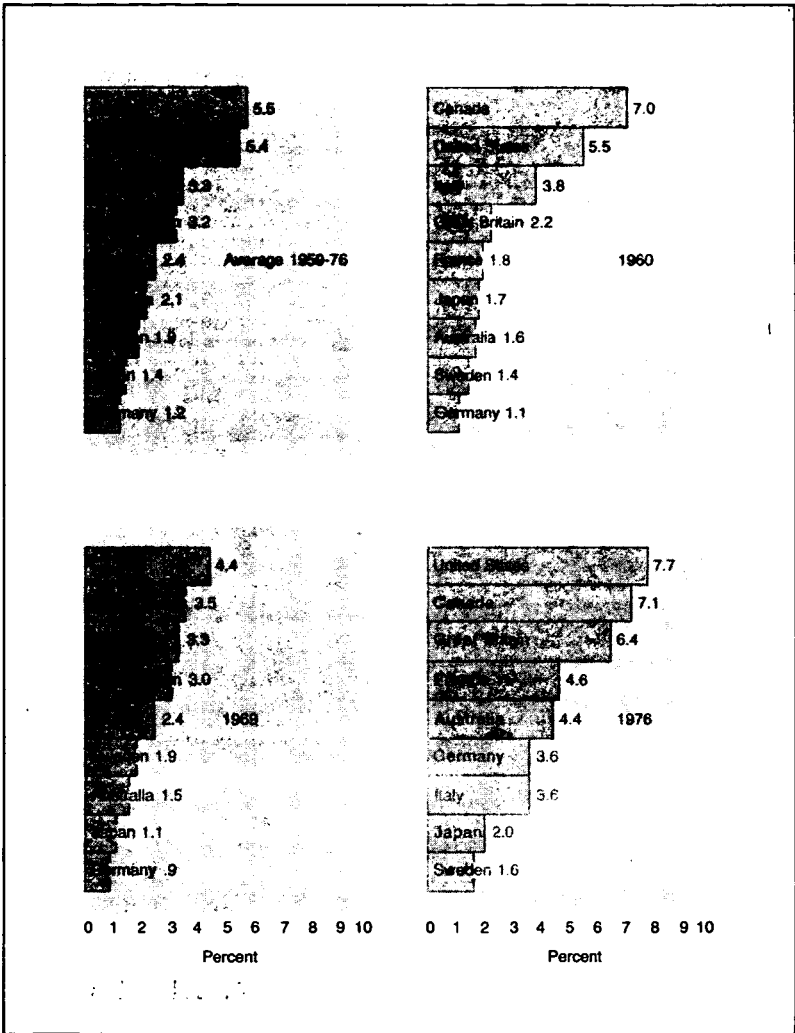


Table 1. Official unemployment rates and rates adjusted to U.S. definitions, 1960 and 1976

Country	1960		1976	
	Official rate	Adjusted to U.S. definitions	Official rate	Adjusted to U.S. definitions
United States . . .	5.5	5.5	7.7	7.7
Canada	7.0	7.0	7.1	7.1
Australia	(¹)	1.6	4.4	4.4
Japan	1.7	1.7	2.0	2.0
France	1.3	1.8	4.5	4.6
Germany	1.3	1.1	4.6	3.6
Great Britain . . .	1.5	2.2	5.6	6.4
Italy	4.0	3.8	3.7	3.6
Sweden	³ 1.4	³ 1.4	1.6	1.6

¹ Not available.

² Preliminary estimates.

³ 1961.

ment in the United States.⁶ After adjustment of such differences to U.S. concepts, the rate of unemployment in this country in 1960 was considerably higher than that for any of the other seven countries studied except Canada.

Chart 1 shows how the nine countries compared during 3 selected years and on the average for 1959-76. The 1976 unemployment rate was unusually high for the United States and the year 1969 was one of relatively low U.S. unemployment. In both years, the United States ranked near the top in the array of countries.

Chapter 1 of this bulletin presents a discussion of the international measurement of unemployment and a general description of the methods used to adjust foreign unemployment rates to U.S. concepts. The description of methods precedes the presentation of results (chapter 2) in the belief that some knowledge of the procedures involved will lead to greater understanding of the results. Breakdowns of the aggregate unemployment rates into their age and sex components are described in chapter 3. Two other significant labor market indicators—participation rates and employment-population ratios—are analyzed in chapter 4.

Although the unemployment data for foreign countries have been adjusted for statistical comparability, inter-country differences in unemployment rates reflect substantial differences in social attitudes and institutional arrangements, as well as in economic performance. Differences in the demographic and sectoral composition of the labor force also affect the unemployment rates. Such non-definitional differences are investigated in chapter 5. Appendix B presents detailed descriptions of each country's data and the methods of adjustment to U.S. concepts.

It should be kept in mind that unemployment is only one measure of underutilization of the labor force. Underutilization may also take the form of underemployment. The term underemployment is usually used to refer to persons in the labor force who involuntarily work part time ("visible" underemployment) or who are underutilized in terms of some efficiency or income standard ("invisible" underemployment).⁷ Because of difficulties in quantifying invisible underemployment, statistical measures are usually confined to measuring the number of persons working part time for economic reasons. It would be very useful to develop broader measures of underutilization, but the most that has been attempted here is to mention other relevant variables which are available for each country. Comprehensive and comparable data on labor underutilization have not yet been developed. The Organization for Economic Cooperation and Development is doing some experimental work in the area of setting up a standardized system for monitoring all facets of the labor market. However, much more data must become available before such a system can come into being.

⁶ "Comparative Levels of Unemployment in Industrial Countries," by Robert J. Myers and John H. Chandler, appendix A of *Measuring Employment and Unemployment*, President's Committee to Appraise Employment and Unemployment Statistics (Washington, Government Printing Office, 1962). This report was also published in a shorter version in the August and September 1962 issues of the *Monthly Labor Review*.

⁷ For a detailed description of the concept of underemployment, see *Measurement of Underemployment: Concepts and Methods* (Geneva, International Labour Office, 1966).

Chapter 1. The International Measurement of Unemployment

The earliest unemployment statistics were compiled by trade unions in order to determine how many of their members were temporarily unemployed. Although records of unemployment among their members have generally been kept by trade unions since their earliest days, it was only in the early 1900's that governments began to collect and publish such statistics. In some countries data were also gathered from unemployment funds paid out by the government to unemployed persons. At the beginning of World War I the usefulness of the unemployment statistics published regularly by about a dozen countries was limited, since the data were neither nationally representative nor internationally comparable.¹

With the development of mass unemployment in the 1930's, the need for better unemployment statistics became apparent. At that time, although countries were still publishing unemployment funds data and trade union statistics, the majority of "official" unemployment statistics were derived from information collected by employment offices on the registered unemployed. Apart from attempts in some decennial censuses, there were no direct measurements of the number of jobless persons at the beginning of the 1930's.

In the mid-1930's, in the United States, experiments with direct surveys of the population occurred for the first time. The unemployed were then defined as those who were not working but who were "willing and able to work." As this criterion appeared too dependent upon the interpretation and attitudes of the persons being interviewed, a set of concepts was developed in the late 1930's according to which an individual was classified as unemployed if his actual activity within a reference period was "not working and looking for work." This criterion constitutes the basis of the modern definition of unemployment.

Development of international standards

In view of the different needs of countries and the differences in their facilities for producing statistics, it has never been seriously proposed that all countries should adopt the same system for measuring unemployment. A good deal of work has been done, however, toward developing uniform international standards and definitions in employment and unemployment statistics. The major role in

¹For further information, see "Statistics of Unemployment among Workers' Organizations," *International Labour Review*, January 1921, pp. 115-20.

developing uniform standards has been played by the International Conference of Labour Statisticians, sponsored by the International Labour Office (ILO).

As early as 1925 the ILO prepared a report on methods of measuring unemployment for the Second International Conference of Labour Statisticians. The Conference recommended that, where no satisfactory data could be obtained from other sources, "an attempt should be made to obtain information on the extent of unemployment through general population censuses or that special inquiries relating to the whole population or to an adequate sample of the population be made from time to time."²

The Sixth International Conference of Labour Statisticians adopted a resolution in 1947 defining unemployment, employment, and the labor force mainly on the basis of the activity of each individual during a specified period. This "actual status" concept was a departure from the "gainfully occupied" concept commonly used by most countries in the past, according to which the classification of a person was not related strictly to activity during any specified time period, but more to a "usual activity."

The "actual status" approach was first used in a national census in the 1940 Census of the United States. This approach is now the worldwide standard, with various modifications.

The Eighth International Conference of Labour Statisticians, meeting in 1954, approved definitions of employment, unemployment, and the labor force which are now widely acknowledged, though by no means generally observed.³

In summary, the ILO definitions (given in detail in appendix A) include as unemployed all persons who, during a specified time period, were without a job, available for work, and seeking work. Also included are persons who had made arrangements to start a new job at a later date and persons on temporary or indefinite layoff without pay. Persons in these two categories did not have to be seeking work. The labor force is defined as the sum of the unemployed and the employed. The employed consist of all persons who, during a specified time period, performed

²*The International Standardization of Labour Statistics* (Geneva, International Labour Office, 1959).

³International Labour Office, Eighth International Conference of Labour Statisticians, op. cit. See also *The International Standardization of Labour Statistics*, Studies and Reports, New Series, No. 53 (Geneva, ILO, 1959).

some work for pay or profit, including the self-employed. Unpaid family workers are included if they worked for at least one-third of the normal working time during the specified period. Persons with a job but not at work because of illness, industrial dispute, vacation, etc. are regarded as employed. The Armed Forces may be included or excluded from the labor force.

The ILO concepts are still officially recognized, and the 12th Conference of Labour Statisticians in 1973 did not find any need to modify them. However, the definitions leave much room for interpretation. For example, the definition of unemployment indicates that a person should be seeking work to be counted as unemployed (unless waiting to begin a new job or on temporary layoff). However, no mention is made of how actively a person must be seeking work or within what period of time in the past a person must have tested the job market. The definitions state that an unemployed person should be available for work, but they do not require a test of current availability. The Armed Forces may be either included or excluded from the labor force. Also, the ILO definitions recommend a lower age limit for the statistics, but do not specify how that age limit should be determined. Further, the ILO definitions do not specify the reference period for the statistics, allowing it to be either 1 day or 1 week.

The theory behind the ILO's standard definitions is that countries having different types of statistical systems can produce unemployment statistics that are reasonably comparable from country to country. In fact, however, relatively few countries strictly observe the international definitions, and, even among those that do, there is room for some divergence, since the ILO definitions are not altogether rigid on certain points. It is for these reasons that adjustments in the figures for various countries are necessary if comparisons of unemployment levels are to be made.

The Organization for Economic Cooperation and Development (OECD) has accepted the ILO definitions and has attempted to promote their use among its 24 member countries. Building upon the work done by BLS, the OECD has attempted to estimate unemployment rates on a statistically consistent basis.⁴ The OECD has made estimates for Finland, Norway, and Spain as well as the countries studied by BLS. The OECD figures are based on the total labor force rather than the civilian labor force. BLS estimates on a total labor force basis are shown in appendix F.

The Statistical Office of the European Communities has also been working to achieve comparability of employment and unemployment statistics among its nine members. Labor force surveys using common definitions were conducted in the member countries in October 1960, in the spring of 1968 through 1971, and thenceforth, every 2 years. A description of these surveys appears in appendix E.

⁴Organization for Economic Cooperation and Development, *Economic Outlook*, July 1976, pp. 32 and 106-10.

The U.S. definition

The definitions used in the U.S. labor force survey follow the general outline of the ILO definitions, but are more specific. The U.S. definitions, described in detail in appendix B, require unemployed persons to take active job-seeking steps within the 4-week period including the reference week. Only persons on layoff who were waiting to be called back to their job and persons waiting to start a new job within 30 days do not have to actively test the job market to be classified as unemployed. Also, unemployed persons must be available to begin work immediately, except for temporary illness, and there is a survey question to test current availability.

The minimum age limit for the U.S. survey is 16, a point left undecided in the ILO definition. Also left undecided by the ILO was whether labor force status should be measured on a particular day or throughout a particular week. The U.S. survey uses a week as its basic reference period.

U.S. labor force survey data are collected for the civilian noninstitutional population only. Persons in the Armed Forces are excluded from the employment and labor force totals.

Sources of unemployment statistics

To obtain their official unemployment data, the countries studied use one of two systems for measuring unemployment: employment office registrations and labor force sample surveys. Employment office data generally relate to the number of persons on the register as of one day during a month. The figures may include persons already employed who are seeking more work or a change of jobs. The number of job applicants registered depends on the way the system is organized, the extent to which persons are accustomed to register, and the inducements for them to do so. Changes in legislation and administrative regulations can affect the continuity of the registrations series.

Labor force sample surveys record the labor force status of a person as of a reference week. Sample surveys usually yield the most comprehensive statistics on unemployment since they include groups of persons who are not covered in unemployment statistics obtained by other methods. New entrants and reentrants into the labor force, for example, would be enumerated as unemployed in labor force surveys if they are looking for work, whereas they may not register as unemployed because they are ineligible to collect unemployment benefits.

Labor force sample surveys provide a better basis for international unemployment comparisons than statistics on registrations at employment offices. Such surveys have been developed specifically to measure the employment status and characteristics of the population above a certain age. They are not dependent upon changes in legislation and

regulations. Because their central purpose is the same, these surveys have many features in common, although inevitably there are special features of the work in each country which reflect national circumstances and needs. In contrast, the coverage of registrations statistics varies widely from country to country. In some countries, for example, married women may accept the option of not joining the unemployment insurance system, and, hence, are not able to collect unemployment benefits if they lose their jobs. Other uninsured groups, such as first-time jobseekers, also have no financial incentive to register.

Sample surveys often collect a wealth of information which can be utilized to make adjustments to a common conceptual framework. Moreover, such surveys are better equipped than registrations data to solve some of the following problems of measurement:

1. Determination of the reasons why some people have jobs but are not working (vacation, illness, layoff).
2. Identification of persons currently seeking work to start at a future time (e.g., students looking in early spring for a summer job) who are not really currently available to begin work.
3. Identification of persons who have ceased their jobseeking activities because they have found a job to which they expect to report at a future date, but for which they are immediately available.
4. Identification of "discouraged workers" who do not seek work because they believe that there is no work available.

All the above problems concerning unemployment measurement are more readily solved through labor force surveys than through data on placements or unemployment insurance registrants. In practice, statistics based on registrations, by not including the nonregistered unemployed, have a downward bias; on the other hand, they tend to generate inflated figures because of the temporary inclusion of persons who have found work and are actually working and of people not seriously interested in finding work but who register for social benefits or to maintain eligibility for a pension. Persons who are working would be classified as employed in a labor force sample survey and those not really "looking for work" would most likely be recorded as "not in the labor force."

Of the countries studied here, all currently conduct labor force sample surveys. Surveys provide the "official" statistics on the unemployed in Australia, Canada, Italy, Japan, Sweden, and the United States.⁵ In France, Germany, and Great Britain, the regularly published unemployment figures refer to the registered unemployed. In addition, France and Germany have conducted labor force

⁵ Australia and Italy also give wide distribution to their registered unemployed statistics since such statistics are available monthly while the labor force survey statistics are available only quarterly. Sweden also uses registration data widely even though monthly survey data are available.

surveys since the 1950's, and Great Britain initiated a monthly household sample survey in 1971. However, the registered unemployed series remains the "official" unemployment series in all three countries partly because registration results are available more frequently and on a much more timely basis than the survey results.

Concepts and definitions

Definitions of unemployment and the labor force differ from country to country, even when the same type of data collection method is used. Appendix B to this study presents detailed descriptions of the unemployment concepts used in the nine countries. Table 2 provides a synopsis of the major areas of difference among the countries. For France, Germany, and Great Britain, two columns are shown, one covering the "official" employment office series and the other covering the labor force survey. The entries in table 2 represent the current status of the statistics. It should be pointed out that changes have been made over the years in all the countries so that different entries in some areas would have been required in earlier years. The following discussion focuses upon the items shown in table 2. Unless otherwise specified, labor force survey data rather than employment office data are described here for France, Germany, and Great Britain.

Age limits. The ILO recommends that countries establish a lower age limit for labor force statistics, but does not specify what that limit should be or how it should be determined. The lower age limit in the U.S. survey is 16, and for the other countries it ranges from 14 to 16. Only Sweden has an upper age limit as well as a lower one.

Reference period. The ILO definition recommends that the reference period for labor force statistics be a specified day or week. In all of the labor force surveys studied here, the general reference period is a week. Registration statistics, however, use a reference period of 1 day.

For jobseeking activities by unemployed persons, the reference period has been expanded beyond 1 week in the sample surveys of some countries. In the United States, Canada, and Australia, a person is counted as unemployed if he sought work within the 4 weeks including the reference week. In Sweden, a 60-day period for jobseeking is allowed.

In several of the labor force surveys, the allowable period for jobseeking activities is ambiguous.⁶ In France, Germany, Great Britain, and Italy the survey questionnaire does not clearly specify the jobseeking period. Thus, some persons may interpret it to be the reference week of the

⁶ Prior to 1967, the U.S. survey questionnaire also did not specify a time period for jobseeking. It was probably interpreted by some jobseekers to refer only to the survey week itself.

Table 2. Synopsis of unemployment statistics: Definitions recommended by the International Labour Office and definitions used in 9 countries

Item	ILO definition	United States	Canada	Australia	Japan	France	
Source	Unspecified	Labor force survey	Labor force survey	Labor force survey	Labor force survey	Employment office registrations	Labor force survey
Frequency	Unspecified	Monthly	Monthly	Quarterly	Monthly	Monthly	Annual
Age limits	Unspecified	16 years and over	15 years and over	15 years and over	15 years and over	None	15 years and over
Reference period	1 day or 1 week	1 week	1 week	1 week	1 week	1 day	1 week
Reference period for jobseeking	1 day or 1 week	4 weeks	4 weeks	4 weeks	1 week	1 day	Unspecified ¹
Whether included in labor force:							
Career military personnel	Unspecified	Excluded	Excluded	Excluded	Included	—	Included
Unpaid family workers working less than 15 hours	Excluded if worked less than one-third of normal working time	Excluded	Included	Excluded	Included	—	Included
Whether included in unemployed: ²							
Persons on layoff	Included	Included	Included ³	Included ⁴	Excluded	Excluded	Excluded
Persons who have not actively sought work ⁵	Excluded, but no test of workseeking	Excluded	Excluded	Excluded	Excluded, but no test of workseeking	Included	Included
Temporarily ill jobseekers	Included	Included	Included	Included	(⁶) Included	Included	Included
Students seeking work	Unspecified	Included	Included ⁷	Included	Included	Excluded	Included
Persons waiting to report to a new job at a later date	Included	Included	Included	Included	Excluded	Excluded	Excluded
Jobseekers not currently available for work	Excluded, but no test of availability	Excluded	Excluded	Excluded	Excluded, but no test of availability	Excluded	Included
Persons who did some work and also looked for work	Excluded	Excluded	Excluded	Excluded	Excluded	Included ⁸	Included ⁹
Special exclusions	—	—	—	—	—	Persons over 60 years old and receiving "income guarantee" payments; persons seeking part-time work	—
Base for unemployment rate	Unspecified	Civilian labor force	Civilian labor force	Civilian labor force	Total labor force	None calculated	Total labor force

See footnotes at end of table.

Table 2. Synopsis of unemployment statistics: Definitions recommended by the International Labour Office and definitions used in 9 countries—Continued

Item	Germany		Great Britain		Italy	Sweden
Source	Employment office registrations	Labor force survey	Employment office registrations	Labor force survey	Labor force survey	Labor force survey
Frequency	Monthly	Annual	Monthly	Annual ¹⁰	Quarterly	Monthly
Age limits	14 years and over	14 years and over	16 years and over	16 years and over	14 years and over	16 to 74 years old
Reference period	1 day	1 week	1 day	1 week	1 week	1 week
Reference period for jobseeking	1 day	Unspecified	1 day	Unspecified ¹¹	Unspecified ¹	60 days
Whether included in labor force:						
Career military personnel	—	Included	—	Excluded	Included	Included
Unpaid family workers working less than 15 hours	—	Included	—	Included	Included	Excluded
Whether included in unemployed: ²						
Persons on layoff	Excluded	Excluded	Excluded	Excluded	Included	Included
Persons who have not actively sought work ³	Included	Included	Included	Included	Excluded	Excluded
Temporarily ill jobseekers	Excluded	Included	Excluded	Excluded	Included	Included
Students seeking work	Included	Included	Excluded	Included (1 ²)	Included	Excluded ¹²
Persons waiting to report to a new job at a later date	Excluded	Excluded	Excluded	Included	Included	Included
Jobseekers not currently available for work	Excluded	Included	Excluded	Included	Excluded, but no test of availability	Included ¹³
Persons who did some work and also looked for work	Included ⁴	Excluded	Included ⁵	Excluded	Excluded	Excluded
Special exclusions	Construction workers receiving "bad weather money" between November 1 and March 31	—	Students age 18 or over registered for vacation employment; severely disabled persons	—	—	—
Base for unemployment rate	Wage and salary labor force	Total labor force	Wage and salary labor force	Civilian labor force	Total labor force	Total labor force

¹ Although the jobseeking period is unspecified, there is a question on jobseeking activities during the 1-month period including the reference week.

² For statistics based on employment office registrations, the term "included" applies only to the unemployed who are registered.

³ Automatically included if on temporary layoff of 26 weeks or less; must be actively seeking work if on lengthier layoff.

⁴ Automatically included if on temporary layoff of 4 weeks or less; must be actively seeking work if on lengthier layoff.

⁵ Except persons on temporary layoff or waiting to start a new job who are not required to seek work in the countries where they are classified as unemployed.

⁶ Included if illness is so minor that the person is currently available for work.

⁷ Full-time students seeking full-time work during the school term are excluded.

⁸ Persons must be without work on the day of the registration count, but some may have done work earlier or later in the week.

⁹ Persons who stated they were seeking work but who also did some marginal work during the reference week.

¹⁰ Although the survey is conducted monthly, only annual averages are published.

¹¹ Although the jobseeking period is unspecified, there is a question on jobseeking activities during the reference week.

¹² Full-time students are included in the unemployed only when seeking work during school vacations.

¹³ Except students, whose current availability is probed.

survey and others may consider it to be a longer period. France, Italy, and Great Britain do have supplementary questions which clearly specify a jobseeking period, but the responses to these questions do not affect the classification of a person as unemployed if he has already stated elsewhere that he is unemployed or "looking for work."

In Japan, the reference period for jobseeking is clearly specified as the reference week. However, according to the instructions given on the survey form, which is filled out by the respondent rather than the enumerator, persons awaiting the results of previous job applications are to list themselves as unemployed. This practice, in effect, widens the allowable jobseeking period to a time in the recent past which can be longer than the reference week.

Military personnel. The ILO definitions relate to both total labor force and civilian labor force, and no recommendation is made regarding treatment of the Armed Forces. Among the nine countries studied, draftees or conscripts are excluded from the labor force definition except in cases where they are temporarily absent from work because of military duty. In such cases, these persons are generally included in the employed category—i.e., "with a job but not at work." Treatment of career military personnel varies; they are excluded from the labor force in the United States, Canada, Australia, and Great Britain, but included in the other countries.

Unpaid family workers. According to ILO definitions, unpaid family workers are included in the labor force if they worked for at least one-third of the normal working time during the reference period. In the United States, Australia, and Sweden unpaid family workers are included in the labor force if they worked 15 hours or more in the reference period. In Great Britain all unpaid family workers were excluded from the household survey until 1976 when wives working 15 hours or more in their husbands' businesses were treated as employed whether they were paid or not. In all the other countries, unpaid family workers are classified as in the labor force with no lower limit on the number of hours worked.

In the United States, unpaid family workers who worked less than 15 hours and looked for other jobs would be classified as unemployed. In the countries without the 15-hour limit, such persons would not be classified as unemployed (except in France).

Persons on layoff. ILO definitions include persons on temporary or indefinite layoff without pay in the unemployed count. This is also the practice in the United States, Canada, Australia, and Sweden. Such persons do not have to be actively seeking work to be classified as unemployed, except that after a specified period in Canada (26 weeks) and Australia (4 weeks) they do have to be taking steps to find work.

In Japan and the Western European countries (ex-

cept Sweden) persons on temporary or indefinite layoff are classified as employed in labor force surveys. They are regarded as "with a job, but not at work."⁷ In these countries, there is generally no such thing as an unpaid layoff. Persons on layoff in most European countries and Japan receive payments from employer funds which are sometimes subsidized by the government. Also, layoffs in Europe and Japan most frequently take the form of working shorter hours during the week rather than not working at all. Such persons would also be classified as employed under U.S. concepts since they have done some work during the reference week.

Persons who have not actively sought work. Under ILO and U.S. definitions, persons should be actively seeking work to be classified as unemployed unless they are on temporary layoff or are waiting to start a new job. These latter two groups do not have to be taking active steps to find work to be classified as unemployed. However, the ILO makes no mention of testing a person's jobseeking activities. In the U.S. survey, there is a test of jobseeking activities, and persons who have not taken active steps to find work in the past 4 weeks are not classified as unemployed (with the exceptions noted above). Active jobseeking and a test of such are also required in the Canadian, Australian, and Swedish surveys for classification as unemployed. In Japan, inactive workseekers are by definition excluded from the unemployed, but there is no question on jobseeking activities. In France, Germany, Great Britain, and Italy, inactive jobseekers are included in the unemployed figures derived from labor force surveys. However, most of these countries do have supplementary questions on workseeking activities. The answers to these questions indicate that a certain percentage of persons will respond that they are unemployed or seeking work although they have not actually taken any steps to find work.

"Discouraged workers" constitute one group of inactive jobseekers. These are persons who are not looking for work but would be doing so if they believed work was available. Such persons were included in the U.S. unemployment figures until 1967; however, there was no specific question on discouraged workers. The fact that a worker was discouraged had to be volunteered by the respondent. This left a large area of uncertainty and imprecision in the definitions, as there was no assurance that discouraged workers were being uniformly reported by all enumerators. In 1967, it was decided to exclude discouraged workers from the unemployed in the United States unless the person had looked for work within the past 4 weeks. Canadian and Australian statisticians made the same decision with regard to the treatment of discouraged workers in 1976. In Sweden, discouraged workers have always been

⁷Persons on temporary layoff in the United States were also treated as employed prior to changes in definition adopted in 1957.

excluded from the unemployed, but information is collected on the number of such persons.

The ILO definitions make no mention of discouraged workers. Since jobseeking activity is mentioned as a requirement for classification as unemployed, the intent of the ILO standards appears to be to exclude discouraged workers from the unemployed.

In the countries which make no mention of discouraged workers in their survey definitions or questionnaires, the labor force classification of such persons depends upon the wording of the survey questions and the way that respondents interpret them. When the specified reference period for jobseeking is longer than 1 week, recently discouraged workers would be included in the unemployed. For example, a Swedish worker who actively sought work 2 months ago but soon became discouraged and stopped seeking work would currently be classified as unemployed. However, next month, if he continues to be discouraged, he would move into the economically inactive category.

Temporarily ill jobseekers. ILO definitions specify that unemployed persons should be available for work, except for minor illness. Those countries, such as the United States, which have a current availability requirement make an exception for persons who are temporarily ill. Thus, such persons are counted in the unemployed. In the labor force surveys of countries without a current availability requirement, temporarily ill jobseekers are also generally counted as unemployed. In Japan, however, temporarily ill jobseekers are instructed to list themselves as unemployed only if their illness is so minor that they are currently available to begin work. Thus, the Japanese practice is more restrictive than the other countries.

Prior to the revisions in the U.S. definitions adopted in 1967, persons who would have been looking for work except for temporary illness were classified as unemployed if this information was volunteered. There was no specific question on this point. In the new definitions adopted in 1967, there was no need to address this point because the allowable period for jobseeking activities was extended to 4 weeks. Thus, persons too ill to seek work during the reference week were classified as unemployed if they sought work during the 4-week period including the reference week. In countries where the reference period for jobseeking is ambiguous and is taken by some respondents to include only the reference week, temporarily ill persons who would have been seeking work except for their illness may be excluded from the unemployed. In Great Britain, however, such persons are included in the unemployed because a specific question is asked: "Would you have looked for work but for temporary illness or injury?" Britain is the only country which asks a direct question on this point.

Students seeking work. The ILO definitions make no mention of special treatment of students. Thus, the intent of

the ILO definitions is probably to treat students as any other member of the population, regarding them as employed if they worked and unemployed if they were seeking work and available to begin work.

Most countries, in their labor force surveys, follow the implied ILO definition with regard to students. Some of them apply tests of current availability before classifying student workseekers as unemployed. This is a point not immediately apparent from a reading of some survey definitions and questionnaires. For example, the Swedish survey questionnaire has no test of current availability, yet interviewers are instructed to probe into the current availability of students. In practice, full-time students are classified as unemployed in Sweden only if seeking work during school vacations. In this attempt to insure current availability, the Swedish practice may, in effect, result in an undercount of students looking for and available for part-time work during the school term. In the British General Household Survey, all full-time students are classified as not in the labor force, even if they are working or seeking work.

In Canada, full-time students seeking full-time work are automatically excluded from the unemployed during school term on the grounds that they are not currently available to begin work. Those seeking part-time work are included in the unemployed if currently available to begin work.

The pattern of working or seeking work during the school week, which is widespread in the United States, does not occur frequently in the Western European countries and Japan. Thus, the question of how to treat students with regard to labor force status has not been rigorously investigated in most other countries.

Persons waiting to report to a new job at a later date. According to ILO definitions, persons waiting to report to a new job at a later date should be classified as unemployed if not currently employed and if available to begin work immediately. This is the practice followed in the United States⁸ and several of the other countries. The reasoning behind this classification is that in many cases the anticipated job does not materialize, and the waiting period actually represents the beginning of a longer period of unemployment.

In the French survey, persons waiting to start a new job are classified as employed. The German survey does not specify the classification of such persons; according to German statisticians, they are most likely enumerated as economically inactive. This was also the case in Italy until January 1977 when the survey was revised; persons waiting to start a new job are now classified as unemployed.

Jobseekers not currently available for work. ILO definitions clearly specify that unemployed persons should be currently available to begin work (except for minor illness). Per-

⁸Prior to 1957, persons waiting to report to a new job were classified as employed in the U.S. survey.

sons not currently available for work (e.g., students seeking work in April but not able to accept work until the end of the school term in June) should be classified as economically inactive under ILO concepts. However, the ILO definitions do not recommend a test of current availability, and most countries do not ask a question in their surveys to ascertain the availability of unemployed persons to begin work immediately. The United States, Canada, and Australia require current availability for classification as unemployed and incorporate a question on availability in their survey questionnaires. In principle, Japan and Italy require current availability, but do not have a specific question on the point in the survey. The Japanese survey questionnaire instructions indicate that persons who enumerate themselves as "looking for work" should be currently available for work. In Sweden, only the current availability of students is probed.

Persons who did some work and also looked for work. ILO definitions state that unemployed persons must be "without a job." This is also the practice in the U.S. survey where the categories of employed and unemployed are mutually exclusive and employment (even 1 hour) takes precedence over unemployment for classification purposes. In the French labor force survey, some unemployed persons may also have done some work during the reference week. That is, they regard their major status as that of an unemployed person, even though they did work a few hours at some marginal activity. The labor force surveys conducted in the other countries do not appear to count persons who did some work as unemployed. Their work activity takes precedence over their workseeking, and they are classified as employed, as in the U.S. survey.

Base for the unemployment rate. The ILO definitions do not recommend whether the unemployment rate should be calculated on the basis of the total labor force or the civilian labor force. In the United States, Canada, Australia, and Great Britain, unemployment rates from the labor force survey are calculated on a civilian labor force basis. In the labor force surveys conducted in Japan, France, Germany, Italy, and Sweden, the labor force includes career military personnel. For Germany and Great Britain, where registration statistics are the basis for the "official" unemployment rate, the wage and salary labor force, which excludes self-employed and unpaid family workers, is used as the basis for the calculation of the unemployment rate. Career military personnel are considered as part of the wage and salary labor force. France does not officially publish an unemployment rate; the official monthly unemployment figure relates to the number of persons registered as unemployed.

Adjustment to U.S. concepts

The noncomparability of national figures on unem-

ployment is attributable to two chief causes: differences in the system for collecting data and differences in concepts or definitions. It has been pointed out above that labor force sample surveys provide data on unemployment which are far more comparable internationally than statistics on the registered unemployed. Three of the countries studied, however, rely on registration statistics for their official unemployment data. Fortunately, France, Germany, and Great Britain also conduct periodic labor force surveys which have been indispensable in adjusting and interpreting the official data.

All of the other countries studied rely on labor force surveys for their official unemployment rates. However, definitions of unemployment and labor force differ from country to country, even when the same type of data collection method is used. It has been seen that definitions vary with regard to treatment of persons on layoff, unpaid family workers, military personnel, students, and other groups. Furthermore, there are differences in reference periods, age limits, and criteria for seeking work.

Adjustments have been made for many, but not all, of these differences. In some areas, data are simply not available for adjustment purposes. Where adjustments have not been made, the remaining differences are believed to be minor, although the exact extent of these differences cannot be precisely known. In other areas, adjustments were not made because institutional differences were taken into account. For example, instead of adjusting the data of all countries to the U.S. lower age limit of 16, the foreign age limits have been adapted to conform to the age at which compulsory schooling normally ends in each country. This was done because youths in most other countries complete their education and enter the labor force on a full-time basis at an earlier age than in the United States. Thus, German data are adjusted to cover 15-year-olds and over; the regularly published German data relate to 14-year-olds and over, but compulsory schooling ends at 15.

The methods of adjusting foreign country data to U.S. concepts are described in detail in appendix B. The following descriptions present a highly condensed account of the adjustments made in the various national statistics.

Canada and Australia. Canada and Australia both have labor force surveys which are closely comparable to the U.S. survey. Although there are some small conceptual differences, they are not regarded as significant enough to require adjustment.

Japan. The Japanese labor force survey was patterned after the U.S. survey, but makes use of a number of different definitions designed to serve Japanese needs. In excluding workers on layoff from the unemployed, the Japanese are somewhat more restrictive than the United States, but the number of workers laid off for a full week is believed to be very small and no adjustment has been made. The "lifetime

employment system" is a basic pattern of labor-management relations in Japan. The regular worker is granted permanent tenure, and when the activity of the establishment is reduced, the employer retains the worker, either transferring him to another job or reducing hours. Workers placed on shorter hours for economic reasons are compensated for the hours not worked under a system partially financed by the government. In having no test of workseeking activities or current availability, the Japanese survey is less restrictive than the U.S. survey. However, the instructions given on the survey questionnaire—which is filled in by the respondent rather than an enumerator—clearly state that unemployed persons must be actively seeking work.

Adjustments are made to the Japanese labor force to exclude career military personnel and unpaid family workers who worked less than 15 hours per week. These adjustments are so small that the published and adjusted unemployment rates are identical in most years.

France. The "official" monthly unemployment figures for France are based on the number of registrations at employment offices. Persons seeking part-time work are excluded as are other jobseekers who fail to register. On the other hand, persons who did some work during the week of the count, but were out of work on the day of the count and registered, are included. No unemployment rate is published. In addition, since 1974 the French authorities have made annual estimates of the unemployed under ILO definitions. These annual estimates are based upon the results of labor force surveys conducted in March of each year. Prior to 1974, the annual estimates were based on French census definitions, which are more restrictive than the ILO definitions.

For adjustment to U.S. concepts, BLS utilizes the results of the annual French labor force surveys. The BLS method of adjusting survey unemployment is quite similar to the method used by French authorities in adapting the labor force survey to ILO definitions. The French labor force survey provides detailed information on the number and characteristics of those unemployed; by subtracting those persons excluded under the U.S. definition (e.g., persons who classify themselves as unemployed but who did some work in the reference week; persons not currently available for work) and adding those who should be included (e.g., persons on layoff; persons waiting to start a new job), BLS obtains estimates of unemployment in close conformity with U.S. concepts. Some adjustments are made to the reported labor force figures, such as exclusion of career military personnel and unpaid family workers who were not at work or worked less than 15 hours.

Coefficients of adjustment are obtained from the March surveys, and interpolations are made between surveys to obtain annual average adjustment factors which are applied to the registered unemployed figures and the French annual estimates of the labor force. The figures on unem-

ployment adjusted to U.S. concepts are considerably higher than the figures from the registered unemployed series but quite close to the annual estimates under ILO definitions.

Germany. The principal and official unemployment statistics for Germany are administrative statistics representing the monthly count of unemployed registered at the employment offices. The unemployment rate is calculated on the basis of the wage and salary labor force. The registration series has certain limitations as a precise measure of unemployment. Some unemployed persons may choose not to register if they are ineligible to collect jobless benefits. Also, unemployed persons who do not want to work at least 20 hours a week are excluded. On the other hand, some persons who are working a few hours or a few days a week may be registered as unemployed. The registration figures cover all persons who at some time in the past have registered as unemployed and whose job application has not yet been settled at the time of the count. Consequently, there may be persons on the register who have found a job but have failed to report it to the employment service.

Germany also conducts a labor force survey, the Microcensus, every April or May. The Microcensus also has its limitations as a measure of unemployment, but provides a better basis for estimating unemployment under U.S. concepts than the registration series. The Microcensus was designed to produce labor force and related statistics consistent with ILO definitions.

In the Microcensus the unemployed exclude persons on layoff who are waiting to return to their job and persons waiting to begin a new job, categories which should be included under U.S. concepts. Also, the reference period for jobseeking is ambiguous, and may be interpreted by some persons to be strictly the survey week. On the other hand, some inactive workseekers and persons who are not currently available to begin work may be included in the Microcensus figures. The Microcensus does not provide data on any of these groups of persons, but these upward and downward biases may tend to cancel each other out. The Microcensus figures have usually been lower than the figures from the registered unemployed series.

The Microcensus unemployment figures, which usually relate to a week in April, are compared with the registered unemployed figures for the month nearest the survey date. This comparison yields an adjustment factor which is then interpolated between surveys to obtain annual average factors to apply to the registered unemployed series.

Germany makes annual estimates of the labor force which are obtained by adding employment from the Microcensus (adjusted to an annual average) and the registered unemployed. BLS modifies this annual estimate by excluding from the employed military personnel and unpaid family workers who worked less than 15 hours. Also, the estimated annual Microcensus unemployed rather than the registered unemployed are added to the employed to obtain

the civilian labor force under U.S. concepts. The unemployment rate derived from the adjusted data is usually lower than the official German rate based on the registered series.

Great Britain. The official unemployment statistics for Great Britain are obtained from a count of registrations at employment offices (now called "Jobcenters") and the separate "career offices" for young people. The unemployment rate is calculated on the basis of the wage and salary labor force. The completeness of coverage of these statistics depends upon the extent to which persons looking for work register as such. Figures from the 1961 population census, the 1966 "sample census," and General Household Surveys (available beginning in 1971) indicate that the registration figures significantly understate unemployment under U.S. concepts.

The General Household Survey (GHS) indicates that the number of adult males registered is slightly in excess of the number to be obtained under U.S. definitions, but the number of women is very much lower and the number of youths, male and female, is moderately lower. The registration figures have been adjusted to take the GHS findings into account, but first the GHS figures themselves required some revision. No adjustment could be made to exclude persons not currently available for work. Adjustments were made to exclude persons who reported themselves as looking for work but who were taking no active steps to find a job. Also, the number of persons on temporary layoff the entire week was estimated and added to the unemployed. Persons on temporary layoff are regarded as employed in the GHS. Further, estimates of students seeking work were added. All these adjustments had the effect of raising the number of unemployed from the official 1,305,000 to 1,610,000 in 1976. The adjusted figures for 1975 and 1976 were estimated on the basis of factors derived from the 1972 GHS results. Although GHS data have been published through 1974, the 1972 factors have been used for adjustment purposes in recent years because 1972 was a year of relatively high unemployment compared with 1973-74, and unemployment has been high in recent years. For the years prior to the first GHS, comparative estimates have been made by adjusting the 1961 and 1966 census data to U.S. concepts and interpolating between the years until 1971.

In order to convert the adjusted figures to an unemployment rate, it was necessary to develop a revised estimate of the civilian labor force. The chief adjustments to the official labor force figure consist of adding the unregistered unemployed and subtracting an estimated number of duplications in the count of the employed. (The number employed is derived from an establishment census and, hence, includes multiple jobholders more than once.) The British unemployment rate adjusted to U.S. concepts is significantly higher than the reported rate—6.4 percent versus 5.6 percent in 1976.

Data for the United Kingdom (Great Britain and Northern Ireland) could not be prepared because the General Household Survey relates only to Great Britain. Unemployment rates, based on registration statistics, are usually higher in Northern Ireland than in Great Britain. For example, in 1975, Great Britain had a published unemployment rate of 4.1 percent, while Northern Ireland's rate was 8.1 percent. Since the labor force in Northern Ireland is small, the rate for the United Kingdom (4.2 percent) was only slightly higher than the rate for Great Britain.

Italy. In 1963, a quarterly labor force survey replaced the registration statistics as the official source of unemployment data in Italy. The results of the quarterly survey form the basis of the adjustment of Italian data to U.S. concepts.

A major revision in survey methods was made in January 1977. A more probing style of questioning was introduced, resulting in significant increases in the number of persons enumerated as unemployed. The revised Italian survey represents an important step toward providing the data necessary for making adjustments to U.S. concepts. For example, the new survey asks a specific question on jobseeking activities, whereas the old survey simply inquired about a person's "status" during the reference week. In the old survey, many persons who were seeking work did not respond that their status was "unemployed." Furthermore, a question is now asked on when the last active step to find work was taken. Persons who have not taken any active steps to find work in the past 4 weeks should be excluded from the unemployed under U.S. concepts.

From January 1977 onward, the only adjustment made to the reported number of unemployed is the exclusion of those who have not taken any active steps to find work in the past 30 days. Survey results for 1977 indicate that over half of the persons enumerated as unemployed responded that their last attempt to find work was made more than 30 days ago. BLS is not certain that all such persons should be excluded. The large number of persons in this category indicates a massive number of "discouraged workers" in Italy or an interpretation by many registered unemployed persons that their presence on the unemployment register does not constitute an active step to find work in the past 30 days. This adjustment, therefore, may be modified downward when more detailed results, including cross-classifications from 1977 surveys, become available.

There are some remaining conceptual differences regarding unemployment for which no adjustments have been made. For instance, persons on layoff who are waiting to return to their jobs are counted as employed in Italy. However, legal restraints and the existence of the Wage Supplement Fund promote the use of reduced hours rather than outright layoffs when plant activity declines. Therefore, the number of persons on layoff for an entire week is probably very small. Also, survey definitions state that unemployed

persons should be currently available to begin work, but there is no test of current availability in the survey questionnaire.

The Italian Central Bureau of Statistics (ISTAT) does not plan to make a reconciliation between the old and new surveys until some time in 1978. BLS has decided to await the ISTAT reconciliation rather than make any preliminary adjustments for the 1959-76 period. Thus, the reported unemployment figures have been used with only a small adjustment to the data for 1959-63 to exclude persons enumerated as unemployed who also did some work in the reference week. The differences between the old and new unemployment series tend to cancel each other. The old series excluded jobseekers who did not respond that their status was unemployed; also excluded were persons waiting to begin a new job. Such persons are now included in the unemployed. On the other hand, the old series included as unemployed those persons who took no active steps to find work in the past 30 days. The results from the 1977 surveys indicate that the old series may have overstated unemployment somewhat because the number of persons who did not recently take active steps to find work is greater than the number of workseekers who did not initially say they were unemployed. However, there are no data on the number of persons in these categories prior to 1977.

Several adjustments were made to the Italian labor force figures. Career military personnel and unpaid family workers who worked less than 16 hours in the survey week were subtracted. The Italian data do not provide a break at the less-than-15-hour level. The 1977 surveys indicate that employment was previously undercounted by about 5 percent. Adjustment factors were derived by sex and by economic sector and applied to Italian employment data for the 1959-76 period.

The adjusted unemployment rates for 1959 through 1963 are about two-tenths of a percentage point lower than the reported rates. For 1964-76 the adjusted rates are one-tenth of a percentage point lower than the published rates. Beginning in January 1977, unemployment rates adjusted to U.S. concepts are much lower than the reported rates because of the adjustment to exclude a large number of inactive jobseekers.

Sweden. In July 1974, the monthly labor force sample survey was established as the official source for Swedish unemployment figures. At that time the data on employment office registrations were supplanted by new statistics showing the total volume of employment applications passing through the employment offices each month. Data are still published on the number of insured unemployed who are registered to collect benefits.

The labor force survey results are quite close in concept to the U.S. figures, and only minor adjustments have been made. No adjustment has been made for full-time stu-

dents who were seeking work during the school term. Data on persons not in the labor force who would have liked to have a job indicate that the number of student workseekers is very small. Also, no adjustment was made to exclude persons who were not currently available for work. Adjustments were made to the labor force figures to include persons age 75 and over and to exclude career military personnel. These small modifications rarely affect the unemployment rate.

Limitations

The adjustments of national data briefly described above yield unemployment estimates that are reasonably comparable from one country to another and that indicate the level of joblessness according to U.S. definitions. The accuracy of the adjustments depends upon the availability of relevant information; in some instances, it is possible to achieve only approximate statistical comparability among countries. Nevertheless the adjusted figures provide a better basis for international comparisons than the figures regularly published by each country.

There are certain differences for which it was not possible to make adjustments. For several countries no adjustment could be made for the differences in the amount of time allowed for jobseeking activities. No information is available on this point in the other countries, but the effect is believed to be minor. Prior to U.S. changes in definitions adopted in 1967, the U.S. time period was vague and was probably interpreted by some jobseekers, primarily women, to refer only to the survey week. Special studies indicated that the effect of the changes in definitions in 1967 resulted in only a small increase in the number of women enumerated as unemployed.⁹ In addition, for some countries adjustments could not be made for the lack of a test of current availability for work, the lack of an active jobseeking requirement, and for differences in treatment of persons on layoff and persons waiting to start a new job.

The data for more recent years for several countries are much better than the data in earlier years in terms of statistical comparability. The 1976 revisions made by Canadian and Australian statisticians have brought these surveys into closer conformity with U.S. definitions and methods. The inception of the British General Household Survey in 1971 was a major step in making available British data closely

⁹ See Robert L. Stein, "New Definitions for Employment and Unemployment," *Employment and Earnings*, February 1967, pp. 9-13. On balance, the new definitions yielded a level of unemployment 100,000 lower than the official 1966 annual average. This was because most of the changes in definition were more restrictive—the requirement of active jobseeking, the test of current availability, and the change in the definition of persons absent from their jobs who sought other work.

comparable to U.S. concepts. The earlier estimates for Britain, based on population censuses in 1961 and 1966, are subject to a wider margin of error because the census data were ambiguous on a number of points; for example, the enumeration of temporarily ill persons. (See appendix B.) The new questions in the French labor force survey since 1975 and in the Italian survey since 1977 have allowed for much more precise identification of certain groups for adjustment purposes. Furthermore, for several countries, data from surveys were published irregularly in the 1960's, and for some years, no data were available. Interpolations had to be made to fill in the missing data.

For several countries, a problem remains in making adjustments because the data needed for such adjustments are not current. For both France and Germany, issuance of data from surveys lags by a year or more from the reference period. Thus current estimates often must be revised when results of more recent surveys are obtained. For Great Britain, the latest available General Household Survey is for 1974. Labor market conditions have deteriorated considerably since that time, and the estimates based on adjustment factors for years when unemployment levels were quite different are subject to an unknown margin of error.

Chapter 2. Unemployment and Employment, 1959-77

Although unemployment in the United States has generally been high in comparison with other countries, Canada had the highest unemployment rates, on the average, for the 1959-76 period. These two countries have also experienced the most rapid growth in employment. In contrast, the Western European countries, with much lower average levels of unemployment than the United States and Canada, had very slow growth or declines in employment.

Table 3 presents data for nine countries on the civilian labor force, employment, and unemployment adjusted to U.S. concepts for the period 1959 to 1976. The following section describes the comparative levels and trends in unemployment and employment. Separate discussions of important labor market developments in each country are then taken up.

Unemployment

Despite the disrupting influence of worldwide cyclical movements and the particular economic ills that have plagued individual countries, the relative positions of the nine countries with regard to unemployment rates have shown little change over the years. From 1959 to 1976, unemployment rates in Canada and the United States were usually much higher than in the seven other countries studied (chart 2). In 10 of the 18 years, Canada had the highest unemployment rate in the industrialized world. In 1963 through 1965, and 1974 through 1976, the United States had the highest rate; in 1966-67 the United States was tied with another country for the highest rate.

Chart 2. Unemployment Rates, 1959-76

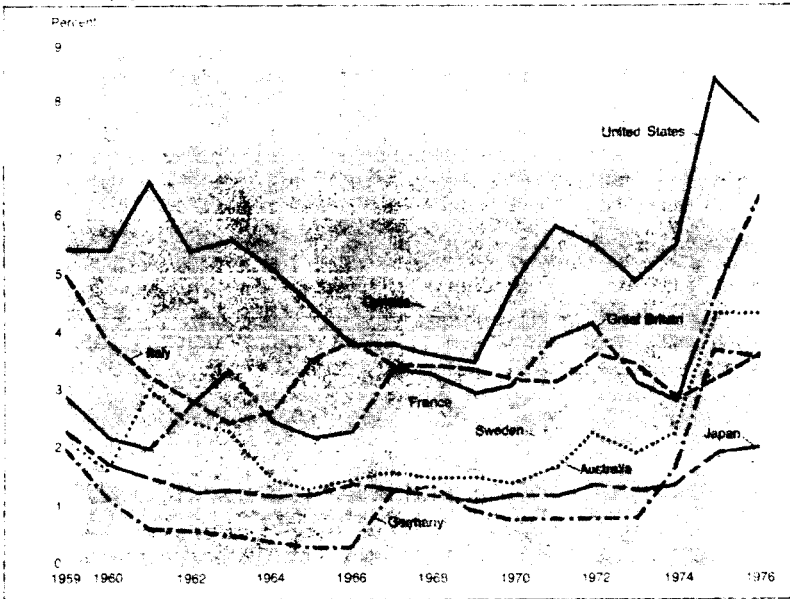


Table 3. Labor force, employment, and unemployment, 1959-78

Year	United States ¹	Canada	Australia ¹	Japan	France	Germany	Great Britain	Italy	Sweden
Civilian labor force (thousands)									
Adjusted to U.S. concepts									
1959	68,369	6,214	(²)	43,320	19,060	26,850	23,230	21,730	(²)
1960	69,628	6,382	(²)	44,120	19,080	26,990	23,470	21,520	(²)
1961	70,459	6,491	(²)	44,610	19,050	26,160	23,720	21,450	3,598
1962	70,814	6,584	(²)	45,040	19,160	26,210	24,070	21,290	3,882
1963	71,833	6,715	(²)	45,430	19,340	26,290	24,290	20,830	3,753
1964	73,091	6,898	4,559	46,040	19,680	26,270	24,420	20,760	3,711
1965	74,455	7,105	4,689	46,780	19,750	26,380	24,560	20,430	3,739
1966	75,770	7,495	4,833	47,850	20,000	26,290	24,650	20,090	3,794
1967	77,347	7,748	4,958	48,810	20,100	26,730	24,600	20,220	3,771
1968	78,737	7,952	5,070	49,680	20,380	25,780	24,460	20,130	3,822
1969	80,734	8,195	5,213	50,140	20,660	26,030	24,400	19,920	3,838
1970	82,715	8,399	5,381	50,730	20,880	26,290	24,270	19,950	3,909
1971	84,113	8,644	5,486	51,120	21,210	26,380	24,020	19,870	3,955
1972	86,542	8,920	5,589	51,320	21,430	26,280	24,240	19,810	3,963
1973	88,714	9,322	5,723	52,590	21,640	26,360	24,530	19,750	3,971
1974	91,011	9,706	5,869	52,440	21,880	26,080	24,510	20,050	4,037
1975	92,813	10,060	5,991	52,530	22,040	26,680	24,820	20,470	4,123
1976	94,773	10,308	6,075	53,100	22,190	25,400	25,100	20,490	4,149
As published ⁴									
1959	68,369	6,242	(²)	44,330	18,925	26,337	23,229	21,288	(²)
1960	69,628	6,411	(²)	45,110	18,951	26,518	23,523	20,972	(²)
1961	70,459	6,521	(²)	45,620	18,919	26,772	23,799	20,882	3,592
1962	70,814	6,615	(²)	46,140	19,050	26,844	24,063	20,629	3,676
1963	71,833	6,748	(²)	46,520	19,388	26,930	24,219	20,137	3,749
1964	73,091	6,933	4,559	47,100	19,638	26,922	24,408	20,026	3,710
1965	74,455	7,141	4,689	47,870	19,813	27,019	24,577	19,717	3,738
1966	75,770	7,495	4,833	48,910	19,964	26,962	24,663	19,398	3,792
1967	77,347	7,748	4,958	49,830	20,118	26,409	24,540	19,525	3,774
1968	78,737	7,952	5,070	50,810	20,176	26,291	24,462	19,484	3,822
1969	80,734	8,195	5,213	50,980	20,434	26,535	24,464	19,266	3,840
1970	82,715	8,399	5,381	51,530	20,750	26,817	24,388	19,302	3,913
1971	84,113	8,644	5,486	51,860	20,958	26,910	24,154	19,254	3,961
1972	86,542	8,920	5,589	51,990	21,155	26,901	24,405	19,028	3,969
1973	88,714	9,322	5,723	53,260	21,388	26,986	24,676	19,169	3,977
1974	91,011	9,706	5,869	53,100	21,715	26,797	24,754	19,458	4,043
1975	92,813	10,060	5,991	53,230	21,733	26,397	24,940	19,650	4,129
1976	94,773	10,308	6,075	53,780	21,853	26,136	25,135	19,858	4,155
Employment (thousands)									
Adjusted to U.S. concepts									
1959	64,630	5,843	(²)	42,340	18,680	25,340	22,560	20,650	(²)
1960	65,778	5,937	(²)	43,370	18,730	25,710	22,950	20,710	(²)
1961	65,746	6,026	(²)	43,950	18,750	26,000	23,250	20,760	3,546
1962	66,702	6,194	(²)	44,450	18,880	26,060	23,390	20,700	3,528
1963	67,762	6,343	(²)	44,840	19,080	26,170	23,460	20,340	3,690
1964	69,305	6,574	4,496	45,500	19,390	26,170	23,810	20,210	3,654
1965	71,088	6,826	4,628	46,210	19,440	26,310	24,030	19,720	3,695
1966	72,895	7,242	4,761	47,200	19,620	26,210	24,090	19,330	3,735
1967	74,372	7,451	4,879	48,180	19,700	25,390	23,770	19,540	3,692
1968	75,920	7,593	4,992	49,080	19,850	25,410	23,660	19,450	3,737
1969	77,902	7,832	5,133	49,570	20,170	25,790	23,660	19,260	3,764
1970	78,827	7,919	5,308	50,140	20,440	26,090	23,520	19,340	3,850
1971	79,120	8,107	5,399	50,480	20,620	26,170	23,090	19,260	3,854
1972	81,702	8,363	5,464	50,580	20,820	26,060	23,230	19,920	3,856
1973	84,409	8,802	5,615	51,910	21,060	26,140	23,750	19,080	3,873
1974	85,936	9,185	5,738	51,710	21,330	25,830	23,820	19,600	3,957
1975	84,783	9,363	5,725	51,530	21,100	24,740	23,650	19,620	4,056
1976	87,485	9,672	5,807	52,020	21,170	24,480	23,490	19,760	4,083

See footnotes at end of table.

Table 3. Labor force, employment, and unemployment, 1959-78—Continued

Year	United States	Canada	Australia ¹	Japan	France	Germany	Great Britain	Italy	Sweden
Employment (thousands)—Continued									
As published ⁴									
1959	84,830	5,870	(²)	43,350	18,671	25,797	22,785	20,169	(²)
1960	85,778	5,965	(²)	44,360	18,712	26,247	23,177	20,136	(²)
1961	85,746	6,056	(²)	44,980	18,716	26,591	23,487	20,172	3,540
1962	86,702	6,225	(²)	45,560	18,820	26,690	23,631	20,018	3,622
1963	87,762	6,375	(²)	45,950	19,126	26,744	23,698	19,663	3,686
1964	89,305	6,609	4,496	46,550	19,422	26,753	24,038	19,477	3,683
1965	71,088	6,862	4,828	47,300	18,544	26,887	24,260	19,003	3,694
1966	72,895	7,242	4,761	48,270	18,894	26,801	24,332	18,637	3,733
1967	74,372	7,451	4,879	49,200	19,753	26,950	24,021	18,846	3,695
1968	75,920	7,693	4,992	50,020	19,749	26,968	23,516	18,800	3,737
1969	77,902	7,832	5,133	50,400	20,093	26,356	23,924	18,811	3,768
1970	78,627	7,919	5,306	50,940	20,394	26,668	23,811	18,693	3,854
1971	79,120	8,106	5,398	51,210	20,521	26,725	23,402	18,645	3,860
1972	81,702	8,263	5,464	51,260	20,663	26,855	23,570	18,331	3,862
1973	84,409	8,802	5,815	52,690	20,938	26,712	24,088	18,500	3,879
1974	85,936	9,185	5,736	52,370	21,100	26,215	24,169	18,898	3,963
1975	84,783	9,363	5,725	52,230	20,844	25,322	24,044	18,996	4,062
1976	87,485	9,572	5,807	52,700	20,870	25,076	23,630	19,127	4,089
Unemployment (thousands)									
Adjusted to U.S. concepts									
1959	3,740	371	(²)	880	380	510	670	1,060	(²)
1960	3,852	445	(²)	750	350	280	520	810	(²)
1961	4,714	465	(²)	660	300	160	470	690	52
1962	3,911	390	(²)	590	280	150	690	690	54
1963	4,070	372	(²)	590	260	120	830	490	63
1964	3,786	324	63	540	290	100	610	550	67
1965	3,366	279	61	570	310	70	530	710	44
1966	2,875	252	72	650	380	70	560	760	59
1967	2,875	297	79	630	400	340	830	680	79
1968	2,817	359	78	590	530	370	800	680	85
1969	2,832	364	80	570	490	240	740	660	72
1970	4,088	480	75	590	540	200	750	610	59
1971	4,993	638	87	640	590	220	930	610	101
1972	4,840	657	125	730	610	220	1,010	700	107
1973	4,304	520	108	680	580	220	780	670	98
1974	5,076	521	133	730	650	450	690	560	80
1975	7,830	697	266	1,000	930	940	³ 1,170	650	67
1976	7,288	736	268	1,080	1,020	920	³ 1,610	730	66
As published ⁵									
1959	3,740	372	(²)	880	254	540	444	1,117	(²)
1960	3,852	446	(²)	750	239	271	346	936	(²)
1961	4,714	466	(²)	660	203	181	312	710	52
1962	3,911	390	(²)	590	220	164	432	611	54
1963	4,070	374	(²)	590	273	186	521	504	63
1964	3,786	324	63	540	216	169	372	549	57
1965	3,366	280	61	570	269	147	317	714	44
1966	2,875	252	72	650	280	161	331	769	59
1967	2,875	297	79	630	365	459	519	679	79
1968	2,817	359	78	590	427	323	546	694	85
1969	2,832	364	80	570	340	179	540	655	72
1970	4,088	480	75	590	356	149	577	609	59
1971	4,993	638	87	640	446	185	752	609	101
1972	4,840	657	125	730	492	246	835	697	107
1973	4,304	520	108	680	450	273	588	668	98
1974	5,076	521	133	730	615	582	585	560	80
1975	7,830	697	266	1,000	889	1,074	936	654	67
1976	7,288	736	268	1,080	993	1,060	1,305	732	66

See footnotes at end of table.

Table 3. Labor force, employment, and unemployment, 1959-76—Continued

Year	United States ¹	Canada	Australia ¹	Japan	France	Germany	Great Britain	Italy	Sweden
Unemployment rate (percent)									
Adjusted to U.S. concepts									
1959	5.5	6.0	⁶ 2.1	2.3	2.0	2.0	2.9	5.0	(²)
1960	5.5	7.0	⁶ 1.8	1.7	1.8	1.1	2.2	3.8	(²)
1961	5.7	7.1	⁶ 3.0	1.6	1.8	.8	2.0	3.2	1.4
1962	5.5	5.9	⁶ 2.4	1.3	1.5	.8	2.2	2.5	1.5
1963	5.7	5.6	⁶ 2.3	1.3	1.3	.5	3.4	2.4	1.7
1964	5.2	4.7	1.4	1.2	1.5	.4	2.5	2.6	1.5
1965	4.5	3.9	1.3	1.2	1.6	.3	2.2	3.5	1.2
1966	3.8	3.4	1.5	1.4	1.9	.3	2.3	3.8	1.6
1967	3.8	3.8	1.6	1.3	2.0	1.3	3.4	3.4	2.1
1968	3.8	4.5	1.5	1.2	2.6	1.4	3.3	3.4	2.2
1969	3.5	4.4	1.5	1.1	2.4	.9	3.0	3.3	1.9
1970	4.9	5.7	1.4	1.2	2.8	.8	3.1	3.1	1.5
1971	5.9	6.2	1.6	1.3	2.8	.8	3.9	3.1	2.6
1972	5.8	6.2	2.2	1.4	2.8	.8	4.2	3.6	2.7
1973	4.9	5.6	1.9	1.3	2.7	.8	3.2	3.4	2.5
1974	5.6	5.4	2.3	1.4	3.0	1.7	2.8	2.8	2.0
1975	8.5	6.9	4.4	1.9	4.2	3.7	³ 4.7	3.2	1.6
1976	7.7	7.1	4.4	2.0	4.6	3.6	³ 6.4	3.6	1.6
As published ⁷									
1959	5.5	6.0	⁶ 2.1	2.2	1.3	2.6	2.0	5.2	(²)
1960	5.5	7.0	⁶ 1.8	1.7	1.3	1.3	1.5	4.0	(²)
1961	6.7	7.2	⁶ 3.0	1.4	1.1	.8	1.4	3.4	1.4
1962	5.5	5.9	⁶ 2.4	1.3	1.2	.7	1.9	3.0	1.5
1963	5.7	5.5	⁶ 2.3	1.3	1.4	.8	2.3	2.5	1.7
1964	5.2	4.7	1.4	1.1	1.1	.8	1.6	2.7	1.5
1965	4.5	3.9	1.3	1.2	1.4	.7	1.4	3.6	1.2
1966	3.8	3.4	1.5	1.3	1.4	.7	1.4	3.9	1.6
1967	3.8	3.8	1.5	1.3	1.8	2.1	2.2	3.5	2.1
1968	3.6	4.5	1.5	1.2	2.1	1.5	2.4	3.5	2.2
1969	3.5	4.4	1.5	1.1	1.7	.9	2.4	3.4	1.9
1970	4.9	5.7	1.4	1.1	1.7	.7	2.5	3.2	1.5
1971	5.9	6.2	1.6	1.2	2.1	.8	3.4	3.2	2.5
1972	5.8	6.2	2.2	1.4	2.3	1.1	3.7	3.7	2.7
1973	4.9	5.6	1.9	1.3	2.1	1.2	2.6	3.5	2.5
1974	5.6	5.4	2.3	1.4	2.8	2.6	2.8	2.9	2.0
1975	8.5	6.9	4.4	1.9	4.1	4.7	4.1	3.3	1.6
1976	7.7	7.1	4.4	2.0	4.5	4.6	5.6	3.7	1.6

¹Published and adjusted data for the United States and Australia are identical.

²Not available.

³Preliminary estimates based on incomplete data.

⁴Including military personnel for Japan, Germany, Italy, and Sweden.

⁵For the United States, Canada, Australia, Japan, Italy, and Sweden, unemployment as recorded by sample labor force surveys; for France, annual estimates of unemployment; and for Germany and Great Britain, the registered unemployed.

⁶The Australian labor force survey was initiated in 1964. Unemployment rates for 1959-1963 are estimates by an Australian researcher.

⁷For France, unemployment as a percent of the civilian labor force; for Japan, Italy, and Sweden, unemployment as a percent of the civilian labor force plus career military personnel; for Germany and Great Britain, registered unemployed (excluding adult students) as a percent of employed wage and salary workers plus the unemployed. With the exception of France, which does not publish an

unemployment rate, these are the usually published unemployment rates for each country. Published rates shown for Germany and Great Britain cannot be computed from data contained in this table.

NOTE: Data for the United States relate to the population 16 years of age and over. Published data for France, Germany, and Italy relate to the population 14 years of age and over; for Sweden, to the population aged 16 to 74; and for Canada, Australia, Japan, and Great Britain, to the population 15 years of age and over. Beginning in 1973, published data for Great Britain relate to the population 16 years of age and over. The adjusted statistics have been adapted, insofar as possible, to the age at which compulsory schooling ends in each country. Therefore, adjusted statistics for France relate to the population 16 years of age and over and for Germany, to the population 15 years of age and over. The age limits of adjusted statistics for Canada, Japan, Great Britain, and Italy coincide with the age limits of the published statistics. Statistics for Sweden remain at the lower age limit of 16, but have been adjusted to include persons 75 years of age and over.

The Canadian unemployment rate has averaged 5.5 percent since 1959; the U.S. unemployment rate, 5.4 percent (table 4). Italian unemployment was between 3 and 4 percent during most years, averaging 3.3 percent for the entire period. British joblessness also averaged 3.3 percent, and French unemployment averaged 2.4 percent. Sweden, Australia, Japan, and Germany all had unemployment rates averaging around 2 percent or less. Germany had the best labor market performance, with unemployment averaging just over 1 percent since 1959.

During the period since 1959, unemployment rates have been the most stable in Sweden and Japan (table 5). The difference between the worst and the best unemployment rate was just 1.2 percentage points in Japan and 1.5 percentage points in Sweden. The widest variation occurred in the United States, where 5 percentage points separated the highest rate from the lowest. Unemployment rates were also relatively volatile in Germany, Great Britain, and Canada. In Germany, unemployment rates usually varied within a narrow range, except for the sharp increases in 1967-68 and 1974-76. The German unemployment rate of 3.7 percent in 1975 was over 12 times the rate prevailing in 1965-66.

In the 1960's, unemployment rates in Western Europe and Japan were normally far lower than those in the United States and Canada. The labor market in most of the other countries was very tight, as reflected in the unemployment rate lows for the decade in Germany (0.3 percent in 1965-66) and Japan (1.1 percent in 1969). Australia, France, and Sweden also had unemployment rates under 2 percent for much of the decade. Achieving "full employment" required little struggle in these countries; indeed, in many years there was a scarcity of labor. Some European countries had to import large numbers of "guest workers" from the poorer nations of the Mediterranean region to maintain the rapid expansion of their economies. Australia encouraged permanent immigration. While the United States achieved a 16-year-low unemployment rate of 3.5 percent in 1969, it was still significantly higher than the rate in most of the other countries.

Conditions in the Italian labor market contrasted with those in the other European countries. Unemployment was significantly higher in Italy during the 1960's, and that country exported hundreds of thousands of workers to the labor-short countries of the North. However, in the 1970's, unemployment rates in the rest of Western Europe moved ahead of Italy's.

In the United States and Canada, unemployment in the second half of the 1960's was much lower than in the first half (table 4). U.S. unemployment averaged 5.7 percent from 1960 to 1964 and 3.8 percent from 1965 to 1969. Australia and Japan also had somewhat lower jobless rates in the latter half of the decade. In contrast, most Western European nations entered a period of recession around

1965, although the impact of the slowdown in growth generally did not make itself felt on the labor market until late 1966 and early 1967 when jobless rates began rising in Great Britain, France, Germany, Italy, and Sweden.

Changes in the unemployment picture since 1974 have been striking. Recessionary trends gathered momentum in the industrial countries following the Arab oil embargo in late 1973. During 1975-76, postwar highs in unemployment were reached in the United States, Australia, France, and Great Britain; German unemployment rates were the highest since the mid-1950's; and Japanese joblessness reached the levels of 1959. In contrast, Swedish unemployment decreased in 1975 and held steady in 1976.

Not only have most countries registered significant increases in joblessness since 1974, but the relative positions of some countries with respect to unemployment rates have changed. Canada and the United States continued to have the highest unemployment rates, but the increase in the jobless rate got underway earlier and went farther in the United States (table 6). Consequently, the U.S. rate, which had been below Canada's from 1968 through 1973, exceeded the Canadian rate in late 1974 and remained higher until

Table 4. Average unemployment rates, selected periods, 1959-76

Country	(Percent)				
	1959-76	1960-64	1965-69	1970-74	1975-76
United States . . .	5.4	5.7	3.8	5.4	8.1
Canada	5.5	6.0	4.0	5.8	7.0
Australia	2.1	2.1	1.5	1.9	4.4
Japan	1.4	1.4	1.2	1.3	2.0
France	2.4	1.5	2.1	2.8	4.4
Germany	1.2	.8	.8	1.0	3.7
Great Britain . . .	3.3	2.6	2.8	3.4	5.6
Italy	3.3	3.0	3.5	3.2	3.4
Sweden	1.9	1.5	1.8	2.3	1.6
Ratio: highest					
to lowest	4.6	10.0	5.0	5.8	5.1

¹ 1961 is the earlier year used.

Table 5. Highest and lowest unemployment rates, 1959-76

Country	(Percent)		
	Highest	Lowest	Difference (in percentage points)
United States . . .	8.5 (1975)	3.5 (1969)	5.0
Canada	7.1 (1961, 1976)	3.4 (1966)	3.7
Australia	4.4 (1975, 1976)	1.3 (1965)	3.1
Japan	2.3 (1959)	1.1 (1969)	1.2
France	4.6 (1976)	1.3 (1963)	3.3
Germany	3.7 (1975)	.3 (1965, 1966)	3.4
Great Britain . . .	6.4 (1976)	2.0 (1961)	4.4
Italy	5.0 (1959)	2.4 (1963)	2.6
Sweden	2.7 (1972)	1.2 (1965)	1.5

¹ 1961 to 1976.

NOTE: Years in parentheses.

Table 6. Quarterly unemployment rates, 1970-77

Period	United States	Canada	Australia	Japan	France ¹	Germany ¹	Great Britain	Italy ²	Sweden
1970	4.9	5.7	1.4	1.2	2.6	0.8	3.1	3.1	1.5
I	4.2	4.8	1.4	1.1	2.3	.8	3.0	3.0	1.6
II	4.7	5.7	1.4	1.1	2.4	.7	3.1	2.9	1.5
III	5.2	6.1	1.4	1.2	2.5	.7	3.1	3.2	1.5
IV	5.8	6.1	1.4	1.3	2.8	.7	3.2	2.8	1.5
1971	5.9	6.2	1.6	1.3	2.8	.8	3.9	3.1	2.6
I	5.9	6.2	1.4	1.2	2.8	.8	3.3	3.0	2.2
II	5.9	6.3	1.5	1.2	2.8	.9	3.7	3.0	2.4
III	6.0	6.1	1.6	1.3	2.8	.8	4.1	3.0	2.6
IV	6.0	6.2	1.8	1.4	2.8	.9	4.3	3.1	2.9
1972	5.6	6.2	2.2	1.4	2.8	.8	4.2	3.6	2.7
I	5.8	6.0	2.0	1.4	2.8	.9	4.5	3.4	2.7
II	5.7	6.1	2.1	1.4	2.8	.9	4.3	3.4	2.7
III	5.6	6.4	2.6	1.4	2.7	1.0	4.1	3.7	2.8
IV	5.3	6.5	2.3	1.4	2.7	.8	3.9	3.6	2.7
1973	4.9	5.6	1.9	1.3	2.7	.8	3.2	3.4	2.5
I	4.9	5.9	2.1	1.3	2.7	.7	3.7	3.6	2.6
II	4.9	5.4	1.9	1.4	2.7	.8	3.3	4.0	2.5
III	4.8	5.4	1.7	1.2	2.7	.8	3.0	3.1	2.5
IV	4.8	5.5	1.7	1.2	2.7	1.0	2.7	2.9	2.4
1974	5.6	6.4	2.3	1.4	3.0	1.7	2.8	2.8	2.0
I	5.0	5.3	1.7	1.3	2.8	1.3	2.7	2.9	2.2
II	5.1	5.2	1.8	1.2	2.7	1.5	2.7	2.5	1.9
III	5.6	5.3	2.4	1.4	2.7	1.9	2.8	2.8	2.0
IV	6.6	5.6	3.3	1.7	3.4	2.5	3.1	3.0	1.7
1975	8.5	6.9	4.4	1.9	4.2	3.7	4.7	3.2	1.6
I	8.1	6.7	4.0	1.7	3.8	3.0	3.7	2.9	1.5
II	8.8	7.0	4.5	1.8	4.2	3.8	4.2	3.4	1.7
III	8.6	7.1	4.6	1.9	4.4	4.1	5.1	3.2	1.6
IV	8.4	7.1	4.6	2.1	4.5	3.9	5.7	3.4	1.7
1976	7.7	7.1	4.4	2.0	4.6	3.6	6.4	3.6	1.6
I	7.6	6.9	4.3	2.0	4.5	3.8	6.2	3.3	1.6
II	7.4	7.1	4.3	2.1	4.6	3.6	6.5	3.5	1.6
III	7.8	7.3	4.8	2.1	4.6	3.6	6.6	3.8	1.6
IV	7.9	7.4	4.3	1.9	4.5	3.5	6.6	3.7	1.6
1977									
I	7.4	7.8	4.6	1.9	4.7	3.4	6.8	3.2	1.7
II	7.0	8.1	5.4	2.1	5.3	3.5	7.0	3.1	1.7
III	7.0	8.2	5.7	2.1	5.8	3.6	7.2	3.6	2.0

¹Preliminary for France and Germany for 1977, and for Great Britain from 1975 onward.

²Data for 1977 are not strictly comparable with data for earlier years. (See appendix B.)

Great Britain are calculated by applying annual adjustment factors to current published data, and therefore should be viewed as only approximate indicators of unemployment under U.S. concepts. Published data for Australia, Canada, Japan, and Sweden require little or no adjustment.

NOTE: Quarterly figures for France, Germany, Italy, and

1977. Increases in unemployment were even more pronounced in other countries; sharp increases in Australian and German unemployment caused those countries to move up in ranking. At the same time, since unemployment declined in Sweden, that country displaced Germany as the country with the lowest unemployment rate. Italy, which had ranked no lower than fourth throughout 1959-74, moved down to sixth position in 1975-76.

The increases in unemployment in the 1970's have been attributed to structural change as well as cyclical factors. Even before the Arab oil embargo, a number of countries had high rates of unemployment in relation to previous experience. In all but three countries (Japan, Italy, and Germany), unemployment rates in the early 1970's were significantly higher than in the latter half of the 1960's. According to calculations by the Organization for Economic Cooperation and Development (OECD), unemployment rates at the end of 1972 in the United States, Canada, France, and Great Britain were about 1 percentage point above the rate prevailing at a similar stage of the previous business cycle.¹ The OECD has noted a tendency for unemployment levels in major industrial countries to increase from cyclical peak to cyclical peak since the end of World War II.

In Canada and the United States, the faster growth of the labor supply in the 1970's has been an element behind the rise of unemployment. In both countries, high birth rates after 1945 and social factors—higher female participation rates and the slowdown in the spread of higher education—have led to a pronounced acceleration of labor force growth. In most of Western Europe, birth rates, following the early postwar baby boom, fell back in the early 1950's. Female labor force participation has declined or increased slowly in the European countries (chapter 4), and higher education has not yet reached as large a proportion of the population as in the United States. In Western Europe, unlike the United States, the spread of higher edu-

cation has brought about a decline in the labor force participation rate of teenagers.

Supply-demand imbalances have constituted an important source of difficulty in labor markets in the 1970's. Illustrating this is the fact that several European countries experienced simultaneous increases in the number of job vacancies and the number of persons unemployed, reflecting growing supply-demand disequilibrium at the occupational, industrial, or regional level. Existing statistics do not generally allow a comprehensive analysis of these imbalances, but such fragmentary evidence as is available suggests that imbalances are increasing in a number of countries.²

Employment

Canada had, by far, the highest rate of employment growth during the period 1959 to 1976 (table 7). Employment rose at a rate of over 3 percent a year, and in 1976 there were about 3.7 million (64 percent) more persons employed in Canada than there were in 1959. Canada was the only country studied which experienced continuous employment expansion throughout the period (chart 3).

Employment growth in the United States and Australia was also strong. In the United States, annual employment increases averaged 1.9 percent, and almost 23 million (35 percent) more persons held jobs in 1976 than in 1959. The United States experienced only 2 years of declining employment, a slight decrease during the 1960-61 recession, and a more dramatic drop in the 1974-75 economic downturn. Japan was the only other country with employment growth of over 1 percent a year, and 1974 and 1975 were the only years of declining employment there.

In the Western European countries, in contrast, employment has grown slowly or actually declined since 1959. In France and Sweden, employment grew by about 0.8 percent a year; in Great Britain, the growth rate was negligible. Germany and Italy had declining employment trends. In Germany, there were 860,000 fewer persons employed in 1976 than there were in 1959.

In the United States, Canada, Japan, and France, employment growth accelerated in the second half of the 1960's. In Canada, employment growth was particularly rapid in 1965-68 (3.5 percent annually), but it then fell off to 2.1 percent per year from 1968 to 1970. In the United States and Canada, the acceleration which began around the mid-1960's was attributed to rapid economic growth combined with a large increase in young persons and women coming onto the labor market and finding jobs. In Germany and Great Britain, employment began to decline in the latter half of the 1960's after rising in the first half of

Table 7. Employment growth rates, selected periods, 1959-76

(Percent per year)

Country	1959-76 ¹	1960-65 ²	1965-70	1970-74	1974-75	1975-76
United States	1.9	1.5	2.1	2.5	-1.3	3.2
Canada	3.1	2.8	2.9	3.9	1.9	2.2
Australia	2.2	³ 1	2.7	2.0	-2	1.4
Japan	1.3	1.2	1.7	.9	-3	1.0
France . . . . .	.9	.9	1.0	1.1	-1.0	.3
Germany	-.1	.4	-.3	-.4	-3.5	-1.1
Great Britain	-.1	.9	-.5	.5	-.7	-.7
Italy	-.5	-1.0	-.3	.1	.6	-.7
Sweden . . . . .	.8	.9	.7	.6	2.5	.7

¹1964-76 for Australia; 1961-76 for Sweden.

²1961-65 for Sweden.

³Not available.

NOTE: Percent changes computed from the least squares trend of the logarithms of the index numbers.

¹Organization for Economic Cooperation and Development, *Economic Outlook*, December 1973, pp. 32-33.

²*Ibid.*

the decade. Swedish employment growth also tapered off. Italian employment continued to decline, but at a reduced rate.

In the early 1970's, the rate of employment growth accelerated again in the United States and Canada. Canadian employment growth continued to outpace the other countries. Employment growth was regained in Great Britain, and Italy's employment began to increase after many years of decline.

The recessionary period of 1974-75 had a strong impact on employment, which fell in six of the nine countries studied. The sharpest decline—3.5 percent—was recorded in Germany. Only Canada, Italy, and Sweden maintained employment growth in 1975. The rise in Italian employment continued into the recessionary period. Even with these recent increases, 1 million fewer Italians were at work in 1976 than in 1961, the peak year for employment in Italy.

In 1976, employment continued to fall in Germany and Great Britain, but rebounded in the United States, Australia, France, and Japan. Canada's employment growth slowed somewhat in 1976, and the United States had the most rapid increase.

Sectoral employment. Generally, with a nation's economic development and its progress in industrialization, the distribution of the employed population shifts from agricultural to industrial activities, particularly manufacturing, and then from these sectors to service activities.³ Tables 8a and 8b present comparative data on civilian employment by sector in nine countries for selected years of the 1960 to 1976 period. During that time, vast long-term sectoral reallocations of employment continued to take place in Japan, France, and Italy, with more moderate shifts occurring in the other countries.

Sectoral employment is significant to the discussion of unemployment because certain sectors are more prone to unemployment than others. Also, sectoral shifts can create unemployment by displacing workers in declining sectors. Chapter 5 goes into these factors in more detail.

³For a more detailed account of sectoral trends since 1950, see Constance Sorrentino, "Comparing Employment Shifts in 10 Industrialized Countries," *Monthly Labor Review*, October 1971, pp. 3-11.

Chart 3. Annual Percent Changes in Civilian Employment, 1960-76

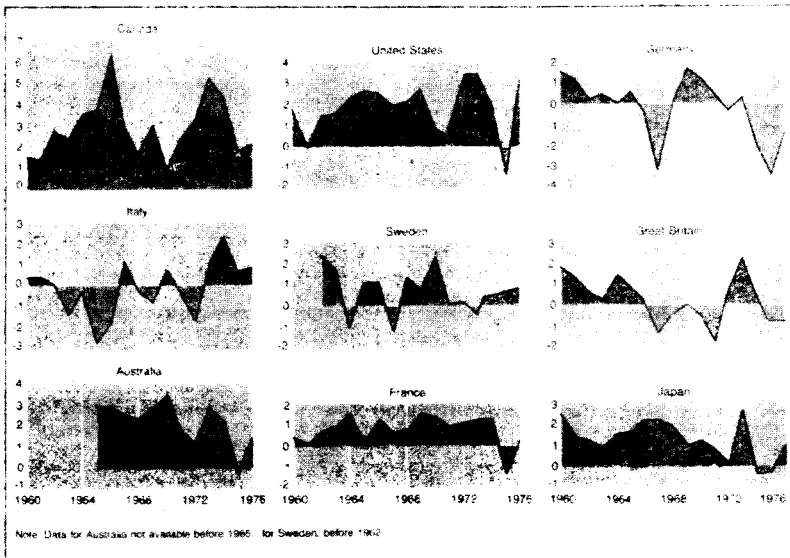


Table BA. Employment by economic sector, selected years, 1960-76

(Thousands)

Year	United States	Canada	Australia	Japan	France	Germany	Great Britain ¹	Italy ²	Sweden
Total civilian employment									
1960	65,778	5,965	NA	43,370	18,712	25,954	24,257	19,877	3,513
1965	71,088	6,862	4,614	46,200	19,544	26,418	25,327	18,721	3,673
1970	78,627	7,919	5,226	50,140	20,393	26,169	24,748	18,460	3,936
1971	79,120	8,107	5,422	50,470	20,511	26,225	24,376	18,376	3,842
1972	81,702	8,363	5,490	50,580	20,663	26,125	24,376	18,075	3,845
1973 ³	84,409	8,802	5,615	51,900	20,938	26,201	24,948	18,239	3,861
1974	85,936	9,185	5,736	51,710	21,100	25,688	25,063	18,644	3,944
1975	84,783	9,363	5,726	51,530	20,844	24,798	24,979	18,765	4,044
1976	87,485	9,572	5,808	52,020	20,870	24,544	NA	18,900	4,070
Agriculture ⁴									
1960	5,572	795	NA	12,800	4,189	3,526	1,005	6,470	544
1965	4,477	694	448	10,500	3,468	2,876	846	4,826	421
1970	3,566	605	431	8,490	2,907	2,262	699	3,574	314
1971	3,503	608	423	7,840	2,791	2,144	674	3,530	300
1972	3,585	576	429	7,310	2,673	2,038	671	3,255	287
1973 ³	3,554	574	401	6,810	2,559	1,954	681	3,141	276
1974	3,588	583	392	6,540	2,452	1,882	662	3,072	264
1975	3,476	579	385	6,380	2,355	1,823	646	2,934	261
1976	3,417	566	374	6,210	2,266	1,714	NA	2,902	254
Industry ⁵									
1960	21,995	1,906	NA	12,380	7,136	12,400	11,466	7,267	1,420
1965	24,311	2,233	1,653	15,010	7,538	12,761	11,755	7,650	1,553
1970	26,066	2,359	1,843	17,880	7,900	12,452	11,114	8,112	1,456
1971	25,117	2,383	1,880	18,140	7,928	12,384	10,728	8,150	1,424
1972	25,709	2,446	1,856	18,290	7,959	12,214	10,470	8,030	1,396
1973 ³	27,086	2,602	1,890	19,210	8,070	12,225	10,592	8,047	1,401
1974	26,988	2,710	1,916	19,020	8,093	11,932	10,566	8,251	1,434
1975	25,022	2,629	*1,834	18,370	7,850	*11,170	10,170	8,300	1,449
1976	25,976	2,733	*1,826	18,520	7,776	*10,837	NA	8,225	1,416
Manufacturing									
1960	17,149	1,471	NA	9,430	5,240	9,872	9,098	5,344	1,120
1965	19,190	1,638	1,207	11,450	5,405	10,105	9,254	5,427	1,206
1970	20,737	1,768	1,308	13,750	5,570	9,796	9,022	5,864	1,064
1971	19,564	1,767	1,336	13,420	5,733	9,711	8,724	5,910	1,054
1972	19,866	1,828	1,310	13,810	5,782	9,590	8,446	5,826	1,046
1973 ³	20,942	1,937	1,335	14,420	5,892	9,541	8,498	5,894	1,066
1974	20,679	1,994	1,340	13,250	5,938	9,410	8,540	6,100	1,120
1975	19,275	1,890	*1,251	13,430	5,789	*8,890	8,157	6,128	1,138
1976	20,044	1,945	*1,255	13,440	5,735	*8,625	NA	6,143	1,100
Services ⁶									
1960	38,212	3,264	NA	18,190	7,387	10,028	11,786	6,141	1,550
1965	42,301	3,934	2,514	20,690	8,538	10,781	12,726	6,244	1,699
1970	48,994	4,955	3,052	23,770	9,586	11,455	12,935	6,772	2,066
1971	50,500	5,116	3,119	24,510	9,791	11,697	12,975	6,895	2,118
1972	52,408	5,341	3,208	24,880	10,031	11,873	13,236	6,790	2,162
1973 ³	53,770	5,626	3,325	25,880	10,309	12,022	13,676	7,049	2,185
1974	55,360	5,892	3,427	26,140	10,555	11,894	13,836	7,321	2,246
1975	56,285	6,155	*3,506	26,770	10,639	*11,805	14,163	7,531	2,334
1976	58,092	6,273	*3,608	27,290	10,828	*11,993	NA	7,773	2,400

¹ Includes Northern Ireland.² Data for Italy have not been adjusted for the undercount of employment which was revealed by the revised Italian labor force survey (see appendix B).³ From 1973 onwards, Japan includes Okinawa.⁴ Agriculture, forestry, hunting, and fishing.⁵ Manufacturing, mining, and construction.⁶ Transportation, communication, public utilities, trade, finance,

public administration, private household services, and miscellaneous services.

NA = Not available.

* = Preliminary.

NOTE: Civilian employment totals may not coincide with those in table 3 because some employment could not be distributed by economic sector.

Table 8B. Percent distribution of employment by economic sector, selected years, 1960-76

Year	United States	Canada	Australia	Japan	France	Germany	Great Britain ¹	Italy ²	Sweden
Total civilian employment									
Each Year	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Agriculture ³									
1960	8.5	13.3	NA	29.5	22.4	13.6	4.1	32.6	15.5
1965	6.3	10.1	9.7	22.7	17.7	10.9	3.3	25.8	11.5
1970	4.5	7.6	8.1	16.9	14.2	8.6	2.8	19.4	8.2
1971	4.4	7.5	7.8	15.5	13.6	8.2	2.8	19.2	7.8
1972	4.4	6.9	7.8	14.4	12.9	7.8	2.8	18.0	7.5
1973 ⁴	4.2	6.5	7.1	13.1	12.2	7.5	2.7	17.1	7.1
1974	4.2	6.3	6.8	12.6	11.6	7.3	2.6	16.5	6.7
1975	4.1	6.2	6.7	12.4	11.3	7.4	2.6	15.6	6.5
1976	3.9	5.9	6.2	11.9	10.9	7.0	NA	15.4	6.2
Industry ⁵									
1960	33.4	32.0	NA	28.5	38.1	47.8	47.3	36.6	40.4
1965	34.2	32.5	35.8	32.5	38.6	48.3	46.4	40.9	42.3
1970	33.2	29.8	34.6	35.7	38.7	47.6	44.9	43.9	38.0
1971	31.9	29.4	34.7	35.9	38.6	47.2	44.0	44.4	37.1
1972	31.5	29.4	33.8	36.2	38.5	46.8	43.0	44.4	36.3
1973 ⁴	32.1	29.6	33.7	37.0	38.5	46.7	42.5	44.4	38.3
1974	31.4	29.5	33.4	36.8	38.4	46.4	42.2	44.3	36.4
1975	29.5	28.1	*32.0	35.6	37.7	*45.0	40.7	44.2	35.8
1976	29.7	28.6	*31.4	35.6	37.3	*44.2	NA	43.5	34.8
Manufacturing									
1960	26.1	24.7	NA	21.7	28.0	38.0	37.5	26.9	31.9
1965	27.0	23.8	26.2	24.8	27.7	38.2	36.5	29.0	32.8
1970	26.4	22.3	24.6	27.4	27.3	37.4	36.5	31.8	27.7
1971	24.7	21.8	24.6	26.6	28.0	37.0	36.8	32.2	27.4
1972	24.3	21.9	23.9	27.3	28.0	36.8	34.8	32.2	27.2
1973 ⁴	24.8	22.0	23.8	27.8	28.1	36.4	34.1	32.3	27.6
1974	24.3	21.7	23.4	25.6	28.1	36.6	34.1	32.7	28.4
1975	22.7	20.2	*21.8	26.1	27.8	*35.6	32.7	32.7	28.1
1976	22.9	20.3	*21.6	25.8	27.5	*35.1	NA	32.5	27.0
Services ⁶									
1960	58.1	54.7	NA	41.9	39.5	38.6	48.8	30.9	44.1
1965	59.5	57.3	54.5	44.8	43.7	40.8	50.2	33.4	46.3
1970	62.3	62.6	57.3	47.4	47.0	43.8	52.3	36.7	53.9
1971	63.8	63.1	57.5	48.6	47.7	44.6	53.2	36.4	55.1
1972	64.1	63.9	58.4	49.4	48.5	45.4	54.3	37.8	56.2
1973 ⁴	63.7	63.9	59.2	49.9	49.2	45.9	54.8	38.6	56.6
1974	64.4	64.1	60.7	50.6	50.0	46.3	55.2	39.3	56.9
1975	66.4	65.7	*61.2	52.0	51.0	*47.6	56.7	40.1	57.7
1976	66.4	65.5	*62.1	52.6	51.9	*48.9	NA	41.1	59.0

¹Includes Northern Ireland.²Data for Italy have not been adjusted for the undercount of employment which was revealed by the revised Italian labor force survey (see appendix B).³Agriculture, forestry, hunting, and fishing.⁴From 1973 onwards, Japan includes Okinawa.⁵Manufacturing, mining, and construction.⁶Transportation, communication, public utilities, trade, finance, public administration, private household services, and miscellaneous services.

NA = Not available.

* = Preliminary.

Employment in agriculture declined in all countries, usually quite rapidly. In conjunction with the growth of total employment in most countries, this resulted in a significant fall in agriculture's share of employment. Great Britain had the lowest proportion of employment in agriculture, and the United States ranked second. Large differences among countries in the proportion of employment in agriculture have narrowed considerably since 1960. In 1960 the agricultural sector in Japan was larger, in terms of employment, than the industrial sector. By 1965, the industrial sector was larger. In most countries, the rate of decline in agricultural employment accelerated in the 1960's over the 1950's.

Movement out of agriculture generally increases the labor supply available for industry and services. However, rural to urban migration in Italy and Japan actually tended to curb the total labor supply. Many women and children who formerly worked as unpaid farm laborers withdrew from the labor force entirely when their families left agriculture. Thus, the female participation rate declined in both countries. (See chapter 4.) In most other countries, this effect was outweighed by the increasing number of married women entering the labor force when their children reached school age.

Employment in the industrial sector—mining, manufacturing, and construction—rose in all countries except Germany, Great Britain, and Sweden. However, the increases in the United States, Canada, Australia, and France did not keep pace with overall employment expansion; consequently, the proportion in industry actually declined. Japan and Italy were the only countries in which the industrial sector increased its share of total employment.

In the recessionary period of 1974-75, Italy and Sweden were the only countries with employment increases in the industrial sector. In Canada, overall employment rose, but industrial employment declined.

The United States emerged as the world's first service economy—over 50 percent of employment in service industries—shortly after World War II. With some lag, the other industrial nations appear to be following that pattern. Canada crossed the 50-percent level in 1958, and Australia and Great Britain joined the United States and Canada in the 1960's. In the first half of the 1970's, Japan and France also became service economies. Only Germany and Italy continue to have more workers engaged in the production of goods than of services.

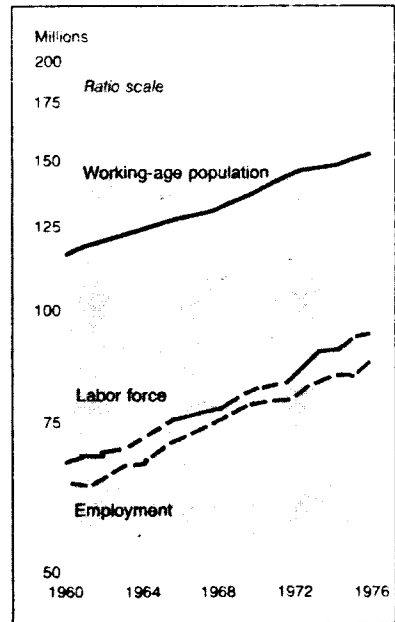
Country developments

Unemployment rates are useful indicators of labor utilization and of economic health. These statistics become even more meaningful when used in conjunction with other labor market data. Hours of work, for example, are commonly reduced in economic downturns as an alternative to laying off workers. Some countries; particularly France and Germany, employ large migrant work forces whose num-

bers can be increased or decreased in conformity with demand. Some workers withdraw from the labor force in bad times, in discouragement over the prospects of obtaining a job. Sweden has a highly developed system which provides training and employment to persons unable to find jobs. These factors and others are considered in the following brief country-by-country analyses of unemployment trends. Charts 4 through 12 show the trends in working age population, labor force, and employment for each of the countries.

United States. Following post-World War II highs of 6.8 percent in 1958 and 6.7 percent in 1961, joblessness in the United States moved downward slowly to a 16-year low of 3.5 percent in 1969. In 1970 unemployment increased sharply to 4.9 percent, and in 1971 it rose further to 5.9 percent. The low point since that time was 4.7 percent in October 1973. In late 1974 and 1975, the United States

Chart 4. **United States: Working-Age Population, Labor Force, and Employment, 1960-76**



suffered from its worst economic downturn since the depression of the 1930's. The average 1975 unemployment rate of 8.5 percent was the highest recorded since 1941. In 1976, unemployment still averaged 7.7 percent of the civilian labor force. In May 1977, the rate fell below 7 percent for the first time in 2½ years.

The rate of growth of the U.S. labor force has been much higher than that for Europe and Japan. From 1960 to 1976, the labor force grew at an annual rate of 2.0 percent. Since 1969 the rate of growth has been at least 2.5 percent a year except in the recession years of 1971 and 1975. Despite the severity of the recessions, the labor force continued to expand, although at a cyclically induced slower pace. During the 1975-76 expansionary period, the labor force grew at a much faster rate than in other recovery periods. The strong labor force growth in 1976 kept unemployment higher than it might otherwise have been.⁴ The growth in the labor force in 1976 reflected mainly the unusually large increase in labor force participation by adult women. Unlike previous recessions, labor force participation rates increased in 1974, remained high in 1975, and rose to a record 61.6 percent in 1976.

U.S. labor force growth rates and participation rates would have been higher than those recorded in the recession years of 1971 and 1975 if increasing numbers of persons had not withdrawn from the labor market when faced with bleak job prospects. The trend for these discouraged workers—persons who would have been looking for work except that they believed they could not find a job—has generally paralleled the cyclical changes in the number of jobless. The number of discouraged workers reached an all-time high of 1.2 million persons in the third quarter of 1975. As economic conditions improved, many of these persons entered or reentered the labor force. In 1976, the number of discouraged workers declined to 916,000. However, in the second quarter of 1977, the number of discouraged workers rose to nearly 1.1 million, the highest level since the third quarter of 1975.

Employment in the United States rose throughout the 1960-76 period, except for 1961 and 1975. In 1961, the decline was negligible; in 1975 employment fell by 1.3 percent. However, the 1975 decline in employment was much less than the increase in joblessness because of the large numbers of labor force reentrants and first-time job-seekers. Employment growth, which resumed in the second quarter of 1975, accelerated to 3.2 percent in 1976. By May 1977, the number of employed persons had increased by 6.3 million from the recession low of 84.1 million in March 1975. More than 40 percent of the increase took place after October 1976, an average of 380,000 new jobs per month.

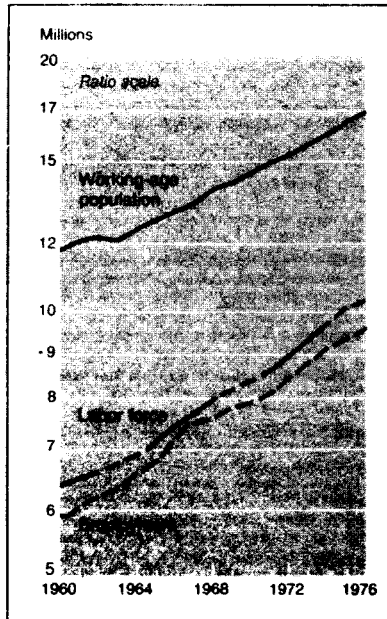
Canada. Canadian joblessness has been significantly higher

⁴ Robert W. Bednarzik and Stephen St. Marie, "Employment and Unemployment in 1976," *Monthly Labor Review*, February 1977, p. 10.

than in the other industrial nations, with the exception of the United States. Only in 1965, 1966, and 1967 was unemployment below 4 percent. Unemployment was below 5 percent in 1968-69, rose to over 6 percent in 1971-72, and then fell to 5.4 percent in 1974. In the following year, unemployment began rising rapidly and by December 1976 the jobless rate had climbed to 7.5 percent, the highest in 15 years. The unemployment rate continued upward in early 1977, reaching 8.3 percent in April.

Regional differences in economic structure, employment, and incomes have remained an obstacle in achieving lower unemployment in Canada. Jobless rates are highest in the Atlantic provinces and Quebec, where the rates in 1976 were 11.0 percent and 8.7 percent, respectively. In the most industrialized province, Ontario, the unemployment rate was 6.2 percent. The Prairie provinces, at 5.9 percent, recorded the lowest regional rates.

Chart 5. **Canada: Working-Age Population, Labor Force, and Employment, Adjusted to U.S. Concepts, 1960-76**



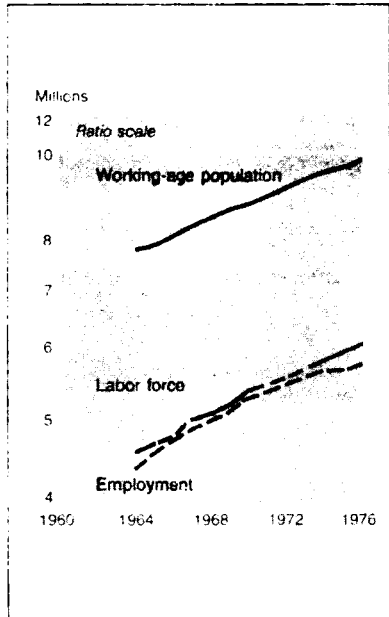
Growth in the Canadian labor force has been very rapid, outpacing all other nations studied in the period 1959-76. Much of the increase resulted from the entry of young persons and women into the work force. After reaching 5.5 percent in 1966, the labor force growth rate fluctuated within a range of 2.6 to 3.4 percent a year. In 1973 and 1974, the pace of labor force growth accelerated to above 4 percent a year, but in late 1974 growth began to taper off. The labor force increased by 3.6 percent in 1975 and by 2.5 percent in 1976. Contributing to these lower rates of growth was the new immigration law of 1974 that tied immigration more closely to labor market needs. In the period 1965 through 1974, the number of new immigrants entering the country to work was equal to one-third of the total increase in the labor force; in 1967 and 1968, the number was equal to nearly half of the increase. In 1975 and 1976, when the labor force grew more slowly, new immigrants were equal to 23 percent and 20 percent, respectively, of the increase in the work force.

Australia. Unemployment in Australia fluctuated within the low and narrow range of 1.3 to 1.6 percent from 1964, the first year for which labor force survey data are available, to 1971. Joblessness increased in 1972 to a 9-year high of 2.2 percent of the labor force and remained near 2 percent until late 1974. Between 1974 and 1975, unemployment doubled. The jobless rate in the third and fourth quarters of 1975, at 4.6 percent, was a record high for the postwar period. Employment rose in 1976, after falling marginally in 1975, but unemployment remained close to 1975 levels since the rise in employment was not sufficient to absorb the growth of the labor force. Joblessness increased steadily in 1977, reaching a new postwar high of 5.7 percent in the third quarter. In response to the slack in the labor market, Australia, traditionally a country encouraging immigration, tightened its immigration laws. Since 1972, persons born outside the country have accounted for 27 percent of the labor force.

Japan. Unemployment in Japan has remained lower and more stable than in the other major industrial nations. From 1960 through 1974, joblessness averaged 1.3 percent and never rose above 1.7 percent. However, beginning in 1974, the trend toward labor shortage was reversed. Employment declined, and in late 1974 unemployment began moving upward steadily, reaching a peak in the fourth quarter of 1975 of 2.1 percent—the highest unemployment rate recorded in Japan since 1959. Unemployment remained at around the 2-percent level throughout 1976 and the first half of 1977.

As these low rates indicate, joblessness is not highly sensitive to the demand for labor in Japan. Employers, with their tradition of lifetime employment policies, prefer to reduce working hours, terminate contracts with part-time, seasonal, and temporary workers, reduce new hires of school leavers, and encourage "voluntary retirement." Dur-

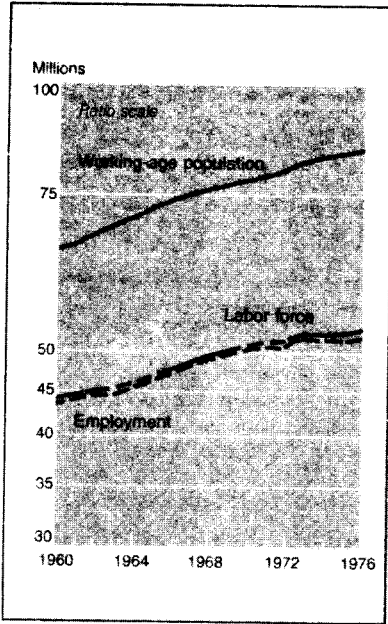
Chart 6. Australia: Working-Age Population, Labor Force, and Employment, Adjusted to U.S. Concepts, 1964-76



ing the 1974-75 recession, Japanese employers also stepped up the practice of transferring employees from one job to another within the same company and setting up special education and training programs to avoid layoffs of permanent employees. In 1975, employment of regular workers increased by 0.5 percent, but employment of temporary workers and day laborers fell by over 5 percent. New hires of school leavers were reduced sharply as more than one-third of Japan's major businesses cancelled plans to hire college and university graduates.

Most firms employing over 1,000 permanent workers solicited "voluntary retirements" by offering larger than normal lump-sum retirement allowances. These programs were aimed specifically at younger women who tend to resign before their marriage and older workers with about 5 years left before mandatory retirement. The firms offered job placement guidance to those "voluntary retirees" who wished to continue working. Those not placed in new jobs

Chart 7. Japan: Working-Age Population, Labor Force, and Employment, Adjusted to U.S. Concepts, 1960-76



were eligible to collect unemployment insurance benefits while jobseeking. Persons 55 years of age and over are eligible to collect benefits for up to 300 days.

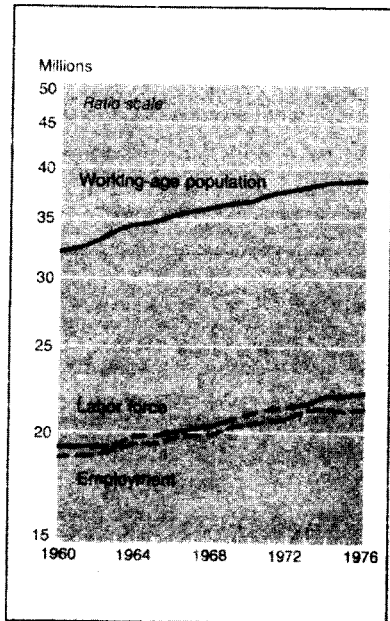
Under the Employment Insurance Law of 1975, the Japanese government subsidized enterprises which kept employees on the payroll rather than laying them off. This employment adjustment grant enabled enterprises in industries designated by the Ministry of Labor as economically impacted to pay up to 90 percent of the worker's basic wage for 6 months with a 3-month additional extension. In small and medium-size firms, the government subsidy amounted to two-thirds of the worker's wage; in large-size firms, one-half of wage costs were covered. Approximately one-third of all Japanese workers were eligible for such compensation during 1975.

The Japanese labor force declined in 1974 for the first time in the postwar era. This decline was attributed to recession-induced labor force withdrawals of laid-off con-

tractual and temporary employees. Many of these workers, mainly women, apparently preferred to withdraw from the labor force rather than look for another job. Thus, the labor force participation rate varies with the Japanese business cycle, and recorded unemployment does not appear to be a highly sensitive indication of the number of persons who would seek work if jobs were available.

France. In the early 1960's, unemployment in France remained below 2 percent of the civilian labor force, with a low of 1.3 percent in 1963. In 1967, the economy slowed down and the French jobless rate moved upward to 2.0 percent. Joblessness continued to move toward the "warning point" set forth in the government's economic plan—260,000 persons registered as unemployed—which would amount to an unemployment level of nearly 3 percent (adjusted to U.S. concepts) and in May 1968 a crisis developed. Student riots and workers' strikes immobilized the na-

Chart 8. France: Working-Age Population, Labor Force, and Employment, Adjusted to U.S. Concepts, 1960-76



tion. After the spring strikes, economic activity picked up as industry filled back orders and attempted to meet the increased consumer demand created by the sharp wage increases of the strike settlement. Unemployment declined in 1969, but then rose to around 2.8 percent in late 1970. It remained at this level until the end of 1974, when joblessness rose sharply in response to strikes in public enterprises and agencies and progressively tightening anti-inflation policies. In 1975, unemployment rose by almost 40 percent. This was equal to the rise in 1968, but the 1975 increase came on top of an unemployment level that already exceeded the 1968 rate. Joblessness continued to expand in 1976 and 1977. A postwar high of 5.8 percent was recorded in the third quarter of 1977.

In response to the higher levels of unemployment, the French government halted immigration from outside the European Community in June 1974 and tightened controls on illegal immigration. Employment of foreigners with or without work permits became more strictly monitored. In 1973, foreign workers had constituted about 10 percent of employment in France.

Another response to rising unemployment was the enactment of a new unemployment compensation program financed jointly by employers and employees, with initial funding provided by the government, whereby workers laid off for economic reasons are paid 90 percent of their former gross wage for up to 1 year unless they are reemployed. This program became effective January 1, 1975. By mid-1976, approximately one of every eight persons registered as unemployed was receiving this high benefit rate. The amount and duration of official assistance for workers on short-time schedules was also increased. The government subsidized 90 percent of employer-paid supplementary assistance for workers on short time. The number of workers partially unemployed peaked at 385,000 in November 1975, and more than 1.4 million days were compensated for by unemployment assistance. In 1976, the situation showed a marked improvement. The number of persons on short time declined from 300,000 in 1975 to 132,000, and 7 million days were paid for compared to 15 million days in 1975.

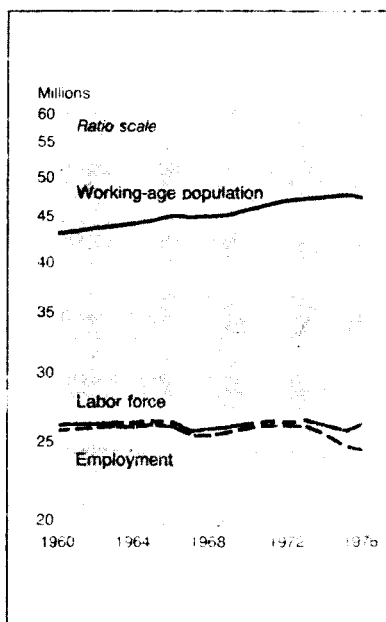
Other measures to promote employment were government subsidies and financial incentives. The subsidies were aimed at encouraging the training of unemployed 16- to 25-year-olds. Subsidies for training programs of at least 6 months provided up to 100 percent of training costs plus the minimum wage. The financial incentives were made available to firms hiring, for at least 1 year, young persons in search of their first job or persons unemployed more than 6 months.

Germany. During Germany's labor shortage of 1960-66, even normally inactive handicapped and older workers were integrated into the labor force. Unemployment was

below 1 percent from 1961 through 1966, falling to the extremely low level of 0.3 percent in 1965-66. After these years of sustained growth, the Germany economy began to slow down in mid-1966. In 1967, for the first time in the history of the Federal Republic, real output fell short of the level of the preceding year. The unemployment rate more than quadrupled, rising to 1.3 percent in 1967. Employment of German nationals dropped by over 500,000 in 1967, and almost 300,000 foreign workers left Germany between mid-1966 and mid-1967.

Recovery from the recession was rapid. Labor shortages soon reappeared and the labor market became increasingly tight. By October 1969, over seven vacancies were reported for every one person registered as jobless. Foreign workers returned to Germany as the economic picture brightened. Unemployment again fell below the 1-percent level in 1969-73.

Chart 9. **Germany: Working-Age Population, Labor Force, and Employment, Adjusted to U.S. Concepts, 1960-76**



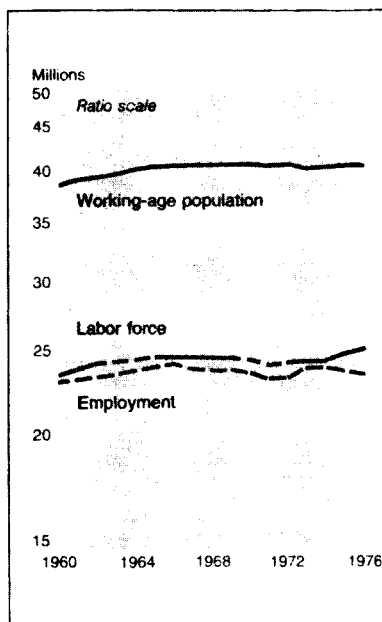
Growth in industrial output leveled off in 1973, and the labor market began to show signs of easing. The Arab oil embargo in November accelerated the deterioration, causing an interruption in German industrial production. Many firms curtailed production and introduced short-time workweeks. The number of workers receiving compensation for short-time work rose sharply to more than 300,000 in February 1974. By February 1975, a new high of almost 1 million workers were on short time. Despite an average of more than 770,000 workers on short time, employment fell by 890,000 in 1975—which exceeded the increase in unemployment by 400,000. The average number of unemployed persons in Germany more than quadrupled between 1973 and 1975, and averaged 3.7 percent of the labor force in the latter year. In 1976 and 1977, joblessness leveled off at 3.6 percent.

Since the late 1950's, the German work force has been supplemented by an influx of foreign workers who, at the peak of the inflow in 1973, constituted 10 percent of employment. Labor shortages and higher wages in Germany and lack of job opportunities in Southern Europe made the German labor market increasingly attractive to migrants. During periods of recession, foreign workers add an element of flexibility to the German labor market. (See "Labor migration" in chapter 5.) In November 1973, a ban was passed on recruiting foreign workers from outside the European Community. Foreign workers were reluctant to leave Germany because they believed that they would not be able to return.

In late 1974 and early 1975, the German government introduced measures to reduce the number of registered unemployed foreigners by requiring them to accept jobs which paid less than their former wages or unemployment compensation. If two such offers were refused, these workers could no longer collect unemployment benefits. Other efforts to limit employment of migrants included the preferential hiring of German nationals, denial of work permits to dependents of migrants, stiffer penalties for illegally employing aliens, and restrictions on the right of immigrants to settle in areas where foreigners constitute more than 12 percent of the population. In response to these restrictions, the number of foreign workers continued to decline in 1976, while employment of German nationals began to rise. By mid-1976, the number of migrants in Germany had fallen to 1.9 million, which was about the number of migrants in 1970.

Great Britain. The jobless rate in Great Britain was below 3 percent during 1959-66 except in 1963, when slackness in the economy was aggravated by a particularly severe winter which disrupted outdoor work. However, in 1967 the unemployment rate rose above 3 percent as measures to alleviate serious deficits in the balance of payments took priority over the full-employment goal. A wage and price freeze in July 1966 was followed by even more stringent measures, including devaluation of the pound in 1967. Un-

Chart 10. Great Britain: Working-Age Population, Labor Force, and Employment, Adjusted to U.S. Concepts, 1960-76



employment was in the 3- to 3.4-percent range until 1971 when it jumped to 3.9 percent as British firms engaged in the biggest work force cutbacks since the depression.⁵ The drastic "shake-out" of labor was in response to sharply rising labor costs and slackening demand. Some of the cutbacks were viewed as a delayed reaction to the slow growth of the late 1960's.⁶

Unemployment rose throughout 1971 and into 1972. In February, millions of workers were laid off as a coal strike caused the Government to decree emergency power cuts for factories. The 1972 unemployment rate of 4.2 percent was

⁵ See "Heath Tightening Unemployment," *The Washington Post*, December 6, 1971, p. D 12; and "Britain's Jobless: A Rapid Rise," *U.S. News and World Report*, May 24, 1971, pp. 84-85.

⁶ British Central Statistical Office, *Economic Trends*, May 1971, p. ii.

the highest yet in the postwar era. Economic growth accelerated in 1973 and unemployment moved back down to 3.2 percent. However, unemployment began to rise again with the beginning of the oil crisis in the autumn of 1973. The Arab oil embargo, combined with labor disputes in the coal and electricity industries, brought about the imposition by the Government of a 3-day workweek in early 1974. In January 1974, the number of workers temporarily laid off and receiving unemployment compensation was over 900,000, up from only 8,000 in December. Most of these workers were not counted as unemployed since they did some work during the week. The number of persons on temporary layoff fell back to more normal levels in April and May as industry returned to full workweeks.

In 1974 and 1975 British output declined and in 1976 it rose only slightly. The situation deteriorated markedly from the spring of 1976 onwards, and the second half of the year saw slow growth, accelerating inflation, and a growing foreign deficit. Faced with such developments, economic policy was tightened increasingly from spring onwards, and unemployment responded by reaching a post-war high of 6.4 percent, up from 4.7 percent in 1975. In 1977, unemployment rose further, averaging 7 percent for the first three quarters.

After rising slowly in the 1960's through 1966, the British labor force began to decline in number. By 1971, it was more than 600,000 below the 1966 high. British projections for the period, assuming the demand for labor to remain at the 1964-66 level, had indicated continued slow increases in the work force. Therefore, the decline apparently reflected withdrawals from or nonappearance in the labor market of persons discouraged by the bleak job situation. Since 1971, the labor force has been increasing by up to 0.5 percent a year as a result of increased participation by married women. However, employment has not grown since 1974.

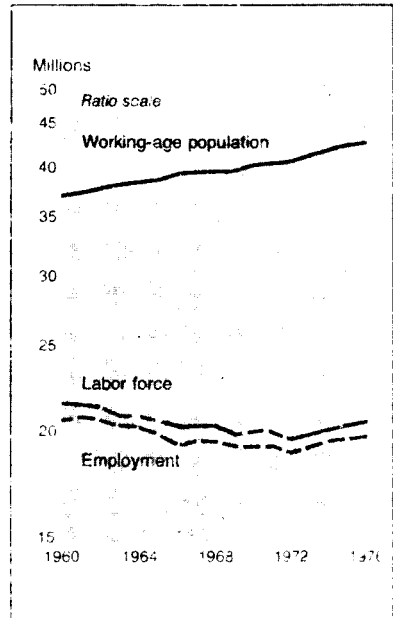
Italy. After reaching 5 percent in 1959, the Italian unemployment rate fell to a low point of 2.4 percent in 1963, but the decline was accompanied by a sharp increase in the consumer price index.⁷ Stringent anti-inflationary measures were taken beginning in the summer of 1963, but unemployment did not begin to increase until the spring of 1964. It continued to increase, reaching 3.8 percent in 1966, the highest rate since 1960. Economic growth picked up strongly in 1967 and joblessness ranged between 3.1 and 3.4 percent until 1972, when it rose to 3.6 percent in lagged response to the lengthy recession which began in 1970.

By the second quarter of 1974, unemployment had fallen to 2.5 percent. However, in mid-1974, the Arab oil

embargo, spiraling inflation, and the instability of the government all combined to create a crisis. Industrial output fell and the jobless rate rose, reaching 3.4 percent in the second quarter of 1975. The drop in output in 1975, as measured by gross domestic product, was the sharpest among the nine countries studied. Unemployment rose to 3.8 percent in the third quarter of 1976, and averaged 3.6 percent for the year. Unemployment declined in the first half of 1977, but rose sharply back to 3.6 percent in the third quarter.

Unemployment does not fully reflect the degree of labor underutilization in Italy. Agreements reached between management and labor have helped to share the burden of recession by encouraging partial rather than full unemployment. The employer-financed Wage Supplement Fund allows employers to reduce production while maintaining employment by placing workers on shorter hours and paying supplements amounting to 80 percent of lost gross earn-

Chart 11. **Italy: Working-Age Population, Labor Force, and Employment, Adjusted to U.S. Concepts, 1960-76**



⁷ Estimates of the level of unemployment from 1959 to 1972 are considered less reliable than those for 1973 onward because they are based partly on adjustment factors derived from surveys for later years. (See appendix B.) However, this probably does not have a large effect on the year-to-year trend in unemployment.

ings. In 1975, over 350 million hours, more than double the 1974 level and approximately 11 percent of total hours worked, were compensated for by the fund. Consequently, the deterioration in the demand for labor in industry is initially reflected by a decline in working hours and a rise in the number of persons involuntarily working part time.

Employment increased for the fourth consecutive year in 1976, a reversal of the general decline of the 1960's. The recent rising trend in employment can be attributed partly to the extensive use of shortened workweeks and the rapid growth of the service sector.⁸

The Italian labor force has also been on the rise since 1972, after declining by 9 percent since 1960. The labor force participation rate, however, continued to decline until 1974 when an upturn in the female rate compensated for a continuing decline in the male rate. With less than half of the working-age population in the labor force, Italy has the lowest participation rate among the major industrial nations. (See chapter 4.)

Chart 12. Sweden: Working-Age Population, Labor Force, and Employment, Adjusted to U.S. Concepts, 1961-76

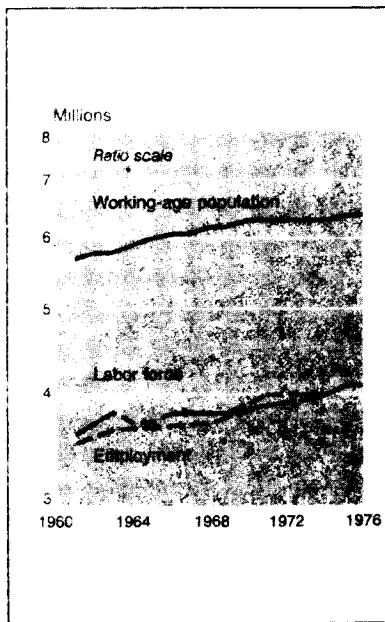


Table 9. Sweden: Effect of labor market programs on unemployment, selected years, 1961-76

(Numbers in thousands)

Year	Unemployment adjusted to U.S. concepts		Number of persons in labor market programs ¹	Unemployment plus persons in labor market programs as percent of civilian labor force
	Number	Rate (percent)		
1961 ..	52	1.4	15	1.9
1965 ..	44	1.2	33	2.1
1967 ..	79	2.1	48	3.4
1968 ..	85	2.2	63	3.9
1969 ..	72	1.9	65	4.1
1970 ..	69	1.5	70	3.3
1971 ..	101	2.6	83	4.6
1972 ..	107	2.7	103	5.3
1973 ..	98	2.5	112	5.3
1974 ..	80	2.0	102	4.5
1975 ..	67	1.6	94	3.9
1976 ..	66	1.6	112	4.3

¹ Monthly average of persons in training for labor market reasons, work training programs, public relief works, archive work and relief work for musicians, and sheltered and semi-sheltered workshops.

SOURCE: National Labour Market Board, *Arbetsmarknadsstatistik* (Labor Market Statistics), various issues; and BLS calculations.

Sweden. Throughout the period since the Swedish labor force survey was begun in 1961, unemployment has averaged about 2 percent, ranging from 1.2 percent (1965) to 2.7 percent (1972). Labor market developments in Sweden differed markedly from the trend in other industrial countries during the recent international recession. While most other industrial countries were deep in the throes of recession, Sweden's unemployment rate fell from 2 percent in 1974 to 1.6 percent in 1975 and 1976. Swedish output grew slowly during the 1974-75 period, while output was falling sharply in the other countries. A tendency of Swedish enterprises to hoard labor in anticipation of an upturn in the world economy helped to maintain employment.⁹ In addition, the number of persons in relief works and training programs was kept at a very high level.

In Sweden, "active labor market" policies are highly developed and provide a comprehensive system of institutions for retraining and relief works. Sweden's training program is the largest in the world relative to the size of the labor force; Sweden is the only country which deliberately uses adult training programs for countercyclical purposes. The Swedish Labor Market Board acted quickly in the 1967-68 and 1971-72 recessions to meet the unemployment problem, and its program kept the jobless rate from

⁸ The high incidence of work done at home in Italy, which goes virtually unrecorded, is another element to consider when interpreting employment statistics. Partly as a result of legislation passed in 1973, home workers have been increasingly taking up recorded employment. See *Economic Surveys: Italy* (Paris, Organization for Economic Cooperation and Development, January 1976), p. 14.

⁹ *The Swedish Economy, Preliminary National Budget* (Stockholm, Economic Department, Ministry of Finance, 1976), p. 97.

moving higher. Table 9 shows the effect of the Swedish labor market programs on unemployment rates in selected years of the 1961-76 period. This table shows that Sweden's unemployment rate was about 1.5 percent in both 1961 and 1976. However, the great expansion in the number of persons in labor market programs, from 15,000 to 112,000, indicates the potential for a large impact on the unemployment rate. Without the extensive training and relief programs, the unemployment rate might have been slightly higher in 1961 and considerably higher in 1976.

Although there has been little organized recruitment of foreign workers, they constitute about 6 percent of the Swedish labor force. The majority of these workers come from the nearby Scandinavian countries—Finland, Denmark, and Norway. The predominance of Nordic workers is due to the Convention on a Common Labor Market which allows free movement of labor among the Scandinavian countries. Since a cyclically related outflow of migrants in 1973, the number of aliens employed in Sweden has risen slowly.

Table 10. Unemployment rates by age and sex, 1968, 1970, and 1974-76—Continued
(Percent of civilian labor force)

Sex and age	Great Britain			Italy ⁷				Sweden				
	1971	1973	1974	1968	1970	1974	1975	1968	1970	1974	1975	1976
Both sexes												
All working ages	3.9	3.2	2.8	3.5	3.2	2.9	3.3	2.2	1.5	2.0	1.6	1.6
Teenagers ²	7.0			12.4	11.9	14.3	16.8	5.6	4.3	6.8	5.6	5.5
20 to 24 years	4.8	4.1	4.5	9.3	8.8	9.1	10.3	3.0	2.2	3.2	2.8	2.8
25 to 54 years	3.3	2.7	2.4	2.0	1.6	1.3	1.6	1.7	1.1	1.3	1.1	1.1
55 years and over	3.5	4.1	2.7	1.2	.8	.4	.6	2.1	1.7	2.0	1.7	1.5
Male												
All working ages	3.9	3.5	2.8	3.3	2.8	2.5	2.8	2.3	1.4	1.7	1.3	1.3
Teenagers ²	7.4			12.5	12.2	14.3	16.2	5.5	3.4	5.6	4.2	4.2
20 to 24 years	4.8	4.4	4.5	9.3	8.7	9.0	10.3	3.1	2.0	2.6	2.2	2.2
25 to 54 years	3.1	2.8	2.5	2.0	1.6	1.2	1.4	1.8	.9	1.1	.8	.8
55 years and over	4.3	4.9	2.8	1.5	1.0	.5	.7	2.6	1.7	2.1	1.9	1.4
Female												
All working ages	3.8	2.7	2.8	4.1	3.9	3.8	4.5	2.1	1.7	2.4	2.0	2.0
Teenagers ²	6.6			11.9	11.5	14.1	17.5	6.6	5.4	8.0	7.0	7.0
20 to 24 years	4.7	3.8	4.4	9.1	9.0	9.3	10.3	2.9	2.4	4.0	3.5	3.4
25 to 54 years	3.6	2.5	2.4	2.0	1.6	1.6	2.1	1.6	1.3	1.6	1.4	1.4
55 years and over	2.0	1.9	2.9	.3	.4	(4)	.2	1.2	1.6	2.3	1.5	1.6

¹ See appendix B for descriptions of the former and revised series.

² 14- to 19-year-olds in Italy; 15- to 19-year-olds in Australia, Canada, Germany, Great Britain (1971), and Japan; 16- to 19-year-olds in United States, France, Great Britain (1973-74), and Sweden.

³ Estimated by BLS.

⁴ Not statistically significant.

⁵ French data are for March of each year.

⁶ German data are for April of 1968, 1970, and 1974, and for May of 1975 and 1976.

⁷ Italian data are not adjusted to U.S. concepts.

NOTE: See appendix C for methods of adjustment to U.S. concepts by age and sex.

this report. Data are shown for selected years of the 1968-76 period. British statistics on unemployment by age and sex could only be shown for years when the General Household Survey was available. For Italy, data could not be adjusted to U.S. concepts by age and sex. To provide some basis for comparison, figures from the unrevised Italian labor force survey have been shown in table 10. It is not possible to indicate how well these figures approximate unemployment by age and sex under U.S. concepts. The data exclude many persons who were seeking work but who did not respond that they were unemployed; on the other hand, the data include a large number of persons who took no active steps to find work in the past 30 days. (See appendix B.) It should also be noted that the data for France and Germany relate to one month in each year and are not seasonally adjusted.

The year 1968 was one of relatively low unemployment in the United States, Canada, Australia, and Japan, but one of relatively high unemployment, for the 1960's, in the European countries. Of the years covered, 1975 and 1976 were the ones of highest unemployment in all countries except Italy and Sweden.

Four age groups are shown—teenagers, 20 to 24 years, 25 to 54 years, and 55 years and over. However, for Great Britain, a breakdown of teenagers and 20- to 24-year-olds could not be made in 1973 and 1974; for France, this break-

down could not be made for 1976. The lower age limit for teenagers has been adapted to the age at which compulsory schooling ends. Appendix C discusses the methods of adjusting each country's unemployment rates by age and sex.

Teenage unemployment

In the United States, young workers have had substantially higher rates of unemployment than adults. In fact, in every year since the end of World War II, in recession and prosperity alike, teenagers have had the highest unemployment rates of any age group in the labor force. The casual methods teenagers use to find jobs, their frequent entrances and exits from the labor market, and the limited horizon of their job search activities are major contributing factors.¹ American teenagers change jobs more frequently than adults and often experience unemployment between jobs. Also, the large proportion of in-school teenagers who seek part-time or part-year work contributes to high youth unemployment in the United States. Some of the major factors affecting youth unemployment rates in the United States and abroad are discussed in chapter 5.

¹ *Youth Unemployment and Minimum Wages*, BLS Bulletin 1657, (Bureau of Labor Statistics, 1970), p. 4.

Table 11. Ratios of teenage to adult unemployment rates¹, 1968, 1970, and 1974-76

Country	Both sexes					Male					Female				
	1968	1970	1974	1975	1976	1968	1970	1974	1975	1976	1968	1970	1974	1975	1976
United States	5.5	4.5	4.2	3.1	3.3	6.8	5.4	5.0	3.5	3.9	4.1	3.4	3.4	2.8	2.8
Canada															
Former basis	3.1	3.3	3.2	(²)	(²)	3.3	3.4	3.4	(²)	(²)	3.9	4.0	3.1	(²)	(²)
Revised basis	(²)	(²)	3.0	2.9	3.0	(²)	(²)	3.8	3.7	3.8	(²)	(²)	(²)	2.1	2.2
Australia	4.2	3.9	4.6	4.7	4.7	5.1	6.2	5.5	5.1	5.1	2.3	2.3	3.7	3.9	3.8
Japan	2.3	2.2	2.4	2.3	2.6	2.6	3.0	2.9	3.2	3.1	2.2	1.4	1.6	1.4	1.6
Former basis	4.1	3.9	5.1	6.2	(²)	5.3	6.0	6.7	7.4	(²)	2.7	2.8	3.8	4.9	(²)
France	3.5	4.0	2.1	2.2	2.4	4.1	4.0	2.4	2.3	2.9	3.4	1.9	2.1	2.1	2.2
Germany	(²)	4.1	(²)	(²)	(²)	(²)	3.3	(²)	(²)	(²)	3.9	(²)	(²)	(²)	(²)
Great Britain	6.2	7.4	11.0	10.6	(²)	6.2	7.6	11.9	11.6	(²)	6.0	7.2	8.8	6.3	(²)
Italy ⁴	3.3	3.9	5.2	5.1	5.0	3.1	3.6	5.1	5.2	5.2	4.1	4.2	5.0	5.0	5.0
Sweden															

¹ Ratio of teenage unemployment rate to unemployment rate for persons 25 to 64 years of age.

² Not available.

³ 1971.

⁴ Based on data which have not been adjusted to U.S. concepts.

SOURCE: Table 10.

In comparison with most other countries, teenage unemployment rates in the United States are relatively high (table 10 and chart 13). In the United States, Italy, and Canada, teenage unemployment rates were higher than 10 percent in all years studied. Unemployment of Australian and French teenagers exceeded 10 percent for the first time in 1975. Japan, Germany, and Sweden had the lowest levels of teenage unemployment during the period studied. These countries also had the lowest overall unemployment rates.

Germany's teenage unemployment rate of 3.8 percent in April 1968 was high by the standards of earlier years of the decade, when teenage unemployment was 1 percent or less. The German recession of 1967 hit teenagers the hardest. According to a report from the American Embassy in Bonn, a wave of cyclical dismissals largely affected youths with a low level of education working at unskilled jobs which had offered relatively high pay during the boom period. The need for employers to economize during the recession led to the cancellation of many odd jobs filled by the unskilled youths. By 1969, Germany was again experiencing labor shortages, and in April 1970, teenagers had an unemployment rate of only 2 percent. By 1974, the teenage jobless rate was still under 3 percent. However, a sharp increase occurred in 1975, and teenage unemployment rose further to over 7 percent in 1976, the highest teenage rate ever recorded by the German Microcensus, which began in 1957.

Youth unemployment in Japan was under 3 percent throughout 1968-74, but moved upward sharply in 1975-76. The 1976 rate of 4.1 percent, however, was still the lowest of any country studied. There is a strong preference by employers for hiring new high school graduates in Japan, as shown by the normally highly favorable job vacancy situation for graduates. Lifetime employment contracts insure that youth wages are low relative to those of adults and that youth turnover is low. Also, teenagers account for a very small and declining proportion of the labor force in Japan.

Teenage unemployment rates are, of course, affected by the overall job situation in each country. Therefore, comparative ratios of teenage unemployment rates to unemployment rates for 25- to 54-year-old adults are shown in table 11 and chart 14. Such ratios may be affected by the general level of unemployment, but they more accurately reflect the relative problems of youth unemployment among countries. In all years studied, Italy had the widest teenage-adult differential.² In 1968, teenage unemployment was 6 times as high as adult joblessness. Teenage unemployment in Italy was down slightly in 1970, but the differential widened so that youth unemployment was 7 times the adult rate. By 1974-75, the differential had grown to over 10. In 1975, Italian teenagers constituted 6 percent of the labor force and 32 percent of the unemployed. Problems of teenagers in the Italian labor market are intensified by a high dropout rate from school. Over half of Italian youths entering the labor market have not completed high school.

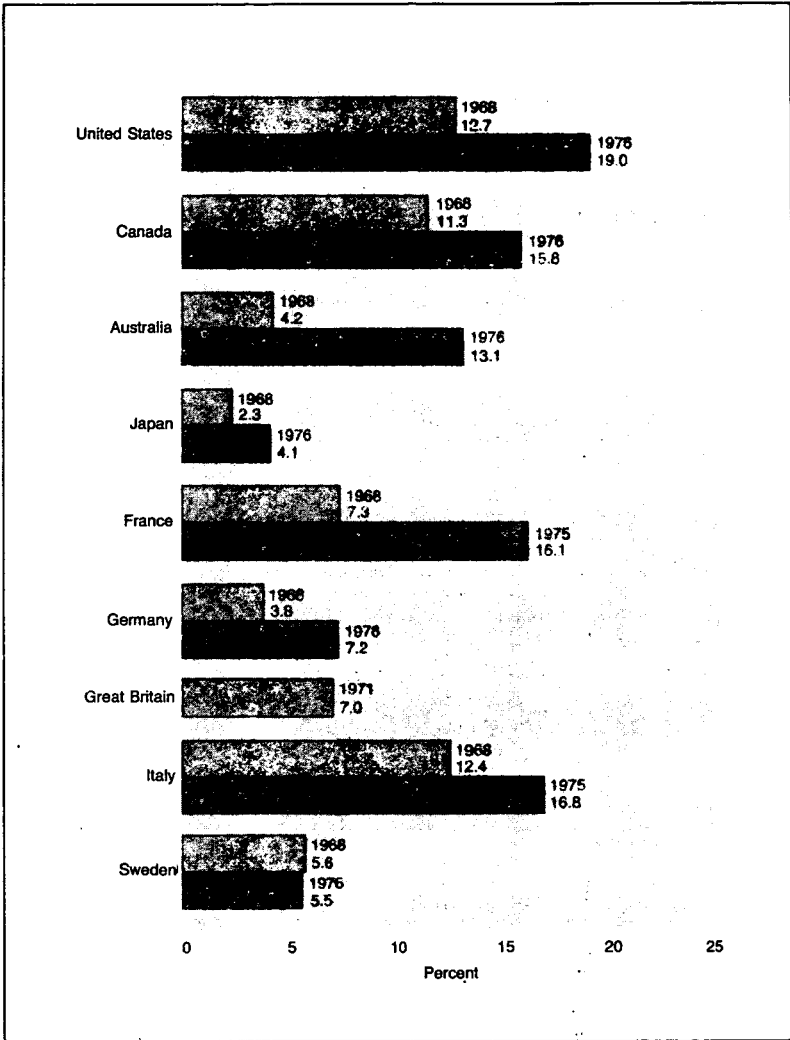
The United States also ranked high in terms of the teenage to adult ratio in 1968 and 1970, with teenagers experiencing 4.5 to 5.5 times the unemployment rate of adults. However, in 1974, Australia, France, and Sweden moved above the United States. In U.S. recessionary periods, the gap between youth and adult unemployment rates usually narrows. Thus, the ratio declined from 4.5 in 1970, to 4.2 in 1974, and to 3.1 in 1975. In contrast, between 1970 and 1975, the ratio of teenage to adult unemployment rose sharply in Australia, France, Italy, and Sweden.

Canada had relatively high youth unemployment rates, but a relatively low ratio of youth to adult unemployment. The ratio was about 3 to 1 in each year and was lower than in Australia, France, Germany, and Sweden where the overall level of unemployment and teenage unemployment rates were much lower.

Great Britain and Japan are the countries with the lowest ratios of teenage to adult unemployment. Data from

² The Italian data were not adjusted to U.S. concepts.

Chart 13. Youth Unemployment Rates, 1968 and 1976



the 1975 European Community labor force survey indicate that the youth-adult differential remained at about 2 for the United Kingdom (Great Britain and Northern Ireland). The differential has been in the 2.2-2.6 range in Japan. The ability of the British to keep youth unemployment relatively low, even during a recession period for the economy, is related to the special efforts made to help bridge the transition from school to work. British teenagers are assisted by widespread counseling, guidance, and job orientation programs in the schools, and a separate employment service for out-of-school youth. The 1,500 officers of the Youth Employment Service in Great Britain provide individual counseling to the great majority of school leavers and help place a significant number of them in their first job. (See chapter 5.)

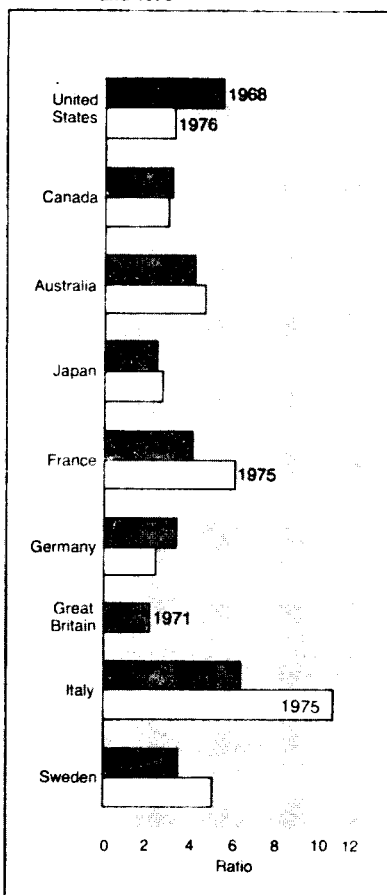
Unemployment of older workers

In the late 1940's and early 1950's, the unemployment rate for U.S. workers age 55 and over was somewhat higher than the rate for workers in the primary working ages of 25 to 54. Beginning with 1957, however, the unemployment rate for older workers has been either at the same level or lower than the rate for 25- to 54-year-olds. In 1970, for example, older workers had a 2.8-percent unemployment rate; workers age 25 to 54, a 3.4-percent unemployment rate. The figures shown in table 10 for the eight foreign countries are based on only a few years' data, but they indicate some similarities and some dissimilarities with the U.S. older worker pattern.

Older workers in Italy have much lower unemployment rates than workers in the primary working ages. In the years studied, the unemployment rate for Italian workers 55 and over was only about half the rate for persons age 25 to 54. The very low unemployment rates for older workers in Italy are related to the fact that very few persons over 55 remain economically active. The labor force participation rate for older Italians was only about 25 percent in 1968 and it has since declined. Italians over age 55 have the lowest participation rate among the major developed countries.

Similar to the U.S. pattern, unemployment rates for older workers in Australia appear to be at about the same level as or somewhat lower than the rates for workers in the primary working ages. Japanese unemployment rates for older workers were about the same as or slightly higher than the rates for 25- to 54-year-olds in 1968 and 1970. However, in 1974-76 the differential widened. In Germany, workers 55 and over had a higher unemployment rate than workers in the primary working ages in April 1968, a period of relatively high unemployment for Germany. However, with the reappearance of labor shortages, older workers were easily absorbed. By April 1970, their unemployment rate was as low as that of persons aged 25 to 54; since April 1974 it has been lower. In contrast to the other countries,

Chart 14. Ratio of Teenage to Adult Unemployment Rates, 1968 and 1976



older workers in France, Great Britain, and Sweden appear to have unemployment rates significantly higher than those of workers in the primary working ages. This was also true for Canada in 1968 and 1970, but in 1974 the unemployment rate for older workers was about the same as the rate

for 25- to 54-year-olds. In 1975-76, the jobless rate for older workers moved well below the rate for 25- to 54-year-olds.

The preceding analysis based on data for all workers 55 and over obscures a sharp difference in the unemployment experience of older men and older women relative to persons in the primary working ages. Prior to the 1974-75 recession, men 55 and over usually had higher unemployment rates than men aged 25 to 54. Women 55 and over, on the other hand, generally have unemployment rates at about the same level as or lower than women aged 25 to 54. The only exception is Sweden, where older women usually have had higher unemployment rates than women in the primary working ages.

Differences among the countries in the unemployment experience of all older workers are partly explained by this contrast between men and women 55 and over. The relatively high unemployment rates for older workers in Canada (1968 and 1970), France, and Great Britain—compared with workers aged 25 to 54—stem from relatively high unemployment rates for older male workers.

Unemployment by sex

In the United States, Australia, France, Germany, Sweden,³ and Italy, women are more likely to be unemployed than men. There do not appear to be any significant differences between male and female unemployment rates in Japan, except among teenagers. Teenage girls have lower unemployment rates than teenage boys in Japan.

In Great Britain, unemployment was higher for men than for women in 1973, but the rates were about equal-

³For Sweden, the higher male unemployment rate in 1968 was an exception. From 1961 through 1967 and 1970 through 1976, female unemployment rates were higher than the male rates.

ent in 1971 and 1974. The higher male rates in 1973 are largely attributable to the high unemployment rate for men 55 years of age and over. The 1975 European Community labor force survey indicated that the unemployment rate for women (5.2 percent) was 1 percentage point higher than the rate for men (4.2 percent) in the United Kingdom (Great Britain and Northern Ireland).⁴

In Canada, the former labor force survey consistently recorded significantly higher unemployment rates for men than for women. However, the revised survey, which contains more probing into labor force status, found that female unemployment was much higher than male unemployment in 1976. Revisions on the new basis for earlier years indicate that unemployment rates for women were slightly lower than for men in 1968 and slightly higher in 1970. A Canadian researcher attributed the lower unemployment rates for women recorded in the 1960's to the fact that Canadian women were less fully committed to labor force activity than were women in other industrial countries.⁵ Thus, Canadian women tended to bypass unemployment when both entering and leaving employment.

Women in the United States have higher unemployment rates than men largely because of higher rates for women in the prime working ages of 25 to 54. Since 1964, teenage girls have also had a somewhat higher incidence of unemployment than teenage boys, except during 1975-76. The pattern in Australia, France, Germany, and Sweden appears to be similar, with women 25-54 and teenage girls having higher unemployment rates than men in these age groups.

⁴The EC survey results should be closely comparable to the figures shown in table 10 for Great Britain. The 1973 EC survey indicated an unemployment rate of 3.6 percent for British men and 2.6 percent for British women. See appendix E for a description of the EC survey.

⁵Sylvia Ostry, *Unemployment in Canada* (Ottawa, Dominion Bureau of Statistics, 1968), pp. 5-7.

Chapter 4. Participation Rates and Employment-Population Ratios

The labor force participation rate is the proportion of the population of working age that is in the labor force. For example, the 1975 civilian population age 16 and over in the United States was 151,269,000 and the number of persons in the civilian labor force was 92,613,000; consequently, the civilian labor force participation rate was 61.2 percent.¹ The main economic interest in participation rates lies in their usefulness in explaining fluctuations in the labor force.

The employment-population ratio is derived by dividing civilian employment by the civilian working-age population. Thus, the employment-population ratio is the major component of the labor force participation rate, the only difference being that the numerator of the employment ratio excludes unemployment.

For certain purposes the employment-population ratio may be a better indicator of the labor market than the traditional measure, the unemployment rate.² Employment is a more precisely measurable condition than unemployment and, since it is much larger, it is subject to smaller relative statistical error. Seasonal adjustment is more accurate since seasonal changes are relatively small. Also, the labor force itself may fluctuate seasonally, in contrast to the population, which incorporates no seasonal movements. While the unemployment rate is potentially subject to wide variations as a result of special developments leading to growth or contraction in the labor force, the employment-population ratio includes a more stable base for a measure of labor market activity.

Since participation rates and employment-population ratios are closely related by definition, they are influenced by similar factors and show similar long-term trends. Over the long term, both measures are chiefly influenced by structural factors of a social and economic character: Trends toward longer years of schooling, early retirement, and changing attitudes toward the role of women. In the short term, changes in these rates largely reflect fluctuations in business activity. The rate of participation of some segments of the population—young

people, women, the elderly—may vary considerably depending on the labor market situation, usually tending to rise in periods of high demand and fall in periods of slack. In periods of economic downturn, there is normally a negative impact on participation rates due to discouragement of marginal workers. Working in the opposite direction, however, unemployment affecting the principal income earners of households may encourage previously nonactive members to seek employment. (See section below on cyclical trends.)

Unlike the long-term trends, short-term movements in participation rates and employment-population ratios may diverge. Thus, an expansion in the labor force may cause the participation rate to rise, while the employment ratio holds steady or falls because the number of persons seeking work increases even faster than the number actually finding jobs.

Table 12 presents civilian labor force participation rates by sex adjusted to U.S. concepts for nine countries. Data are shown by sex because the overall rate masks marked differences in the trends for men and women. All participation rates are annual averages except those for France, which are for March or October as indicated on the table. Employment-population ratios for nine countries are shown in table 13. These figures have not been shown separately by sex, but the long-term trends would be quite similar to the participation rate trends by sex.

Comparative levels and trends

The overall labor force participation rate in 1976 was over 60 percent in the United States and five other countries. Sweden had the highest activity rate at 65 percent. Italy, with 48 percent of the working-age population economically active, had the lowest activity rate in the industrialized world. The rankings by employment-population ratios were about the same as those by participation rates.

Australia and Japan had the highest male activity rates—81 percent—and Sweden had, by far, the highest female rate at 55 percent. Italy and Germany had the lowest rates for men and Italy had the lowest rate for women. The female activity rate in Italy was only about one-half of the rate in Sweden.

Only the United States, Canada, and Sweden had higher overall activity rates in 1976 than in the early 1960's. Based on data since 1964, the trend in Australia has also been upward. For these countries, sharp increases in female activity rates more than offset falling male rates.

¹The U.S. labor force participation rate is usually published in terms of the total population and labor force over age 16, including the Armed Forces. In 1975, the participation rate including the Armed Forces was 61.8 percent. Civilian participation rates are analyzed in this section for purposes of international comparability.

²James E. McCarthy, "Employment and Inflation in Major Industrial Countries," *The Conference Board Worldbusiness Perspectives* No. 28, (August 1975), p. 4. See also Julius Shiskin, "Employment and Unemployment: The Doughnut or the Hole?" *Monthly Labor Review*, February 1976, pp. 3-10.

Table 12. Labor force participation rates by sex, 1960-76

Year	United States	Canada	Australia	Japan	France	Germany	Great Britain	Italy	Sweden
Both sexes									
1960	59.4	¹ 56.2	(?)	57.9	³ 61.8	60.0	60.7	58.0	(?)
1961	59.3	¹ 56.1	(?)	57.8	³ (?)	59.9	61.5	57.4	63.2
1962	58.8	¹ 55.9	(?)	56.9	³ 61.4	59.5	60.9	56.3	63.9
1963	58.7	¹ 55.9	(?)	55.7	³ 60.6	59.4	61.0	54.7	64.4
1964	58.7	¹ 56.2	58.7	54.8	³ 60.4	59.0	60.9	53.9	63.0
1965	58.9	¹ 56.5	59.1	54.4	³ 59.7	58.7	60.9	52.8	62.8
1966	59.2	¹ 57.3	59.5	54.6	³ 59.8	58.2	60.9	51.2	63.1
1967	59.6	¹ 57.6	59.8	54.8	³ 58.9	57.0	60.6	51.2	62.2
1968	59.6	¹ 57.6	59.9	54.9	³ 58.6	57.1	60.2	50.5	62.4
1969	60.1	¹ 57.9	60.2	54.8	³ 58.3	57.1	59.8	50.1	62.3
1970	60.4	¹ 57.8	60.8	54.5	³ 58.0	57.0	59.4	49.5	62.9
1971	60.2	¹ 58.1	60.7	54.2	³ 57.7	56.5	59.1	49.2	63.2
1972	60.4	¹ 58.6	60.8	53.8	³ 57.9	55.8	59.4	48.0	63.1
1973	60.8	¹ 59.7	61.1	54.0	³ 57.8	55.4	60.8	47.9	63.0
1974	61.2	¹ 60.5	61.4	53.0	³ 58.0	54.4	⁴ 60.5	47.9	63.8
1975	61.2	¹ 61.1	61.6	52.4	³ 58.7	53.5	⁴ 61.0	47.9	64.9
1976	61.6	¹ 61.1	61.4	52.3	³ 58.7	53.2	⁴ 61.5	48.0	65.3
Men									
1960	83.3	¹ 82.2	(?)	84.2	³ 84.3	82.7	86.0	84.7	(?)
1961	83.2	¹ 81.3	(?)	84.3	³ (?)	82.7	85.5	83.8	83.0
1962	82.0	¹ 80.6	(?)	83.6	³ 83.6	82.2	84.9	82.4	82.8
1963	81.4	¹ 80.0	(?)	82.5	³ 83.7	81.8	84.9	80.9	81.8
1964	81.0	¹ 79.7	84.2	81.5	³ 82.5	81.4	84.1	80.3	82.2
1965	80.7	¹ 79.4	84.0	81.1	³ 81.5	80.8	83.5	79.2	80.7
1966	80.4	¹ 79.8	84.1	81.1	³ 81.3	80.5	83.1	77.5	80.2
1967	80.4	¹ 79.3	83.7	81.0	³ 79.8	79.3	82.4	77.5	79.1
1968	80.1	¹ 78.7	83.3	81.7	³ 78.4	79.1	81.7	76.3	78.9
1969	79.6	¹ 78.3	83.3	81.5	³ 77.6	79.1	80.8	75.5	77.5
1970	79.7	¹ 77.8	83.2	81.5	³ 77.1	78.8	79.8	74.5	77.2
1971	79.1	¹ 77.4	82.6	81.9	³ 76.6	77.7	79.1	74.1	76.8
1972	79.0	¹ 77.5	82.5	81.8	³ 76.3	76.4	78.8	72.6	76.1
1973	78.8	¹ 78.2	82.1	81.8	³ 75.6	75.2	80.1	71.7	75.7
1974	78.7	¹ 78.7	81.6	81.5	³ 75.2	73.6	⁴ 78.9	71.3	75.7
1975	77.9	¹ 78.4	81.0	81.0	³ 75.8	72.1	⁴ 78.8	71.0	76.0
1976	77.5	¹ 77.7	80.6	80.9	³ 75.2	72.1	⁴ 79.0	70.5	75.8
Women									
1960	37.7	¹ 30.2	(?)	52.7	³ 43.0	41.2	38.7	33.8	(?)
1961	38.1	¹ 31.0	(?)	52.4	³ (?)	41.0	39.2	33.8	43.4
1962	37.9	¹ 31.3	(?)	51.3	³ 42.6	40.7	39.5	33.0	45.5
1963	38.3	¹ 32.0	(?)	50.0	³ 40.9	40.7	39.8	31.2	46.9
1964	38.7	¹ 32.9	33.4	49.3	³ 41.5	40.3	40.2	30.1	45.6
1965	39.3	¹ 33.9	34.4	48.8	³ 40.6	40.0	40.7	28.9	45.6
1966	40.3	¹ 35.4	35.3	49.2	³ 41.4	39.4	41.1	27.4	46.6
1967	41.1	¹ 36.5	36.3	49.6	³ 40.8	38.4	40.9	27.4	45.8
1968	41.6	¹ 37.1	36.9	49.2	³ 41.2	38.6	40.8	27.2	46.9
1969	42.7	¹ 38.0	37.6	48.8	³ 41.4	38.7	41.0	27.1	47.6
1970	43.3	¹ 38.3	38.9	49.3	³ 41.2	38.6	41.1	26.8	49.0
1971	43.3	¹ 39.4	39.2	47.7	³ 40.9	38.4	41.3	26.6	50.0
1972	43.9	¹ 40.2	39.5	46.8	³ 41.7	38.1	41.9	25.7	50.5
1973	44.7	¹ 41.8	40.6	47.3	³ 42.1	38.3	43.6	26.1	50.8
1974	45.6	¹ 42.9	41.6	45.7	³ 42.6	37.9	44.5	26.6	52.4
1975	46.3	¹ 44.2	42.5	44.8	³ 43.1	37.5	⁴ 45.2	26.9	54.2
1976	47.3	¹ 45.0	42.6	45.0	³ 43.8	37.7	⁴ 45.8	27.6	55.2

¹ Estimates by BLS on new survey definitions. Canada has made revisions back to 1966 on the new 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 of working age as a percent of the civilian population of working age. 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.

Table 13. Employment-population ratios,¹ 1960-76

Year	United States	Canada	Australia	Japan	France	Germany	Great Britain	Italy	Sweden
1960	56.1	² 52.8	(³)	66.7	58.6	59.4	59.4	55.8	(³)
1961	55.4	² 52.4	(³)	66.8	58.1	59.6	59.7	55.6	62.2
1962	55.5	² 52.9	(³)	66.0	57.1	59.3	59.2	54.7	63.0
1963	55.4	² 53.1	(³)	66.3	56.2	59.2	59.0	53.4	63.4
1964	55.7	² 53.8	57.9	64.1	56.4	58.8	59.4	52.5	62.0
1965	56.2	² 54.5	58.3	63.6	55.7	58.6	59.6	50.9	62.1
1966	56.9	55.4	58.7	63.7	55.6	58.0	59.6	49.2	61.1
1967	57.3	55.4	58.9	64.0	55.4	56.3	58.5	49.5	60.9
1968	57.5	55.0	59.0	64.1	55.1	56.2	58.2	48.8	61.0
1969	58.0	55.3	59.3	63.9	55.4	56.6	58.0	48.4	61.1
1970	57.4	54.5	60.0	63.8	55.5	56.6	57.5	48.0	61.9
1971	56.6	54.5	59.8	63.4	55.4	56.1	56.8	47.7	61.6
1972	57.0	54.9	59.4	62.8	55.3	55.3	56.9	46.4	61.4
1973	57.8	56.4	60.0	63.2	55.4	54.9	56.9	46.2	61.4
1974	57.8	57.3	60.0	62.2	55.6	53.5	58.8	46.6	62.6
1975	56.0	56.8	58.9	61.2	54.5	51.5	⁴ 58.2	46.4	63.8
1976	56.8	56.7	58.7	61.1	54.4	51.3	⁴ 57.5	46.3	64.2

¹ Civilian employment, adjusted to U.S. concepts, as a percent of the civilian working-age population. The data relate to persons 16 and over for the United States, France, Sweden, and, beginning in 1973, Great Britain; 15 and over for Canada, Japan, Germany, and prior to 1973, Great Britain; and 14 and over for Italy.

² Estimates by BLS on new survey definitions. Canada has made revisions back to 1966 on the new basis.

³ Not available.

⁴ Preliminary.

A downward trend in male participation rates has occurred in all countries and is attributable to earlier retirement and longer years of schooling. The age structure of the population also has some effect. Although declining, male activity rates were still considerably higher than female rates in 1976. However, the gap between male and female rates has narrowed significantly since 1960 in most countries. For example, Canada's male activity rate was 2.7 times the female participation rate in 1960; by 1976, it was only 1.7 times the female rate.

Since 1960, female activity rates have fallen in Japan, Germany, and Italy. The trend in France is difficult to analyze because the data for 1960, 1962, 1964, and 1966 relate to October while figures for 1967 onward are for March. The available data indicate falling female participation in the labor force between 1960 and 1966 and a rising trend since 1972.

In Germany, female participation rates rose in the 1950's, but began to fall in the 1960's, intensifying the labor shortage in that country. Adult female activity has been rising in Germany, but it has not been sufficient to make up for a sharp drop in participation by teenage girls brought about by the extension of schooling. The activity rate for teenage girls has dropped about 20 percentage points since 1960. The relatively low level of female labor force participation in Germany may also be related to the relatively small share of total employment which is in the service sector.³

In Italy and Japan, female participation rates have fallen since 1960 for all age groups. In Italy, the declining trend ended in 1972, but female activity rates have continued to fall in Japan, except for a slight increase in 1976.

A major factor in the long-term trends for Italy and Japan has been the sharp postwar decline in agricultural employment in both countries.⁴ As countries develop industrially, the initial response of female activity is to fall, along with the decline in importance of agriculture in the economy. Women who were economically active as unpaid family workers on the farm generally withdraw from the labor force when the family moves to the city. In most instances, their family responsibilities, low skill qualifications, and insufficient demand for their services discourage them from looking for a job. In Italy, about 1 million unpaid female family workers have left the agricultural sector since 1960; in Japan, about 3 million unpaid female workers have moved out of agriculture.

Surveys were made in Italy beginning in 1971 on the reasons for nonparticipation in the labor force.⁵ In 1971, women made up 80 percent of the nonparticipants, and family duties were held responsible for nonparticipation in more than half the cases. These figures indicated a likelihood that an improvement in the Italian preschooling structures could significantly increase the rate of female economic activity.⁶

⁴ See footnote 3.

⁵ Istituto Centrale di Statistica, "Indagine speciale sulle persone non appartenenti alle forze di lavoro," *Supplemento to the Monthly Bulletin of Statistics*, No. 11, November 1971; *Annuario di Statistiche de Lavoro*, 1975, pp. 109-16, and 1976, pp. 103-15.

⁶ Data compiled by the Organization for Economic Cooperation and Development indicate that in Italy 62 percent of children between the ages of 3 and 6 were enrolled in school in 1970. This was a smaller proportion than in Belgium (96 percent) and France (88 percent), but larger than in the United Kingdom (60 percent) and the United States (57 percent). See OECD, *Educational Statistics Yearbook*, Volume 1, International tables, p. 27.

³ See the section on sectoral employment in ch. 2.

Along with falling participation rates for women, Germany and Italy also had absolute declines in the female labor force. Japan, on the other hand, had a rising female labor force, but it did not rise as fast as the working-age population, so the participation rate declined.

In Italy, female participation rates began to rise in 1973, after many years of decline. This increase may be partly because home workers progressively are taking up recorded employment as a result of legislation passed in 1973.⁷ According to projections by the ILO, a moderate rise in female labor force participation is foreseen for Japan, Italy, and Germany in the later 1970's, reversing the former long-term trend.⁸

After the initial fall in female activity rates which comes with the decline of agriculture, a second stage of development witnesses a rise in women's activity rates. This second stage can be seen most recently in France. Female activity rates declined until the mid-1960's and then began to rise. In the United States, female participation rates rose during most of the post-World War II period, increasing from about 32 percent just after the war to 38 percent in 1960 and 47 percent in 1976. Significant increases also occurred in Canada, Australia, and Sweden. In Great Britain, a more moderate increase oc-

curred, but Britain already had a relatively high level in 1960. France has had only a slight rise in female participation since 1965.

Underlying the rise in female participation rates in many countries have been the following factors: Lessening of job discrimination against women, increased availability of part-time work, declines in fertility rates, a high rate of increase in jobs in the service sector, and changing attitudes towards women's role in society.

Sweden's high and rapidly rising female participation rate indicates a more active involvement of married women in economic life compared with other nations. In Sweden, 53 percent of married women work, compared with roughly 46 percent in Japan, 41 percent in the United States and Great Britain, 38 percent in France, and only 33 percent in Germany. Several factors are responsible for the high Swedish rate. In Sweden many married women have no children or only one child. Furthermore, over 60 percent of women with preschool-age children work in Sweden, compared with about 30 percent in the United States. Government-financed day care centers provide for infant care, beginning with children 6 months of age, when maternity leave expires.⁹ The introduction of separate taxation for married women in 1971, parenthood insurance

⁷Organization for Economic Cooperation and Development, *Economic Survey of Italy*, (Paris, OECD, January 1976), p. 14.

⁸International Labour Office, *Labour Force 1950-2000*, Vols. IV and V (Geneva, ILO, 1977).

⁹The Swedish facilities for day care, although extensive compared with other countries, still fall short of meeting estimated needs. See Alice H. Cook, *The Working Mother, A Survey of Problems and Programs in Nine Countries* (Ithaca, Cornell University, 1975), p. 31.

Table 14. Labor force participation rates by age and sex, 1973¹

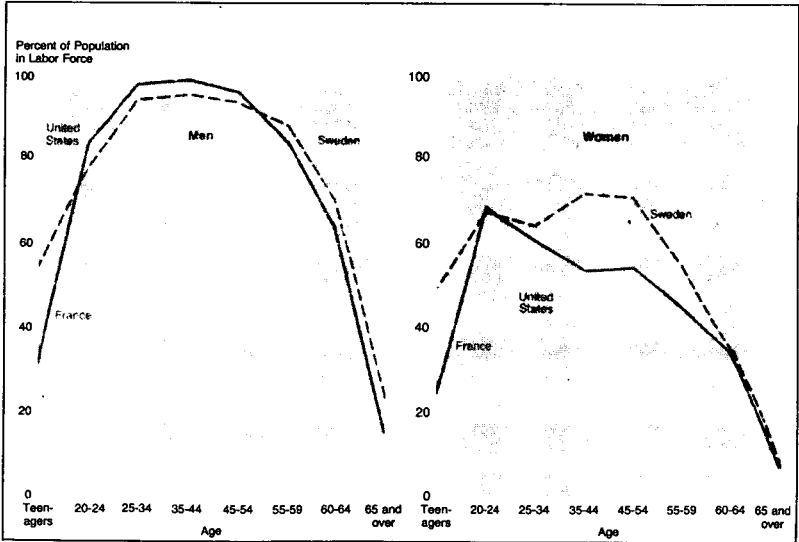
Sex and age	United States	Australia	Canada	France	Germany	Italy	Japan	Sweden
Men								
Teenagers	61.9	59.8	49.7	31.1	62.1	35.8	25.2	53.7
20-24	86.8	91.1	85.3	83.9	83.6	68.2	79.5	78.4
25-29	} 95.9	} 97.4	} 96.4	96.5	93.0	93.5	96.9	} 93.7
30-34				99.1	98.1	98.3	98.1	
35-39	} 96.3	} 97.4	} 97.3	99.0	98.7	98.1	98.1	} 95.0
40-44				98.3	98.4	97.2	97.2	
45-49	} 93.0	} 94.9	} 94.6	97.3	96.7	95.2	} 97.2	} 94.3
50-54				94.3	93.9	90.7			90.7
55-59	86.2	89.1	} 81.3	83.7	86.2	79.0	} 86.8	} 82.7
60-64	69.1	76.0		64.1	68.5	43.3		
65 and over	22.8	21.4	18.3	15.9	15.0	10.4	46.7	² 23.9
Women								
Teenagers	47.9	55.7	39.8	24.8	60.4	26.1	27.9	49.8
20-24	61.2	61.9	62.5	68.7	67.0	42.0	67.0	67.6
25-29	} 50.2	} 43.6	} 45.2	63.8	53.4	34.0	44.4	} 65.0
30-34				56.2	48.1	30.3	46.8	
35-39	} 63.3	} 50.4	} 43.7	53.6	48.5	29.6	56.3	} 71.5
40-44				53.7	50.0	30.3	50.0	
45-49	} 53.7	} 45.2	} 42.9	54.8	50.7	29.6	} 61.3	} 71.0
50-54				53.5	46.5	25.8			46.5
55-59	47.4	30.5	} 31.0	45.2	38.0	16.5	} 44.5	} 46.3
60-64	34.2	16.4		34.1	17.7	9.1		
65 and over	8.9	3.4	4.4	7.0	5.7	2.1	16.9	² 7.4

¹1972 data for Italy and Germany.

²Ages 65-74.

NOTE: Data are not adjusted to U.S. concepts.

Chart 15. Age Structure of Labor Force Participation Rates, 1973



in 1974, and greater flexibility in working time have also provided incentives for Swedish women to seek gainful employment. Parenthood insurance provides that either a mother or father may stay home up to 7 months after a child's birth and be reimbursed for 90 percent of his or her pay.

Age structure of participation rates

The age structure of participation rates differs greatly between the sexes (table 14). Male participation rates plotted by age groups display a bell shape in all countries, with high rates during the prime working ages and then tapering off after age 50 as males enter retirement. Chart 15 shows the age structure of participation rates for three of the countries, illustrating the bell shape. The growing importance of schooling and the increasing frequency of early retirement, voluntary or otherwise, have resulted in a trend toward lower participation rates at both ends of the age spectrum.

In the case of women, the above phenomena are accompanied by conditions relating to women's traditional role in society. Generally speaking, after a first maximum which occurs between 20 and 25 years of age, a fall in economic activity rates occurs which is attributable to

marriage and the birth and raising of children. Subsequently, a number of women return to work. Sometime in the 30's the female activity rate begins to rise again and reaches a second maximum in the 40's which is, except in Sweden, lower than the first maximum. In Sweden, about 68 percent of women in the 20-24 age group are economically active; this tapers off gradually to 65 percent in the 25-34 age group, then rises to a second maximum of 71.5 percent in the 35-44 age bracket. Projections indicate that Sweden is approaching a pattern of female participation by age similar to that of men, with no drop in activity connected with the birth and bringing up of children. Chart 15 shows the characteristic M-shaped curve for female participation rates in two of the three countries shown. Since 1973, the U.S. curve has changed from the M-shape shown in the chart. The differential in participation rates between the age groups 25 to 34 and 35 to 44 gradually narrowed, and by 1976, participation rates were about the same for both age groups.

Table 14 indicates a very high rate of participation for older Japanese workers. Almost half of the men in Japan 65 years old and over are still working. In the United States, only about 1 in 5 men over 65 are working, and in Germany about 1 out of every 6. A comparatively high proportion of older Japanese women are also working. The

prevalence of the work ethic in Japan partly accounts for these high participation rates of older workers. Also, social security benefits are very small and pensions are low or nonexistent. Fifty-five is still the common retirement age in Japan, but social security payments begin at age 60 and lump-sum retirement payments are not enough to allow for self-sufficiency until age 60. As a result, most workers who are retired from their regular jobs at 55 continue at lower paid jobs or go into self-employment out of financial necessity.

Cyclical trends in participation

In the short term, changes in participation rates can incorporate a significant cyclical component. It is generally assumed that the interaction between demand for and supply of labor may take two opposite forms: In the course of a recession, dismissed workers or potential labor force entrants may either be inhibited from even seeking a new job ("discouraged worker hypothesis") or be stimulated by sheer need to try harder for new sources of income ("additional worker hypothesis"). Econometric investigations have usually found confirmation at the aggregate level of the "discouraged worker hypothesis," even though this may only imply that the alternative hypothesis has less weight.¹⁰

According to research by Dernburg and Strand, the degree to which the two effects govern labor force participation depends upon the stage of the business cycle.¹¹ An initial decline in employment from a cyclical peak results in large-scale discouragement and withdrawal from the labor force. Subsequent declines in employment are met by a smaller decline in labor force participation. As the period of economic slack grows longer, pressure on additional workers to enter the labor force builds up and this tends to partially offset the discouragement effect. Because the dominant effect is withdrawal from the labor force, the official unemployment statistics understate the magnitude of the economic loss during periods of economic slack.¹²

The United States and Sweden are the only countries studied which regularly collect data on discouraged workers. In the United States, changes in the number of such workers have been consistent with cyclical changes in the demand for labor. Both the unemployment rate and the number of discouraged workers moved downward, though in differing degrees, from 1967 to 1969, when unemployment declined 5 percent and discouraged workers declined 22 percent; both series rose substantially from 1969 to 1971,

when job prospects were poor; and both moved downward again during 1972 and 1973 as the job market improved. The drop in the U.S. labor force participation rate in 1971, after a rise since 1964, was related to the sharp increase in withdrawals from the labor force of discouraged workers. The number of discouraged workers reached a recession high of 1.2 million in the third quarter of 1975—one quarter later than the unemployment peak—and the 1975 participation rate held steady at the 1974 level after rising in 1972 and 1973. After the peak, the number of discouraged workers began moving downward fairly steadily through the third quarter of 1976. However, as unemployment began to rise again, there was also an increase in the number of discouraged workers to 1 million in the final quarter of 1976.

In Sweden, economic activity slowed down in 1967-68, and both unemployment and the number of discouraged workers reached decade highs. The labor force participation rate dipped sharply in 1967, one of the few years in which female economic activity declined. In 1968, the participation rate rose, possibly evidencing the "additional worker hypothesis." In 1970-71, when unemployment moved upward sharply, the number of discouraged workers actually fell slightly and continued downward in 1972; participation rates continued to rise. This trend may have been related to the rapid expansion in government training and job creation programs in the early 1970's which probably absorbed many discouraged workers. During the international recession of 1974-75, Swedish unemployment remained low, and participation rates for women rose sharply, while the rates for men held steady. In contrast, male participation rates declined in all the other countries during the recession.

The long-term trend in Italy is one of slowly declining overall participation rates. Cyclical trends, superimposed upon this long-term trend, have occasionally caused sharper than usual declines in participation. In 1963-66, when the Italian economy turned downward and unemployment rose, participation rates dipped sharply. As economic activity moved upward, activity rates held steady in 1967 and declined only slightly until 1972 when another sharp drop occurred. The latter drop was a lagged reaction to the lengthy recession which began in early 1970. Whereas in previous cycles the easing of the labor market was accompanied by a rapid decline in participation rates, the rates remained stable in the recession which began in 1974.

¹²*Ibid.* Dernburg and Strand constructed a "potential" labor force series for the United States which they used to recalculate the unemployment rate including net cyclical withdrawals from the labor force. Thus, for November 1962, when the official seasonally adjusted unemployment rate was 5.8 percent, they calculated a "manpower gap" unemployment rate of between 9.5 and 10.3 percent. Professor Alfred Tella of Georgetown University has also done work in this area. See "The Relation of Labor Force to Employment," *Industrial and Labor Relations Review*, April 1974, pp. 454-69.

¹⁰See Jacob Mincer, "Labor Force Participation and Unemployment: a Review of Recent Evidence," in R. A. Gordon and M. S. Gordon eds., *Prosperity and Employment* (New York, Wiley and Sons, 1966).

¹¹Thomas Dernburg and Kenneth Strand, "Hidden Unemployment 1953-62: A Quantitative Analysis by Age and Sex," *American Economic Review*, March 1966, pp. 71-95.

The data for Germany and Great Britain also suggest that participation rates tend to react, with certain lags, to changes in the demand for labor. Participation rates declined throughout most of the 1960-76 period in Germany, but the sharpest drops occurred in 1967 and 1974, both years of recession for the economy. In Great Britain, participation rates for 1960-66 held quite steadily at about 61 percent, but then fell off to 59 percent by 1971 as unemployment rose. One noncyclical influence which should be mentioned was the raising of the British school-leaving age from 15 to 16 in 1973. Removal of the 15-year-olds from the 1973 data explains some of the in-

crease in participation rates in 1973 since 15-year-olds had a lower than average level of labor force activity.

Employment-population ratios also were sensitive to cyclical fluctuations, but did not always move in the same direction as participation rates. For example, in 1975, U.S., Canadian, Australian, Italian, and British participation rates held steady or rose while employment-population ratios declined. According to one hypothesis, this behavior in the United States was attributable to the combination of inflation and unemployment which put severe financial pressure on many families and induced an unusually large number of family members to seek jobs.

Chapter 5. Factors Contributing to Differences in Unemployment Levels

Unemployment rates in the United States have tended to be appreciably higher than in most other industrial countries, even after adjustments are made to account for differences in definitions and survey methods. Although U.S. unemployment reached a 16-year low of 3.5 percent in 1969, it was still well above the rates in Western Europe and Japan. Explanations for the differences may be sought in demographic, economic, legal, and social factors.

This chapter examines some of the factors which may contribute to differences in unemployment levels among the major industrial countries. Emphasis is placed on those factors which help to explain the relatively high unemployment rates in the United States. The discussion updates and expands upon the pioneering 1962 study by Myers and Chandler prepared for the President's Committee to Appraise Employment and Unemployment Statistics.¹ It will be noted that, in many ways, the countries studied are more alike today than they were in the early 1960's. Nevertheless, significant differences do remain which help to explain international differences in unemployment rates.

Consideration is given first to demographic factors such as the growth and composition of the labor force. Attention is also given to cyclical labor migrations, to seasonality, to income maintenance arrangements, to labor market programs, and to differences in the employment situation for young people. Finally, noneconomic factors such as legal and social restraints against layoffs are considered.

The chapter is by no means a complete survey of all the factors that influence comparative levels of unemployment rates. Such complex questions as the form of economic organization (i.e., free enterprise, socialism, etc.) and the level of wages in relation to the supply of, and demand for, labor have been deliberately excluded. Similarly, the fiscal and monetary policies chosen by the various governments are not taken into consideration. Differences in occupational, industrial, and regional supply-demand imbalances (i.e., structural unemployment) have also been excluded. Treatment of such topics is beyond the scope of this report. However, it should be noted that some of these excluded topics could be very significant factors in explaining differences in unemployment levels.

It is fairly easy to identify many of the principal causes contributing to differences in unemployment rates, but it is much more difficult to appraise their relative im-

portance. To present such a quantitative appraisal would require a study in considerable depth. Comparatively low unemployment rates in Western Europe and Japan cannot be attributed solely to any one of the topics discussed below. They are rather the cumulative effect of a number of factors which in combination have gradually enabled some national economies to provide jobs for almost all persons seeking work.

Labor force growth

It is commonly suggested that the rapid growth of the labor force in the United States has greatly increased the difficulty of maintaining full employment. Growth of the U.S. civilian labor force alone called for about 25 million new jobs between 1959 and 1976 if the unemployment rate were not to rise above the 1959 level of 5.5 percent. The economy generated 23 million new jobs, however, and the unemployment rate rose to 7.7 percent in 1976. Of course, some of this shortfall is attributable to cyclical factors.² The lower unemployment rates of the European countries and Japan from 1960 onward were achieved under conditions of slow growth or decline of the labor force. Indeed, it is often overlooked that these countries created relatively fewer net new jobs than did the countries with high unemployment rates—the United States and Canada.

The Canadian labor force grew at an annual rate of 3.2 percent, higher than the rate of increase in any other country (table 15). Australian work force growth, at 2.4 percent annually since 1964, was also rapid. The rate of growth of the U.S. labor force, at 2 percent, was much higher than that for the European countries and Japan. The labor force grew at annual rates of 1 percent or less in France, Great Britain, and Sweden. In Germany, the labor force decreased slowly but would have declined faster if not for the rapid influx of foreign workers since 1960. The labor force excluding foreign workers in Germany declined by 7 percent between 1960 and 1975, while the number of foreign workers rose about sevenfold. Italy's work force declined by 0.4 percent a year. These very low rates of labor force increase in European countries may have aided in maintaining low levels of unemployment. In fact, labor shortages developed during the 1960's in several

¹ President's Committee to Appraise Employment and Unemployment Statistics, *Measuring Employment and Unemployment*, appendix A (Washington, U.S. Government Printing Office, 1962).

² Real gross national product rose by 6 percent over the preceding year in 1959 and by 6.1 percent in 1976; both years were preceded by economic downturns. However, the 1974-75 recession was steeper and longer lasting than the 1957-58 downturn.

Table 15. Growth rates of population, labor force, and employment, 1960-76

Country	Civilian working-age population	Civilian labor force	Employment
United States	1.7	2.0	1.9
Canada	2.4	3.2	3.1
Australia ¹	2.0	2.4	2.2
Japan	1.7	1.3	1.2
France	1.2	1.1	.9
Germany . . . . .	.7	-.1	-.2
Great Britain . . . . .	.3	-.2	-.1
Italy . . . . .	.8	-.4	-.4
Sweden ² . . . . .	.7	.8	.8

¹ 1964-76.

² 1961-76.

NOTE: Percent changes computed from the least squares trend of the logarithms of the index numbers.

countries—notably Germany and Japan—as the supply of labor could not keep up with demand.

Population growth and trends in participation rates are factors which underlie the different trends in the labor force among the major industrial countries. Since 1960, the civilian population of working age has grown fastest in Canada, followed by Australia, the United States, Japan, and France (table 15). Population growth was under 1 percent a year in Germany, Great Britain, Italy, and Sweden. Labor force participation rates have been rising in the United States, Australia, Canada, and Sweden, while remaining steady in Great Britain and declining in the other countries. (See chapter 4.)

The relatively rapid growth in working-age population and rising participation rates led to the relatively high rates of labor force growth in the United States, Australia, and Canada. Germany, Great Britain, and Italy had low rates of population growth and declining or steady participation rates; in these countries, the labor force grew very slowly or declined. For Japan, population growth was fairly strong but labor force growth was held down by a sharp drop in participation rates.

A major reason for the rapid increase in the U.S. working-age population and labor force compared to many European countries was this country's unusually high birth rate in the early postwar years. These children began entering the labor force in the latter 1960's. Thus, in 1967, some 3.8 million Americans turned 21, nearly 1 million more than a year earlier. The number reaching 21 remained close to 3.8 million until 1975 and then began to push above 4 million. In most other industrial countries, in contrast, the ravages of World War II precluded any prompt postwar return to normal family life. Consequently, there were no comparable postwar baby booms, and there was no comparable stream of young persons pouring into the work force.

Underlying long-term trends in participation rates are

such factors as trends toward longer years of schooling, early retirement, and changing attitudes toward the role of women. In the United States, a dramatic increase in participation rates for women occurred in the 1960-76 period. In contrast, Japan, Germany, and Italy had declining female activity rates. (See chapter 4.)

Labor force composition

Differences in the composition of the labor force among the major industrial countries are important in an investigation of why international unemployment rates differ, since certain groups have been more prone to unemployment than others. Hence, if a country has a higher proportion of its labor force in such groups, its overall unemployment rate should tend to be higher. Differences in composition by sex, age, economic sector, and economic status (i.e., self-employed, wage earner, or unpaid family worker) are examined here.

Age and sex composition. In general, women enter and leave the work force more frequently than adult men and women and younger workers change jobs more frequently, encountering more spells of unemployment in the course of these transitions than workers with more permanent job attachments. Another factor that tends to increase the unemployment rate of married women is the migration of families who generally move where the husband's job opportunities are better.³ Also, women and younger workers are more vulnerable to layoffs than adult men, because on average they do not have as many years of work experience. On the other hand, women and teenagers tend to work in occupations and industries which are not subject to sharp cyclical fluctuations. Women, for example, are more likely to be employed in white-collar jobs and in service industries where unemployment fluctuates less over the business cycle. In addition, the slower rate of entry of women and teenagers into the labor force during a recession narrows the age and sex differential in the U.S. unemployment rate.

In chapter 3 comparative data were presented on unemployment by age and sex. These figures indicated that women in most countries have higher unemployment rates than men. Female rates are about the same as male rates only in Great Britain and Japan. Teenagers have relatively high jobless rates in all countries. Thus, it is relevant to consider the trends in the proportion of the labor force accounted for by women and teenagers.

A significant increase in the proportion of women and teenagers in the labor force has been singled out as one of the reasons for the worsening unemployment situation

³ In the United States in 1970, married women age 25 to 34 who had moved to a different county within the year had an unemployment rate of 11 percent, compared to 5 percent for nonmigrants. Among married men of the same age group, the rates were 4.8 percent and 2.1 percent, respectively.

Table 16. Women and teenagers in the labor force, 1960, 1971, 1975, and 1976

Country	Women ¹				Labor force growth rate, 1960-76	Teenagers ²				Labor force growth rate, 1960-76
	As percent of labor force					As percent of labor force				
	1960	1971	1975	1976		1960	1971	1975	1976	
United States . . .	33	38	40	41	3.1	7	9	10	10	3.9
Canada	² 27	34	37	37	5.2	³ 9	10	12	11	4.1
Australia	⁴ 29	32	35	35	4.1	⁴ 14	12	12	12	4.7
Japan	40	39	37	37	.6	10	5	3	3	-6.7
France	⁵ 36	38	38	39	1.7	⁵ 8	6	5	(⁶)	5-1.6
Germany	38	36	38	38	-1.7	11	8	8	9	-1.2
Great Britain	34	37	39	39	1.3	⁷ 11	9	8	8	7-1.7
Italy	31	28	30	30	-4	12	8	7	(⁶)	8-4.5
Sweden	⁷ 35	40	43	43	2.2	⁷ 9	6	6	6	7-1.5

¹All working ages.

²16- to 19-year-olds in the United States, France, and Sweden; 15- to 19-year-olds in Australia, Canada, Germany, and Japan; 14- to 19-year-olds in Italy. Data for Great Britain are for 15- to 19-year-olds in 1960 and 1971 and 16- to 19-year-olds in 1975 and 1976.

³Estimate.

⁴1965 for proportion; 1965-76 for growth rate.

⁵1963 for proportion; 1963-75 or -76 for growth rate.

⁶Not available.

⁷1961 for proportion; 1961-76 for growth rate.

⁸1960-75.

NOTE: Data have been adjusted to U.S. concepts. Growth rates (percent per year) based on compound rate of change.

in the United States in the 1970's. Women grew from one-third of the U.S. labor force in 1960 to 41 percent in 1976, while 16- to 19-year-olds increased their share from 7 to 10 percent. The U.S. economy has not fully absorbed these groups, and unemployment rates for women and teenagers have worsened compared with the national average. For example, the overall unemployment rate was about 5.6 percent in both 1960 and 1974; female unemployment was 5.9 percent in 1960 and 6.7 percent in 1974; teenage unemployment was 14.7 percent and 18.2 percent, respectively. In contrast, the jobless rate for males 20 years of age and over dropped from 4.7 percent to 3.8 percent over the same period.

Table 16 shows that the United States has had a comparatively large increase in the female work force during the period since 1960. Only Canada and Australia (1965-76) have had more rapid increases. In all of these countries, the strong expansion of the service sector, with jobs traditionally held by women, had an important effect. Other underlying factors are noted in chapter 4. In 1976, Sweden, which has done much to encourage women to work, had the highest proportion of women in its labor force. The United States ranked second, followed closely by France, Germany, and Great Britain. Italy had, by far, the lowest proportion of women. These rankings differed markedly from the situation in 1960, when five of the nine countries had higher proportions of women in the work force than the United States. At that time, Japan ranked first, and Germany was second. Canada ranked last, with women constituting only about one-quarter of the labor force.

Thus, the United States has had a relatively high and growing proportion of women in the labor force. Sweden has maintained low overall unemployment rates even with a large and growing female component. Female unemployment rates in Sweden, although higher than male rates, are

quite low when compared with most of the other countries. Italy has had both a low level and a declining trend in the female labor force. This has probably helped to keep unemployment down, since female unemployment rates have been 50 to 60 percent higher than the male rates in recent years. France and Germany had significantly higher proportions of women in their labor forces in 1960 than the United States, but had much lower levels of unemployment compared with the United States.

Between 1960 and 1970, the United States had the fastest growth in the teenage labor force; for the entire 1960-76 period, Canada had the sharpest increase because of extremely rapid growth in the 1970's. In all of the European countries and Japan, the teenage labor force declined between 1960 and 1976 (table 16).

In 1976, teenagers constituted 10 percent of the labor force in the United States; this proportion was exceeded only in Australia and Canada (table 16).⁴ Japan, France, and Sweden have very low proportions of teenagers in the labor force (3 to 6 percent) and this has helped to keep overall unemployment down in those countries. However, in 1960 all the other countries had higher proportions of teenagers in their labor force than the United States and were able to maintain much lower overall levels of unemployment, except for Canada.

Canada and the United States were the only countries where the proportion of teenagers in the labor force

⁴It should be noted that the proportion of teenagers in the labor force may be affected by the lower age limit used in defining teenagers (footnote 2, table 16). These age limits have been adapted to the age at which compulsory schooling ends, which varies from age 14 to 16. If 15-year-olds were excluded from the Australian and Canadian labor forces, for example, the proportion of teenagers would probably be lowered closer to the level in the United States, where teenagers comprise persons age 16 to 19.

rose between 1960 and 1975. Basically, there are two reasons for the increases in the teenage labor forces in both countries. As mentioned earlier, the sharp increase in birth rates in the 1950's resulted in rapid growth of the teenage population beginning in the second half of the 1960's. Second, participation rates of young persons have risen significantly. In most of the other countries studied, birth rates did not rise significantly in the 1950's and participation rates have generally fallen for teenagers with the spread of higher education.

On balance, the overall effect of the demographic composition of the U.S. labor force may be to marginally increase its aggregate unemployment rate compared with some other countries. The high and growing proportion of both women and teenagers in the U.S. labor force has had an upward influence on unemployment rates. This has also been the case in Canada. In most of the other countries the female and teenage components of the work force are not as large and have either declined or increased less rapidly.

Industry and economic status. The industrial composition of the labor force and the economic status of workers (i.e., as self-employed, wage earner, or unpaid family worker) are factors of interest since workers in certain sectors of the economy and workers of wage earner status are more often unemployed than others.

In many foreign countries—Japan and Italy are the best examples—small, family-owned businesses are found more frequently than in this country. The farms, small factories, and commercial establishments owned and operated by family members have provided jobs and a substantial measure of protection from unemployment for a large segment of the labor force. In such enterprises unemployment is virtually nonexistent, though substantial underemployment and shrinkage of income may occur from time to time. Furthermore, in countries where this form of business organization plays a significant role, there is more chance that a family member who loses his wage or salary job will return to working in the family business and thus not be counted as unemployed. In the United States, on the other hand, the economies of scale that can be realized in a large and fairly homogeneous sales market have been factors encouraging a consolidation of business enterprises, so that self-employment and family operations occur less frequently and the risk of unemployment is increased.

Unemployment is much less frequently associated with agriculture than with industry, partly because agriculture is less susceptible to cyclical change, but chiefly because a high proportion of workers in agriculture are self-employed or unpaid family workers. The following tabulation shows the proportion of the employed population engaged in agriculture in 1960 and 1976:

	1960	1976
United States	8.5	3.9
Canada	13.3	5.9
Australia	n.a.	6.2

Japan	29.5	11.9
France	22.4	10.9
Germany	13.8	7.0
Great Britain	4.1	2.6
Italy	32.6	15.4
Sweden	15.5	6.2

These figures indicate that Italy, Japan, and France had the highest proportions of workers generally not susceptible to being counted as unemployed. Great Britain and the United States had the lowest proportions. However, it should be noted that the countries with the highest proportions experienced a high rate of displacement from the agricultural sector in the period under review and have therefore had the added problem of providing other jobs for the displaced farm workers.

The following tabulation shows the 1974 proportion of employment made up by wage and salary earners in the nine countries:

United States	90.4
Canada	88.7
Australia	85.8
Japan	69.3
France	80.8
Germany	83.9
Great Britain	82.0
Italy	71.5
Sweden	91.0

The United States has a higher proportion of wage and salary workers than all the other countries except Great Britain and Sweden. The small proportion of agricultural workers discussed above helps to explain this, but other factors such as the prevalence of large-scale operations in the United States play a role. Japan, Italy, and France had much lower proportions of wage and salary workers than the other countries and, therefore, had a significant group of workers who might be underemployed but who are seldom totally unemployed. Some industrial countries, notably Sweden, have been able to maintain very low rates of unemployment despite a relatively high proportion of wage and salary workers.

Labor migration

The volume of migration in the Western European countries has tended to fluctuate with the economic situation. Foreign nationals have flowed into the Northern European countries when demand is high and have left when it is low, without seriously affecting unemployment levels in the host country. This flexibility of labor supply, particularly in France, Germany, and Switzerland, has acted as a cyclical shock absorber, helping to keep unemployment rates low during recessions, although in 1974-75 the outflow was not as great as in past recessions. These cyclical flows of "guestworkers" have no precise counterpart in the United States and are one of the factors explaining why unemployment rates in some Western European countries have been lower than in this country.

Massive migratory movements of workers within Europe have occurred within the past two decades. In contrast to the involuntary and permanent migration which marked the immediate postwar decade, European migration since 1955 has been mostly voluntary and temporary. The first impetus to such migrations was the formation of the European Community (EC) in 1957 and its rules permitting the free movement of labor across the borders of member states. Subsequently, rapid economic growth in the Northern European countries attracted many migrant workers from outside the EC, mainly from the poorer Mediterranean countries such as Turkey, Greece, and Spain. In the early 1960's, the influx of migrants became very large as Northern Europe's demand for labor far outstripped the domestic supply.

Workers migrating from one EC country to another are assured equal social protection with nationals, reception facilities covering training and linguistic studies, and housing, as well as an increasing participation in the political and socioeconomic life of the host country. Migrants from outside the EC, having no official status under Community law, enter the Community under conditions set forth in bilateral agreements between member states and the countries of origin. These agreements guarantee legal migrants some social security protection in the Community, but usually less than local citizens receive.

The flow of migrant labor from Mediterranean countries to the north increased steadily until the 1966-67 recession, when many foreign workers were obliged to return home because of growing unemployment in Northern Europe. After the recession, the movement of foreign workers to the north resumed.

Measures to limit considerably, or stop, the influx of migrants by the labor-receiving countries led to a diminution

of the cyclical outflow of migrants in the 1974-75 recession. Many foreign workers remained in the host countries because they feared they would not be able to reenter under the newly restrictive immigration policies. Another factor was that increased unemployment benefits in industrialized countries exceeded any wage the migrants could hope to receive at home. This growing tendency for unemployed foreign workers to remain in the Northern European countries contributed to the sharp rise in unemployment rates recorded in most of these countries during the recent recession. This contrasts with the situation in the European recession of 1966-67, when there was a sharp outflow of foreign workers.⁵ Table 17 shows the number of foreign workers employed and unemployed in Germany over the period since 1960. Unemployment of foreign workers rose from 0.3 to 1.5 percent from 1966 to 1967, but was much higher in the 1974-75 recession, reaching a peak of 6.9 percent in 1975. The annual figures in the table conceal the fact that between mid-1966 and early 1968, over 30 percent of the foreign labor force left the country. Between mid-1973 and mid-1974 the drop was only 12 percent, but as the recession continued foreign workers left in increasing numbers.

Italy was a major labor-exporting country during the 1960's and early 1970's. However, the 1974-75 recession caused many Italians to return home, and Italy had a positive migratory balance. For example, in 1974 some 85,000 workers left Italy for Germany, while 120,000 returned home from that country. Even with this return flow, there were still about 1 million Italians working abroad in 1975, most of them in Germany, Switzerland, and France.

Almost all Northern European countries have placed bans on new immigration. These restrictions were related to the social and political problems caused by migration as well as the 1973 energy crisis and subsequent recession. With rules of the European Community providing for a free flow of workers from one member country to another, efforts to hold down the flow of migrants are aimed at countries that do not belong to the group of nine nations. About three-quarters of the foreign workers in European Community countries are from outside the Community. Germany banned recruitment of foreign labor from outside the Common Market in November 1973; Belgium and France followed with bans in 1974. In the Scandinavian countries, there is a partial ban against migratory flows from outside the free Nordic market. In Switzerland, a policy of increasing restriction on the entry of foreign workers began well before the recent recession.

Uniform statistics on migrant workers in Western Europe are not available, chiefly because nearly all countries use different methods of classifying foreign workers. Some countries include seasonal workers in their reporting, while others do not. Also, it is difficult to obtain

Table 17. Foreign workers in Germany, 1960 and 1965-76

Year	Employed foreign workers		Unemployed foreign workers ¹	
	Number (thousands)	Percent of labor force	Number (thousands)	Percent of foreign labor force
1960	281	1.1	(²)	(²)
1965	1,119	4.3	2	.2
1966	1,243	4.7	4	.3
1967	1,014	3.9	15	1.5
1968	1,019	4.0	5	.5
1969	1,368	5.3	3	.2
1970	1,807	6.9	4	.2
1971	2,128	8.1	11	.5
1972	2,285	8.7	16	.7
1973	2,595	9.8	19	.7
1974	2,446	9.3	69	2.7
1975	2,034	7.9	151	6.9
1976 (June) . .	1,937	7.6	90	4.4

¹ Registered unemployed.

² Not available.

SOURCE: *Hauptergebnisse der Arbeits- und Sozialstatistik* (Bonn, Der Bundesminister für Arbeit und Sozialordnung, various issues).

⁵ See "Effects of Recession on Immigrant Labor," *OECD Observer*, June 1972, pp. 15-18.

Table 18. Estimated number of foreign workers by country of immigration and emigration, 1975

Country of emigration	Country of immigration							
	Austria	Belgium ¹	France ²	Germany ³	Netherlands	Sweden	Switzerland ⁴	United Kingdom ¹
Algeria	—	3,000	420,000	2,000	—	¹ 200	—	500
Austria	—	—	—	78,000	—	—	21,000	—
Finland	—	—	—	—	—	103,000	—	—
Greece	—	8,000	5,000	212,000	2,000	8,000	—	2,500
Italy	¹ 2,000	85,000	210,000	318,000	10,000	2,500	281,000	56,500
Morocco	—	60,000	165,000	¹ 18,000	28,000	500	—	1,000
Portugal	—	3,000	430,000	70,000	5,000	1,000	4,000	4,000
Spain	—	30,000	250,000	132,000	18,000	2,000	72,000	15,500
Tunisia	—	—	90,000	¹ 15,000	1,000	200	—	—
Turkey	26,200	10,000	35,000	582,000	38,000	4,000	16,000	1,500
Yugoslavia	136,000	3,000	60,000	436,000	10,000	23,000	24,000	3,500
Other	21,000	76,000	235,000	328,000	104,000	60,000	135,000	690,000
Total	185,000	278,000	1,900,000	2,171,000	216,000	204,000	553,000	775,000
Percent of labor force	6.1	7.1	8.7	8.4	4.6	5.0	18.8	3.1

¹ Estimates for 1974.² Excludes 124,000 seasonal workers.³ Data for September 1975, includes unemployed foreign workers.⁴ Excludes 86,000 seasonal workers and 85,000 foreign workers who commute daily across international borders.

figures on the number of daily international commuters who work in France, for example, but actually live in Spain or Belgium. The free movement of Common Market migrants into member states makes it difficult to get an accurate count of border crossings. Further problems in measuring the number of foreign workers in Western European countries are created by illegal immigration and by tourists who enter a country and stay to take temporary employment.

Thus, the number of migrant workers currently in the Western European countries is not accurately known. However, an idea of the magnitude involved can be gained from statistics from a continuous reporting system set up by the Organization for Economic Cooperation and Development (OECD) in 1973.⁶ Table 18 presents data from the OECD system by country of immigration and emigration in 1975. The table shows that foreign workers represent about 19 percent of the Swiss labor force; 8 to 9 percent of the German and French work forces; about 6 to 7 percent in Austria and Belgium; 4 to 5 percent in the Netherlands and Sweden; and 3 percent in the United Kingdom. Prior to the recession, foreign workers made up greater proportions of the labor force—25 percent in Switzerland and around 10 percent in Germany and France. The figures in table 18 include participants in the free movement of labor within the European Community countries.

As the term "guestworker" implies, the host countries of Western Europe have tended to regard the foreign workers as transient. Legal frameworks discourage migrants

SOURCE: Organization for Economic Cooperation and Development, SOPEMI (Continuous Reporting System on Migration), 1976 report.

from permanently settling in these countries.⁷ Also, with some exceptions, the migrants are not looking for a new home. They want jobs and money which they can send home or take with them when they leave after a few years. The "guestworker" phenomenon of these countries has no exact counterpart in the United States, Australia, Canada, Sweden, and Great Britain. These immigrant-receiving countries have traditionally taken the position that those who arrive from abroad to work may also become citizens; the legally arriving foreign worker, in short, has usually been granted immigrant status. These countries do not define their foreign populations as "migrants" or "guestworkers" but as "immigrants."

There has been a growing influx of illegal migrants in Western European countries since the virtual halt in "guestworker" hiring instituted during the 1974-75 recession. Such persons either cross international borders illegally or enter legally as visitors or students and remain to work without a permit. The European Community has estimated that there are about 600,000 illegal aliens working in member countries.⁸ German government authorities estimate that about 200,000 illegal foreign nationals are working in that country.⁹ In 1976, Germany passed a law providing for prison terms and larger fines for the illegal

⁷ For example, in many countries there are work permits tying workers to certain jobs, other restrictions on job mobility, requirements for renewal of work and residence permits, and rules inhibiting the reunion of families.

⁸ "Illegal Immigrants," *The Economist*, Nov. 13, 1976, p. 68.

⁹ Embassy of the Federal Republic of Germany (Washington, D.C.), *What's New in Labor and Social Policy?* January/February 1976, pp. 12-14.

recruitment and employment of foreign workers. In addition, the Commission of the European Communities has before it a proposal for a harmonized policy on illegal immigration.

In the United States, illegal aliens have also become a growing problem. Immigration officials place the number of illegals at between 7 and 12 million persons (including family members).¹⁰ A Cabinet-level Presidential committee reported in 1976 that illegal aliens have become so numerous that those apprehended annually are almost double the number of foreign citizens entering the United States legally.¹¹

Seasonality

Unemployment statistics, like many other economic series, reflect in part a regularly recurring seasonal movement which can be estimated on the basis of past experience. Seasonal adjustment procedures make allowances for changes in average climatic conditions and institutional arrangements during the year such as the influx of young persons into the labor market at the end of the school term.

Seasonality plays a more important role in some countries than in others. For instance, the unusually long and severe winters in Canada cause higher average levels of unemployment. One would also expect very large seasonal swings related to the winter in Sweden, but this has been mitigated as a result of massive government programs to stimulate winter employment. In the United States, seasonal variations explain about 90 percent of the month-to-month variance in the unemployment figures, on average, over the year. In construction alone, one study estimated that seasonal layoffs represented about 38 percent of all unemployment.¹²

From its low point in February or March to its peak in August, the U.S. contract construction industry characteristically has a massive upswing in employment. The magnitude of these seasonal swings is compared with other countries in table 19. This table indicates that the United States and Canada have the sharpest seasonal changes in construction employment. Seasonal fluctuations were the mildest in Italy and were also quite small in France, Great Britain, and Australia. Germany and Sweden were in the middle range.

European efforts to better utilize manpower during

¹⁰Vernon M. Briggs, Jr., "Mexican Workers in the United States Labor Market: A Contemporary Dilemma," *International Labour Review*, November 1975, p. 352.

¹¹*Immigration: Need to Reassess U.S. Policy*, Departments of Justice and State: report to the Congress, 1976. Also, see "Illegal Alien Study Urges Rethinking on Immigration," *The Washington Post*, Jan. 9, 1977, p. 1.

¹²*Employment and Training Report of the President, 1976*, p. 62. See also Robert J. Myers and Sol Swerdloff, "Seasonality and Construction," *Monthly Labor Review*, September 1967, p. 1.

Table 19. Construction industry: Range of indexes of employment, 1965 and 1975

(Average employment for each year = 100)

Country	1965		1975	
	Quarterly	Monthly	Quarterly	Monthly
United States . . .	87-109	85-111	94-106	92-107
Australia	98-101	(1)	97-103	(1)
Canada	83-114	81-116	86-111	86-112
France	98-101	(1)	97-102	(1)
Germany	94-104	92-104	96-102	93-103
Great Britain . . .	98-102	97-103	99-101	98-101
Italy	99-101	(1)	99-101	(1)
Sweden	91-107	91-107	98-102	95-107

¹Not available.

NOTE: Quarterly data are 3-month averages except for Australia (February, May, August, and November), France (March, June, September, and December), and Italy (January, April, July, and October).

the winter months have helped to hold down seasonal unemployment in construction, and Canada has waged an aggressive campaign to reduce seasonality in construction. Similar goals were an objective of the National Commission on Construction Labor, created in the United States in 1969. The commission has explored ways to stabilize labor supplies, partly by encouraging the continuance of construction projects during the winter months.

Low temperatures, frozen ground, snow, rain, and mud impede outdoor construction during the winter. Over the years, continuing technological advances have made it possible to overcome many of these obstacles. American scientists and engineers have developed materials and techniques to permit winter construction. Such methods, although widely known, are not widely used. Canada, with winter temperatures well below freezing, has made great strides in all types of construction work through the year.¹³ During the past decade, Canada has made wide use of polyethylene wind barriers, interior heating units, cold-resistant concrete, and other materials which allow for year-round building. Experience throughout Europe—particularly in Scandinavia—confirms the technical feasibility of construction in extreme cold.¹⁴

An impediment to increased winter construction in the United States is the additional cost. Special protective shelter and protective clothing for workers may have to be provided. But when the difficulties and costs of winter operation are weighed against the costs of halting operations, the balance is often in favor of winter construction.

¹³See Economic Council of Canada, *Manpower in Construction* (Ottawa, 1975) and *Toward More Stable Growth in Construction* (Ottawa, 1974).

¹⁴Testimony of James J. Reynolds, Under Secretary of Labor, on "Seasonal Unemployment in the Construction Industry," Hearings before the Select Subcommittee on Labor of the Committee on Education and Labor, House of Representatives, 90th Congress, Second Session, on HR 15990, July 15, 1968, p. 5.

The cost savings to the economy become particularly notable when the direct and indirect savings in reduced unemployment are considered. The Department of Labor has estimated that up to a 7-percent increase in winter construction costs will be offset by a decrease in unemployment insurance outlays.¹⁵

Experience in other countries. Other industrialized countries began working on the diminution of seasonality of construction employment sooner than the United States. These steps have been particularly pronounced since the end of World War II. Two major weapons against winter unemployment have been used by foreign policy makers: compensatory employment and compensatory income policies.¹⁶ Compensatory income policies will be discussed in the section on income maintenance measures.

Compensatory employment policies attempt to reduce seasonal unemployment in construction through programming of regular public works projects, adoption of emergency public works programs, stimulation of the private construction sector, and scheduling of private projects.

Several Western European countries require all public construction to take place either on a year-round basis or to be concentrated during the winter months. In Germany, for example, a government directive earmarks 30 percent of all Federal construction appropriations for use between November and March. In Canada and Great Britain, administrative budget review is required to assure that the maximum amount of winter employment is obtained, and in many countries there are subsidies for winter housing construction.

Sweden has a direct and comprehensive approach to the full utilization of the construction labor force. Construction scheduling, carried out through the issuance of permits, is based upon detailed appraisals of local requirements and resources which are integrated into a national program. Seasonal demand is leveled off in the peak season by issuing building permits which require work to begin in November, and often to be completed by April.

In the United States, public facilities account for roughly one-third of total construction spending, but the ratio is approximately one-half in Great Britain and France. In Sweden, over 90 percent of all housing is built with state loans. In addition, publicly owned and controlled industries occupy an important role in the industrial structure of many Western European countries and thereby introduce

¹⁵ *Ibid.*, p. 6.

¹⁶ For a more detailed description of these programs, see E. Jay Howenstine, "Programs for Providing Winter Jobs in Construction," *Monthly Labor Review*, February 1971, pp. 24-32, and *Compensatory Employment Programs: An International Comparison of Their Role in Economic Stabilization and Growth* (Paris, OECD, 1969); also Jan Wittrock, *Reducing Seasonal Unemployment in the Construction Industry* (Paris, OECD, 1967).

an important stabilization potential in the industrial construction sector. Thus, the governments of these countries can exercise a great deal of control over seasonal fluctuations through the timing of construction projects.

The results of seasonal stabilization measures have been fairly impressive. In Sweden, fluctuations in employment in the controlled building sector have narrowed considerably. Seasonal stabilization programs in Germany have virtually abolished mass dismissals by medium- and large-sized firms. Subsidies for winter housing construction in Canada have virtually eliminated seasonality in homebuilding.

The presence of a large number of foreign workers in the construction labor force of many European countries offers another solution to seasonality in the host country. In Austria, France, and Switzerland, such workers are issued temporary work permits which require them to return home before the Christmas season. New temporary permits are then issued the following spring. This policy exports the problem of seasonal unemployment to the workers' country of origin.

Income maintenance arrangements

Unemployment insurance and such income maintenance programs as short-time payments, "bad weather" compensation, and early retirement benefits may have an important impact on unemployment. Unemployment benefits may encourage workers to remain unemployed longer, while the other income maintenance measures may serve to reduce unemployment.

High levels of unemployment benefits payable for long periods of time allow workers to remain unemployed longer while they seek work with skill requirements and pay similar to those of their previous jobs. A major question has been whether high levels of unemployment benefits discourage efforts to find work quickly, thereby prolonging unemployment. Several research studies during the last few years have addressed this question.¹⁷

¹⁷ Stephen T. Marston, "The Impact of Unemployment Insurance on Job Search," *Brookings Papers on Economic Activity*, No. 1, 1975 (The Brookings Institution, Washington, D.C.); Martin S. Feldstein, "Lowering the Permanent Rate of Unemployment," a study prepared for the Joint Economic Committee, Congress of the United States, Sept. 18, 1973, and "Unemployment Insurance: Time for Reform," *Harvard Business Review*, March-April 1975, pp. 51-61; H.G. Grubel, D. Maki, and S. Sax, "Real and Insurance-Induced Unemployment in Canada," *Canadian Journal of Economics*, May 1975, p. 174-91; C. Green and J. M. Cousineau, *Unemployment in Canada: The Impact of Unemployment Insurance* (Ottawa, Economic Council of Canada, 1976); N. Swan, P. Mac Rae, and C. Steinberg, *Income Maintenance Programs: Their Effect on Labour Supply and Aggregate Demand in the Maritimes* (Ottawa, Economic Council of Canada, 1976); P. A. Cook, G. V. Jump, C. D. Hodgins, and C. J. Szabo, *Economic Impact of Selected Government Programs Directed Toward the Labor Market* (Ottawa, Economic Council of Canada, 1976); J. S. Cubbin and K. Foley, "The Extent of Benefit-Induced Unemployment in Great Britain: Some New Evidence," *Oxford Economic Papers*, March 1977, pp. 128-40.

For example, three reports recently released under the auspices of the Economic Council of Canada investigate various aspects of the impact of unemployment insurance benefits on the rate of unemployment in Canada.¹⁸ In 1971, a new unemployment insurance (UI) act took effect in Canada, extending coverage, increasing the maximum weekly benefit and the ratio of payments to former earnings, and establishing more liberal eligibility requirements. Subsequently, seasonally adjusted unemployment rose despite an increasing number of vacancies. While the authors of the studies generally agree that these events were caused by the 1971 revisions, each study focuses on a particular dimension of the relationship. Green and Cousineau were primarily concerned with the impact on the unemployed segment of the labor supply. They found that the more generous UI benefits strengthened the incentive to remain or become unemployed, increasing the unemployment rate from 1 to 1.5 percentage points on this account alone. Higher UI benefits were found to facilitate a more selective job search than would have been possible prior to 1971. However, other factors may have also been operating, as noted in the study by Swan, MacRae, and Steinberg. They confined their research to one region—the Maritime Provinces—and concentrated on the effects of UI on employment rather than unemployment. They observed increasing participation rates and employment levels for women and young people as a result of the 1971 act. Finally, Cook, Jump, Hodgins, and Szabo limited their study to the macroeconomic impact of the revised act. They found the new act was clearly expansionary, since the unemployed were assured of greater purchasing power than they could otherwise have expected.

Some countries have instituted mechanisms to counter the incentive to stay idle and live off unemployment checks. Japan's approach is to pay workers a bonus when they go back to work, with the size of the bonus determined by the amount of time the worker could have continued to collect benefits. France and Great Britain try a different approach. They scale down the size of the unemployment benefit the longer it is paid.

In some countries, the systems of benefit payments to workers placed on reduced workweeks provide a mechanism for employers to keep workers partially employed rather than laying them off outright when economic activity declines. Such workers continue to be classified as employed rather than unemployed. Construction workers receiving "bad weather" compensation are also not regarded as unemployed. Finally, financial inducements toward early retirement may keep a number of persons out of the labor force who might otherwise have been looking for work.

Unemployment insurance. An international comparison of unemployment insurance systems indicates that most countries now have fairly broad coverage of the labor force, long

¹⁸ *Ibid.*

Table 20. Unemployment insurance systems, mid-1975

Country	Percent of labor force covered ¹	Required weeks employed preceding unemployment	Waiting period (days)	Maximum duration of benefits (weeks)
United States	82	(²)	7	65
Canada	89	8 out of 52 ³	14	51
Japan	45	26 out of 52	7	⁴ 15-50
France	60	13 out of 52	0	⁴ 52-104
Germany	77	28 out of 156	0	52
Great Britain	80	28 out of 52	3	52
Italy	51	52 out of 104	7	26
Sweden ⁵	100	20 out of 52	5	⁴ 60-90

¹ Coverage in 1974.

² Eligibility requirements vary widely by State.

³ For minimum benefits; 20 weeks of employment in the preceding year are required for maximum benefits.

⁴ Maximum duration for earnings-related benefits depends upon age of claimant with duration rising with age.

⁵ Figures shown relate to flat-rate benefits. For earnings-related supplements, waiting period is 14 days and maximum duration of benefits is 26 weeks.

⁶ The trade union system covers about two-thirds of the labor force and the labor market support program covers the remainder, including new entrants; other figures are for trade union system.

maximum durations of benefits, and benefits which typically replace at least half of former earnings of the average worker.¹⁹ In the United States, each of the States, the District of Columbia, and Puerto Rico have separate unemployment insurance laws subject to broad Federal guidelines. Because no uniform system exists, the most frequently applicable regulations must be used for comparisons with other countries. Australia is not covered here since unemployment-relief payments are made in that country only to persons with low income.

Table 20 indicates that Sweden leads all countries in coverage of the labor force, with virtually all persons covered who complete the specified waiting period. About two-thirds of the labor force is covered by a government-subsidized system run by the trade unions. In addition, in 1974 Sweden established a "labor market support" system extending coverage to persons not in a trade union and to those whose benefits with the fund have been exhausted; also covered are all workers 16 and over who have recently entered the labor market as well as persons reentering the labor market.

Canada, the United States, and Great Britain all had coverage of at least four-fifths of the labor force in 1974.²⁰ The relatively low coverage in France, Italy, and Japan reflects, in part, large numbers of self-employed and unpaid family workers, persons generally not covered by unemployment insurance.

¹⁹ Some additional information on unemployment compensation is presented in Constance Sorrentino, "Unemployment Compensation in Eight Industrial Nations," *Monthly Labor Review*, July 1976, pp. 18-24.

²⁰ In 1975, coverage in the United States was increased to about 90 percent of the work force under Emergency Jobs and Unemployment Assistance Act passed in December 1974.

To become entitled to unemployment benefits, a worker must have worked a certain number of weeks, be willing to return to work or to undertake training, have suffered loss of employment, and, in some cases, have met a minimum level of earnings while employed.

All countries except Sweden require a set length of previous work to ensure that the unemployed person has suffered a wage loss. In the United States, most States require a minimum amount of earnings in the preceding base year rather than a minimum number of weeks of employment. In the other countries, eligibility requirements range from 8 weeks of employment out of the preceding 52 weeks in Canada (for minimum benefits) to 52 weeks of employment out of the preceding 104 weeks in Italy.

In Sweden, new entrants and reentrants to the labor force may become eligible for benefits after a 3-month period of unemployment during which they are actively seeking work. The eligibility requirement under the trade union system is 20 weeks of employment in the preceding year.

A waiting period must usually be served before unemployment benefits become payable. Canada requires the longest waiting period—2 weeks. The United States, Italy, and Japan require 1 week. Less than a week is required in Sweden (trade union system) and Great Britain (for flat-rate benefits), and no waiting period is imposed in France and Germany. Except for Japan and Sweden, a waiting period is required for each new spell of unemployment. In Japan, a waiting period of any 7 days during the preceding year satisfies the requirement. Technically, Sweden has one waiting period of 5 days during the year, but a 1964 labor-management agreement provides for employer-paid layoff benefits during this period.

In the United States, the maximum duration of benefits tends to be adjusted according to the degree of unemployment that prevails in the economy. In times of low unemployment, American workers do not fare as well as workers in most of the other countries studied, but in times of high unemployment, benefits are extended under Federal programs; during the 1974-75 recession, extensions to 65 weeks of benefits were enacted.²¹ A similar mechanism exists in Canada where the normal 26-week benefit period is doubled when the national unemployment rate exceeds 4 percent, a condition met since 1967. In Japan, 1975 legislation also contains provisions for extended benefit periods.

A maximum benefit period of 1 year is allowed in Germany and Great Britain. In Italy, benefits are payable for 26 weeks. Japan, France, and Sweden vary the maximum duration of benefits according to the age of the claimant.

Uniquely, Japan provides a lump-sum bonus worth 30 to 70 days of unemployment benefits as an incentive for

²¹The normal U.S. benefit period varies from 26 to 36 weeks according to State.

quick reemployment. The payment is determined by the unused portion of insurance rights.

Weekly benefits are expressed under most unemployment insurance benefit formulas as a percentage of the worker's recent average wages. In the United States, Canada, France, and Germany, a benefit ceiling is imposed. In France, the benefit is scaled down to a lower level after 3 months of unemployment. Under its regular system, France provides flat amounts of unemployment assistance in combination with the earnings-related insurance compensation for the first 3 months of unemployment without a means test.²² Thereafter, the assistance payments are subject to a means test. Japan and Sweden use systems of wage classes that produce a scale of percentages which vary inversely to previous earnings levels. The Swedish labor market support system provides a flat rate benefit, using a means test.

In Italy, there is an earnings-related scheme for agriculture, industry, and construction; only flat amounts are payable to all other unemployed workers. Prior to 1966, flat amounts were also paid in Great Britain, but graduated supplements based on previous earnings have been added to flat benefits for the first 6 months of unemployment.

Supplementary allowances for a nonemployed spouse and children are added in the form of flat amounts to the basic benefit in France, Great Britain, and Japan. In France, the supplements are provided under the unemployment assistance program, subject to a means test. The French worker previously earning the average manufacturing wage would be eligible for the supplemental assistance if the household had no other income than the worker's unemployment benefits and a family allowance. In the United States, only 10 States and the District of Columbia provide dependents' supplements. In Canada, these supplements are provided to workers whose income is below a certain level or whose unemployment is prolonged.

Unemployment benefits may vary by level of former income and marital status. In addition, in all of the countries except the United States, allowances are payable to families with children and are paid whether or not a worker is unemployed.²³

Table 21 presents a comparison of unemployment benefits as a percent of a manufacturing worker's average earnings in mid-1975.²⁴ In the United States, an unmarried unemployed worker generally receives unemployment benefits equal to approximately 50 percent of former gross earn-

²²Means-tested programs establish eligibility for benefits by measuring individual or family resources against a standard, usually based on subsistence needs.

²³Family allowances are primarily regular cash payments made by the government to families with children. In some countries, these programs also include educational grants, birth grants, maternal and child health services, and sometimes allowances for adult dependents. Family allowances are payable to families that contain 1 child or more (Canada, Germany, Italy, and Sweden), 2 children or more (France and Great Britain), or 3 children or more (Japan).

ings, although not in excess of a State-established maximum. The maximum benefit in the majority of States is 50 percent of the average State wage in insured employment.

In contrast, all of the foreign countries studied except Great Britain provide more than 50 percent of the average manufacturing worker's previous earnings. France provides the highest level of benefits, replacing 90 percent of former earnings to workers laid off for cyclical or structural reasons, subject to official authorization. In mid-1976, about 1 out of every 8 persons registered as unemployed was receiving this high rate of benefit. Workers not eligible for this system receive a much lower level of benefits.

Canada, Japan, Germany, Sweden, and Italy replace up to 60 percent or more of former earnings of the average manufacturing worker. In Italy, the highest benefits go to industrial workers, who receive two-thirds of former earnings. Italian construction workers can obtain one-third of their former wage (plus flat-rate benefits) and agricultural workers 60 percent; persons who lose their jobs outside agriculture, industry, and construction or who did not satisfy eligibility requirements are entitled to very small flat-rate benefits.

Both France (regular system) and Great Britain scale down the benefit amount after an initial period of unemployment. In France, regular benefits amount to 56 percent of the unmarried manufacturing worker's former wage during the first 3 months of unemployment; thereafter, the benefit falls to 50 percent. In Great Britain, a flat rate is paid for the full year in addition to an earnings-related supplement paid only for the first half-year; thus the 38-percent replacement rate for the first 6 months falls to 19 percent in the next 6 months of unemployment. Public assistance payments, including compensation for mortgage interest and rent subsidies, can substantially increase these ratios.

The payment of supplements for dependents in several countries, and of family allowances in all countries except the United States and Japan, causes the level of income support for an unemployed married person with two children to rise relative to the U.S. level (table 21). The addition of

²⁴For comparison it is assumed that average American and Canadian workers receive no dependents' supplements and that the worker has been earning the average wage in manufacturing prior to unemployment. Earnings-related unemployment benefits are based on a person's earnings in a past period of time. This past period ("base period") varies from country to country. For example, in the majority of States in the United States, the base period is the highest quarter of wages during the year preceding unemployment. In Japan, benefits are based upon the average daily wage in the 6 months preceding unemployment. France uses a base period of the 3 months preceding unemployment. In Great Britain, the base period is the tax year (April-March) preceding the calendar year in which the claim to benefit is made. These varying base periods were not taken into account in the calculations made in table 21. These calculations simply state the level of benefits available in mid-1975 as a percent of average manufacturing earnings in mid-1975.

Table 21. Unemployment benefits as a percent of average earnings, manufacturing workers, mid-1975

Country	Single worker	Married worker with 2 children	
		Unemployment benefits	Unemployment benefits and family allowances
United States ¹	50	50	50
Canada	63	63	68
Japan	60	62	62
France			
Regular system			
First 3 months	56	63	² 69-77
Subsequent months	50	57	² 63-71
Supplementary benefits system ³	90	90	² 96-104
Germany	60	60	66
Great Britain			
First 6 months ⁴	38	60	63
Next 6 months ⁴	19	41	44
Italy			
Flat-rate benefits	9	22	22
Earnings-related scheme ⁵	67	80	80
Sweden ⁶	62-72	62-72	67-79

¹Figures shown are representative of the majority of States.

²Lower figures relate to family allowance payable to family with more than 1 wage earner; higher figure includes single wage earner allowance.

³For workers under age 60 laid off for cyclical or structural reasons.

⁴Means-tested public assistance payments can substantially raise these ratios.

⁵Industrial sector employee at the same enterprise for 3 months.

⁶Trade union system. Numerical ranges due to trade union funds.

dependents' supplements in Great Britain increases the level of earnings replacement above the U.S. level for the first 6 months of unemployment. In France, the addition of supplements under the regular system keeps the replacement ratio higher than the U.S. level even after it is scaled down following the first 3 months of unemployment. Under the supplementary program, there are no dependents' supplements, but family allowances continue to be received.

All the countries studied except the United States provided for higher wage replacement rates for persons earning relatively low wages. In Canada, a benefit rate of 75 percent applies to claimants with dependents and with earnings below one-third of maximum weekly insurable earnings. Similarly, Japanese workers at the low end of the wage scale receive 80 percent of their former wage. France allows a maximum payment of combined regular insurance and assistance of 90 percent of the former earnings of the household. This maximum is raised to 95 percent if there are dependents.

In Great Britain, the maximum of the flat rate plus earnings-related supplements equals 85 percent of former earnings. Germany allows unemployment insurance plus family allowances to amount to 80 percent of former net

earnings (about 70 percent of gross earnings). Sweden's trade union system allows a maximum benefit of about 90 percent of gross earnings. In Italy, flat-rate benefits will replace a higher proportion of the earnings of a low income than of a middle- or high-wage earner. However, there is no maximum percentage applied. In contrast to the foreign practices, the United States does not provide higher replacement rates to lower income workers. But such workers are eligible for such welfare programs as food stamps.

In the United States, unemployment benefits are treated as tax-free income. This is also the case in Japan, Germany, Great Britain, and Italy. In Canada and Sweden, however, unemployment benefits are taxable; in France, all unemployment benefits except the flat-rate assistance payments are taxable. Canadian unemployment benefits typically amount to 63 percent of former gross earnings, but, after taxes, the worker actually receives less. Therefore, Canadian benefits received by the worker are only slightly higher than U.S. payments. Similarly, "after-tax" replacement ratios in France and Sweden would be somewhat nearer the U.S. level.

Short-time payments. In some countries, special payments are available for workers placed on short workweeks. During 1974-75, the introduction or improvement of compensation for partial unemployment permitted a fairly widespread resort to part-time work in several countries as a means of spreading a reduced volume of employment among the work force.

For many years, statutory unemployment insurance or assistance schemes in France, Germany, Great Britain, and Sweden have contained provisions covering payments for partial unemployment.²⁵ Japan introduced such payments in 1975. In Italy, partial-unemployment compensation is provided by a special institution, the Wage Supplement Fund. The United States and Canada do not have systems for short-time payments.

Short-time payments replace 70 to 90 percent of foregone gross earnings in Japan, 80 percent in Italy, 60 percent in Germany, and about 50 percent in France. Generally, financing is partly out of public funds and partly by the firms concerned.

Almost 3 million Japanese workers (5 to 6 percent of the labor force) received short-time compensation at some time during 1975. In Germany, the number of such workers peaked at 4 percent of the labor force in early 1975. There were also large numbers of workers receiving short-time compensation in France and Italy during 1974-75. Without the special benefit programs, many of the workers on short workweeks would have been unemployed. Short-time payments have undoubtedly played an important role in pro-

tecting many workers threatened by dismissal in these countries.

Some countries, such as the United States, have traditionally rejected the idea of compensation for short-time work because it can encourage rigidity in the labor market, with employers receiving public funds to keep workers employed while not adopting necessary technological and organizational changes. While this argument is recognized as valid, defenders of the short-time compensation system are prepared to pay the price. They are convinced that, as soon as temporary difficulties are overcome, it will prove to be much more efficient and cheaper to have maintained trained personnel.²⁶ Also they consider that layoffs are viewed most unfavorably by the public (see section on legal and social factors).

"Bad weather" compensation. Most European countries provide special compensation for construction workers who lose work time on account of bad weather. These schemes take three major forms: Statutory systems; collective agreements; and collective agreements given the force of law.

To qualify for bad-weather benefit payments, workers are generally required to report for duty at the usual time and to remain available for any other reasonable alternative work which may be assigned to them by the employer. The amount of compensation ranges between 60 and 75 percent of the basic wage, but in some cases is as high as 90 percent. In some countries, such as Austria, Norway, Sweden, and Great Britain, a limit is placed on the number of hours or days for which bad weather is compensated. In other countries, such as Germany and Ireland, no time limit has been instituted. In most countries, these schemes are financed only through contributions from employers. In a few countries, workers also pay contributions in addition to their unemployment insurance contributions. In general, government financing has been confined to occasions when funds prove inadequate.

The system in Germany provides a good example of a compensatory income program. Since 1959, construction workers in Germany have been kept on the employer's payroll during the winter months (November 1 to March 31) and receive compensation—termed "bad weather money"—for any days not worked because of inclement weather. The employer pays the bad weather compensation along with the workers' regular earnings and is reimbursed for the bad weather pay by the Federal Employment Office. The German construction worker does not sever his employment relationship in order to collect benefits and he is not counted as unemployed. Prior to the institution of bad weather money, the German construction worker had to either depend on unemployment insurance or find other work during bad weather. The employment relationship

²⁵For further information see Sar A. Levitan and Richard S. Belous, "Work-sharing Initiatives at Home and Abroad," *Monthly Labor Review*, September 1977, pp. 16-20; and Peter Henle, *Work Sharing as an Alternative to Layoffs* (Washington, Congressional Research Service, July 19, 1976).

²⁶National Commission for Manpower Policy, *Reexamining European Manpower Policies*, Special Report No. 10 (Washington, August 1976), p. 31.

was severed and he was counted as unemployed in the German statistics.

As a result of the bad weather money system, German unemployment rates in the construction industry are not appreciably higher than the overall unemployment rate. Before the institution of the system, construction industry unemployment was about 3½ times the overall unemployment rate.

Another practice with a similar effect occurs in Great Britain. There, construction workers receive a guaranteed minimum wage; this encourages their employers to utilize work forces as fully as possible. The scheme provides for the worker to receive the normal wage for half the time lost during a normal workweek, with a guarantee that he will receive his usual pay for a minimum of 36 hours in a week. He is also entitled to 36 hours of pay during the following week. Thereafter, if the bad weather continues, he is required to register as unemployed under the unemployment compensation system. This scheme places the cost of idleness directly on the employer, thus creating an incentive for him to stabilize production at the highest possible level.

Early retirement benefits. Payment of early retirement benefits can reduce recorded unemployment in two ways. First, the early retiree may withdraw from the labor force; therefore, he would not be regarded as unemployed. Second, his early retirement may free a job for an unemployed person. Whether a retired person wishes to continue to work depends in part on the amount of his pension. The higher it is, the less likely he will be to continue working.

Various schemes for early retirement have been offered to workers in several countries, usually for cyclical or structural reasons. In France, for workers over 60 years of age at time of dismissal or who become 60 while receiving unemployment benefits, a 1972 income guarantee scheme replaced the former payments made to workers until they reached retirement age—"waiting allowances"—under the unemployment insurance program.²⁷ Recipients of the income guarantee, unlike recipients of "waiting allowances," are not included in the registered unemployed. The scheme guarantees that workers dismissed after reaching age 60 will receive benefits up until their retirement at age 65. These benefits are more generous than the normal unemployment benefits, replacing up to 85 percent of former earnings.

As of July 1975, French manual workers who have been engaged in more arduous kinds of labor, and also all women workers who have borne at least three children, became eligible for early retirement at 60 on the same pension as is normally given at age 65.²⁸ The measure was enacted partly in response to a union campaign for early retirement as a means of combating rapidly rising unemployment. It

was estimated that initially about 75,000 persons were affected by the new scheme.

In Great Britain, an early retirement scheme began in January 1977.²⁹ It provided £23 a week tax-free to employed or unemployed persons who opted to retire a year early. If such early-retirement volunteers were employed, their employers had to replace them with someone on the unemployment register. The initial trial scheme expired at the end of June 1977, and 10,600 persons were involved. A second phase of the scheme began July 1, 1977, and was expected to cover about 13,000 more persons.

Sweden instituted a national partial retirement scheme in mid-1976.³⁰ If the insured worker transfers to part-time work, he can receive a partial pension between ages 60 and 65. The pension replaces 65 percent of the income lost because of the transfer. The scheme is financed by employers through a social insurance fee. The law also makes it possible to receive a reduced pension as early as age 60, while the usual pensionable age was lowered from 67 to 65. For persons who opt for early retirement, benefits are reduced by 0.5 percent per month below the age of 65.

Labor market programs

Labor market policies constitute the measures used by government to upgrade the skills of workers, to create jobs, and to match people and jobs. The general techniques of labor market policy have been developed and used in both Western Europe and North America. However, differences in economic environment, social attitudes, and institutional arrangements have had an impact on the mix of labor market measures and on the way in which they have been applied in different countries.³¹

The following sections present a brief discussion of some of the instruments of labor market policy used in the major industrial countries. Government-sponsored adult training seeks to upgrade the quality of the work force. Public works projects have been used to create jobs in times of cyclical or seasonal employment downturns. In the area of matching people and jobs, relocation incentives for workers and industries and the work of the national employment services are significant instruments of labor market policy.

Training programs. The United States first embarked upon a large-scale government program of retraining for adults

²⁹See "Job Swap," Incomes Data Services, *IDS International Report*, October 1976, p. 2; and "Job Release Takes Off," *Department of Employment News*, January 1977, p. 1.

³⁰"Flexible Retirement Provisions in Sweden: A Novel System," *European Industrial Relations Review*, March 1977, pp. 11-12.

³¹For a study of the different strategies taken with regard to the mix between unemployment compensation and other employment policies, see Organization for Economic Cooperation and Development, *Unemployment Compensation and Related Employment Policy Measures* (Paris, OECD, forthcoming).

²⁷Organization for Economic Cooperation and Development, *Economic Survey of France* (Paris, OECD, February 1973), p. 22.

²⁸Incomes Data Services, "Early Retirement for Some Manual Workers in France," *IDS International Report*, July 1976, pp. 2-3.

under the 1962 Manpower Development and Training Act. The MDTA expired at the end of fiscal year 1973. Government training programs are now authorized under the Comprehensive Employment and Training Act (CETA) of 1973. Western European countries have been operating retraining programs throughout the postwar period, and in some cases, as far back as the 1920's and 1930's.³²

The European training programs offer adult trainees a variety of benefits to enable them to undertake training. These benefits include compensation for loss of earnings, social insurance premiums, lodging and food, special clothing and tools, travel, and dual household maintenance.³³

Unlike the situation in the United States, where 85 percent of all training program enrollees were disadvantaged in 1974,³⁴ European training programs are not concentrated on the disadvantaged. The European programs are available to persons seeking advancement or preparation for shortage occupations as well as to the unemployed and unskilled.

Public systems of continuous training of adults, sometimes called lifetime learning, are coming to the fore in Western Europe.³⁵ The need for a more qualified work force is judged to be so urgent and the right to training for advancement so fundamental that France (1967 and 1971) and Germany (1969) have made outright commitments to the principle of universal eligibility to continuing lifetime training. The existence of a vast amount of adult training in the United States, including private and public vocational training, and the long period of general education compared with other countries probably lessen the need for "permanent education."

New enrollments in government-sponsored training programs were 2.4 percent of the Swedish labor force in 1976 compared with 1.5 percent in the United States in fiscal 1976.³⁶ Recent rapid expansion in Canadian training

programs has put that country close to Sweden in the extent of adult training. German legislation in 1969 and 1971 had laid the basis for an explosive expansion of adult training under public sponsorship, and France's 1971 law on adult training sets a goal of keeping over 2 percent of the labor force constantly in training.³⁷

Sweden is unique in that it has deliberately employed its adult training programs as an economic instrument for countercyclical purposes, expanding them rapidly whenever demand slackens. Thus, the training courses in Sweden are used as a form of public works for the unemployed as well as a means of upgrading the skills of the labor force. They have been an important factor in holding Swedish unemployment rates low during economic downturns.

Job creation. Public works projects are used in most countries to offset cyclical or seasonal declines in employment. In Germany, unemployment insurance funds may be used to provide jobs on public works projects in lieu of making unemployment insurance payments. The relief work programs include road construction, reforestation, and recovery of wastelands. Preference is given to projects likely to lead to permanent jobs.

Projects similar to those in Germany are utilized in Sweden. In 1976, almost 1 percent of the Swedish work force was employed in relief works. The Swedish Labor Market Board also has unique powers for stimulating the investment of private capital to create jobs and mitigate cyclical fluctuations.³⁸ This requires close coordination of monetary and fiscal policy with employment policy. Employers may set aside as much as 40 percent of their profits for capital investment, depositing a fixed proportion of this in the Swedish central bank, without paying income taxes on the amount set aside. When it is determined that capital investment would be appropriate to combat a recession, the funds may be released with additional tax incentives to employers who use them for new plant and equipment.

In the United States, the first large-scale public works employment program since the 1930's was enacted in 1971. Under this Public Employment Program (PEP), funds were made available nationally for public service employment when the national unemployment rate equaled or exceeded 4.5 percent for 3 consecutive months. As a result, 226,000 persons, or about 0.3 percent of the labor force, obtained employment during fiscal 1972. PEP was terminated at the end of fiscal 1973, and public works jobs are now funded under CETA. In fiscal 1976, first-time enrollments in public

³²See Margaret S. Gordon, *The Comparative Experience with Retraining Programs in the United States and Europe* (Berkeley, University of California, 1966).

³³U.S. Department of Labor, Manpower Administration, *Manpower Policy and Programs in Five Western European Countries*. (Manpower Research Bulletin Number 11, July 1966).

³⁴Under CETA, the composition of participants in U.S. programs has changed somewhat. In fiscal 1976, 76 percent of all trainees under Title I of CETA were classified as disadvantaged.

³⁵Beatrice Reubens, "Manpower Policy in Western Europe," *Manpower*, November 1972, pp. 16-22.

³⁶U.S. figures comprise first-time enrollments under Titles I, III, and IV of the Comprehensive Employment and Training Act. Title I authorizes a nationwide program of comprehensive employment and training services. Title III provides for nationally sponsored and supervised training and job placement programs for such special groups as youth, offenders, older workers, and others with a particular labor market disadvantage. Title IV provides the authorization for the Job Corps, a program of intensive education, counseling, and training for disadvantaged youth.

³⁷In 1973, about 3.7 percent of the French labor force received training in whole or in part with government funds. Since many courses are of brief duration, a smaller proportion of the labor force was in government-funded training at any one time.

³⁸See Hans Brems, "Swedish Fine Tuning," *Challenge*, March-April 1976, pp. 39-42; and "Anti-Recession Policies in Sweden," *OECD Observer*, March-April 1976, pp. 31-32.

service jobs under CETA totalled 487,000, or 0.5 percent of the U.S. labor force.³⁹

Matching people and jobs. All Western European countries and Canada include relocation assistance as an important part of their labor market programs. There are allowances for travel expenses, payments to cover the cost of moving household goods, and in some countries a resettlement allowance to help defray the expenses of selling one home and buying another and allowances to cover the added expense of maintaining two households if the worker cannot move his family right away. In the United States, relocation with government assistance is not extensive.⁴⁰

The United States has had some experience with fostering economic development in lagging regions beginning with programs under the Area Redevelopment Act of 1961. In the mid-1960's, further steps were taken with the enactment of the Appalachian Regional Development Act and the programs of the Economic Development Administration. These provided for business loans, grants and loans for public works and development facilities, technical assistance, and research assistance in areas with relatively high unemployment.

European countries have had considerable experience in the use of programs to attract industry to areas where unemployment is high. In Germany and Great Britain, there are programs to encourage investment and industrial growth in areas where surplus labor is available. France uses a system of loans, interest subsidies, and tax incentives to guide industrial location. In Sweden, the Labor Market Board can influence the location of industrial enterprises through its authority to approve loans.

Measures to improve information about available workers and job vacancies concern both the demand and supply side of the labor market. Employment services in almost all countries studied have been modernized, although the scope and quality of the services offered vary from country to country.

It should be noted that only in the English-speaking countries—the United States, Canada, Australia, and Great

Britain—is there extensive activity by private employment agencies. In most countries such agencies are forbidden, restricted to certain occupations, or regulated. In Great Britain, regulatory legislation was passed in 1973 which established licensing requirements for private employment agencies.

Data-processing techniques have frequently been introduced in employment service agencies to match job vacancies and applicants with a minimum of delay. Japan has pioneered in the development of a computerized employment service linking the 700 offices of the service with a Labor Market Center. Only in Japan and France does it appear that computers do the work of matching job requirements and candidate qualifications.⁴¹ In the United States, for example, job banks in most States have eliminated tedious searching through files, but searching on supply and demand sides is carried on separately. In Japan, Sweden, and Germany, interregional placements have grown whereas in the United States local market clearance predominates.

Factors affecting youth unemployment

The business cycle has a pronounced effect on youth unemployment. Thus international differences in youth unemployment rates are partly the result of cyclical factors such as the timing and severity of recessions. However, in times of both prosperity and recession, the United States has had youth unemployment rates which rank among the highest in the industrial world. The United States has also had a rather wide differential between youth and adult unemployment rates, although some countries have caught up with or surpassed the United States in recent years in terms of the youth-adult differential. (See chapter 3.)

Some of the factors which may affect international differences in youth unemployment rates are discussed below. Supply and demand trends in the youth labor market are discussed first. Other aspects considered are the student labor force, apprenticeship, counseling and placement services, and the youth minimum wage.

Supply and demand. As indicated in an earlier section, the United States and Canada have had rapid increases in the teenage labor force during the period since 1960, while the European countries and Japan have had declining teenage work forces. Thus the United States and Canada were under pressure from a fast-growing teenage labor force which contributed to higher rates of both overall and teenage unemployment. However, some countries in which the teenage

³⁹Enrollments under Titles II and VI of CETA. Title II authorizes transitional public service employment and other manpower services in areas with 6.5 percent or higher unemployment for 3 consecutive months. Title VI authorizes a temporary emergency program of public service jobs to help ease the impact of high unemployment. Public works jobs have also been created by the Public Works Economic Development Act. By June 30, 1977, 38,000 short-term jobs, amounting to 19,900 labor months of work, had been created by this act.

⁴⁰Relocation assistance projects for workers were undertaken under the MDTA, which aided the relocation of about 14,000 workers and their families between 1965 and 1969. Congress did not appropriate any funds for these projects after 1969. There is relocation assistance available under the Trade Act of 1974 to workers who lose their jobs because of imports.

⁴¹Organization for Economic Cooperation and Development, *Inflation: the Present Problem* (Paris, OECD, December 1970), p. 108; and "Manpower Policy in Japan," *OECD Observer*, April 1973, p. 34. Computer processing of job openings and job applicants in France began in 1977. The system currently operates on a regional basis and there are plans to eventually establish links between the regional computer systems.

labor force has actually declined—e.g., France and Italy—also have substantial youth unemployment.

During the 1960's, a tight labor market in many European countries and Japan fostered a high demand for young workers. Labor shortages gave many young people opportunities to choose among jobs and to enter the occupational hierarchy at higher levels than would have been possible in less favorable times. The favorable experience of the 1960's has been changing, and several countries have observed a deterioration in the relative position of youth in recent years as structural problems have been intensified by deep recession.⁴²

In some nations, new entrants are eagerly sought by employers who are willing to take youngsters without occupational skills or previous work experience. Japan, Great Britain, and Germany are among the countries where the transition is eased because employers recruit young people straight from school and provide training for many of them. While this acceptance of youth is less common in France, it is even less visible in the United States where employers exhibit little active interest in hiring teenagers.⁴³ According to one study, employers are reluctant to hire American teenagers because of restrictions on employing them in hazardous work, the cumbersome machinery of work certificates, union restrictions, and problems of transportation.⁴⁴ Also, dissatisfaction with teenager absenteeism, unreliability, and job performance is common.

The student labor force. The labor market activity of students in the United States differs markedly from the pattern abroad. The frequent entries and exits of students in the American labor market do not occur to any significant extent in Western European countries and Japan. The working student is very much an American phenomenon. The young persons who work or seek work in other countries are mainly out-of-school youth.

⁴²In response to the rise in youth unemployment during the 1970's, the OECD has carried out research on the problems faced by young people in the transition from school to work. See *The Entry of Young People into Working Life* (Paris, OECD, 1977). In addition, the OECD convened a "High Level Conference on Youth Unemployment" in December 1977 to work out a diagnosis of the problem and to exchange national experiences concerning the measures taken to deal with youth unemployment. The Council of Ministers of Social Affairs of the European Communities (EC) also held a conference on youth unemployment in late 1977 to identify areas where common action might be necessary.

⁴³Beatrice G. Reubens, "Foreign and American Experience with the Youth Transition," in *From School to Work: Improving the Transition*, a collection of policy papers prepared for the National Commission for Manpower Policy (Washington, U.S. Government Printing Office, 1976), p. 274. See also Beatrice G. Reubens, *Bridges to Work: International Comparisons of Transition Services* (New York, Universe Books, 1977).

⁴⁴*Youth Unemployment and Minimum Wages* (BLS Bulletin 1657, 1970), p. 69.

In the United States, unemployment rates for students have been higher than for nonstudents under age 25 since 1965, reversing the situation of the early 1960's and previously, when the rates were higher for those out of school. The higher rate among students may reflect the much larger numbers seeking employment and their limited availability with respect to hours of work.⁴⁵

Separate figures for employment and unemployment of students are not available for most countries. No country has a survey as comprehensive as the October special labor force survey questions on students for the United States.⁴⁶ However, some information on student labor force activity is available for Canada, Great Britain, and Japan.

According to the October 1975 survey for the United States, 31 percent of all employed persons age 16 to 24 were enrolled in school. If part-time college students are excluded, the proportion declines to 26 percent. Persons enrolled in school accounted for 14 percent of total U.S. unemployment. If they had not been included, the October 1975 unemployment rate (not seasonally adjusted) would have been 6.7 percent rather than 7.8 percent.

A recent special study on labor force activities of Canadian students presented some data which can be compared with the U.S. October surveys.⁴⁷ The figures indicate that student labor force activity in Canada, although substantial, is not as widespread as in the United States. In October 1975, 24 percent of all employed persons age 15 to 24 were enrolled in school. If part-time Canadian students are excluded, the proportion falls to 19 percent. Persons enrolled in school accounted for 11 percent of total Canadian unemployment in October 1975.

British full-time students who also worked accounted for only 9 percent of total employment of 15- to 24-year-olds in 1972. This figure is an annual average; a figure for students working during the school term (as reflected in the U.S. figures for October) would be considerably lower. However, even on an annual basis, the figure is well below the U.S. and Canadian proportions for October.

In Japan, only about 50,000 persons are normally engaged in both work and schooling. This represents less than 1 percent of employment in the 15- to 24-year-old age group.

The United States has much higher proportions of 16- to 19-year-olds in school. (See table 22.) For example, about 94 percent of all 16-year-olds are in school in the United States, 80 percent in Japan, 40 percent in Great Britain, and 30 percent in Germany. For 19-year-olds, the contrast

⁴⁵Anne M. Young, "Employment of School Age Youth," *Monthly Labor Review*, September 1970, p. 9.

⁴⁶For example, see Anne M. Young, "Students, Graduates, and Dropouts in the Labor Market, October 1975," *Monthly Labor Review*, June 1976, pp. 37-41.

⁴⁷Leonel Plasse, *Labor Force Activities and Characteristics of Students*, Statistics Canada Research Paper No. 14, July 1977.

Table 22. Percent of 16- to 19-year-olds in educational institutions, all levels, 1966-72

Country	Year	Age			
		16	17	18	19
United States	1970	94.1	86.9	58.1	45.4
Australia	1972	54.9	36.3	18.0	10.7
Canada	1970	87.1	69.0	45.5	30.3
France	1970	52.6	45.5	30.6	21.8
Germany	1969	31.3	19.2	12.9	9.6
Great Britain	1970	41.6	25.9	17.4	13.7
Italy	1966	33.6	27.4	19.7	11.0
Japan	1970	80.0	74.8	29.5	22.0
Sweden	1972	73.7	60.7	40.7	24.0

SOURCE: Organization for Economic Cooperation and Development, *Educational Statistics Yearbook, Vol. II, Country Tables* (Paris, OECD, 1975) as tabulated by Beatrice Reubens in *From School to Work: Improving the Transition*, a collection of policy papers prepared for the National Commission for Manpower Policy (Washington, U.S. Government Printing Office, 1976), p. 280.

is even greater. Thus, other countries have a much higher proportion of teenagers who are out of school and working at or seeking full-time year-round jobs. Furthermore, those young persons still in school in Europe and Japan usually do not also participate in the labor force. This has been attributed to the academic demands of school combined with government financial support to young persons, especially those in low income families, who continue their education beyond the legal minimum age.

Apprenticeship and formal training programs. In the United States, a small proportion of high school graduates enroll in apprenticeship or vocational training courses. A study of the high school class of 1972 indicated that only 1.9 percent planned to enroll in apprenticeship or on-the-job training programs and 10.8 percent planned to take vocational or technical training at specialized schools or junior colleges.⁴⁸ The total number of apprenticeships completed annually in the United States is roughly 50,000, with 292,000 persons enrolled in such programs as of January 1, 1975. In contrast, Germany, with a much smaller population than the United States, had 1,400,000 persons in apprenticeship programs during 1975. The contrast was even greater in 1960 when the United States had 166,000 and Germany had 1,224,000 apprentices in training. In that year, France had about 140,000 enrolled apprentices and Great Britain had 123,000.

In most foreign countries, apprenticeship and vocational education are widespread. Vocational education programs are predominant in France and Sweden; apprenticeship training is the principal type of industrial training for youths in Great Britain and Germany, and is widely used elsewhere. In Japan, training within enterprises usually

marks the beginning of life-long employment. Where apprenticeship programs are significant, they provide employment security for a good proportion of the young people in the labor force. Apprentices are not immune to unemployment but they have shown greater stability during training than other youth.⁴⁹ Historically, countries with extensive apprenticeship programs have had low youth unemployment.

Apprenticeship in America never acquired the scope or prestige that it enjoyed in Europe because the economic and social development of the United States did not encourage this form of craft training. Neither employers nor workers were eager to enter agreements that would be binding on them for a period of years. U.S. unions obtain the bulk of their membership through channels other than apprenticeship.⁵⁰

In recent years, apprenticeship has been declining relative to other activities of young people in those countries where apprenticeship formerly was well established. The number of apprenticeship places has been declining in Germany, Great Britain, and Australia, for instance. Employers are increasingly reluctant to undertake apprenticeship because of the rising cost of training, the trend toward longer schooling which deprives the employer of the preferred age group, and technological changes which require a broader, general educational background and wider, less specialized training.⁵¹

Counseling and placement services. Several countries, including Germany, Great Britain, and Japan, engage in extensive counseling and placement activities for youth.⁵² In Germany, for instance, the Federal employment service and its local agencies provide nearly all students with comprehensive vocational orientation before graduation. If training in the chosen occupation is not available locally, the vocational guidance service can provide youth with financial assistance to go where training is given. In Great Britain, staff members of the Careers Offices of the Youth

⁴⁸ Beatrice G. Reubens, "Foreign Experience," in *Report of Congressional Budget Office Conference on The Teenage Unemployment Problem: What Are the Options?* Congress of the United States, Congressional Budget Office (Washington, U.S. Government Printing Office, October 14, 1976), p. 56.

⁵⁰ Thomas H. Patten, Jr., *Manpower Planning and the Development of Human Resources* (New York, John Wiley and Sons, 1971), pp. 284, 300.

⁵¹ Beatrice G. Reubens, *Policies for Apprenticeship*, Unpublished study prepared for the Organization for Economic Cooperation and Development, 1977.

⁵² Reubens, *Bridges to Work, op. cit.*; *Transition from School to Work in Selected Countries*, (Bureau of Labor Statistics, August 1969); David Bauer, *Factors Moderating Unemployment Abroad* (New York, The Conference Board, 1970), pp. 8-9; and *Manpower Report of the President, 1968*, p. 118.

Employment Service interview almost all school leavers. During the 1960's, they placed approximately one-third of all youths in their first jobs. The public employment service in Japan conducts guidance programs and provides information to the education authorities, who in turn give vocational orientation in the schools. Partly as a result of the deliberate efforts of the official guidance and placement services to prearrange jobs, a large portion of the youths of these countries are able to obtain their first job after leaving school without experiencing an initial period of unemployment.

Youth minimum wages. Wage differentials based on the worker's youth alone are used on a very limited basis in the United States. The Fair Labor Standards Act contains provisions for subminimum wages for students and learners, but these provisions have not been used to any significant extent partly because employers generally regard the required recordkeeping as too burdensome. Also, employers feel that students are not willing to work at subminimum wages.

In contrast, differentials between youth and adult wages are common in Western Europe and Japan. Some countries have minimum wage laws that provide for lower minimum wages for teenagers. Some have collective bargaining procedures that can result in differentially lower wages for young workers. Still other countries use both mechanisms.⁵³

Under collective bargaining agreements in Great Britain, youth enter employment at about 30 percent of adult earnings and, by steps, reach adult wages normally at age 21 for men and 18 for women. In France, with both a statutory minimum and minimum rates set under collective bargaining, there is a system of reduced rates whereby youth enter employment at about 70 percent of the adult minimum at age 16 and reach the adult rate at age 18. Youth wage rate schemes are also used in Canada, Germany, and Japan. In Japan, where wages are based in large part on age or seniority throughout working life, young workers start at about one-third the adult rate.

It has been argued that relatively low wages for teenagers compared to adult wages tend to facilitate the employment of youth. One study concluded the following:

The evidence from abroad indicates that low wages for youth are an inducement to employers to seek young workers eagerly. The relatively low youth unemployment rates abroad... are partially a reflection of the fact of low wages for youth.⁵⁴

⁵³ *Youth Unemployment and Minimum Wages*, pp. 107-12, 135-79.

⁵⁴ Thomas W. Gavett, "Youth Unemployment and Minimum Wages," *Monthly Labor Review*, March 1970, p. 9.

This study pointed out that low wages for youth in Europe cannot be separated from the extensive apprenticeship programs in such countries as Germany and Great Britain and from the lifetime employment system in Japan under which high wages in later years with the firm offset the low wages paid young workers. Also, experience in foreign countries having institutions different from those in the United States has a limited application to American teenagers who are much more likely to be looking for a part-time job rather than a permanent job.

The situation in France and Canada demonstrates that more is involved in achieving full employment among teenagers than provisions for lower wage levels. Both of these countries provide youth minimum wages, yet both have high youth unemployment. Furthermore, in spite of legislation and agreements for youth differentials, the actual earnings of youth have risen faster than those of adults in a number of foreign countries.⁵⁵ Thus, several European countries report a growing reluctance on the part of employers to hire young people because of relatively high wage rates and fringe benefits for entry-level jobs which result in a cost disadvantage if training and induction costs are included. Apprenticeship wages have also risen considerably in Western European countries.

Legal and social factors

Legal and social factors play an important role in holding down unemployment in Western Europe and Japan. Unemployment in several European countries has been curbed by legislation or labor-management agreements that shield workers from layoffs. U.S. job security measures, by contrast, are much weaker. Where they exist, they are based on seniority and usually specify severance pay related to the length of service.⁵⁶

In Germany, under a 1951 law, a legally valid discharge may be declared ineffective by the Labor Court if it is "socially unjustified," that is, if it cannot be based on the characteristics or conduct of the employee or on important needs of the enterprise. Even if important business needs warrant the discharge, it is nevertheless "socially unjustified" if the employer selected the worker for discharge without giving sufficient attention to the social factors involved.⁵⁷ The procedures required under the 1951 law were made even stronger by the Works Constitution Act of 1972. Under certain collective bargaining agreements, German employers are prohibited from dismissing workers be-

⁵⁵ Reubens, "Foreign Experience," pp. 287-88.

⁵⁶ David Jenkins, "Job Security Measures Growing Throughout Europe," *World of Work Report*, July 1976, p. 3.

⁵⁷ Kurt Braun, "European Limitations on Employee Dismissal," *Monthly Labor Review*, January 1965, p. 67.

tween a given age (ages 45 to 55, depending on the industry) and the age of pensionable retirement.⁵⁸

As a good example of how the German system works, one of the companies of the Thyssen group carried out a massive reorganization, involving the loss of about 6,000 jobs. The head of the firm's works council, which is an employee-run unit financed by the company, discussed problems with the employees, found jobs for many in other units of the company, and negotiated numerous problems with management. Not a single day was lost through labor conflict and no one suffered exceptional hardship.⁵⁹

Strict legislation also exists in Italy. Courts have applied tough standards to judge whether adequate justification exists for a dismissal; if not, a dismissed employee is entitled to reinstatement or an indemnity of 5 months' wages. In case a layoff is eventually made, the employer is required to take account of a number of factors, including the family responsibilities and economic situation of the workers. In many firms, labor agreements also provide protection. At Fiat, where worker protection has been increasingly strengthened by labor contracts during the past few years, no reduction in the work force is permitted.⁶⁰

The French Ministry of Labor can require an employer to postpone separations for economic reasons to allow the Ministry time to determine that every precaution has been taken to minimize the hardship on workers. The employer is expected to make strong efforts at the firm's expense to find another job for workers about to be separated.

A national agreement on security of employment was signed in February 1969 by French employers and all the trade union federations. This agreement, like the individual industry agreements which followed it, recognizes the responsibility of the parties towards security of employment. In the case of prospective dismissals, the firm must consult with the plant employment committee and give due notice, endeavor to minimize dismissals, and utilize intraplant or intracompany transfers. Reductions of staff must be achieved as far as possible by attrition. The employer must give a dismissed worker priority reemployment rights for a year, guarantee seniority rights with the firm, and assist him in obtaining all unemployment benefits to which he is entitled. The employer "must search for possibilities of re-employment likely to suit the wage-earners who are dismissed as well as training facilities from which these workers might benefit."⁶¹

⁵⁸ Edward Yemin, "Job Security: Influence of ILO Standards and Recent Trends," *International Labour Review*, January-February 1976, p. 3.

⁵⁹ Jenkins, *op. cit.*, p. 3.

⁶⁰ Jenkins, *op. cit.*, p. 4.

⁶¹ Organization for Economic Cooperation and Development, *Manpower Policy in France* (Paris, OECD, 1973), p. 63.

An employer's ability to lay off workers is also considerably restricted by Swedish law. Existing protection of employees was improved when the Security of Employment Act went into effect in 1974.⁶² According to this law, an employee can only be dismissed on "reasonable" grounds. The law virtually prohibits the dismissal of any employee except for the most serious misbehavior. The law is so stringent that it is beginning to show some counterproductive effects. It has had a negative effect on the employment of workers who find it more difficult to prove themselves—e.g., the young, the old, and the handicapped.⁶³ The Promotion of Employment Act of 1974 contains rules designed to help older employees and disabled workers. According to these rules, labor market authorities are to negotiate with the employer and appropriate trade union in an effort to allow such workers to retain their jobs.

Laws or labor-management agreements requiring advance notice of layoff give workers time to look for another job prior to dismissal. Where advance notification provisions are in effect, they allow for the placing of at least some workers in new jobs without a period of unemployment associated with the job search.

In the United States, most collective bargaining agreements do not contain clauses prescribing advance notice of layoff. Moreover, those provisions that deal generally with advance notice of layoff (43 percent of the major agreements) normally specify only a very limited time period—in most cases less than 30 days.⁶⁴

Advance notification has been required by various laws regarding the dismissal of workers in Western European countries. One type of law obliges the employer to notify the employment service of the impending dismissal. Such laws exist in France, Germany, and Great Britain. In Sweden, the Employers' Federation has an agreement with the Labor Market Board which requires a minimum of 30 days' notice to the employment service by employers preceding collective dismissals. Also, the Promotion of Employment Act (1974) contains rules concerning periods of notice to trade unions before production cutbacks can involve dismissals.

Another type of law calls for advance notice to employees prior to dismissal. France, Germany, Great Britain, and Sweden have such legislation. For example, the Swedish law on Security of Employment requires a minimum of 1 month's notice, with longer notice (up to 6 months) as an employee gets older.

Besides laws, social custom and tradition play an important part in diminishing the threat of layoff in Europe and Japan. Employers avoid dismissals if at all possible be-

⁶² Lennart Forseback, *Industrial Relations and Employment in Sweden* (Stockholm, The Swedish Institute, 1976), p. 99.

⁶³ Jenkins, *op. cit.*, p. 4.

⁶⁴ *Characteristics of Major Collective Bargaining Agreements, July 1, 1975* (BLS Bulletin 1957, Bureau of Labor Statistics, 1977), p. 89.

cause they feel a high degree of responsibility for their regular employees and continue to provide employment, perhaps at reduced hours, when production declines. In addition, the employer may be somewhat afraid of loss of prestige among his fellow employers, because layoffs might be interpreted as proof of his failure as businessman. In Sweden, for example, companies reportedly try greatly to avoid the weakening of their reputation for job stability, especially since most major employers are located in small towns or cities, where company practices are common knowledge.⁶⁵

Recognized "regular" employees in Japan benefit from a paternalistic attitude on the part of employers that is unmatched by other industrial nations. In large Japanese enterprises, appointment to a regular job virtually assures employment until retirement, and the employer takes responsibility for maintaining the worker during periods of economic adversity.

In most foreign industrial countries, legal and social restrictions against layoff are reinforced by the reluctance of workers to change jobs in search of improved wages or working conditions. In the United States and Canada, labor turnover rates in manufacturing are significantly higher than in Western Europe and Japan. The United States and Canada have approximately 50 to 60 separations (quits, layoffs, and other job terminations) annually per 100 occupied jobs. European separation rates, in contrast, generally range from 30 to 40 per 100 jobs, and Japanese separation rates are even lower, under 30 per 100 jobs annually. Quit rates, where available, show a similar disparity among the United States, Canada, and other industrial nations.

Data on the duration of unemployment indicate that a larger proportion of U.S. and Australian unemployment is of the short-term job-changing variety compared with other countries. However, it is not known to what extent differences in the proportion of those unemployed for long periods can be attributed to differences in the duration and level of unemployment benefits.

In the United States, mobility is often considered a desirable attribute of a worker even though the search for a new job may entail some unemployment. In contrast, the job attachment of European and Japanese workers is much stronger than in the United States, partly because of the belief that a change of jobs is likely to reflect unfavorably on a worker's dependability.

Conclusion

Why there has been more unemployment in the United States than in most Western European countries and Japan is a question to which there is no simple or universally accepted answer. The foregoing analysis has re-

vealed several reasons for differences in unemployment rates. The relatively rapid increase in the U.S. labor force has contributed to higher unemployment here. The labor force in most other countries has grown quite slowly or declined. Teenagers make up a relatively high and growing proportion of the labor force in the United States. This is significant because teenage unemployment is higher than the overall average in all countries. The teenage labor force has grown rapidly in the United States while declining in all countries except Canada and Australia. This decline has helped keep Western European and Japanese unemployment rates down, but, in the early 1960's, when teenagers constituted a larger proportion of the labor force than in the United States, these countries had substantially lower unemployment rates than the United States. The small proportion of the U.S. labor force engaged in agriculture and the large wage and salary component have also contributed to our higher unemployment rates compared with most industrial countries.

Cyclical flows of foreign workers to and from certain European countries help to dampen unemployment increases during recessions. The United States does not have significant cyclical movements in its foreign labor supply.

In many European countries, strong efforts have been made to achieve a better distribution of work throughout the year by reducing seasonal fluctuations in hirings and dismissals. Government directives and financial incentives have helped to lower seasonal fluctuations, particularly in the construction sector. The United States does not exert as much control over construction scheduling as some other countries.

Income maintenance arrangements may have an important impact on unemployment statistics. A comparison of unemployment insurance systems reveals that most countries now have a fairly broad coverage of the labor force, a lengthy maximum duration of benefit payments, and benefits which typically replace at least half of former earnings of the average manufacturing worker. Most foreign countries provide higher levels of income replacement to the unemployed than the United States, especially when dependents' supplements and family allowances are taken into account. On the other hand, the United States provides a comparatively long duration of benefits during times of recession. In some countries, bonuses for quick re-employment and the practice of scaling down benefits after a certain length of time may provide incentives to find new jobs more quickly than would otherwise occur. Short-time payments, "bad weather" compensation, and early retirement arrangements may also serve to avoid statistical increases in the number of unemployed persons. The under-employment of many workers receiving short-time payments abroad does not show up in the unemployed count.

Some countries have experienced much lower levels of youth unemployment than the United States. One reason has been the great deal of student labor force activity

⁶⁵Jenkins, *op. cit.*, p. 4.

in the United States compared to abroad. Also, European educational and labor market institutions have tended to put the masses of youth into training for narrow vocational specialties while American youth are still continuing general education. The European system's emphasis on apprenticeship and vocational training tends to put young people into stable work-training relationships that discourage mobility. The prevalence of "lifetime" employment arrangements in Japan also discourages worker mobility.

Thus, joblessness among youth abroad has been checked partly because of vocational guidance and industrial training which reduce the frequent job changes and spells of unemployment characteristic of young persons in the United States. However, vocational education in Europe reflects a heavily structured status system for entry into jobs—the kind of system that has been traditionally rejected in the United States.⁶⁶ A firm decision regarding a career at the age of 15 to 17 is common in Europe. These countries seem to prefer to structure the early years of work by such devices as apprenticeship systems, severance pay regulations, or lifetime contracts, as in Japan. While these devices reduce the level of frictional unemployment, they also reduce mobility and possibilities for career changes in later life. In the United States, youth counselors have stressed the importance of extended schooling rather than early career decision because of the wider range of jobs open to persons with high school diplomas and college degrees.

The threat of layoffs in Europe and Japan is considerably diminished by legal restraints and management's reluctance to let workers go. Moreover, the worker's attachment to the job is firmer abroad than in the United States. Labor mobility is low, and short-term transitional unemployment is much less prevalent than in the United States. It is apparent that unemployment in Japan, and to some extent in certain other industrial countries, is not a threat to the entire body of wage and salary workers, as in the United States. Rather, it tends to be more concentrated among a restricted group of temporary or seasonal workers, new entrants, or others in the process of entering or leaving the labor force.

⁶⁶*Manpower Report of the President*, 1968, p. 117.

The widespread use of short-time benefits in Europe and Japan and their absence in the United States reflect different social and cultural patterns. In most European countries and Japan, there is a traditional preference for job security as against job mobility; layoffs have ordinarily meant dismissal and a break in the employer-employee relationship. In the United States, layoffs are much more common. When American firms in Europe have attempted to lay off workers in the postwar years, they have faced strong adverse reactions because of these differences in social patterns.

It is evident that the different institutions, attitudes, and practices of other countries help many of them to maintain lower average unemployment rates than appear to be feasible at present in the United States. It can be argued, however, that at least some of the reasons for the lower unemployment rates in Europe and Japan arise from features which inhibit efficiency as well as lower unemployment. For example, while higher labor turnover rates and greater worker mobility in the United States increase the average level of unemployment, the job security of the regular worker in Europe and Japan also involves an appreciable cost. Unemployment may be less cyclically volatile because of hoarding of labor during downturns of economic activity, but the result may be disguised unemployment rather than overt unemployment. Although foreign employment practices bring advantages in the form of income maintenance and job security, some of these benefits are probably paid for by a lower aggregate productivity of labor.

Furthermore, many foreign countries still have a large proportion of small, family-owned businesses which shield self-employed and unpaid family workers from the threat of unemployment. During slack periods, such workers tend to work part time or withdraw from the labor force rather than seek another job with pay. In the United States, the economies of scale that can be realized in a large, homogeneous market have encouraged business consolidations, so that self-employment and unpaid family work occur less frequently and the risk of unemployment is increased. Where small, family-owned businesses are still predominant, workers may be underemployed a good part of the time, impairing the efficiency and productivity of the countries involved.

Appendix A. International Labour Office Definitions

In 1954, the Eighth International Conference of Labour Statisticians adopted the following definitions of labor force, employment, and unemployment:

Labor force

The civilian labor force consists of all civilians who fulfill the requirements for inclusion among the employed or the unemployed, as defined below.

The total labor force is the sum of the civilian labor force and the Armed Forces.

Employment

1. Persons in employment consist of all persons above a specified age in the following categories:

- a. At work; persons who performed some work for pay or profit during a specified brief period, either one week or one day;
- b. with a job but not at work; persons who, having already worked in their present job, were temporarily absent during the specified period because of illness or injury, industrial dispute, vacation or other leave of absence, absence without leave, or temporary disorganization of work due to such reasons as bad weather or mechanical breakdown.

2. Employers and workers on own account should be included among the employed and may be classified as "at work" or "not at work" on the same basis as other employed persons.

3. Unpaid family workers currently assisting in the operation of a business or farm are considered as employed if they worked for at least one-third of the normal working time during the specified period.

4. The following categories of persons are not considered as employed:

- a. Workers who during the specified period were on temporary or indefinite layoff without pay;
- b. persons without jobs or business or farms who had arranged to start a new job or business or farm at a date subsequent to the period of reference;
- c. unpaid members of the family who worked for less than one-third of the normal working time during the specified period in a family business or farm.

Unemployment

1. Persons in unemployment consist of all persons above a specified age who, on the specified day or for a specified week, were in the following categories:

- a. Workers available for employment whose contract of employment had been terminated or temporarily suspended and who were without a job and seeking work for pay or profit;
- b. persons who were available for work (except for minor illness) during the specified period and were seeking work for pay or profit, who were never previously employed or whose most recent status was other than that of employee (i.e. former employers, etc.), or who had been in retirement;
- c. persons without a job and currently available for work who had made arrangements to start a new job at a date subsequent to the specified period;
- d. persons on temporary or indefinite layoff without pay.

2. The following categories of persons are not considered to be unemployed:

- a. Persons intending to establish their own business or farm, but who had not yet arranged to do so, who are not seeking work for pay or profit;
- b. former unpaid family workers not at work and not seeking work for pay or profit.

Appendix B. Sources of Data and Methods of Adjustment: Nine Countries

United States

The United States has three sources of unemployment statistics. Data based on the number of persons registering to collect unemployment insurance are available on a weekly basis. The number of persons served by the U.S. Employment Service is available monthly. Statistics from the monthly labor force survey have been available since 1940 and are regarded as the "official" unemployment statistics. Before the 1930's, no direct measurements were made of the number of jobless persons. In response to the increased need for unemployment statistics during the depression of the 1930's, direct surveys of the population were initiated but the definitions of unemployment—those who were not working but were willing and able to work—did not meet the standards of objectivity that many technicians felt were necessary to measure the level of joblessness at a point in time or changes over a period of time. In 1940, a set of precise concepts was adopted for the national sample surveys of households conducted by the Works Progress Administration. Classification of one's labor force status depended principally on whether one was working, looking for work, or engaged in other activities within a designated time period. In 1943, responsibility for the survey was transferred to the Bureau of the Census. In 1959, responsibility for the analysis and publication of labor force survey data was shifted to the Bureau of Labor Statistics, with the Bureau of the Census retaining the responsibility for the collection and tabulation of the statistics.

Unemployment

Registered unemployment. The United States has two registered unemployed series: Insured unemployment and persons registered with the U.S. Employment Service. Insured unemployment represents the number of persons reporting a week of unemployment under an unemployment insurance program. It includes some persons who are working part time who would be counted as employed in the labor force survey. Excluded are persons who have exhausted their benefit rights and workers who have not earned rights to unemployment insurance. In general, excluded from coverage are those persons engaged in agriculture, domestic service, unpaid family work, selected nonprofit organizations, some State and local government, and self-employment.

The rate of insured unemployment is the number of insured unemployed expressed as a percent of average covered employment. Because of differences in State laws and procedures under which unemployment insurance programs are operated, State unemployment rates generally indicate, but do not precisely measure, differences in unemployment among the individual States. Figures on unemployment insurance claims are published by the Employment and Training Administration of the Department of Labor in *Unemployment Insurance Claims Weekly Report*.

In nonrecessionary periods, unemployed persons receiving benefits under the various State and other unemployment insurance programs typically account for less than half of total U.S. joblessness. (This ratio has swelled during downturns to as much as 75 percent.) For this reason, and as a consequence of administrative changes and variations from State to State, statistics from unemployment insurance programs are not directly comparable with data on total unemployment from the Current Population Survey. However, the unemployment insurance data are extremely useful as indicators of current change, especially because they are timely and available on a weekly basis.

The second and less widely used series counts individuals served by the U.S. Employment Service. Monthly data are available on persons counseled, tested, and/or placed by the Employment Service. These monthly statistics are published by the Employment and Training Administration of the Department of Labor in *Selected Services Provided by the United States Employment Service*.

Labor force survey unemployment. The monthly household survey—the Current Population Survey (CPS)—provides statistics on the civilian noninstitutionalized population 16 years of age and over. Persons under 16 years of age are excluded from coverage because of child labor laws and compulsory school attendance. However, separate statistics are collected and published for 14- and 15-year-olds. The results of the CPS are published monthly by BLS in *Employment and Earnings*.

The CPS is currently collected from a probability sample of approximately 56,000 households. Since July 1955, the reference week of the CPS is the calendar week including the 12th day of the month. The actual survey is conducted during the following week, which is the week containing the 19th day of the month. Prior to July 1955, the reference week was the calendar week containing the

U.S. Current Population Survey Questionnaire (Excerpt)

<p>18. LINE NUMBER</p> <p>18. What was ... doing most of LAST WEEK</p> <p>Working (Skip to 20A) ... WK <input type="checkbox"/> With a job but not at work ... JK <input type="checkbox"/> Looking for work (Skip to 24) ... LK <input type="checkbox"/> Keeping house ... H <input type="checkbox"/> Going to school ... S <input type="checkbox"/> Unable to work (Skip to 24) ... U <input type="checkbox"/> Retired ... R <input type="checkbox"/> Other (Specify) ... OT <input type="checkbox"/></p> <hr/> <p>20C. Does ... USUALLY work 35 hours or more a week at this job?</p> <p>Yes <input type="checkbox"/> What is the reason ... worked less than 35 hours LAST WEEK?</p> <p>No <input type="checkbox"/> What is the reason ... USUALLY works less than 35 hours a week?</p> <p>(Mark the appropriate reason)</p> <p>Stack work ... <input type="checkbox"/> Material shortage ... <input type="checkbox"/> Plant or machine repair ... <input type="checkbox"/> New job started during week ... <input type="checkbox"/> Job terminated during week ... <input type="checkbox"/> Could find only part-time work ... <input type="checkbox"/> Holiday (Legal or religious) ... <input type="checkbox"/> Labor dispute ... <input type="checkbox"/> Bad weather ... <input type="checkbox"/> Own illness ... <input type="checkbox"/> On vacation ... <input type="checkbox"/> Too busy with housework, school, personal bus., etc. ... <input type="checkbox"/> Did not want full-time work ... <input type="checkbox"/> Full-time work week under 35 hours ... <input type="checkbox"/> Other reason (Specify) ... <input type="checkbox"/></p> <p>(Skip to 23 and enter job worked at last week)</p>	<p>20. Did ... do any work at all LAST WEEK, not counting work around the house? (Note: If farm or business operator in hh, ask about unpaid work)</p> <p>Yes <input type="checkbox"/> No <input type="checkbox"/> (Go to 21)</p> <p>20A. How many hours did ... work LAST WEEK at all jobs?</p> <p>49+ (Skip to Item 23) <input type="checkbox"/> 1-34 (Go to 20C) <input type="checkbox"/> 35-48 (Go to 20C) <input type="checkbox"/></p> <p>20D. Did ... lose any time or take any time off LAST WEEK for any reason such as illness, holiday or stack work?</p> <p>Yes <input type="checkbox"/> How many hours did ... take off?</p> <p>(Correct 20A if last time not already deducted; if 20A reduced below 35, correct 20B and fill 20C; otherwise, skip to 23.)</p> <p>20E. Did ... work any overtime or at more than one job LAST WEEK?</p> <p>Yes <input type="checkbox"/> How many extra hours did ... work?</p> <p>(Correct 20A and 20B as necessary if extra hours not already included and skip to 23.)</p> <p>No <input type="checkbox"/> (Skip to 23)</p> <p>OFFICE USE ONLY</p> <table style="width:100%; border: none;"> <tr> <td style="border: none;">INDUSTRY</td> <td style="border: none;">OCCUPATION</td> </tr> <tr> <td style="border: none;">0 0 A 0</td> <td style="border: none;">0 0 0 N 0</td> </tr> <tr> <td style="border: none;">1 1 B 0</td> <td style="border: none;">1 1 1 P 0</td> </tr> <tr> <td style="border: none;">2 2 C 0</td> <td style="border: none;">2 2 2 Q 0</td> </tr> <tr> <td style="border: none;">3 3 D 0</td> <td style="border: none;">3 3 3 R 0</td> </tr> <tr> <td style="border: none;">4 4 E 0</td> <td style="border: none;">4 4 4 S 0</td> </tr> <tr> <td style="border: none;">5 5 F 0</td> <td style="border: none;">5 5 5 T 0</td> </tr> <tr> <td style="border: none;">6 6 G 0</td> <td style="border: none;">6 6 6 U 0</td> </tr> <tr> <td style="border: none;">7 7 H 0</td> <td style="border: none;">7 7 7 V 0</td> </tr> <tr> <td style="border: none;">8 8 J 0</td> <td style="border: none;">8 8 8 W 0</td> </tr> <tr> <td style="border: none;">9 9 K 0</td> <td style="border: none;">9 9 9 X 0</td> </tr> <tr> <td style="border: none;">L 0</td> <td style="border: none;">Y 0</td> </tr> <tr> <td style="border: none;">Ref. 0 M 0</td> <td style="border: none;">Ref. 0 Z 0</td> </tr> </table>	INDUSTRY	OCCUPATION	0 0 A 0	0 0 0 N 0	1 1 B 0	1 1 1 P 0	2 2 C 0	2 2 2 Q 0	3 3 D 0	3 3 3 R 0	4 4 E 0	4 4 4 S 0	5 5 F 0	5 5 5 T 0	6 6 G 0	6 6 6 U 0	7 7 H 0	7 7 7 V 0	8 8 J 0	8 8 8 W 0	9 9 K 0	9 9 9 X 0	L 0	Y 0	Ref. 0 M 0	Ref. 0 Z 0	<p>21. (If LK in 18, skip to 21A.)</p> <p>Did ... have a job or business from which he was temporarily absent or on layoff LAST WEEK?</p> <p>Yes <input type="checkbox"/> No <input type="checkbox"/> (Go to 22)</p> <p>21A. Why was ... absent from work LAST WEEK?</p> <p>Own illness ... <input type="checkbox"/> On vacation ... <input type="checkbox"/> Bad weather ... <input type="checkbox"/> Labor dispute ... <input type="checkbox"/> New job to begin within 30 days ... <input type="checkbox"/> (Skip to 22B and 22C2) Temporary layoff (Under 30 days) ... <input type="checkbox"/> Indefinite layoff (30 days or more or no def. recall date) ... <input type="checkbox"/> (Skip to 22C2) Other (Specify) ... <input type="checkbox"/></p> <p>21B. Is ... getting wages or salary for any of the time off LAST WEEK?</p> <p>Yes ... <input type="checkbox"/> No ... <input type="checkbox"/> Self-employed ... <input type="checkbox"/></p> <p>21C. Does ... usually work 36 hours or more a week at this job?</p> <p>Yes <input type="checkbox"/> No <input type="checkbox"/> (Skip to 23 and enter job held last week)</p>	<p>22. (If LK in 18, skip to 22A.)</p> <p>Has ... been looking for work during the past 4 weeks?</p> <p>Yes <input type="checkbox"/> No <input type="checkbox"/> (Go to 24)</p> <p>22A. What has ... been doing in the last 4 weeks to find work? (Mark all methods used; do not read list.)</p> <p>Checked with ... <input type="checkbox"/> - pub. employ. agency <input type="checkbox"/> - priv. employ. agency <input type="checkbox"/> employer directly ... <input type="checkbox"/> friends or relatives ... <input type="checkbox"/> Placed or answered ads ... <input type="checkbox"/> Nothing (Skip to 24) ... <input type="checkbox"/> Other (Specify in notes, e.g., CETA, union or prof. register, etc.) ... <input type="checkbox"/></p> <p>22B. Why did ... start looking for work? Was it because ... lost or quit a job at that time (specify) or was there some other reason?</p> <p>Lost job ... <input type="checkbox"/> Quit job ... <input type="checkbox"/> Left school ... <input type="checkbox"/> Wanted temporary work ... <input type="checkbox"/> Other (Specify in notes) ... <input type="checkbox"/></p> <p>22C. 1) How many weeks has ... been looking for work?</p> <p>1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9 <input type="checkbox"/> 10 <input type="checkbox"/> 11 <input type="checkbox"/> 12 <input type="checkbox"/> 13 <input type="checkbox"/> 14 <input type="checkbox"/> 15 <input type="checkbox"/> 16 <input type="checkbox"/> 17 <input type="checkbox"/> 18 <input type="checkbox"/> 19 <input type="checkbox"/> 20 <input type="checkbox"/> 21 <input type="checkbox"/> 22 <input type="checkbox"/> 23 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<input type="checkbox"/> 95 <input type="checkbox"/> 96 <input type="checkbox"/> 97 <input type="checkbox"/> 98 <input type="checkbox"/> 99 <input type="checkbox"/> 100 <input type="checkbox"/></p> <p>22C. 2) How many weeks ago did ... start looking for work?</p> <p>1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9 <input type="checkbox"/> 10 <input type="checkbox"/> 11 <input type="checkbox"/> 12 <input type="checkbox"/> 13 <input type="checkbox"/> 14 <input type="checkbox"/> 15 <input type="checkbox"/> 16 <input type="checkbox"/> 17 <input type="checkbox"/> 18 <input type="checkbox"/> 19 <input type="checkbox"/> 20 <input type="checkbox"/> 21 <input type="checkbox"/> 22 <input type="checkbox"/> 23 <input type="checkbox"/> 24 <input type="checkbox"/> 25 <input type="checkbox"/> 26 <input type="checkbox"/> 27 <input 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type="checkbox"/> 99 <input type="checkbox"/> 100 <input type="checkbox"/></p> <p>22C. 3) How many weeks ago was ... laid off?</p> <p>1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9 <input type="checkbox"/> 10 <input type="checkbox"/> 11 <input type="checkbox"/> 12 <input type="checkbox"/> 13 <input type="checkbox"/> 14 <input type="checkbox"/> 15 <input type="checkbox"/> 16 <input type="checkbox"/> 17 <input type="checkbox"/> 18 <input type="checkbox"/> 19 <input type="checkbox"/> 20 <input type="checkbox"/> 21 <input type="checkbox"/> 22 <input type="checkbox"/> 23 <input type="checkbox"/> 24 <input type="checkbox"/> 25 <input type="checkbox"/> 26 <input type="checkbox"/> 27 <input type="checkbox"/> 28 <input type="checkbox"/> 29 <input type="checkbox"/> 30 <input type="checkbox"/> 31 <input type="checkbox"/> 32 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Has ... been looking for full-time or part-time work?</p> <p>Full <input type="checkbox"/> Part <input type="checkbox"/></p> <p>22E. Is there any reason why ... could not take a job LAST WEEK?</p> <p>Yes <input type="checkbox"/> (Already has a job) <input type="checkbox"/> Temporary illness ... <input type="checkbox"/> Going to school ... <input type="checkbox"/> Other (Specify in notes) ... <input type="checkbox"/></p> <p>No <input type="checkbox"/></p> <p>22F. When did ... last work at a full-time job or business lasting 2 consecutive weeks or more?</p> <p>Within last 12 months (Specify) ... <input type="checkbox"/></p> <p>(Mark)</p> <p>One to five years ago ... <input type="checkbox"/> More than 5 years ago ... <input type="checkbox"/> New, worked full-time 2 wks. or more ... <input type="checkbox"/> Never worked at all ... <input type="checkbox"/></p> <p>(SKIP to 23. If layoff entered in 21A, enter job, either full or part time, from which laid off. Else enter last full time civilian job lasting 2 weeks or more, or "never worked.")</p>	<p>24. INTERVIEWER CHECK ITEM</p> <p>Unit in rotation group (Mark one circle only)</p> <p>0, 2, 3, 4, 6, 7 or 8 (End questions) <input type="checkbox"/> 1 or 5 (Go to 24A) <input type="checkbox"/></p> <p>24A. When did ... last work for pay at a regular job or business, either full- or part-time?</p> <p>Within past 12 months <input type="checkbox"/> 1 up to 2 years ago ... <input type="checkbox"/> 2 up to 3 years ago ... <input type="checkbox"/> (Go to 24B) 3 up to 4 years ago ... <input type="checkbox"/> 4 up to 5 years ago ... <input type="checkbox"/> 5 or more years ago ... <input type="checkbox"/> (Skip to 24C) Never worked ... <input type="checkbox"/></p> <p>24B. Why did ... leave that job?</p> <p>Personal, family (incl. pregnancy) or school ... <input type="checkbox"/> Health ... <input type="checkbox"/> Retirement or old age ... <input type="checkbox"/> Seasonal job completed ... <input type="checkbox"/> Stack work or business conditions <input type="checkbox"/> Temporary nonseasonal job completed ... <input type="checkbox"/> Un satisfactory work arrangements (Hours, pay, etc.) <input type="checkbox"/> Other (Specify in notes) ... <input type="checkbox"/></p> <p>24C. Does ... want a regular job now, either full- or part-time?</p> <p>Yes <input type="checkbox"/> (Go to 24D) Maybe - it depends (Specify in notes) <input type="checkbox"/> (Go to 24D) No <input type="checkbox"/> (Skip to 24E) Don't know <input type="checkbox"/> (Skip to 24E)</p> <p>24D. What are the reasons ... is not looking for work?</p> <p>(Mark each reason mentioned)</p> <p>Believes no work available in line of work or area <input type="checkbox"/> Couldn't find any work <input type="checkbox"/> Lack of education, training, skills or experience <input type="checkbox"/> Employee thinks too young or too old <input type="checkbox"/> Other pers. handicap in finding job <input type="checkbox"/> Can't arrange child care <input type="checkbox"/> Family responsibilities <input type="checkbox"/> In school or other training <input type="checkbox"/> Ill health, physical disability <input type="checkbox"/> Other (Specify in notes) <input type="checkbox"/> Don't know <input type="checkbox"/></p> <p>24E. Does ... intend to look for work of any kind in the next 12 months?</p> <p>Yes <input type="checkbox"/> It depends (Specify in notes) <input type="checkbox"/> No (for farm) ... SE <input type="checkbox"/> Don't know <input type="checkbox"/></p> <p>(If answer in 24B, describe job in 23)</p>
INDUSTRY	OCCUPATION																													
0 0 A 0	0 0 0 N 0																													
1 1 B 0	1 1 1 P 0																													
2 2 C 0	2 2 2 Q 0																													
3 3 D 0	3 3 3 R 0																													
4 4 E 0	4 4 4 S 0																													
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<p>23. DESCRIPTION OF JOB OR BUSINESS</p> <p>23A. For whom did ... work? (Name of company, business, organization or other employer.)</p> <p>23B. What kind of business or industry is this? (For example: TV and radio mfg., retail shoe store, State Labor Dept., farm.)</p> <p>23C. What kind of work was ... doing? (For example: electrical engineer, stock clerk, typist, farmer.)</p> <p>23D. What was ...'s most important activities or duties? (For example: types, keeps account books, files, sells cars, operates printing press, finishes concrete.)</p>		<p>23E. Was this person</p> <p>An employee of PRIVATE Co. ... <input type="checkbox"/> - bus. or individual for wages, salary or comm. ... P <input type="checkbox"/> A FEDERAL government employee ... F <input type="checkbox"/> A STATE government employee ... S <input type="checkbox"/> A LOCAL government employee ... L <input type="checkbox"/> Self emp. in OWN bus., prof. practice, or farm <input type="checkbox"/> Is the business incorporated? <input type="checkbox"/> Yes <input type="checkbox"/> No (for farm) ... SE <input type="checkbox"/> Working WITHOUT PAY in fam. bus. or farm ... WP <input type="checkbox"/> NEVER WORKED ... NEV <input type="checkbox"/></p>																												

8th day of the month. All interviewing, either by personal visit or telephone call, is done by trained interviewers.

In the CPS, unemployed persons include those who did not work at all during the survey week, were looking for work, and were available for working during the reference period except for temporary illness. Those who had made specific efforts to find work within the preceding 4-week period, such as by registering at a public or private employment agency, writing letters of application, canvassing for work, being on a union or professional register, etc., are considered to be looking for work. Also included as unemployed are those who did not work at all during the survey week, were available for work, and (a) were waiting to be called back to a job from which they had been laid off, or (b) were waiting to report to a new wage or salary job scheduled to start within the following 30 days. Full-time students looking for part-time work are counted as unemployed if they meet the above criteria.

Although there have been improvements in measurement techniques, the concepts of employment and unemployment have remained essentially the same since the initiation of the national sample survey in 1940. Two minor changes have been made in the concepts and definitions used in determining labor force status. The first change occurred in 1957. As a result of a comprehensive interagency review of the employment and unemployment data, two groups which had been previously classified as "employed, with a job but not at work," were reclassified as unemployed. These two groups were (1) persons who were laid off for a definite period of less than 30 days (persons on layoff for 30 days or longer were already classified as unemployed), (2) persons waiting to report to a new wage or salary job scheduled to begin within 30 days, except for those attending school during the survey week, who are classified as not in the labor force. When these two groups were reclassified, data for all major labor force components were adjusted to the new definition for every month back to January 1947.

The second change in the definitions of employment and unemployment occurred in 1967, following the recommendations of the President's Committee to Appraise Employment and Unemployment Statistics (the Gordon Committee). The Gordon Committee recommended that more information be gathered and published on participants in the labor force and that labor force concepts be clarified. After more than a year of testing the new definitions clarifying labor force survey concepts, the labor force survey questionnaire was revised in January 1967. The principal changes in the survey were:

1. The lower age limit on employment, unemployment, and other labor force concepts was raised from 14 to 16 years. This change reflects the fact that most 14- and 15-year-olds are barred from most occupations by child labor laws. Historical data were revised as far as possible to provide a consistent series based on the population 16 years of age and over.

2. To be counted as unemployed, a person must be currently available for work (except for temporary illness). In the past, there was no test of current availability. The revision primarily affected the classification of students who began seeking work during the school year, but were not available to begin work until the end of the term. Previously, they were included in the unemployed; now they are classified as not in the labor force.
3. To be counted as unemployed, a person must have reported a specific jobseeking activity (applying to an employer, going to a private or public employment agency, answering a want ad) within the past 4 weeks. (An exception is made for persons waiting to start a new job in 30 days or waiting to be recalled from lay-off.) Formerly, the labor force survey questionnaire was ambiguous as to the time period for jobseeking, and there was no specific question regarding methods of looking for work. Persons who would have looked for work except for the belief that no work was available—discouraged workers—were previously theoretically included in the unemployed but are now classified as not in the labor force.
4. Persons with a job are classified as employed, even if they were absent from their jobs during the survey week and looking for other jobs. Before, persons absent from work because of strikes, bad weather, etc., but looking for other jobs were counted as unemployed.

The removal of 14- and 15-year-olds from the labor force survey reduced employment by 1 million and unemployment by 60,000, but had no measurable effect on the unemployment rate. Except for raising the lower age limit of the CPS coverage, the historical data were not revised to take into account the other changes in the survey since the differences between the old and new series were on the borderline of statistical significance. In only a few detailed series were there significant differences between the two surveys. However, it was not considered technically feasible to revise any of the historical statistics on the basis of a single year of data.

Labor force

According to CPS definitions, the civilian labor force comprises all civilians 16 years of age and over classified as either unemployed or employed. The total labor force includes, in addition, members of the Armed Forces stationed either in the United States or abroad. Information on the size of the Armed Forces is obtained from official records of the Department of Defense.

The definition of the unemployed was discussed above. The employed comprise (1) all those who, during the survey week, did any work at all as paid employees, or in their own business, profession, or on their own farm, or who worked 15 hours or more as unpaid workers in a family-operated enterprise and (2) all those who did not work but had jobs or businesses from which they were temporarily absent due to illness, bad weather, vacation, labor-management dispute, or various personal reasons—whether or not they were seeking other jobs.

Unemployment rate

The unemployment rate represents the number of unemployed as a percent of the civilian labor force. This measure is also computed for various worker groups by sex, age, race, industry, occupation, etc., and for combinations of these characteristics.

Quarterly and monthly estimates

For the United States, the seasonally adjusted quarterly and monthly unemployment rates are those published by the Bureau of Labor Statistics in its monthly publication, *Employment and Earnings*. At the beginning of each calendar year, the BLS revises the seasonal adjustment factors for unemployment and other labor force series from the CPS to take into account data from the previous year. Until full-year data are available, the seasonal adjustment factors are based on data through the prior year.

Since 1973, the Census Bureau's X-11 method¹ has been used to seasonally adjust the labor force data. For most series, the computation is based upon the most recent 10-year period. Prior to 1975, BLS assumed that the magnitude of the seasonal increase or decrease was proportional to the level of the series and, therefore, used the multiplicative version of the X-11 program exclusively in adjusting the employment and unemployment series. It was found that this procedure did not adequately allow for changes in seasonal patterns during periods of sharply changing unemployment. This problem was highlighted in May-June 1975 when large numbers of teenagers left school and entered the labor force. Since this flow tends to be fairly constant and relatively independent of the level of joblessness in any year, the additive option of the X-11 was better suited to seasonally adjust the teenage unemployment series. Consequently, BLS revised its seasonal adjustment procedures. Currently, seasonality for teenage unemployment and for other unemployment series of which teenagers are the primary components are adjusted using the additive procedure of the X-11 method. All other series are adjusted using the multiplicative procedure.

After the components of a series are seasonally adjusted, the values are aggregated to provide seasonally adjusted values for other series. For example, the unemployment rate for all civilian workers is derived by dividing the estimate of total unemployment (the sum of 4 seasonally adjusted age-sex components) by the civilian labor force (the sum of 12 seasonally adjusted age-sex components).

Canada

Canada has three sources of unemployment statistics, only one of which is widely used. Data based on registra-

¹For a detailed description of the X-11 method, see Technical Paper No. 15, *The X-11 Variant of the Census Method II Seasonal Adjustment Program*, by Julius Shiskin, Alan Young, and John Musgrave, 1967 revision (Bureau of the Census, 1967).

tions for unemployment insurance benefits, registrations for employment at Canadian Manpower Centres, and labor force surveys are all available on a monthly basis. Following the report of a ministerial committee on unemployment statistics in August 1960, the results of the labor force survey have been regarded as the "official" Canadian unemployment series. No adjustments have been made in the official Canadian data since they are very close in concept to the U.S. figures.

Unemployment

Registered unemployed. Canada has two series of registered unemployed statistics. The first consists of monthly counts of unemployment insurance claimants and beneficiaries. The second, and less widely used series, is a count of registrations for employment at the Canada Manpower Centres (CMC). Most persons filing a claim for unemployment insurance benefits are requested to register with CMC. CMC receives notices of vacancies from employers all across the country and tries to match registrants with vacancies. No unemployment rates are published based on these administrative data.

Data on unemployment claimants and beneficiaries are published monthly by Statistics Canada in the *Statistical Report on the Operation of the Unemployment Insurance Act*. Data on registrations at the Canada Manpower Centres are published in Statistics Canada's *Canada Manpower Review*.

Labor force surveys. The labor force survey, conducted by Statistics Canada, was introduced as a quarterly survey in 1945 and converted to a monthly survey in November 1952. Statistics are published monthly in *The Labour Force*.

In 1972, a major project was begun to revise the survey to embrace a number of substantial statistical refinements, to collect new data, and to ask more specific questions on labor force status. Throughout 1975, the former and revised surveys were conducted in parallel to enable an analysis of the differences between the two surveys over a 12-month period and to develop a revised historical series. After the December 1975 survey, the old survey was discontinued. The new Canadian survey is very close in concepts to the United States survey; therefore, no adjustments are required for comparability with U.S. definitions.

The reference period for the monthly labor force survey is usually the week containing the 15th of the month. All interviewing, either by telephone call or personal visit, takes place the following week. The survey is currently based on a sample of approximately 55,000 households. The sample was designed to represent all persons 14 years of age and over residing in Canada, except for residents of the Yukon and Northwest Territories, persons living on Indian Reserves, inmates of institutions, and full-time members of the Armed Forces. The number of persons excluded amounts to approximately 2 percent of the population 14

Canadian Survey Questionnaire Used Prior to 1976

LABOUR FORCE SCHEDULE - Complete a schedule for every member of the household 14 years of age or over.

1. Primary Sampling Unit	2. Segment Number	3. Listing Number	4. Line No.	5. Bureau	6. Name	7. Survey
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

FOR OFFICE USE ONLY

Primary Sampling Unit

10	11	12	13	14	15	16	17	18	19
20	21	22	23	24	25	26	27	28	29
30	31	32	33	34	35	36	37	38	39
40	41	42	43	44	45	46	47	48	49
50	51	52	53	54	55	56	57	58	59

Segment Number

10	11	12	13	14	15	16	17	18	19
20	21	22	23	24	25	26	27	28	29
30	31	32	33	34	35	36	37	38	39
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50	51	52	53	54	55	56	57	58	59

Listing Number

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50	51	52	53	54	55	56	57	58	59

Line Number

10	11	12	13	14	15	16	17	18	19
20	21	22	23	24	25	26	27	28	29
30	31	32	33	34	35	36	37	38	39
40	41	42	43	44	45	46	47	48	49
50	51	52	53	54	55	56	57	58	59

<p>7. Sex</p> <table style="width: 100%;"> <tr> <td>Male <input type="checkbox"/></td> <td>Female <input type="checkbox"/></td> </tr> </table>	Male <input type="checkbox"/>	Female <input type="checkbox"/>	<p>8. Marital Status</p> <table style="width: 100%;"> <tr> <td>Single <input type="checkbox"/></td> <td>Married <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> </table>	Single <input type="checkbox"/>	Married <input type="checkbox"/>	Other <input type="checkbox"/>
Male <input type="checkbox"/>	Female <input type="checkbox"/>					
Single <input type="checkbox"/>	Married <input type="checkbox"/>	Other <input type="checkbox"/>				

9. Relationship to Head of Household			
Head <input type="checkbox"/>	Wife <input type="checkbox"/>	Son or Daughter <input type="checkbox"/>	Other <input type="checkbox"/>
Non-son or Daughter-in-law <input type="checkbox"/>	Other relative <input type="checkbox"/>	Partner <input type="checkbox"/>	Other <input type="checkbox"/>

<p>10. Age</p> <table style="width: 100%; text-align: center;"> <tr><td>10</td><td>11</td><td>12</td><td>13</td><td>14</td><td>15</td><td>16</td><td>17</td><td>18</td><td>19</td></tr> <tr><td>20</td><td>21</td><td>22</td><td>23</td><td>24</td><td>25</td><td>26</td><td>27</td><td>28</td><td>29</td></tr> <tr><td>30</td><td>31</td><td>32</td><td>33</td><td>34</td><td>35</td><td>36</td><td>37</td><td>38</td><td>39</td></tr> <tr><td>40</td><td>41</td><td>42</td><td>43</td><td>44</td><td>45</td><td>46</td><td>47</td><td>48</td><td>49</td></tr> <tr><td>50</td><td>51</td><td>52</td><td>53</td><td>54</td><td>55</td><td>56</td><td>57</td><td>58</td><td>59</td></tr> </table>	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	<p>11. MAJOR ACTIVITY</p> <p>What did this person do mostly last week?</p> <table style="width: 100%;"> <tr> <td>Looked for a job but not at work <input type="checkbox"/></td> <td>Had a job but not at work <input type="checkbox"/></td> <td>Permanently unable to work <input type="checkbox"/></td> <td>Kept house <input type="checkbox"/></td> <td>Went to school <input type="checkbox"/></td> <td>Retired or voluntarily left <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> </table>	Looked for a job but not at work <input type="checkbox"/>	Had a job but not at work <input type="checkbox"/>	Permanently unable to work <input type="checkbox"/>	Kept house <input type="checkbox"/>	Went to school <input type="checkbox"/>	Retired or voluntarily left <input type="checkbox"/>	Other <input type="checkbox"/>
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<p>12. SECONDARY ACTIVITY</p> <p>Did this person do anything else last week?</p> <table style="width: 100%;"> <tr> <td>Looked for a job but not at work <input type="checkbox"/></td> <td>Had a job but not at work <input type="checkbox"/></td> <td>Permanently unable to work <input type="checkbox"/></td> <td>Kept house <input type="checkbox"/></td> <td>Went to school <input type="checkbox"/></td> <td>Retired or voluntarily left <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> <td>Did nothing else <input type="checkbox"/></td> </tr> </table>	Looked for a job but not at work <input type="checkbox"/>	Had a job but not at work <input type="checkbox"/>	Permanently unable to work <input type="checkbox"/>	Kept house <input type="checkbox"/>	Went to school <input type="checkbox"/>	Retired or voluntarily left <input type="checkbox"/>	Other <input type="checkbox"/>	Did nothing else <input type="checkbox"/>	<p>13. How many hours did this person work last week?</p> <table style="width: 100%; text-align: center;"> <tr><td>10</td><td>11</td><td>12</td><td>13</td><td>14</td><td>15</td><td>16</td><td>17</td><td>18</td><td>19</td></tr> <tr><td>20</td><td>21</td><td>22</td><td>23</td><td>24</td><td>25</td><td>26</td><td>27</td><td>28</td><td>29</td></tr> <tr><td>30</td><td>31</td><td>32</td><td>33</td><td>34</td><td>35</td><td>36</td><td>37</td><td>38</td><td>39</td></tr> <tr><td>40</td><td>41</td><td>42</td><td>43</td><td>44</td><td>45</td><td>46</td><td>47</td><td>48</td><td>49</td></tr> <tr><td>50</td><td>51</td><td>52</td><td>53</td><td>54</td><td>55</td><td>56</td><td>57</td><td>58</td><td>59</td></tr> </table>	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59
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<p>14. For how many months has this person been looking for work?</p> <table style="width: 100%;"> <tr> <td>Under 1 <input type="checkbox"/></td> <td>1-3 <input type="checkbox"/></td> <td>4-6 <input type="checkbox"/></td> <td>7-12 <input type="checkbox"/></td> <td>13-18 <input type="checkbox"/></td> <td>19 or more <input type="checkbox"/></td> </tr> </table>	Under 1 <input type="checkbox"/>	1-3 <input type="checkbox"/>	4-6 <input type="checkbox"/>	7-12 <input type="checkbox"/>	13-18 <input type="checkbox"/>	19 or more <input type="checkbox"/>	<p>15. Did this person look for full time or part time work last week?</p> <table style="width: 100%;"> <tr> <td>Full time <input type="checkbox"/></td> <td>Part time <input type="checkbox"/></td> </tr> </table>	Full time <input type="checkbox"/>	Part time <input type="checkbox"/>
Under 1 <input type="checkbox"/>	1-3 <input type="checkbox"/>	4-6 <input type="checkbox"/>	7-12 <input type="checkbox"/>	13-18 <input type="checkbox"/>	19 or more <input type="checkbox"/>				
Full time <input type="checkbox"/>	Part time <input type="checkbox"/>								

FOR "W", "L" OR "J" IN 11 OR 12 ASK

16. For whom did this person work? name of firm, government agency or person

17. **INDUSTRY** In what kind of business or industry did this person work?

18. **OCCUPATION** What kind of work did this person do in this industry?

19. To what class of worker did this person belong?

WORKED FOR OTHERS	OWN BUSINESS, FARM OR PROFESSION	
Part worker <input type="checkbox"/>	Unpaid family worker <input type="checkbox"/>	Self paid help <input type="checkbox"/>
Other <input type="checkbox"/>	Other <input type="checkbox"/>	Other <input type="checkbox"/>

FOR 1-34 HOURS IN 13 OR "J" IN 11 OR 12 ASK

20. Does this person usually work 35 hours or more at his present job?

No Yes **ASK 21**

21. IF "NO" IN 20 ASK: Would this person prefer to work 35 hours or more?

No Yes

22. IF "YES" IN 21 ASK: Why doesn't this person usually work 35 hours or more each week?

Household responsibilities <input type="checkbox"/>	Age or physical condition <input type="checkbox"/>	Went to school <input type="checkbox"/>	Other (Specify below) <input type="checkbox"/>
---	--	---	--

IF "YES" IN 20 OR "J" IN 11 OR 12 ASK

23. Why did this person work less than the usual number of hours last week?

Bad weather <input type="checkbox"/>	Public holiday <input type="checkbox"/>	Labor dispute <input type="checkbox"/>	Left job during week <input type="checkbox"/>	Found job during week <input type="checkbox"/>	Temporary leave <input type="checkbox"/>	Working short shift <input type="checkbox"/>	Other (Specify above) <input type="checkbox"/>
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ACTIVITY LAST MONTH

24. MAJOR ACTIVITY

What was this person doing the week ending.....?

Looked for a job but not at work <input type="checkbox"/>	Had a job but not at work <input type="checkbox"/>	Permanently unable to work <input type="checkbox"/>	Kept house <input type="checkbox"/>	Went to school <input type="checkbox"/>	Retired or voluntarily left <input type="checkbox"/>	Other <input type="checkbox"/>
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25. SECONDARY ACTIVITY

Did this person do anything else that week?

Looked for a job but not at work <input type="checkbox"/>	Had a job but not at work <input type="checkbox"/>	Permanently unable to work <input type="checkbox"/>	Kept house <input type="checkbox"/>	Went to school <input type="checkbox"/>	Retired or voluntarily left <input type="checkbox"/>	Other <input type="checkbox"/>	Did nothing else <input type="checkbox"/>
---	--	---	-------------------------------------	---	--	--------------------------------	---

26. Was this person interviewed?

No Yes

Canadian Survey Questionnaire Used from 1976 Onward

Question No. 2 _____ Survey date 3 _____ Assignment No. 4 _____ "Authority - Statistics Act, Chapter 11, Statutes of Canada 1970 - 71 - 72." FORM NO. 05

MID point - No. No. _____ Class name _____

6 _____ 7 _____

10 DID ... DO ANY WORK AT ALL LAST WEEK (not counting work around the house)?
 Yes No *go to 30*
Enter code

11 DID ... HAVE MORE THAN ONE JOB LAST WEEK?
 Yes No *go to 13*
Enter code

12 WAS THIS A RESULT OF CHANGING EMPLOYING LAST WEEK?
 Yes No *go to 13*
Enter code

13 HOW MANY HOURS PER WEEK DOES ... USUALLY WORK AT HIS/HER:
 (during job) *if usual* *if not* *if more* *if 20 or more* *if 10*
 Other job? *if usual* *if not* *if more* *if 20 or more* *if 10*
Enter code

14 WHAT IS THE REASON ... USUALLY WORKS LESS THAN 30 HOURS PER WEEK?
 Other code

15 LAST WEEK, HOW MANY HOURS OF OVERTIME OR EXTRA HOURS DID ... WORK?
 if none *if more* *if 20 or more* *if 10*
Enter code

16 LAST WEEK, HOW MANY HOURS DID ... LOSE OR TAKE OFF FROM WORK FOR ANY REASON SUCH AS BUSINESS, HOLIDAY, OR LAYOFF? (from all jobs)
 if none *if more* *if 20 or more* *if 10*
Enter code

17 WHAT WAS THE MAIN REASON FOR LOSING THESE HOURS?
 Other code

18 HOW MANY HOURS DID ... ACTUALLY WORK LAST WEEK AT HIS/HER:
 (during job) *if usual* *if not* *if more* *if 20 or more* *if 10*
 Other job? *if usual* *if not* *if more* *if 20 or more* *if 10*
Enter code

19 IN THE PAST 4 WEEKS, HAS ... LOOKED FOR ANOTHER JOB?
 Yes No *go to 71*
Enter code

20 WHAT HAS ... DONE IN THE PAST 4 WEEKS TO FIND ANOTHER JOB?
 if none *if more* *if 20 or more* *if 10*
Enter code

30 LAST WEEK, DID ... HAVE A JOB AT WHICH HE/HE SHE DID NOT WORK?
 Yes No *go to 32* *if no* *if no*

31 LAST WEEK, DID ... HAVE A JOB TO START AT A DEFINITE DATE IN THE FUTURE?
 Yes No *go to 30*

32 COUNTING FROM THE END OF LAST WEEK, IN HOW MANY WEEKS WILL ... START TO WORK AT HIS/HER NEW JOB?
 if not worked before *if worked before* *if 20 or more* *if 10*
Enter code

33 WHY WAS ... ABSENT FROM WORK LAST WEEK?
 if none *if more* *if 20 or more* *if 10*
Enter code

34 DID ... HAVE MORE THAN ONE JOB LAST WEEK?
 Yes No *go to 35*
Enter code

35 HOW MANY HOURS PER WEEK DOES ... USUALLY WORK AT HIS/HER:
 (during job) *if usual* *if not* *if more* *if 20 or more* *if 10*
 Other job? *if usual* *if not* *if more* *if 20 or more* *if 10*
Enter code

36 WHAT IS THE REASON ... USUALLY WORKS LESS THAN 30 HOURS PER WEEK?
 Other code

37 UP TO THE END OF LAST WEEK, HOW MANY WEEKS HAS ... BEEN CONTINUOUSLY ABSENT FROM WORK?
 if none *if more* *if 20 or more* *if 10*
Enter code

38 IS ... GETTING ANY TALK OR SALARY FOR ANY OF THE TIME OFF LAST WEEK?
 Yes No *go to 39*
Enter code

39 INTERVIEWER CHECK ITEM:
 * If code 1 (report) is 33 *go to 60*
 * Otherwise *go to 60*

40 IN THE PAST 4 WEEKS, HAS ... LOOKED FOR ANOTHER JOB?
 Yes No *go to 71*
Enter code

41 WHAT HAS ... DONE IN THE PAST 4 WEEKS TO FIND ANOTHER JOB?
 if none *if more* *if 20 or more* *if 10*
Enter code

70 INTERVIEWER CHECK ITEM:
 * If "No" (never worked) is 30 *go to 80*
 * If not worked before *if 20 or more* *if 10* *go to 80*
 * Otherwise *go to 72 through 76 and check that the information is complete and correct.*

71 HAS ... CHANGED EMPLOYERS SINCE LAST MONTH?
 Yes *Enter date information for 72 through 76* *Check that information in 72 through 76 is complete and correct.*

72 FOR WHOM DID ... WORK? (Name of business, governmental dept., or agency, or person)
 A) *if none* *if more* *if 20 or more* *if 10*
 B) *if none* *if more* *if 20 or more* *if 10*
Enter code

73 WHEN DID ... START WORKING FOR THIS EMPLOYER?
 if none *if more* *if 20 or more* *if 10*
Enter code

74 WHAT KIND OF BUSINESS, INDUSTRY OR SERVICE WAS THIS? (Give full description, e.g., paper-bag manufacturing, retail shoe store, municipal board of education)
 A) *if none* *if more* *if 20 or more* *if 10*
 B) *if none* *if more* *if 20 or more* *if 10*
Enter code

75 WHAT KIND OF WORK WAS ... DOING? (Give full description, e.g., painting, ironing, selling shoes, teaching primary school)
 A) *if none* *if more* *if 20 or more* *if 10*
 B) *if none* *if more* *if 20 or more* *if 10*
Enter code

76 Class of worker:
 Main job *if none* *if more* *if 20 or more* *if 10*
 Other job *if none* *if more* *if 20 or more* *if 10*
Enter code

50 HAS ... EVER WORKED?
 Yes No *go to 80*

51 WHEN DID ... LAST WORK AT A JOB OR BUSINESS?
 if none *if more* *if 20 or more* *if 10*
Enter code

52 INTERVIEWER CHECK ITEM:
 * If last worked before *if 20 or more* *if 10* *go to 80*
 * Otherwise *go to 80*

53 ABOUT HOW MANY HOURS PER WEEK DID ... WORK AT THAT JOB?
 if none *if more* *if 20 or more* *if 10*
Enter code

54 WHAT WAS THE MAIN REASON WHY ... LEFT THAT JOB?
 if none *if more* *if 20 or more* *if 10*
Enter code

55 INTERVIEWER CHECK ITEM:
 * If "None, unable to work" is 10 *go to 80*
 * Otherwise *go to 80*

56 IN THE PAST 6 MONTHS HAS ... LOOKED FOR WORK?
 Yes No *go to 79*
Enter code

57 IN THE PAST 4 WEEKS WHAT HAS ... DONE TO FIND WORK? (List of methods reported)
 if none *if more* *if 20 or more* *if 10*
Enter code

58 IN THE PAST 4 WEEKS HAS ... DONE ANYTHING ELSE TO FIND WORK? (List of other methods reported)
 if none *if more* *if 20 or more* *if 10*
Enter code

59 WHEN DID ... LAST ... (Report method)
 if none *if more* *if 20 or more* *if 10*
Enter code

60 HAS ... BEEN LOOKING FOR A JOB TO LAST FOR LESS THAN 6 MONTHS, OR MORE THAN 6 MONTHS?
 Less than 6 months (not 6 days) More than 6 months
Enter code

61 ABOUT HOW MANY HOURS OF WORK PER WEEK HAS ... BEEN LOOKING FOR?
 if none *if more* *if 20 or more* *if 10*
Enter code

62 INTERVIEWER CHECK ITEM:
 * If "I want age" for any method is 97 *go to 84*
 * Otherwise *go to 83*

63 WAS THERE ANY REASON WHY ... DID NOT LOOK FOR WORK LAST WEEK?
 if none *if more* *if 20 or more* *if 10*
Enter code

64 WAS THERE ANY REASON WHY ... COULD NOT TAKE A JOB LAST WEEK?
 if none *if more* *if 20 or more* *if 10*
Enter code

EDUCATIONAL ACTIVITY

80 LAST WEEK, WAS ... ENROLLED IN A SCHOOL, COLLEGE, OR UNIVERSITY?
 Yes No *go to 80*

81 WAS ... ENROLLED AS A FULL-TIME OR A PART-TIME STUDENT?
 if none *if more* *if 20 or more* *if 10*
Enter code

82 WHAT KIND OF SCHOOL WAS THIS?
 if none *if more* *if 20 or more* *if 10*
Enter code

INFORMATION SOURCE

90 MID page-the No. of person providing the above information.
 Last interview This interview

91 Was this information provided over the telephone?
 Yes No

years of age and over. Although the revised labor force survey collects data on persons 14 years of age and over, the official labor force and unemployment data refer to persons 15 years of age and over.

Since compulsory education ends at age 15 or 16 in Canada, no adjustment is necessary. In the former labor force survey, the official lower age limit was 14. Under the former survey, Canadian statistics were adjusted by BLS to exclude the 14-year-olds.

The unemployed include all persons who, during the reference week, were in any of the following categories: (1) Without work and had actively looked for work in the past 4 weeks and available for work; (2) been on layoff for 6 months or less and were available for work; or (3) had not actively looked for work in the past 4 weeks but had a new job to start in 4 weeks or less and were available for work.

In order to determine labor force status, the interviewer asks a series of specific, direct questions designed to provide precise and comprehensive information about labor force activities and characteristics. The interviewer asks, "Did . . . do any work at all last week, not counting work around the house?"; "Last week, did . . . have a job at which he/she did not work?"; "In the past four weeks what has . . . done to find work?"; "Was there any reason why . . . could not take a job last week?" In the former survey, more general questions were asked: "What did . . . do mostly last week?"; "Did . . . do anything else last week?" While these questions led to a straightforward distinction among persons who are employed, unemployed, or not in the labor force, they were not suited for detailed probing, particularly on the characteristics of persons near the margins of the three basic labor force categories.

Specific questions regarding availability for work in the reference week are now asked and some persons who were unemployed under the old survey would not have met the availability requirements of the revised survey. For example, full-time students looking for full-time work are automatically considered not available for work in the reference week according to the revised labor force survey. However, full-time students seeking part-time work are regarded as available (unless they report otherwise) and, if the other criteria are met, are included among the unemployed.

Persons on layoff with instructions to return to work within 30 days of the layoff—the temporarily laid off—were classified as unemployed in the former survey. All others on layoff were classified as unemployed if they stated that they would have looked for work in the reference week except that they expected to be recalled to their former jobs. However, no questions on this point were asked of these persons and, unless they had volunteered the information that they expected to be recalled, they were classified as not in the labor force.

In the revised survey, persons on layoff for less than 26 weeks are classified as unemployed. Those who have been laid off for more than 26 weeks are classified as un-

employed if they looked for work in the previous 4 weeks. Otherwise, they are classified as not in the labor force. In both surveys then, persons on layoff expecting to return to work are classified as unemployed. The distinguishing feature is that the revised survey is able to identify persons on layoff with greater precision due to direct questioning, and to record additional information about such persons, such as the duration of the layoff. In the United States, there is no time limit after which laid-off workers waiting to be recalled to work must look for another job to be counted as unemployed.

Canadians waiting to start a new job were not identified separately in the former survey, and, as a result, generally were classified as unemployed or not in the labor force, depending on whether or not they reported that they were looking for work. A small number could also have been classified as employed and included among the "had a job but not at work" category. In the revised survey, they are unemployed if their new job is to start within 4 weeks of the end of the reference period. If the job is to start in more than 4 weeks from the end of the reference period, they are classified as unemployed only if they also looked for work. This is similar to the U.S. practice.

Persons without jobs who stated they would have looked for work except for certain conditions—discouraged workers—were formerly classified as unemployed. However, there was no specific question on this point, and the information on discouragement had to be volunteered. In the revised survey and in the United States survey, discouraged workers are considered as not in the labor force.

On the basis of these more detailed questions, aggregate unemployment rates were revised downward slightly. In 1975, the jobless rate was revised from 7.0 percent to 6.9 percent. While the total difference was slight, there were substantial differences in the estimates by sex and region. In the revised survey, unemployment was significantly higher for women and lower for men. In 1975, the unemployment rate for women was 6.4 percent according to the old survey and 8.1 percent according to the new survey. Female joblessness was formerly understated since women tended to respond to the question, "What did . . . do mostly last week?" in terms of household or other non-labor force activities. The more specific wording of the revised questionnaire revealed that many of these women were unemployed.

Lower unemployment estimates for men (6.2 percent versus 7.4 percent in 1975, with differences concentrated in winter and spring), result mainly from differences in the manner in which the new survey identifies and classifies persons who have not actively sought work.

Labor force

The labor force is composed of all persons who, during the reference week, were employed or unemployed. The

employed in Canada include all persons who, during the reference week, were in any of the following categories: (1) Did any work for pay or profit; (2) did any unpaid family work which contributed directly to the operation of a farm, business, or professional practice owned or operated by a related member of the household; or (3) had a job but were not at work due to illness, disability, personal or family responsibilities, bad weather, labor dispute, or vacation.

With the introduction of the current labor force survey, the methods used to measure employment and unemployment were revised, although the concepts remained essentially the same. These revisions have brought the Canadian questionnaire closer to that of the United States. There were a few differences between the former Canadian survey and the United States survey, but most have disappeared with the introduction of the revised Canadian survey. Under the old survey, to be counted as employed, Canadian farm housewives had to work more than 20 hours in the survey week, but there was no minimum of hours worked for other unpaid family workers. The revised survey, using more specific questions to identify work activities, contains no restrictions on farm housewives or other unpaid family workers. In the United States, unpaid family workers must work 15 hours or more during the survey week to be counted as employed. However, the difference in treatment of unpaid family workers working less than 15 hours is probably insignificant.

In the former Canadian survey, a small number of persons with a job but who were not at work and also looked for work in the reference week were classified as unemployed. In the revised survey, as in the U.S. survey, working takes precedence over looking for work. Thus, these persons are now classified as employed.

The revisions of the survey resulted in slightly higher employment estimates for women of all age groups (4.4 percent) and men 15 to 24 years (2.8 percent) due to more precise identification of employment activities. No changes were made to employment estimates for men 25 years of age and over.

Unemployment rate

Annual unemployment rates for Canada are calculated by averaging the results of the monthly labor force surveys. From 1966 onward, unemployment rates based on the revised definitions of unemployment and employment have been estimated by Statistics Canada. The rates for 1959-65, however, have not been revised. Labor market conditions were believed to be too different in this earlier period to make estimates based on 1975 relationships.

Quarterly and monthly estimates

For Canada, no adjustments are necessary to the labor force survey data for comparability with U.S. defini-

tions. The seasonally adjusted jobless rates are those published by Statistics Canada in its monthly publication, *The Labour Force*.

Statistics Canada uses the X-11 Variant of the U.S. Bureau of the Census Method II seasonal adjustment program to seasonally adjust the labor force survey data. The multiplicative version is used for some series, the additive version for other series. Statistics Canada has also experimented with a modification of the X-11, known as Statistics Canada X-11-ARIMA (auto-regressive integrated moving average). Seasonally adjusted estimates of the labor force, employed, and unemployed are derived by the summation of the appropriate series.

Seasonally adjusted figures have been calculated on a current basis since January 1975; the seasonal adjustment program is run each month using data up to and including the most recent month. At the end of the calendar year, the seasonally adjusted figures are revised.

Australia

Australia has two sources of unemployment statistics, both of which are widely used. Data based upon registrations at employment offices are available on a monthly basis. A quarterly labor force survey, begun in 1964, provides unemployment data in close conformity with U.S. concepts. Since about 1970, the statistics from the quarterly survey have been regarded as the "official" Australian unemployment series by the International Labour Office. Registrations statistics are released about 2 weeks before publication of the survey data. In addition, because the registrations statistics are on a monthly basis, they are still used as current labor market indicators in Australia.

Unemployment

Registered unemployed. These statistics comprise all persons who were still registered with the Commonwealth Employment Service (CES) on the Friday nearest the end of the month, who claimed when registering that they were not employed, and who were seeking full-time employment, i.e., 35 hours or more per week. They include persons referred to employers but whose employment was still unconfirmed, and persons who had recently obtained employment without notifying the CES. The statistics are published by the Department of Employment and Industrial Relations in the *Monthly Review of the Employment Situation*.

Separate figures are published for recipients of unemployment benefits. Such benefits are payable only to persons of limited means. All recipients of benefits must complete a weekly statement of income, and benefits are reduced by other income over a specified low level. Recipients of unemployment benefits must also have at least 1 year of residence in Australia immediately before un-

Australian Population Survey Questionnaire (Excerpt)

<p>8. MOST OF LAST WEEK DID ... WORK AT A JOB OR BUSINESS OR DO SOMETHING ELSE?</p> <p>Worked (Go to Q.10) ... <input type="checkbox"/> 1</p> <p>Had a job but not at work (exclude waiting to start new job) ... <input type="checkbox"/> 2</p> <p>Looking for work ... <input type="checkbox"/> 3</p> <p>Kept house ... <input type="checkbox"/> 4</p> <p>Went to school ... <input type="checkbox"/> 5</p> <p>Retired or voluntarily inactive ... <input type="checkbox"/> 6</p> <p>Permanently unable to work (No more questions) ... <input type="checkbox"/> 7</p> <p>Other (Specify on field query form) ... <input type="checkbox"/> 8</p> <p>SD only: Institutionalised (No more questions) ... <input type="checkbox"/> 9</p>	<p>15. WHY WAS ... AWAY FROM WORK LAST WEEK?</p> <p>Leave or holiday ... <input type="checkbox"/> 1</p> <p>Own illness or injury ... <input type="checkbox"/> 2</p> <p>Lost job in week ... <input type="checkbox"/> 3</p> <p>Began job in week ... <input type="checkbox"/> 4</p> <p>Bad weather, breakdown, etc. ... <input type="checkbox"/> 5</p> <p>Laid off or on short time: Economic reasons ... <input type="checkbox"/> 6</p> <p>Industrial dispute NPE ... <input type="checkbox"/> 7</p> <p>Industrial dispute PE ... <input type="checkbox"/> 8</p> <p>On strike ... <input type="checkbox"/> 9</p> <p>Note: If Q.10 not asked end box 5, 6, 7, 8 or 9 above, go to Q.22B; otherwise go to Q.22.</p>	<p>21. IF ... HAD FOUND WORK IS THERE ANY REASON WHY ... COULD NOT HAVE STARTED LAST WEEK?</p> <p>Yes - own temporary illness or injury ... <input type="checkbox"/> 1</p> <p> - child care problems ... <input type="checkbox"/> 2</p> <p> - going to school ... <input type="checkbox"/> 3</p> <p> - made arrangements to start a new job; preferred to start in survey week ... <input type="checkbox"/> 4</p> <p> - preferred to start after survey week ... <input type="checkbox"/> 5</p> <p>other reasons (Specify on field query form) ... <input type="checkbox"/> 6</p> <p>U ... <input type="checkbox"/> 6</p> <p>NILF ... <input type="checkbox"/> 7</p> <p>No ... <input type="checkbox"/> 8</p>
<p>9. DID ... DO ANY PAID WORK AT ALL LAST WEEK OR WORK WITHOUT PAY IN A FAMILY BUSINESS?</p> <p>Yes ... <input type="checkbox"/> 1</p> <p>No (Go to Q.11) ... <input type="checkbox"/> 2</p>	<p>No Qs 16 and 17</p>	
<p>10. HOW MANY HOURS DID ... WORK LAST WEEK AT ALL JOBS, INCLUDING OVERTIME AND EXCLUDING TIME OFF?</p> <p>Note: HOURS</p> <p> - If 01-34 hours, go to Q.12.</p> <p> - If 35 hours and over, go to Q.23</p> <p><input type="text"/> <input type="text"/></p>	<p>18. (If "Looked for work" in Q.8, ask Q.19)</p> <p>HAS ... BEEN LOOKING FOR WORK AT ANY TIME DURING THE PAST FOUR WEEKS?</p> <p>Yes <input type="checkbox"/> (Ask Q.19)</p> <p>No (No more questions) ... <input type="checkbox"/> 11</p>	<p>22A. WHEN DID ... BEGIN LOOKING FOR WORK?</p> <p>22B. WHEN WAS ... LAID OFF/WHEN DID ... GO ON STRIKE?</p> <p>WEEKS AGO <input type="text"/> <input type="text"/></p> <p>Note: Record whole weeks to end of survey week. If box 5, 6, 7 or 8 in Q.15 probe whether period 4 weeks or less, recode if necessary. Ask for last job in Q.23 to Q.26.</p>
<p>11. (If "Had a job but not at work" in Q.8, ask Q.12)</p> <p>EVEN THOUGH ... DID NOT WORK LAST WEEK, DID ... HAVE ANY JOB, BUSINESS (OR FARM)?</p> <p>Yes <input type="checkbox"/> (Ask Q.12)</p> <p>No (Go to Q.18) ... <input type="checkbox"/> 1</p>	<p>19. HAS ... BEEN LOOKING FOR FULL-TIME OR PART-TIME WORK DURING THE PAST FOUR WEEKS?</p> <p>Full-time work ... <input type="checkbox"/> 12</p> <p>Part-time work ... <input type="checkbox"/> 13</p>	<p>23. WHAT WAS ... OCCUPATION LAST WEEK?</p> <p><input type="text"/> <input type="text"/> <input type="text"/></p>
<p>12. DOES ... USUALLY WORK LESS THAN 35 HOURS AT ... PRESENT JOB(S)?</p> <p>Yes <input type="checkbox"/> (Ask Q.13)</p> <p>No <input type="checkbox"/> <input type="checkbox"/> 3</p>	<p>20. WHEN LOOKING FOR WORK DURING THE PAST FOUR WEEKS - WAS ... REGISTERED WITH THE COMMONWEALTH EMPLOYMENT SERVICE OR OTHER EMPLOYMENT AGENCY?</p> <p>Did ... APPLY TO PROSPECTIVE EMPLOYERS IN PERSON? ... <input type="checkbox"/> 2</p> <p>Did ... APPLY BY POST OR TELEPHONE? ... <input type="checkbox"/> 3</p> <p>Did ... DO ANYTHING ELSE?</p> <p>Active ... <input type="checkbox"/> 4</p> <p>Non-active ... <input type="checkbox"/> 5</p> <p>(Specify on field query form) ... <input type="checkbox"/> 6</p>	<p>24. FOR WHOM DID ... WORK LAST WEEK? (Name/Full Address)</p> <p><input type="text"/> <input type="text"/> <input type="text"/></p>
<p>13. WOULD ... PREFER TO WORK 35 HOURS OR MORE?</p> <p>Yes <input type="checkbox"/> (Ask Q.14)</p> <p>No (If Q.10 not asked, go to Q.15; otherwise, go to Q.23)</p> <p><input type="checkbox"/> 1</p>	<p>25. IN WHAT KIND OF BUSINESS OR INDUSTRY DID ... WORK LAST WEEK?</p> <p><input type="text"/> <input type="text"/> <input type="text"/></p>	<p>26. LAST WEEK DID ... WORK FOR AN EMPLOYER FOR WAGES, SALARY, KIND ETC? (Name/Full Address)</p> <p>IN OWN BUSINESS - WITH EMPLOYEES? ... <input type="checkbox"/> 1</p> <p>WITH NO EMPLOYEES? ... <input type="checkbox"/> 2</p> <p>WITHOUT PAY IN FAMILY BUSINESS? ... <input type="checkbox"/> 3</p> <p>Never worked ... <input type="checkbox"/> 5</p>
<p>14. WHY DOESN'T ... WORK LONGER?</p> <p>No work ... <input type="checkbox"/> 2</p> <p>All other reasons ... <input type="checkbox"/> 3</p> <p>Note: If Q.10 not asked, ask Q.15; otherwise, go to Q.23.</p>		

employment or must intend to reside permanently in Australia. Seasonal workers are not eligible for unemployment benefits.

Labor force surveys. The Australian labor force survey, conducted by the Australian Bureau of Statistics, is similar in concepts and definitions to the U.S. labor force survey. Revisions in definitions in May 1976 have brought the Australian survey closely in line with U.S. concepts. Although there were some differences prior to these revisions, they are not believed to be important enough to require adjustment. The Australian survey is conducted quarterly, by means of personal interviews, in February, May, August, and November. Until 1972, a 1-percent sample of about 40,000 private dwellings and a sample of other dwellings (hotels, motels, etc.) were taken. In 1972, the sample was redesigned based on data from the 1971 Census of Population. The revised sample consists of about 30,000 private dwellings and a sample of nonprivate dwellings which together represent a sample of two-thirds of 1 percent of the population of Australia. Results of the surveys are published by the Australian Bureau of Statistics in *The Labour Force*.

Interviews are carried out during a period of 4 weeks, so that there are 4 survey weeks in each of the months to which the survey relates. These 4 weeks are chosen so as to fall within the limits of the calendar month or with minimum encroachment into the adjacent months.

As of May 1976, unemployment estimates have been based on the revised definition below. Unemployed persons are now defined as all civilians aged 15 years and over who either:

- a. During the survey week did not work and did not have a job, but could have taken one had it been available, and had been looking for full-time or part-time work in the 4 weeks up to and including the survey week (including persons who would have been prevented from taking a job in the survey week by their own temporary illness or injury, or by their having made arrangements to start in a new job after the survey week which they would have preferred to start in the survey week); or
- b. were waiting to be called back to a job from which they had been temporarily laid off without pay for 4 weeks or less (including the survey week).

The definition of unemployment prior to May 1976 differed in several respects from the above definition. First, persons who would have been looking for work but had not because they believed no work was available—"discouraged workers"²—were included in the unemployed prior to May 1976. However, the Australian survey did not contain a specific question on discouraged workers; such information had to be volunteered by the respondent. Discouraged workers are now excluded from the labor force. Second, some persons classified as unemployed were not actually

able to take a job in the survey week. There is now a test for current availability of jobseekers. Third, the period for jobseeking activities for unemployed persons was limited to the survey week. Now, a period of 4 weeks (including the survey week) is allowed for jobseeking in order to classify persons as unemployed.

Students actively seeking work are classified as unemployed both in the old and revised surveys. Under the old survey, special probing into the current availability of students was made in the November survey (that is, at the end of the school year).

Beginning in February 1975, questions were added to the survey to ascertain the number of persons seeking work during a 4-week period who could have taken a job in the survey week. Evaluation of the results of these new questions led to the May 1976 revisions in definitions. Although unemployment officially remained on the old definition from February 1975 through February 1976, data were also published on the new basis for this period. Therefore, BLS has made adjustments to the data going back to February 1975. The Australian Bureau of Statistics does not intend to make historical revisions for the period prior to February 1975. BLS has not made historical revisions either. On an annual basis, the difference between the old and new definitions in 1975 was very small—the old definitions produced an average unemployment rate of 4.3 percent; the new definitions raised the rate to 4.4 percent. In several survey months, however, the difference was wider, as indicated by the following tabulation:

	Unemployment rate	
	Old definitions	New definitions
1975:		
February	4.6	4.9
May	3.9	4.2
August	3.9	4.1
November	4.6	4.5
1976:		
February	4.7	5.0

The unemployment rate for women was also significantly different: 5.7 percent on the old basis and 6.2 percent on the new basis for 1975. The male rate was increased only marginally, from 3.5 to 3.6 percent.

Labor force

The labor force, under survey definitions, comprises all civilians 15 years of age or over who, during the survey week, were employed or unemployed. Unemployment definitions were discussed above. Employed persons comprise all who, during the survey week, (a) did any work for pay, profit, commission, or payment in kind in a job or business or on a farm (including employees, employers, and self-employed persons); or (b) worked 15 hours or more without pay in a family business or farm; or (c) had a job, business, or farm but were not at work because of illness, accident, leave, holiday, production holdup due to bad

²Called "discouraged jobseekers" in Australia.

weather, plant breakdown, etc., or because they were on strike. These definitions are identical to U.S. definitions, and no adjustments are required for comparability with U.S. concepts.

In the 1971 population census, trainee teachers (enrolled at government teachers' colleges and in some cases enrolled also at other institutions) were for the first time classified as not in the labor force; since then they have also been excluded from labor force estimates derived from the Australian survey. Exclusion of these persons constitutes a break in the series between May and August 1971; the number of trainee teachers excluded from the labor force in August amounted to 24,000. This makes no difference in the unemployment rate for Australia.

Unemployment rates

Annual unemployment rates for Australia have been calculated by averaging the published data for February, May, August, and November of each year. For 1975 onward, as mentioned above, data based on the new definition of unemployment have been used.

The Australian labor force survey was initiated in 1964. Unemployment rates for 1959 through 1963 are estimates made by an Australian researcher based on linking of the survey and registration statistics.³

Quarterly and monthly estimates

For Australia, no adjustments are necessary for comparability with U.S. definitions. The seasonally adjusted unemployment rates are those published by the Australian Bureau of Statistics (ABS) in their publication, *The Labour Force Survey*. Since the Australian labor force survey is conducted quarterly, no monthly estimates of joblessness on the labor force survey basis are made.

Every year, the seasonally adjusted statistics are revised to take into account the previous year's data. The ABS has adopted for its standard method of seasonal adjustment, the X-11Q (quarterly) Variant of the Census Method II seasonal adjustment program of the U.S. Bureau of the Census. Until 1974, a standard multiplicative adjustment was used. This method assumes that the amplitude of seasonal change is proportional to the level of the series. Following the rapid rise in the level of unemployment in 1974, this proportional relationship apparently changed substantially and the X-11Q method was unable to adapt sufficiently. ABS made an estimate of the effect of the change in the proportional relationship and applied prior adjustment factors to the data before seasonally adjusting. Therefore, the seasonal factors reflect one proportional relationship up to 1974 and another relationship since then.

³Barry Hughes, "Supply Constraints and Short-term Employment Functions: A Comment," *The Review of Economics and Statistics*, Number 4, 1971, p. 394.

Japan

The principal system of labor force statistics in Japan was patterned after the American system and was installed with the aid of American experts. Japanese statisticians have subsequently introduced a number of modifications to adapt the system better to Japanese needs.

The Japanese labor force survey has been conducted monthly by the Bureau of Statistics, Office of the Prime Minister, since September 1946, and currently comprises a sample of about 76,000 persons residing in 33,000 households. This represents a sampling ratio of about 1 out of every 1,000 persons 15 years old and over. Results are published by the Bureau of Statistics in the *Monthly Report on the Labour Force Survey*.

Adjustment of Japanese labor force data to U.S. concepts is based mainly on the monthly labor force survey. In September 1967, the survey design was revised and the enumeration method changed from "self enumeration and interview" to "self enumeration"—i.e., the labor force survey schedule is now filled in by the respondent rather than the enumerator. The major data items have been revised back to 1953 by Japanese authorities based on the new survey design.

Unemployment

The unemployed in the Japanese labor force survey consist of all persons 15 years of age or over without jobs who did not work at all during the survey week (the week ending on the last day of each month) and who:

1. State that they actually sought work during the survey week; or
2. Were awaiting the results of previous employment applications.

In the Japanese questionnaire, the question "Was this person engaged in work at all during the survey week?" has eight possible answers. One of the following is checked by the respondent:

1. Engaged mainly in work
2. Engaged partly in work besides attending school
3. Engaged partly in work besides home duties, etc.
4. Had a job but did not work
5. Had no job but seeking one
6. Attending school
7. Engaged in home duties
8. Others

Persons checking response number 5—"had no job but seeking one"—are classified as unemployed. This response is defined in the explanatory notes accompanying the survey schedule as follows: "Refers to the person who had no job but was actually seeking work by answering advertisements in the newspaper, applying at the Public Employment Security Office, etc. Also refers to the person who is waiting for an answer to an application and is able to take up a job immediately after he finds one."

Japan

Labour Force Survey Schedule

Confidential

Designated Statistics No. 30

(For First month)

Month ___ Year ___
Bureau of Statistics
Office of the Prime
Minister

The statistical law, on which this survey is based, prohibits the use of the information supplied by you for purposes other than strictly statistical. It is also forbidden that enumerators and any other officials who may be engaged in the survey disclose what is reported in the schedules. You are, therefore, kindly requested to provide information frankly and accurately.

PLEASE READ THE FOLLOWING NOTES BEFORE FILLING OUT

All members who usually live in your household should be included in this schedule.

Persons who usually live in your household refer to those who have been living, or are going to live in your household for three months or more as of the end of the month.

Persons to be included

- * Family members
- * Living-in employees
- * Persons living in the family without paying for room and for meals.

Persons who are temporarily absent from your household for travelling or working elsewhere shall be reported at their homes if their absent period is less than three months. If they have been, or are going to be, absent from home for three months or more, they shall be enumerated at their destination.

In-patients in a hospital shall be reported at the hospital if they have been hospitalized for three months or more. If not, they shall be reported at their homes.

Special attention should be paid to the following cases.

Lodgers

- * Lodgers such as roomers and boarders who pay room rent should be reported individually as a separate household.
- * Lodgers living together with their relatives should be reported with their relatives as one household.

Persons living in dormitories

- * Persons living in school dormitories, dormitories for unmarried employees, etc. should be reported individually as a separate household.

Columns to fill out

For persons 15 years old and over as of the end of the month (26th in December) fill out the designated columns entry page on the reverse side.

- * The household head should be entered in the column No. 1.

- * Use another schedule, if the number of household members is six or more.

For persons 14 years old and under, fill out the columns below.

When entry is over, check if the entry is correct. Write the name of the head in the designated column, and give this schedule to the enumerator.

In this survey, actual status during the survey week ending the last day (26th for December) of the month should be entered.

For instance, for the person who happened to work temporarily during the survey week, the entry should be made as regards the work done even if he usually does not work. For the person who is usually working in an office but who was absent from work and assisted his farm work during the survey week, the entry should be made as regards the farm work.

Household No.	For persons 14 years old and under as of the end of the month (26th for December)			For the baby who is not yet named, write "not yet named"	
	51	52	53	54	55
1. Name					
2. Relationship to household head					
3. Sex	1 Male 2 Female	1 Male 2 Female	1 Male 2 Female	1 Male 2 Female	1 Male 2 Female
4. Date of birth	Year Month Day	Year Month Day	Year Month Day	Year Month Day	Year Month Day

Japan

To be filled in by the enumerator	Enumeration district code	For a person 15 years old and over		Household code	Area of cultivated land			Number of members of the household 15 years old and over	Both sexes	Male	Female				
					1. 50 ares or more	2. More than 10 ares but less than 50 ares	3. Less than 10 ares or without cultivated land								
1 Name				Enter the names of persons 15 years old and over who usually live in your household. See the notes on page 1 for the persons to be included.				Number							
2 Relationship to the household head				Write as Wife, Mother, Eldest son, Wife of eldest son, Domestic servant, Business employee, etc. according to relationship to the household head.				Head							
3 Sex				Circle 1 for male, or 2 for female		1. Male 2. Female		1. Male 2. Female		1. Male 2. Female		1. Male 2. Female			
4 Date of birth				Year Month Day		Year Month Day		Year Month Day		Year Month Day		Year Month Day			
5 Marital status				Circle an appropriate number irrespective of official record.		1. Never married 2. Married 3. Widowed, divorced		1. Never married 2. Married 3. Widowed, divorced		1. Never married 2. Married 3. Widowed, divorced		1. Never married 2. Married 3. Widowed, divorced			
6 Was this person engaged in work at all during the survey week?				Work means any work for pay or profit including the work in a family business on a farm, in a store, and so on.				For a person engaged mainly in work besides attending school, engaging in home duties, and so on ... 1 For a person engaged partly in work in home duties, and so on ... 2 or 3 For a person not engaged in work had a job but did not work ... 4 Had no job but seeking one ... 5 Attended school, engaged in home duties and others ... 6, 7 or 8				Circle an appropriate number			
6-2 Seeking a main job or a secondary one (For persons who checked 5 in column 6)				Seeking a main job ... 1 Seeking a secondary job besides attending school, engaging in home duties, and so on ... 2				Circle an appropriate number							
7 Hours worked during the survey week. (Use the "numeration" at page 4)				Include hours worked on side jobs, home handicrafts, temporary jobs, etc. For a person who had a job but did not work during the survey week (person who checked 4 in column 6), write 0.				hours				hours			

Japan

8. Status For an employee	For an employer	For an employer	For an employer	For an employer	For an employer	For an employer
1 Regular employee 2 Temporary employee (an employee who has a contract of employment with a period of a month or more but not more than a year) 3 Day laborer (including an employee who has a contract of employment with a period of less than a month) 4 For a company or public corporation director 5 For a self-employed worker with employees 6 Without employees 7 For a family worker 8 For a person who did home handicraft	1. Unincorporated 2. Company 3. Others Circle an appropriate number	1. Unincorporated 2. Company 3. Others Home handicraft Self-employed worker (without employees) Self-employed worker (with employees) Director Temporary Regular	1. Unincorporated 2. Company 3. Others Home handicraft Self-employed worker (without employees) Self-employed worker (with employees) Director Temporary Regular	1. Unincorporated 2. Company 3. Others Home handicraft Self-employed worker (without employees) Self-employed worker (with employees) Director Temporary Regular	1. Unincorporated 2. Company 3. Others Home handicraft Self-employed worker (without employees) Self-employed worker (with employees) Director Temporary Regular	1. Unincorporated 2. Company 3. Others Home handicraft Self-employed worker (without employees) Self-employed worker (with employees) Director Temporary Regular
9 Name of establishment Write the name of the office, factory, shop, etc. in which this person worked. Circle an appropriate number for the organization.	10 Kind of business or industry Write specifically the kind of business or industry at the office, factory, shop, etc. where this person worked.	11 Kind of work Write specifically the kind of work in which this person was engaged at work at the office, factory, shop, etc.	12 Number of persons engaged in the enterprise as a whole State the number of persons engaged in the enterprise including the main office, branch offices, factories, etc. Circle 9 for a central or local government employee.	13 Status for work For a person who is wishing to change jobs Seeking 1 Not seeking 2 For a person who is wishing to have another job in addition to the present one Seeking 3 Not seeking 4 Others 5	1. Unincorporated 2. Company 3. Others 4. Government or more 500 - 999 persons 100 - 499 persons 50 - 99 persons 10 - 49 persons 1 person	1. Unincorporated 2. Company 3. Others 4. Government or more 500 - 999 persons 100 - 499 persons 50 - 99 persons 10 - 49 persons 1 person

* Report on the work this person actually did during the survey week.
 * Report on the work this person did for longer hours if he worked an even or more job during the survey week.
 * For this person was engaged in columns of report on the work these which he was doing.

Japan

Notes for entry (Question 6~13)

6. Was this person engaged in work during the survey week?
 "Work" means any work for pay or profit whether it be in the form of wages, salary, business profits, etc. Family members who worked for the family business such as a farm, store etc. are regarded as those "working", even though they did not receive any wages. The work also includes any home handicraft or temporary work for pay or profit.
 "1 Engaged mainly in work" refers to a person who was engaged mainly in work on a farm or in an office, etc.
 "4 Had a job but did not work" refers to:
 a the employee or the worker who had been away from his work because of sickness, holidays, etc., but who is expected to receive wages or salary.
 b the self employed person or employer who had been away from his work for less than 30 days because of sickness, holidays, etc.
 "5 Had no job but seeking one" refers to the person who had no job but was actually seeking work by answering the advertisements in the newspaper, applying at the Public Employment Security Office, etc. Also refers to the person who is waiting for the answer of the application and is able to take up a job immediately after he finds a job.
7. Hours worked during the survey week
 Include the hours worked on a main job, side job, assisting in the family enterprise, temporary remunerative work, preparing for and clearing work, overtime work, etc.
 Do not include the hours spent for housekeeping, voluntary work without pay, meals, breaks, transporting to and from an office, etc.
8. "Self employed worker" includes a shop keeper, a factory owner, a farmer, doctor, solicitor, writer or travelling merchant etc., who carries on his own business on account.
9. }
 10. } See example on separate sheet.
 11. }
12. Number of persons engaged in the enterprise as a whole
 Self employed worker should be counted if the organization is "unincorporated".
13. Desire for work
 "Wishing to change jobs" refers to the employee who wished to be a self employed worker, to change the enterprise where he had been working to another, the self employed worker who wished to be an employee, etc. But does not refer to the person who wished to change the type of work in the same enterprise.

Memorandum for question 7 on the reverse side						
Names		Hours.Minutes	Hours.Minutes	Hours.Minutes	Hours.Minutes	Hours.Minutes
Hours worked (to be recorded every day)	Day	-	-	-	-	-
	Day	-	-	-	-	-
	Day	-	-	-	-	-
	Day	-	-	-	-	-
	Day	-	-	-	-	-
	Day	-	-	-	-	-
	Day	-	-	-	-	-
Total		-	-	-	-	-

Students who are actively seeking work would be enumerated as unemployed if they check "had no job but seeking one." Employed students would be counted as such since they would check "engaged partly in work besides attending school." It should be noted that very few students are also engaged in work in Japan—only about 50,000, representing less than 1 percent of the 15- to 24-year-old labor force.

The Japanese method appears to be more restrictive than the U.S. method. Excluded from the unemployed count in Japan, but included in the U.S. count, are:

1. Persons on layoff who were waiting to return to their jobs and not seeking other work.
2. Temporarily ill jobseekers who were not in a condition to begin work immediately. Such persons, if in a condition to work and seeking work, would be classified as unemployed.
3. Some persons who had recently been looking for jobs (i.e., within the past 4 weeks), but who took no active steps in the survey week and were not waiting for an answer from a previous job application. The questionnaire appears to relate "job seeking" to the survey week.
4. Persons without a job and waiting to report to a new job at a later date. Such persons are considered, as a rule, neither to be seeking a job nor to be waiting for the results of previous job applications. Therefore, they are classified as economically inactive.

Method of adjustment. There are no data available to estimate accurately the number of additional persons who would be counted as unemployed in Japan if U.S. survey methods and definitions were used. However, the total number who would be added is probably small. The "lifetime employment" system (in which a worker remains with the same employer until retirement) is a basic pattern of labor-management relations in Japan. In most plants, the worker is, in effect, granted permanence of tenure. When the activity of the establishment is reduced, the employer holds the worker on, either transferring him to another job or reducing hours.

In the downturn of economic activity which began in 1974, a growing number of persons became "temporarily laid off" in Japan. This was partly because of the employment adjustment grant system, through which the central government provides a portion of the allowances paid to laid-off workers. (See chapter 2.) In the labor force survey, persons receiving these subsidies are regarded as employed. In the unlikely event that a person was laid off without pay, he would be classified as unemployed.

A Japanese "layoff" is quite different from an American one. Persons on temporary layoff in Japan are not discharged, and they are still paid by their firms. They are under a continuing employment contract and usually work a reduced number of days or hours during the week rather than being totally without work. Under U.S. concepts, persons who work at all during the reference week are classified as employed, as are the Japanese on "temporary lay-off."

No information is available on the number of persons in Japan not classified as unemployed because of temporary illness or the number of persons recently looking for work, but taking no concrete steps in the survey week. The fact that persons awaiting the results of previous job applications are counted as unemployed results in the widening of the jobseeking period beyond the survey week. However, there is no specified period allowed for jobseeking activities, such as the 4-week period used in the U.S. survey. There is also no information on the number of persons waiting to report to a new job at a later date. The number of such persons not classifying themselves as unemployed results in a slight understatement of Japanese unemployment under U.S. concepts.

Labor force

In Japan, the labor force consists of all persons 15 years of age and over who: (1) Worked 1 hour or more for pay or profit or as unpaid family workers in the survey week; (2) were employed; or (3) were self-employed persons or paid employees with jobs but temporarily absent from work provided that: (a) If self-employed, their absence from work did not exceed 30 days; (b) if paid employees, they received pay for part of the survey week.

Four differences between U.S. and Japanese concepts of the labor force are noted. First, Japan includes and the U.S. excludes inmates of institutions in the survey universe (both countries include staff members of institutions as employed persons). Japan probably classifies all, or nearly all, inmates of institutions as not in the labor force—therefore, no adjustment is necessary.

Japan includes and the U.S. excludes unpaid family workers who worked 1 but less than 15 hours in the survey week (460,000 in 1975). Japan includes career military personnel (the "self defense force") in the labor force. Finally, persons with a paid job but not at work during the survey week are in the U.S. labor force whether or not they receive pay for the time off; in Japan, such workers must have received pay for part of the survey week to be considered as in the labor force. No adjustment seems necessary for this since Japanese employees under a continuing employment contract normally receive wages or salaries when absent from work.

Method of adjustment. The number of unpaid family workers who worked less than 15 hours in the survey week is reported in the survey results each month. Such persons are subtracted from the labor force. Japan does not publish figures on the self-defense force in the survey; such figures were obtained from the Japanese Embassy in Washington.

Unemployment rate

Japan computes its unemployment rate by dividing the unemployed by the total labor force. Adjustment to

U.S. concepts is accomplished by dividing the reported unemployed by the labor force adjusted to exclude family workers working less than 15 hours and the self-defense force. The adjustments result in either no change or a slight increase in the reported unemployment rates (table B-1).

Quarterly and monthly estimates

The Bureau of Labor Statistics prepares quarterly and monthly estimates of Japanese unemployment rates, adjusted to U.S. definitions and seasonally adjusted. The method used in making these estimates is as follows:

Unemployment. No adjustment is necessary to estimate unemployment on a basis comparable to U.S. definitions. BLS uses the Economic Planning Agency's (EPA) seasonally adjusted number of unemployed. These figures are published in the EPA's monthly report, *Japanese Economic Indicators*. The EPA method for seasonal adjustment was developed by the EPA and is an adaptation of the X-10 Variant of the U.S. Bureau of the Census seasonal adjustment program. The X-10 was modified by the EPA to take account of the rapid growth and structural changes experienced in Japan. Each year, the seasonal adjustment program is rerun to incorporate the experience of the previous year and to estimate the seasonal factors for the current year.

Labor force. An adjustment for comparability to U.S. concepts is made to EPA's seasonally adjusted labor force data. The ratio of the labor force adjusted to U.S. definitions to the "as published" labor force, based on annual average estimates, is applied to the monthly seasonally adjusted labor force data to estimate the labor force adjusted to U.S. concepts. The seasonally adjusted labor force figures are prepared by the EPA in the same manner as unemployment figures.

France

The official monthly unemployment figures for France relate to the number of registered unemployed persons. No unemployment rate is published. In addition to the monthly counts of the registered unemployed, the French National Institute of Statistics and Economic Studies (INSEE) makes annual estimates of the labor force and unemployment which, prior to 1974, were intended to be comparable with the results of the French population censuses. Since 1974, the annual estimates have been based on the number of unemployed under ILO definitions, as determined from the results of annual labor force surveys. Unemployment under ILO definitions represents a broader concept than that under French census definitions. The annual unemployment estimates are currently obtained by

Table B-1. Japan: Labor force data adjusted to U.S. concepts, 1959-76

(Numbers in thousands)									
Item	1959	1960	1961	1962	1963	1964	1965	1966	1967
Reported labor force	44,330	45,110	45,620	46,140	46,520	47,100	47,870	48,910	49,830
Less: Unpaid family workers who worked less than 15 hours	¹ 800	¹ 780	¹ 800	¹ 880	¹ 880	¹ 840	¹ 870	¹ 830	790
Less: Career military personnel	210	210	210	220	210	220	220	230	230
Adjusted civilian labor force	43,320	44,120	44,610	45,040	45,430	46,040	46,780	47,850	48,810
Unemployed	980	750	660	590	590	540	570	650	630
Published unemployment rate (percent)	2.2	1.7	1.4	1.3	1.3	1.1	1.2	1.3	1.3
Adjusted unemployment rate (percent)	2.3	1.7	1.5	1.3	1.3	1.2	1.2	1.4	1.3
	1968	1969	1970	1971	1972	1973	1974	1975	1976
Reported labor force	50,810	50,980	51,530	51,860	51,990	53,280	53,100	53,230	53,780
Less: Unpaid family workers who worked less than 15 hours	690	600	560	510	440	440	420	460	440
Less: Career military personnel	240	240	240	230	230	230	240	240	240
Adjusted civilian labor force	49,880	50,140	50,730	51,120	51,320	52,590	52,440	52,530	53,100
Unemployed	590	570	590	640	730	680	730	1,000	1,080
Published unemployment rate (percent)	1.2	1.1	1.1	1.2	1.4	1.3	1.4	1.9	2.0
Adjusted unemployment rate (percent)	1.2	1.1	1.2	1.3	1.4	1.3	1.4	1.9	2.0

¹ Estimate based on relationship of new series to old series in 1967.

increasing the unemployed job registrant series to include the unregistered unemployed under ILO definitions—about 6 percent greater in 1975. The extent to which the registered series undercounts unemployment has declined sharply since the adoption of a compulsory national insurance system in 1967.

In October 1960, a regular series of labor force surveys was initiated, complementing the general population censuses. These surveys indicate that the annual French unemployment and labor force estimates based on population census concepts need to be adjusted considerably to conform more closely to U.S. concepts. The annual unemployment estimates based on ILO concepts, however, need to be adjusted only slightly to conform to U.S. concepts.

In March 1975, INSEE published an article in which French unemployment from the March 1974 survey was adjusted to "international definitions."⁴ The international definitions used were the definitions adopted by the ILO in 1954. INSEE's method of adjusting survey unemployment was the same as that being used by BLS, except that persons seeking a non-wage or -salary job were excluded by INSEE but are included by BLS. INSEE did not adapt the labor force to "international definitions" in the article.

INSEE has continued its work on adapting French unemployment to international concepts. In the last chapter of the results of the 1975 and 1976 labor force surveys, INSEE presented estimates of employment and unemployment according to international definitions.⁵ Additional questions initially incorporated in the 1975 survey questionnaire made it possible to obtain more precise estimates under international definitions. For example, questions are now being asked on current availability for work and on jobseeking activity within the previous month. Prior to 1975, there were no such questions in the survey.

Unemployment and labor force

Registered unemployed. Official monthly unemployment statistics in France refer to the registered unemployed, consisting of all persons registered with the employment offices at the end of each month. The figures are published by the Ministry of Labor in the *Bulletin mensuel des statistiques du travail*. The reductions in the INSEE coefficient by which the registered unemployed are inflated to obtain annual estimates of French unemployment partially reflect a substantial increase in the proportion of unemployed workers claiming unemployment status following the adop-

⁴Bernard Grais, "Methodes et sources utilisees pour la mesure du chomage," *Economie et Statistique*, March 1975, pp. 63-69.

⁵Baudouin Seys and Pierre Lailhe, *Enquete Sur L'Emploi de 1975, Resultats provisoires*. Les Collections de L'INSEE, Series D, Number 42, December 1975, pp. 71-76; and *Enquete Sur L'Emploi de 1976, Resultats provisoires*, Les Collections de L'INSEE, Series D, Number 48, November 1976, pp. 59-68.

tion of a compulsory unemployment insurance system in 1967. Prior to that, France had a nonstatutory insurance plan established by collective bargaining agreements. The National Employment Agency was established in July 1967 to carry out employment exchange and other labor market management tasks. The new system provides coverage for over half the French labor force, whereas the earlier plan covered only about one-quarter of the work force. Also affecting registration statistics was the 1975 enactment of a new program whereby workers laid off for economic reasons receive 90 percent of their former wages.

Like most registration counts, the French series is limited largely to recently employed wage and salary workers who have lost their jobs. Wage and salary workers make up about three-quarters of the French labor force. Persons seeking a job for the first time rarely register, and women workers appear to depend on the placement offices relatively less than men. Furthermore, the registration statistics do not include recipients of the "income guarantee," a form of early retirement pension paid under certain conditions to older workers who lose their job. Despite the establishment of the National Employment Agency, a substantial number of unemployed still do not register as such, as is clear from the results of the labor force survey.

Labor force surveys. INSEE conducted experimental labor force surveys irregularly during the 1950's, using samples of 5,000-10,000 households. In the series of surveys begun in October 1960, a sample of over 25,000 households was used—a sampling ratio of 1 in 600. The surveys were conducted in October and March of alternate years, except in 1961 when no survey was conducted. The survey of March 1967 terminated this series.

Beginning in March 1968, INSEE inaugurated a new series of labor force surveys, using a different sampling method than that used in the 1960-67 surveys. INSEE had found that the 1962-67 surveys underestimated the total population, particularly for age groups with the highest activity rate. It was mainly to remedy this bias that the new sampling method was introduced. The sample for the new series is made up of areas rather than households. The greater geographic concentration of interviews under the new method permits savings in time and cost of interviewing. In addition, the new method permits better enumeration of persons in "marginal" lodgings, such as young people living in individual rooms. Surveys in the new series are conducted annually each March,⁶ using samples of 55,000-60,000 households—a sampling ratio of 1 in 300. Detailed results of these surveys have been published through

⁶The surveys are taken over a period of 7 weeks, usually beginning the last week of February and ending the second week of April. Most interviews (i.e., over 90 percent) are conducted during the first 4 weeks of this period. The 1968 survey, however, was delayed and spread over a fairly long period, and the 1975 survey was conducted in April and May because the population census was taken in March.

March 1972. Summary results for 1973 through 1976 are also available and have been utilized in this study to prepare preliminary estimates for those years. From 1977 onwards the survey is conducted twice a year, in March and October. No results for 1977 have been published yet.

Foreign workers are counted on the same basis as national workers in the labor force surveys. Some separate data on foreign workers are published in the survey results.

The French labor force surveys are limited to residents of private households. Collective households such as military camps, hotels, hospitals, homes for the aged, and religious communities are not surveyed. Also excluded are residents of mobile homes. INSEE has made estimates of the civilian labor force excluded from the survey, and these figures have been added to the reported labor force.⁷ In recent years, there have been about 500,000 such persons. All such persons are assumed to be employed; INSEE states that they are persons who are engaged in an activity.

Both the old and the new surveys employ the same basic definitions and wording of questionnaires. The questionnaire used in the surveys is so constructed that the population 15 years of age and over (14 and over prior to 1968) can be classified according to two different definitions of employment status—one corresponding to that used in the population censuses, and therefore also comparable to INSEE's annual labor force and unemployment estimates, and the second corresponding more closely to U.S. labor force concepts.

Census definitions. In the population census, persons are asked to indicate their principal activity at the time of the census. Persons stating that they are employed or unemployed constitute the labor force. No further questions are asked regarding employment status. In the labor force surveys, people are asked their principal activity at the time of the survey and the interviewer records their spontaneous responses. Those responding that they have a job or are unemployed are comparable to the labor force under the census definition.

Labor force survey definitions. The labor force surveys attempt to probe deeper into the economic activity and status of those who do not initially respond that they have a job or that they are unemployed—the "inactive" population by census definitions. These are persons who respond that their principal activity is that of housewife or student, or that they are retired from the work force. These persons are asked two additional questions. The first question concerns whether any professional activities were carried out during the reference week. Persons who answer that they worked 1 hour or more are classified as "marginally employed." The second additional question concerns jobseeking activities. Persons without a job who did not work at all in the survey week are asked whether they sought work.

⁷The INSEE figures were not derived from direct observation, and should be regarded only as an estimated order of magnitude.

Those answering "yes" are classified as "marginally unemployed."

Under labor force survey definitions, the employed comprise all persons responding "employed" as their principal activity plus the "marginally employed" as defined above. The unemployed comprise all persons responding "unemployed" as their principal activity plus the "marginally unemployed." Thus, the labor force surveys arrive at a concept of the labor force broader than that of the population censuses.

Under French survey concepts, persons do not have to be actively seeking work or currently available for work to be counted as unemployed. Also, persons who worked a few hours during the survey week are counted as unemployed if they responded that their principal activity was "unemployed." On the other hand, persons on layoff and persons waiting to begin a new job are counted as employed if they responded that their principal activity was "employed."

Comparability of surveys. As mentioned earlier, France initiated a new series of labor force surveys in 1968, utilizing a somewhat different sampling technique than used in the 1960-67 surveys. Concepts and definitions remained the same. INSEE statisticians assert that a gap between the old and new series has undoubtedly arisen from the differences in sampling methods. They have stated that the change in sampling method had little, if any, effect on unemployment under census definitions, but feel that there may have been a significant impact on the "marginally unemployed" figures. INSEE has made no link between the two series of surveys.

In analyzing the survey results, BLS has noted a sharp increase in the number of "marginally unemployed" persons between 1967 and 1968, from 132,000 to 306,000 (table B-2). Some of the increase was undoubtedly due to deteriorating economic conditions in 1968, but an unknown proportion may also be attributed to the better enumeration of persons in "marginal" lodgings under the new sample design.

Labor force participation rates provide another indicator of the break in the comparability of the surveys between 1967 and 1968. The figures for teenagers are difficult to interpret because the age of compulsory schooling was increased from 14 to 16 in 1968. Economic activity rates for both boys and girls declined slowly from March 1963 to March 1967, then dropped sharply in March 1968. However, activity rates for several other age groups appear to reflect the effects of the change in surveying method in 1968. Thus, between 1963 and 1967 activity rates of 20- to 24-year-old women held steady around 61 and 62 percent, then rose to 66.5 percent in 1968. Both men and women in the 55 to 64 age group also had an abnormal increase in economic activity, based on the previous trend. It may well be that women in their early twenties and men and women over age 55 who lived alone in rooming houses

French Labor Force Survey Questionnaire

QUESTIONNAIRE INDIVIDUEL

Pour toute personne née en 1961 ou avant (et ayant MOB différent de 9)

Prénom : _____

TC	N° 1	Sexe 1. Mâc. 2. Fem.	1 Date de naissance mois année	2 Lien avec le chef de ménage (voir code)	3 MOB (voir pour le 1 ^{er} enquête dans l'ats)	4 Caté- gorie	5 Nationalité (voir code)	6 État mariage	7 1. Célibataire 2. Marié 3. Veuf 4. Divorcé, légali- ment séparé
3									

8. **FILTRE** : Présenter la carte n° 2 : Occupation principale à la date de l'enquête.
La personne doit se classer elle-même.

Si 1 directement - Partie I
 Si 5 directement - Partie II
 Autres → 0, 9

9. Pendant la **SEMAINE DE RÉFÉRENCE** du _____ au _____ 1975,
(dernière semaine du lundi au dimanche précédant la date d'enquête).

M... a-t-il cependant exercé une activité professionnelle ?

Oui... 1 Si 1 directement - Partie I

Même une activité non rémunérée en aidant un membre de sa famille dans sa profession par exemple.

Non... 0

Ne tû- ce qu'une heure, ne tû- ce qu'un travail occasionnel ou exceptionnel.

10. M... a-t-il déjà exercé une activité professionnelle même pendant une courte période, même s'il y a longtemps ? Exclure les activités purement occasionnelles.

Oui... 1
 Non... 0 Si 0 directement - Partie II

11. (Si oui à la question précédente) :

a. Dernière profession exercée (et qualification) ? _____

À M... travaillait- il : _____ à son compte (artisan, commerçant, profession libérale...)..... 1
 en aidant un membre de sa famille dans sa profession..... 2
 comme salarié..... 3
 nombre de salariés permanents : _____

c. Activité de l'établissement (Préciser le plus possible) :

d. À quelle date M... a-t-il cessé d'exercer cette activité ? Année.....
 (Si en 1971 ou après) Mois :

Réservé à la D.R.

CSA
 AEAR
 AEA
 AESA

PARTIE I. — ACTIVITÉ PROFESSIONNELLE PRINCIPALE

Partie à remplir pour toutes les personnes classées « 1 » à la question 8 « FILTRE »
 toutes les personnes ayant répondu « oui » à la question 9 (écrite dans ce cas l'activité professionnelle de la semaine de référence et non l'activité professionnelle habituelle ou la plus fréquente)

12. **PROFESSION PRINCIPALE** : _____

(Préciser le plus possible - Exemple : mécanicien réparateur d'automobiles, charpentier, ou les directeur principal, chef pour dames, etc.)

13. M... travaille-t-il, sans être salarié, en aidant un membre de sa famille dans sa profession ? Oui... 1
 Non... 0

14. (Si « non » à la question précédente). M... exerce-t-il cette profession comme : .

Exploitant agricole (propriétaire, fermier, métayer)..... 0
 Membre d'une profession libérale..... 1
 Employeur ou travailleur indépendant : artisan, commerçant, industriel, etc..... 2
 Travailleur à domicile pour le compte d'une ou plusieurs entreprises..... 3
 Apprenti sous contrat..... 4
 Salarié d'un parent qui travaille à son compte..... 5
 Salarié placé par l'intermédiaire d'une entreprise de travail temporaire..... 6
 Autre salarié..... 7
 18

M... emploie-t-il des salariés ? Combien ? 1 ou 2 salariés..... 11
 3 à 5..... 12
 6 ou plus..... 13
 n'emploie pas de salariés..... 0

15. a. SI M... est ouvrier, qualification de l'emploi actuel :
 Manœuvre ou manœuvre spécialisé..... 1
 Ouvrier spécialisé (OS 1, OS 2, etc.)..... 2
 Ouvrier qualifié ou hautement qualifié (P 1, P 2, P 3, etc.)..... 3
 4

À SI M... est agent de l'État ou d'une collectivité locale, employé d'un service public (EDF, SNCF, etc.), titulaire de carrière. Grade. Exemple : commis principal secrétaire administratif chef de pavé de 2^e classe, sous-officier météorologue, etc.)

c. SI M... est dans un autre cas, préciser sa position hiérarchique. Exemple : responsable, chef d'atelier, directeur commercial, chef de culture, chef de rayon, etc.)

Réservé à la D.R.

P

French Labor Force Survey Questionnaire

24. M... cherche-t-il un emploi occasionnel pour une durée limitée ?
- | | |
|---|---|
| Oui | 1 |
| Non : cherche un emploi permanent | 0 |
- 25 a. M... est-il actuellement inscrit à un office public de placement : Agence Nationale pour l'Emploi (ANPE), bureau de main d'œuvre d'une mairie ?
- | | |
|-----------|---|
| Oui | 1 |
| Non | 0 |
- Δ DEPUIS UN MOIS, M... a-t-il fait d'autres démarches pour trouver un emploi ?
- | | |
|-----------|---|
| Oui | 1 |
| Non | 0 |
| | 2 |
- Lesquelles ? (Si plusieurs réponses, inscrire celle qui a le plus petit numéro)
- | | |
|---|---|
| S'est inscrit (ou est resté inscrit) dans un office privé de placement ou une agence de travail temporaire .. | 1 |
| A fait une annonce dans un journal ou sur un tableau d'affichage | 2 |
| A répondu à des offres d'emploi publiées par annonce dans un journal ou sur un tableau d'affichage .. | 3 |
| A cherché par relations personnelles | 4 |
| A utilisé d'autres modes de recherche. (Préciser) | 5 |
26. Depuis combien de temps M... cherche-t-il un emploi ?
- | | |
|---------------------------------------|---|
| N'a pas commencé ses recherches | 0 |
| Moins d'un mois | 1 |
| 1 mois à moins de 3 mois | 2 |
| 3 mois à moins de 6 mois | 3 |
| 6 mois à moins d'1 an | 4 |
| 1 an à moins de 2 ans | 5 |
| 2 ans à moins de 3 ans | 6 |
| 3 ans et plus | 7 |
| Préciser le nombre de mois | 1 |
27. (Seul pour les personnes classées 1 à la question 8. FILTRE) A la suite de quelles circonstances M... cherche-t-il un emploi ?
- | | |
|--|---|
| Vient de terminer (ou termine) ses études | 1 |
| Vient de terminer son service militaire | 2 |
| Vient de quitter un emploi : | |
| dont il a été licencié : | |
| licenciement individuel | 3 |
| licenciement collectif | 4 |
| dont il a démissionné : | |
| saire ou revenu insuffisant, conditions de travail (horaires, pénibilité, etc.), distance du domicile | 5 |
| pour motifs personnels | 6 |
| pour lequel il a pris sa retraite | 7 |
| qui était un emploi occasionnel | 8 |
| Avait cessé toute activité (pour s'occuper de sa famille, de ses enfants, ou pour raisons de santé, etc.) .. | 9 |
28. (Pour les personnes classées 1 à la question 8. FILTRE) Pourquoi M... cherche-t-il un autre emploi ?
- | | |
|---|---|
| Il existe une crainte ou une certitude de perdre l'emploi actuel | 1 |
| M... désire trouver un emploi plus satisfaisant en ce qui concerne : | |
| Le salaire, le revenu | 2 |
| Les conditions de travail (horaires, pénibilité, etc.), la distance par rapport au domicile | 3 |
| M... cherche une seconde activité à exercer en plus de celle qu'il exerce actuellement | 4 |
| Autres circonstances | 5 |
29. (Seul pour les personnes classées 1 à la question 8. FILTRE) M... perçoit-il des allocations de chômage ?
- | | |
|--|---|
| Aide publique | 1 |
| Assurance-chômage ASSEDIC | 2 |
| Aide publique et assurance-chômage ASSEDIC | 3 |
| Non | 0 |

France: English translation of labor force survey questions relating to labor force status

8. Respondent is asked to classify himself in one of following categories listed on card 2:

1. Practicing a profession; employed; working in a relative's business as an unpaid family worker (go to Part I)
2. Without work and looking for work
3. Housewife (keeping own home)
4. Student or pupil
5. Military conscript (performing compulsory service) (go to Part III)
6. Retired
7. Others without a professional position

9. During the reference week did ... practice a professional activity? (If yes, go to Part I)

Part I—Employed Persons

(To be completed for all persons classified under number 1 to question 8 or replying yes to question 9)

- 12 to 16. Occupation, class of worker, industry, etc.
17. Is ... a regular, seasonal, or occasional worker?
 18. Is the principal activity full or part time?
 19. State the number of hours actually worked during the reference week in the principal profession
 - including overtime
 - excluding hours paid for but not worked; travel between home and work site; hours lost due to sickness, holiday, or unemployment
 20. If the number of hours worked is less than 45, give reason:

A. Short-term reasons:

- Start or cessation of job
- Illness (including long-term illness)
- Maternity leave (under national insurance)
- Annual or personal leave
- Bad weather, reduction of seasonal activity
- Labor dispute (strike or lock-out)
- Partial unemployment (or slack work)
- Performing an occasional job at present
- Participation in training course
- Other (specify)

B. Long-term reasons (only if no short-term reason is given):

- Normal working hours in establishment
- Nature of work (tiring, dangerous, etc.)

- Part-time job
- Other (specify)

Part II—Seeking Employment

(To be completed for all persons except military conscripts, whether employed or not)

21. Did ... seek a job (or another job)?
 - Yes - sought wage employment
 - Yes - sought self-employment (skip to following Part)
 - No (skip to following Part)
22. If ... found a job NOW, could he begin work immediately?
 - Yes
 - No, why?
 - Finishing his studies
 - Has a job and is not able to quit immediately
 - Temporarily ill
 - Other (specify)
23. Did ... look for:
 - A full-time job
 - A part-time job, but would accept a full-time job
 - A part-time job only
24. Did ... seek a temporary job for a limited duration?
 - Yes
 - No: permanent job only
- 25A. Is ... registered at the Agence Nationale pour l'Emploi (ANPE) or a local employment bureau?
- B. In the past month, did ... make any other attempts to find a job?

If yes:

 - Registered at private employment agency or an agency for temporary work
 - Advertised in a newspaper or other public place
 - Answered newspaper ads or other job announcements
 - Asked personal friends
 - Other (specify)
26. How long has ... looked for work?
 - Not yet commenced job search
 - Less than 1 month
 - 1-3 months
 - 3-6 months
 - 6 mos-1 year
 - 1-2 years
 - 2-3 years
 - 3 or more years

Table B-2. France: Unemployment as recorded by labor force surveys, 1960-76

(Thousands)			
Date	Total unemployment	Under census definitions	Marginally unemployed
October surveys:			
1960	450	202	248
1962	467	254	203
1964	420	254	166
1966	506	371	135
March surveys:			
1963	343	223	120
1965	360	238	124
1967	437	305	132
1968	656	350	306
1969	687	362	325
1970	684	330	353
1971	767	423	344
1972	794	451	343
1973	734	394	340
1974	782	441	342
1975	1,185	737	448
1976	1,350	911	439

¹ This survey was conducted in April.

were much better represented in the series of surveys beginning in 1968.

In the following method of adjustment, the possible gap between the two series of surveys has not been taken into account because of the absence of any data with which to make an adjustment for the impact of change in surveying technique. However, it should be kept in mind that the French unemployment rates adjusted to U.S. concepts are likely to be somewhat understated for the period prior to 1968 because of underenumeration of the "marginally" unemployed.

Method of adjustment

The detailed information provided by the labor force surveys can be used to estimate French labor force and unemployment according to U.S. concepts of measuring these items. In summary, annual estimates of France's labor force and unemployment, adjusted to U.S. concepts, are derived as follows: (1) The total civilian labor force and unemployment figures from the labor force surveys are adjusted to U.S. concepts; (2) ratios are computed comparing (a) the adjusted labor force with the civilian labor force figures (from the labor force surveys) that are comparable with French population census definitions, and (b) the adjusted unemployed with the registered figure for the survey month; (3) annual adjustment factors are derived and applied to the published French figures. Detailed descriptions of these three steps follow.

Adjustment of labor force survey results to U.S. concepts.

The adjustments of the reported unemployment figures to U.S. concepts are shown in tables B-3 (October surveys) and B-4 (March surveys). Total reported unemployment, including the marginally unemployed, is adjusted to:

1. Exclude those who state that their principal activity was unemployed but who did some work in the survey week. The number of such persons is reported in the labor force survey. (If those who worked less than 15 hours were unpaid family workers, they would be classified as unemployed in the United States if they were seeking paid employment, but sufficient detail for making this distinction is not available from the French surveys.)
2. Exclude unemployed persons (both the "active" and the "marginal") who stated that they had not yet commenced seeking work. Such persons would be classified as outside the labor force in the United States. Some of the unemployed (census definition) who have not yet commenced seeking work may be among those (already subtracted from the unemployed total) who stated they were unemployed but who did some work in the survey week.

The number of unemployed persons who had not commenced seeking work is reported in the labor force survey. In the 1975 and subsequent surveys, persons were asked specifically whether they had made any attempts at jobseeking in the previous month. Those who responded that they had not done so have been excluded from the unemployed for comparability with U.S. concepts. In the surveys prior to 1975, persons were asked how long they had been looking for work, but there was no specific question as to whether active steps were taken in the previous month. Persons who responded that they had not begun to look for work were excluded from the unemployed in the years prior to 1975 for adjustment to U.S. concepts. Thus, there may well be some persons who have not been excluded prior to 1975 who did not take active steps within the previous month. This is indicated by the higher proportion of marginally active persons who did not commence seeking work in 1975 and 1976 compared with previous years—40 percent in 1975 and 1976; 20-25 percent in 1968-74.

3. Exclude unemployed persons (both "active" and "marginal") who were not currently available for work except for reasons of temporary illness. Data on the number of such persons were not regularly collected in the surveys until 1975. Results for that year indicated that 4.7 percent of the unemployed under census definitions and 40.2 percent of the marginally unemployed were not currently available for work (except for temporary illness). These proportions have been applied each year through 1974 to obtain estimates of the number of persons not currently available for work. Beginning in 1975, a regular question on current availability (within 15 days) was added to the survey, and data were published on this point. Again, there is a possibility of overlap with items 1 and 2 above.
4. Exclude the number of persons who fall into more than one of the first three categories above, to avoid doublecounting. In the results of the 1975 labor force survey, information on this point was provided for the first time. The data indicated that 11 percent of the sum of persons in the first three categories, under census definitions, should be excluded because of double counting. Similarly, 23 percent of these persons in the "marginally active" category should be excluded. For 1968 onward, the adjustment for overcount has been based on estimates supplied by

INSEE. For the years prior to 1968, BLS has made estimates of the overcount based on 1968 relationships. The number of such persons has been added back into the unemployed count.

5. Include persons who stated they were employed but who did not work at all in their principal activity during the survey week because of partial unemployment or slack work (i.e., temporary layoff) or because they either were waiting to start work or left their previous employment. The number of persons in these two categories is reported in the survey results. Some of these persons may have worked in secondary jobs during the survey week, but no data are available on this point.
6. Include other jobseekers who said they had a job in the "census" sense but were looking for work in the "international" sense. This group comprises a small number of workers identified by INSEE for the first time in the 1975 survey. They are probably such persons as unpaid family workers who worked fewer than 15 hours and were seeking paid jobs. They should be included under U.S. concepts. The 1975 data indicated that they represented a small number of persons, about 11,000. INSEE has used this figure as a constant in making estimates of unemployment under ILO concepts back to 1968. BLS has also

followed this procedure. For the years prior to 1968, the number of persons in this category was estimated based on 1968 relationships.

7. Exclude persons under 16 years of age from the unemployed count. The lower age limit for the French labor force surveys was 14 until 1968 when it was raised to 15. Since compulsory schooling now ends at age 16 in France, 14- and 15-year-olds have been excluded from the unemployed in 1960 through 1967, and 15-year-olds have been omitted from data for 1968 and following years. The numbers of unemployed 14- and 15-year-olds was not separately reported in the labor force surveys. Their numbers were estimated by assuming they had the same unemployment rate as all teenagers.

The adjustments to the labor force figures reported in the French surveys are shown in tables B-5 and B-6. The total civilian labor force (including the "marginally" employed and unemployed) is adjusted to exclude unpaid family workers not at work, unpaid family workers who worked 1 but less than 15 hours, and persons reporting themselves as employed but who were not at work because of "durable reasons," that is, personal convenience or the nature of the job. Figures on all the above categories are

Table B-3. France: Adjustment of unemployment data from October surveys to U.S. concepts, 1960-66

(Numbers in thousands)

Item	1960			1962			1964			1966		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Reported unemployed	450	160	290	465	183	282	420	175	245	506	204	302
Less: Persons at work 1 hour or more	22	16	5	17	7	10	12	5	7	16	10	6
Less: Unemployed who have not commenced seeking work ^{1,2}	77	17	60	85	33	52	67	20	47	58	18	40
Less: Persons not currently available for work ³	109	24	85	94	36	58	79	43	36	71	22	49
Plus: Adjustment for double count ⁴	48	13	35	45	17	28	36	15	21	33	11	22
Plus: Employed persons not at work due to:												
Start or cessation of job ¹	29	14	15	20	10	10	27	13	14	22	15	7
Partial unemployment (slack work) ¹	46	20	26	41	18	23	33	13	20	29	14	15
Plus: Other jobseekers ⁵	4	1	3	4	2	2	4	2	2	5	2	3
Adjusted unemployed, age 14 and over	369	151	219	379	154	225	362	150	212	450	196	254
Less: 14- and 15-year-olds ⁶	21	10	11	21	10	11	19	10	9	18	8	10
Adjusted unemployed, age 16 and over	348	141	208	358	144	214	343	140	203	432	188	244
Registered unemployed (October)	116	69	47	163	94	69	119	71	48	154	93	61
Adjusted unemployed age 16 and over as percent of registered unemployed	300.0	204.3	442.6	219.6	153.2	310.1	288.2	197.2	422.9	280.5	202.2	400.0

¹ Number of persons reported as "unknown" distributed proportionally.

² Based on data reported in the surveys on persons who have not commenced seeking jobs. No data were available on the number of persons who had not actively sought work in the preceding month.

³ Estimates based on data reported in 1975 which indicated 4.7 percent of the unemployed under census definitions and 40.2 percent of the marginally unemployed were not currently available for work.

⁴ This adjustment allows for the fact that persons may have been excluded more than once by appearing in more than one of the above categories. Double count was estimated as 23 percent of the above three categories.

⁵ Persons who were classified as employed, but who were seeking work and would be counted as unemployed under U.S. concepts. Estimates based on data from INSEE which indicate that this group is equivalent to 2 percent of the reported unemployed.

⁶ Number of 14- and 15-year-olds reported in the survey divided by ratio of reported to adjusted unemployed age 14 and over.

Table B-4. France: Adjustment of unemployment data from March surveys to U.S. concepts, 1963-76

(Numbers in thousands)

Item	1963			1965			1967			1968		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Reported unemployed	343	156	187	360	155	204	437	200	237	656	269	387
Less: Persons at work 1 hour or more	8	4	4	10	8	1	9	6	3	18	11	7
Less: Unemployed who have not commenced seeking work ¹	69	27	42	57	14	43	46	12	34	105	29	76
Less: Persons not currently available for work ²	58	23	35	61	15	46	67	17	50	139	38	101
Plus: Adjustment for double count ³	31	12	19	29	8	21	28	8	20	61	20	41
Plus: Employed persons not at work due to:												
Start or cessation of job ¹	18	10	8	16	10	6	9	7	2	28	15	13
Partial unemployment (back work) ¹	31	15	16	38	15	23	41	21	20	36	19	17
Plus: Other jobseekers ⁴	7	3	4	7	3	4	9	4	5	11	5	6
Adjusted unemployed, age 14 and over	295	142	153	322	154	168	402	205	197	530	250	280
Less: 14- and 15-year-olds ⁵	16	8	8	19	9	10	23	12	11	7	4	3
Adjusted unemployed, age 16 and over	279	134	145	303	145	158	379	193	186	523	246	277
Registered unemployed (March) Adjusted unemployed age 16 and over as percent of reg- istered unemployed	178	116	62	153	95	58	189	123	66	264	168	96
	156.7	115.5	233.9	198.0	152.6	272.4	200.5	156.9	281.8	198.1	146.4	288.5
	1969			1970			1971			1972		
Reported unemployed	687	278	409	684	249	435	767	273	494	794	287	506
Less: Persons at work 1 hour or more	19	12	7	19	12	7	21	13	8	24	15	9
Less: Unemployed who have not commenced seeking work ¹	102	27	75	109	25	84	123	30	93	117	24	92
Less: Persons not currently available for work ²	148	39	109	158	36	122	158	39	119	169	33	126
Plus: Adjustment for double count ³	70	23	47	78	23	55	77	21	56	79	19	60
Plus: Employed persons not at work due to:												
Start or cessation of job ¹	26	14	12	22	12	10	26	15	11	18	9	9
Partial unemployment (back work) ¹	29	13	16	26	11	15	23	12	11	20	9	11
Plus: Other jobseekers ⁴	11	4	7	11	4	7	11	4	7	11	4	7
Adjusted unemployed, age 14 and over	554	254	300	535	225	309	602	243	359	622	256	366
Less: 14- and 15-year-olds ⁵	4	2	2	4	2	2	2	1	1	2	1	1
Adjusted unemployed, age 16 and over	550	252	298	531	224	307	600	242	358	620	255	365
Registered unemployed (March) Adjusted unemployed age 16 and over as percent of reg- istered unemployed	246	148	99	250	145	105	335	190	145	389	221	167
	223.6	170.3	301.0	212.4	154.5	292.4	179.1	127.4	246.9	159.4	115.4	218.6
	1973			1974			1975 ⁶			1976		
Reported unemployed	734	251	483	782	250	524	1,185	486	699	1,350	511	839
Less: Persons at work 1 hour or more	21	13	8	22	14	8	29	18	11	34	22	12
Less: Unemployed who have not commenced seeking work ¹	110	25	85	120	28	92	257	60	197	238	56	182
Less: Persons not currently available for work ²	156	35	121	158	37	121	215	49	166	192	44	148
Plus: Adjustment for double count ³	81	21	60	72	19	53	99	25	74	82	22	60

See footnotes at end of table.

Table B-4. France: Adjustment of unemployment data from March surveys to U.S. concepts, 1963-76—Continued

(Numbers in thousands)

Item	1973			1974			1975 ⁶			1976		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Plus: Employed persons not at work due to:												
Start or cessation of job ²	18	9	9	18	9	9	16	8	8	26	13	13
Partial unemployment (slack work) ¹	20	9	11	20	9	11	35	16	19	18	8	10
Plus: Other jobseekers ⁴	11	4	7	11	4	7	11	5	6	5	2	3
Adjusted unemployed, age 14 and over	577	221	356	603	221	383	845	413	432	1,017	434	583
Less: 14- and 15-year-olds ⁵	2	1	1	2	1	1	2	1	1	2	1	1
Adjusted unemployed, age 16 and over	575	220	355	601	220	382	843	412	431	1,015	433	582
Registered unemployed (March)	378	192	186	439	207	232	755	391	364	938	465	474
Adjusted unemployed age 16 and over as percent of registered unemployed	152.1	114.6	190.9	136.9	106.3	164.7	111.7	105.4	118.4	108.2	93.1	122.8

¹ Number of persons reported as "unknown" distributed proportionally.

² Through 1974 estimated as 4.7 percent of unemployed under census definitions and 40.2 percent of the marginally unemployed. Beginning 1975, based on results of the survey.

³ This adjustment allows for the fact that persons may have been excluded more than once by appearing in more than one of the above categories. From 1968, the adjustment was made on the basis of data supplied by INSEE. Double count for prior years estimated as 23 percent of the above three categories.

reported in the survey results. The unemployed who have not commenced seeking work or who were not currently available for work should also be excluded from the labor force. The method of estimating these categories was explained above. Also, the adjustment to eliminate double counting in these unemployed categories must also be made here.⁸

Finally, the number of persons in the reported labor force who are under the age of 16 should be excluded. The number of 14-year-olds in the labor force was separately reported in the surveys conducted from 1960 through 1967. In 1968, the lower age limit was raised to 15. The number of 15-year-olds in the labor force has been estimated by applying the reported labor force participation rate for 15-year-olds to the estimated 15-year-old population from demographic data reported to the OECD.⁹

⁸ The double-count adjustment was modified slightly to apply only to double counting of persons who had not commenced seeking work and were also not currently available for work. Thus, the adjustment did not apply to persons who stated that their principal activity was "unemployed" but who did some work in the survey week. Such persons were excluded from the unemployed, but should not be excluded from the labor force because they would be classified as employed by U.S. concepts.

⁹ Organization for Economic Cooperation and Development, *Demographic Trends, Supplement Country Reports* (Paris, OECD, 1966) and *Demographic Trends, 1970-1985 in OECD Member Countries* (Paris, OECD, 1974).

⁴ Persons who were classified as employed, but who were seeking work and would be counted as unemployed under U.S. concepts (e.g., unpaid family workers who worked fewer than 15 hours and were seeking paid jobs). The figures for 1968 onward were supplied by INSEE. For prior years, estimated as 2 percent of the number of reported unemployed.

⁵ Number of 14- and 15-year-olds reported in the survey divided by ratio of reported to adjusted unemployed age 14 and over.

⁶ Data for April.

Detailed results of the French surveys through March 1972 have been published. For the later surveys, only summary results have been published, and these have been used to make interim estimates until the detailed results become available. Therefore, some minor revisions may be made in the future in tables B-4, B-6, and B-7.

Adjustment ratios. (See tables B-3 through B-6.) Ratios of (a) labor force figures adjusted to U.S. concepts to (b) unadjusted figures based on census definitions were computed for each labor force survey. Ratios of adjusted unemployed to registered unemployed for men and women were also computed. The unemployment ratios were computed separately for men and women because of the large difference in the degree to which unemployed men and women register. In March 1976, the adjusted civilian labor force age 16 and over was 1.5 percent greater than the civilian labor force by French census definitions. Adjusted unemployment was 8 percent greater than unemployment recorded in the registered unemployed series. Male unemployment according to U.S. concepts was 7 percent smaller than registered male unemployment; female unemployment under U.S. concepts was 23 percent higher than registered female unemployment. The March 1976 survey was the first one to show an overstatement of male unemployment by the registered series; all previous surveys had indicated that the registration series understated male unemployment by U.S. definitions.

Table B-5. France: Adjustment of labor force data from October surveys to U.S. concepts, 1960-66

(Numbers in thousands)				
Item	1960	1962	1964	1966
Reported civilian labor force ¹	20,025	20,642	20,862	20,948
Less: Unpaid family workers:				
Not at work ²	27	46	36	35
At work less than 15 hours ²	178	168	177	136
Less: Employed persons not at work for durable reasons ^{2,3}	15	19	32	33
Less: Employed who had not commenced seeking work ^{2,4}	77	85	67	58
Less: Persons not currently available for work ⁵	109	94	79	71
Plus: Adjustment for double count ⁶	21	24	23	21
Adjusted civilian labor force, age 14 and over	19,640	20,254	20,494	20,636
Less 14- and 15-year-olds ⁷	^a 581	442	368	308
Adjusted civilian labor force, age 16 and over	19,059	19,812	20,126	20,328
Reported civilian labor force (census definitions)	18,929	19,672	20,055	20,239
Adjusted civilian labor force age 16 and over as percent of reported civilian labor force	100.7	100.7	100.4	100.4

¹ Labor force surveyed including marginally active plus estimated labor force not covered by the survey less career military personnel.

² Number of persons reported as "unknown" distributed proportionally.

³ "Durable reasons" refers to nature of the job and personal convenience.

⁴ Based on data reported in the surveys on persons who had not commenced seeking jobs. No data were available on the number of persons who had not actively sought work in the preceding month.

⁵ Estimated as 4.7 percent of unemployed under census definitions and 40.2 percent of the marginally unemployed.

⁶ This adjustment allows for the fact that persons may have been excluded more than once above since they could have neither commenced seeking work nor been currently available for work.

⁷ Number of 14- and 15-year-olds estimated in the survey divided by ratio of reported civilian labor force to adjusted labor force age 14 and over.

^a Estimate.

The adjustment factor for men has been declining rapidly in recent years. In March 1969, male unemployment adjusted to U.S. concepts was 70 percent higher than registered male unemployment. By 1970, this factor had fallen to 15 percent, and by 1975, to 5 percent. Part of this decline was brought about by the spread of the New Employment Agency throughout the country. The decline was also related to higher unemployment benefits in France which induced more persons to register. Periods of recession, such as 1974-76, also tend to cause more unemployed persons to register at employment offices, thus reducing the adjustment factor which is applied to the registrations series.

Female adjustment factors have also been declining (except in 1976 when the factor rose slightly) for the same reasons stated above. However, the adjustment factors for women remain much higher than those for men since many unemployed women are new entrants or reentrants to the labor force and are not eligible for jobless benefits.

Annual estimates of labor force and unemployment adjusted to U.S. concepts. The adjustment factors developed from the labor force surveys for October and March of alternate years 1960 through 1966 and March of each year beginning in 1967 were prorated by month to obtain annual average adjustment factors (shown on table B-7). For the years 1959 and 1960, the adjustment factor for 1961 was assumed to apply. The March 1976 adjustment factor was assumed to apply in 1976 in order to make preliminary estimates for that year. When the March 1977 survey results are available, some revisions to the 1976 unemployment estimates may be necessary because of the prorating technique.

The October surveys taken at 2-year intervals between 1960 and 1966 indicated much higher unemployment adjustment factors than the March surveys. This may indicate a large seasonal variation in adjustment factors; however, it is difficult to determine the extent of seasonal variation in the factors since no two surveys were taken in the same year. A comparison of age distributions of the unemployed in October and March reveals some significant differences. The following tabulation shows the average age distribution for the 1962-66 October surveys versus the distribution for the 1963-67 March surveys:

	October (Percent)	March
Total under census definitions	100.0	100.0
14 to 19 years	34.6	31.3
20 to 24 years	13.5	15.1
25 to 54 years	36.5	41.3
55 and over	13.2	12.3
Total marginally active	100.0	100.0
14 to 19 years	22.3	27.9
20 to 24 years	11.6	12.9
25 to 54 years	47.0	41.9
55 and over	19.0	17.3

These figures indicate that, under census definitions, teenage unemployment was a higher proportion of total unemployment in October than in March. The reverse was true for marginally active teenagers.

According to census definitions, teenagers seeking their first job had a much higher representation in the October surveys. For the marginally active teenagers, however, representation was highest in March, as shown in the following tabulation:

	October (Percent)	March
Under census definitions	24.1	16.3
Marginally active	19.2	24.5

These differences probably reflect the fact that in-school teenagers ("marginally active") are more likely to seek work in March for the coming summer vacation. According to INSEE officials, out-of-school teenagers ("census definitions") who completed their schooling in the previous June tend to look seriously for their first job around September and October, after a summer vacation. Thus, there

are some important differences between March and October survey results.

In 1977, INSEE began to conduct two surveys each year—in March and October. When results of these surveys become available, the extent of the seasonal variation between the March and October adjustment factors will be better known.

The annual adjustment factor for the labor force has fluctuated within a narrow range of 99.7 to 101.5. The adjusted labor force was occasionally below the labor force under census definitions because the addition of the "marginal" labor force was more than cancelled out by the subtraction of 14- and 15-year-olds, unpaid family workers not at work or working less than 15 hours, and other elements not included in the U.S. labor force, as discussed earlier.

Unemployment rate

Adjusted unemployment rates are obtained by dividing the adjusted unemployed figures by the adjusted labor force figures. These adjusted rates are higher than the unemployment rates calculated from published French data

(except in 1963). In 1959, the adjusted French unemployment rate was 2.0 percent, whereas the rate based on unadjusted data was 1.3 percent (table B-7). By 1976, the adjusted and unadjusted figures were much closer—4.6 and 4.5 percent, respectively.

Quarterly and monthly estimates

BLS estimates seasonally adjusted jobless rates adjusted to U.S. definitions for France. The method used in making these estimates is as follows:

Unemployment. Quarterly and monthly adjustment factors (to adjust to U.S. concepts) are derived from the annual French labor force surveys by prorating between surveys, as described above. These adjustment factors are applied to the INSEE seasonally adjusted number of registered unemployed to arrive at seasonally adjusted estimates of joblessness adjusted to U.S. definitions. The seasonally adjusted registered unemployed series is published in INSEE's monthly bulletin, *Bulletin Mensuel de Statistique*. INSEE utilizes the additive version of the X-11 Variant of the U.S. Census Bureau's Method II seasonal adjustment program.

Table B-6. France: Adjustment of labor force data from March surveys to U.S. concepts, 1963-76

(Numbers in thousands)

Item	1963	1965	1967	1968	1969	1970	1971	1972	1973	1974	1975 ¹	1976
Reported civilian labor force ²	20,179	20,502	20,530	21,304	21,417	21,621	21,658	21,818	21,914	22,154	22,902	23,027
Less: Unpaid family workers:												
Not at work ³	46	67	31	48	45	51	48	36	42	42	42	42
At work less than 15 hours ⁴	139	162	141	86	111	135	117	124	116	116	123	125
Less: Employed persons not at work for durable reasons ^{5,6}	22	9	20	24	11	14	19	19	619	619	617	617
Less: Unemployed who had not commenced seeking work ^{3,7}	69	57	46	105	102	109	123	117	110	120	257	238
Less: Persons not currently available for work ⁸	58	61	67	139	148	158	158	159	156	158	215	192
Plus: Adjustment for double count ⁹	29	27	26	56	58	72	70	72	74	67	94	77
Adjusted civilian labor force, age 14 and over	19,674	20,173	20,251	20,958	21,058	21,226	21,263	21,435	21,543	21,762	22,356	22,504
Less: 14- and 15-year-olds ¹⁰	468	435	420	97	56	55	29	29	625	625	625	620
Adjusted civilian labor force, age 16 and over	19,406	19,738	19,831	20,861	21,002	21,171	21,234	21,406	21,518	21,737	22,331	22,484
Reported civilian labor force (census definitions)	19,518	19,864	19,923	20,609	20,764	20,940	20,994	21,119	21,253	21,487	22,048	22,152
Adjusted civilian labor force age 16 and over as percent of reported civilian labor force	99.4	99.4	99.5	101.2	101.1	101.1	101.1	101.4	6101.2	6101.2	6101.3	6101.5

¹Data for April.

²Labor force surveyed including marginally active plus estimated labor force not covered by the survey less career military personnel.

³Number of persons reported as "unknown" distributed proportionally.

⁴Through 1974, estimated as 0.7 percent of reported labor force (data not yet published). Beginning 1975, the number at work less than 15 hours was published. Number not at work was estimated from 1972 proportions.

⁵"Durable reasons" refers to nature of the job and personal convenience.

⁶Preliminary.

⁷Through 1974, based on data reported in the surveys on persons who had not commenced seeking work. Beginning 1975, based on results of specific question in survey on number of persons

who had not actively sought work in the preceding month.

⁸Through 1974, estimated as 4.7 percent of unemployed under census definitions and 40.2 percent of the marginally unemployed. Beginning 1975, based on results of the survey.

⁹This adjustment allows for the fact that persons may have been excluded more than once above since they could have neither commenced seeking work nor been currently available for work. From 1968, the adjustment was made on the basis of data supplied by INSEE. Double count for prior years estimated as 23 percent of the above two categories.

¹⁰Beginning in 1968, the labor force data relate to 15-year-olds and over. Therefore, only 15-year-olds are omitted in 1968 and following years. The number of persons under age 16 were estimated from the survey and were divided by the ratio of reported civilian labor force to adjusted civilian labor force age 14 (or 15) and over.

Labor force. BLS estimates quarterly civilian labor force figures based on INSEE estimates of end-of-year civilian employment and end-of-quarter data on the number of employees in nonagricultural industries and other available data. The BLS estimates are then seasonally adjusted using the U.S. Bureau of the Census X-11 seasonal adjustment program, multiplicative version.

Unemployment rate. Quarterly unemployment rates are computed by dividing the 3-month average of seasonally

adjusted unemployment (adjusted to U.S. definitions) by the seasonally adjusted (adjusted to U.S. definitions) labor force. Monthly unemployment rates are calculated in a similar way. Since estimates of the labor force are only available quarterly, the labor force is held constant for each of the 3 months which make up that quarter. Additionally, the latest available labor force figure is used until enough data are available to make a more current estimate. At that time, quarterly and monthly jobless rates are recalculated.

Table B-7. France: Labor force and employment data before and after adjustment to U.S. concepts, 1959-76

Item	1959	1960	1961	1962	1963	1964	1965	1966	1967
PUBLISHED FIGURES									
Registered unemployed	141	130	111	123	140	114	142	148	196
Male	86	82	67	72	86	71	86	92	123
Female	55	49	45	51	54	43	55	55	73
Civilian labor force	18,925	18,951	18,919	19,050	19,399	19,638	19,813	19,964	20,118
Total unemployed ¹	254	239	203	230	273	216	269	280	365
Percent of registered	180	184	183	187	195	189	189	189	186
Unemployment rate	1.3	1.3	1.1	1.2	1.4	1.1	1.4	1.4	1.8
ADJUSTED FIGURES									
Civilian labor force (rounded)	19,060	19,080	19,050	19,160	19,340	19,680	19,750	20,000	20,100
Percent of published figures	100.7	100.7	100.7	100.6	99.7	100.2	99.7	100.2	99.9
Unemployed (rounded)	380	350	300	280	260	290	310	380	400
Male	160	153	125	115	115	127	142	175	192
Percent of registered	186.2	186.2	186.2	159.3	133.5	178.9	164.6	190.1	155.9
Female	218	194	178	167	149	163	168	203	212
Percent of registered	395.7	395.7	395.7	327.0	275.0	378.1	305.1	369.0	289.8
Unemployment rate	2.0	1.8	1.6	1.5	1.3	1.5	1.6	1.9	2.0
PUBLISHED FIGURES									
Registered unemployed	254	223	262	338	383	394	498	840	934
Male	156	129	146	188	208	193	238	428	444
Female	98	94	116	150	176	201	260	412	490
Civilian labor force	20,176	20,434	20,750	20,958	21,155	21,388	21,715	21,733	21,863
Total unemployed ¹	427	340	356	446	492	450	615	889	993
Percent of registered	168	152	136	132	128	114	123	106	106
Unemployment rate	2.1	1.7	1.7	2.1	2.3	2.1	2.8	4.1	4.5
ADJUSTED FIGURES									
Civilian labor force (rounded)	20,380	20,660	20,980	21,210	21,430	21,640	21,980	22,040	22,190
Percent of published figures	101.0	101.1	101.1	101.2	101.3	101.2	101.2	101.4	101.5
Unemployed (rounded)	530	490	540	590	610	580	650	930	1,020
Male	240	213	214	233	240	216	253	435	413
Percent of registered	154.1	164.9	146.4	124.2	115.4	112.0	106.2	101.6	93.1
Female	290	280	323	359	370	368	392	497	603
Percent of registered	292.2	298.0	278.4	239.0	210.5	183.3	150.8	120.7	122.8
Unemployment rate	2.6	2.4	2.6	2.8	2.8	2.7	3.0	4.2	4.6

¹Until 1971 based on census definitions; thenceforth, based on ILO definitions.

Germany

The official unemployment statistics for Germany are administrative statistics representing the number of persons registered as unemployed at the offices of the employment service. Since 1957, the registered unemployed series has been supplemented by data on unemployment obtained from a household labor force survey, the Microcensus. The Microcensus definitions and concepts are similar to U.S. labor force survey concepts and the Microcensus is used as the basis for adapting German unemployment statistics to U.S. concepts.

Unemployment

Registered unemployed. The German registered unemployed count is taken on a specified day at the end of each month and covers those who at some previous time registered as unemployed and whose job application has not yet been settled. Persons 15 years of age and over without a job or employed for less than 20 hours per week are counted as unemployed if they are available for work, not ill, and seeking paid employment of 20 hours per week or more. Registration is not compulsory, but it is an essential condition for receiving unemployment benefits. The data on registrations are published monthly by the Federal Labor Office in *Ämtliche Nachrichten*.

The registration statistics distinguish between unemployed jobseekers and jobseekers who are not unemployed (table B-8). All jobseekers are referred to as "arbeitsuchende." Unemployed jobseekers are designated as "arbeitslose," the official German unemployment concept. The difference between the jobseekers and the unemployed comprises the "nichtarbeitslose arbeitsuchende," that is, jobseekers who are not unemployed. These are mainly persons who have a job, but are looking for a new job or a supplementary job. Also included in the "nichtarbeitslose arbeitsuchende" are persons who are not employed and who are seeking "insignificant" employment of less than 20 hours per week.

In 1976, the total number of jobseekers was 1,296,000, of whom 1,060,000 were unemployed and 236,000 were not unemployed. Of the unemployed, 84 percent were seeking full-time work ("vollzeitarbeitslose") and the remainder were seeking 20 hours or more, but not full-time work ("teilzeitarbeitslose"). Statistics are not published on the number of persons working less than 20 hours per week who are classified as unemployed.

Beginning with December 1959, persons in the construction industry who receive unemployment insurance benefits known as "bad weather money" (payable during the period of November 1 to March 31) are excluded from the unemployment count. This makes a substantial difference in the registered unemployed total since construction unemployment in Germany is generally very heavy in the winter months; peak unemployment in January was 3 to 5

Table B-8. Germany: Statistics on the registered unemployed, 1959-76

(Thousands)			
Year	Total number of jobseekers	Unemployed jobseekers ¹	Other jobseekers ²
1959 ³	659	540	119
1960	395	271	124
1961	302	181	121
1962	272	155	118
1963	303	186	118
1964	282	169	113
1965	252	147	106
1966	277	161	116
1967	579	459	120
1968	443	323	120
1969	301	179	123
1970	281	149	132
1971	325	185	140
1972	403	246	156
1973	452	273	178
1974	778	582	196
1975	1,274	1,074	200
1976	1,296	1,060	236

¹ These are the official German unemployment figures. Some persons with negligible employment are included.

² Comprises jobseekers who have a job but are looking for a new job or a supplementary job and persons who are not employed and who are seeking work of less than 20 hours per week.

³ Data for 1959 include persons in the construction industry who receive unemployment benefits known as "bad weather money." For 1960 and later years, such persons are excluded from the unemployed.

SOURCE: *Ämtliche Nachrichten* (Nuremberg, German Federal Labor Office).

times the September level in the late 1950's. Separate figures are available on the number of recipients of "bad weather money." Persons outside the construction industry who register to receive short-time benefits have always been excluded from the registered unemployed count. Separate figures are also collected on the number of such persons.

The yearly average of registered unemployed is computed by dividing by 12 the sum of one-half the total for the previous December plus the monthly totals for January through November of the current year plus one-half the total for December of the current year. This method is used because the counts of registered unemployed are taken at the end of each month.

The German registered unemployed series has certain limitations as a precise measure of unemployment. Registrants are drawn predominantly from the wage and salary labor force. There are indications that certain unemployed persons, particularly women and teenagers, choose not to register. Also, unemployed persons who do not want to work at least 20 hours a week are excluded. They would be considered as unemployed in the U.S. and German labor force surveys. On the other hand, registrations include a number of part-time workers with negligible employment (i.e., working less than 20 hours per week) who want more work. Under U.S. and German labor force survey definitions, such persons would be regarded as employed. The

fact that the count is made as of a single day instead of a longer period tends to produce a higher figure than would a count of persons who have not worked at all during an entire week, as in the United States. Also, the figures could include persons who found jobs and started working after the date on which they initially registered or renewed their registration.

Microcensus. Since 1957 the monthly count of the registered unemployed has been supplemented by the Microcensus, a sample survey of households conducted by the Federal Statistical Office. The survey, first taken in October 1957, was generally conducted in January, April, July, and October until 1975. At that time, the quarterly surveys were discontinued, and only one survey is now conducted each year, in the last week of April or the 1st week of May, depending on which week contains no public holiday.

Household samples of 1.0 percent (about 180,000 households in 1960 and 230,000 households currently) were surveyed in October 1957-62 and April or May of the following years. Surveys for the other three quarters used a 0.1-percent sample. Summary survey results are published periodically in the monthly *Wirtschaft und Statistik*. The detailed survey results are published in Series 6 of *Bevölkerung und Kultur*.

The reference period for the Microcensus is the week prior to the survey interviews. There is no specified period for jobseeking activities related to the definition of unemployment.

The unemployed in the Microcensus are defined as persons 14 years of age and over who are not at work in the survey week and who state that they are unemployed or that they are looking for work. Unemployment status is determined by the answers to two questions. The first asks "Is this person unemployed?" The term unemployed is defined to include persons who normally have a job but are temporarily out of work as well as persons coming out of school and looking for an apprenticeship. Persons who normally do not have an occupation, such as housewives and pensioners who were not recently working, are not to be classified as unemployed under this question.

The second question asks "Was this person looking for work?" An affirmative answer to this question also results in classification of a person as unemployed if he did not work in the reference week. This question is designed to find out how many normally inactive persons are seeking work.

The total number of unemployed persons—"erwerblos"—consists of those classified as either unemployed in the first question or as looking for work in the second. Those enumerated as unemployed in the first question are classified as unemployed whether or not they state that they are looking for work in the second question. Thus, there may be some inactive workseekers in the Microcensus unemployment total.

There is also no probing into the unemployed person's current availability to begin work. Thus a person seeking work in April but only able to accept it in June is enumerated as unemployed in the April Microcensus. A sudden increase in youth unemployment in April 1968 is partly explained by the change in the school-leaving date from March to July that year. The large youth unemployment recorded in April 1968 includes students who reported themselves as unemployed but who were looking for work beginning in July. The 1977 Microcensus (for the labor force survey of the European Community) asks for the first time whether persons who claim to be seeking a job are immediately available for employment. The results from the 1977 Microcensus are not yet available.

There is no question concerning layoffs in the Microcensus. German statisticians believe that persons on temporary layoff are most likely classified as employed in the Microcensus. They would probably be regarded as "with a job but not at work." According to German statisticians, persons waiting to report to a new job at a later date are probably classified as economically inactive, and temporarily ill jobseekers would be counted as unemployed.

Foreign workers in Germany are included within the scope of the Microcensus, and unemployment data have been shown separately for such workers in recent years. For example, in May 1975, 134,000 unemployed foreign workers were reported in the Microcensus. This compares with 167,000 registered unemployed foreign workers in the same month.

The following differences between the Microcensus concepts and U.S. unemployment concepts have been noted: (1) Current availability to begin work is not required in the German survey, but is required in the U.S. definition of unemployment; (2) active jobseeking is not required in the German survey, but in the United States a person must have engaged in some specific jobseeking activity within the past 4 weeks;¹⁰ (3) persons on layoff are probably classified as employed in Germany (unless they state they are looking for work) and as unemployed in the United States; (4) persons waiting to report to a new job at a later date are classified as not in the labor force in Germany and as unemployed in the United States.

Method of adjustment. No adjustment is made to the Microcensus unemployment figures to account for the definitional differences noted above. The data needed for such an adjustment are not available since these categories are not enumerated in the Microcensus. The overall effect of these differences is believed to be small. The lack of a test of current availability and inclusion of some inactive jobseekers tend to bias the unemployment figures in an upward direction for comparison with U.S. concepts; on the other hand,

¹⁰Unless awaiting recall from layoff or waiting to start a new job within 30 days. In these cases, the person would also be counted as unemployed even though not actively seeking work.

Germany: English translation of labor force survey questions relating to labor force status

Columns 22-34. To be completed for employed and all other persons:

Column 22. Is . . . normally employed in an occasional, or full-time job, or as an unpaid family worker?

Column 25. Is . . . unemployed? If yes, does . . . receive unemployment benefits?

Column 32. What is . . . chief means of livelihood?

- Employment
- Rent, personal fortune, pension, old-age benefits, relief benefits
- Unemployment insurance or unemployment welfare assistance
- Assistance from parents or husband
- Soldier

Column 33. Was . . . seeking work by:

- Applying at labor exchange
- Applying at private employment agencies
- Newspapers
- Personal friends or trade union
- Participating in competitive exam
- Other

Column 34. For jobseekers without a job. If job ended within last 2 years, list the precise date at which the job ended.

Columns 35-44. To be completed for employed persons:

Columns 35-39. Name of employer, location, industry, occupation, and class of worker.

Column 43. Hours worked in survey week.

Column 44. If . . . worked less than 42 hours, give reason.

exclusion of persons on layoff and persons waiting to start a new job biases the figures in a downward direction. These two opposite effects tend to cancel each other to some extent. If a bias remains, it is likely to be that the Microcensus unemployment figures are somewhat overstated in comparison with U.S. data. This is because the number of persons on layoff in most years was probably virtually nil, whereas the numbers not currently available and not actively seeking work were probably more numerous. Figures on the number of short-time workers indicate that only in 1967 and 1974-76 could the number laid off the entire survey week have affected the unemployment rate.

It was decided to discard the 0.1-percent survey results and utilize only the 1-percent Microcensus in making the adjustments to U.S. concepts. Before 1975, the survey was conducted quarterly, as mentioned earlier, with a large (1-percent) sample in the second quarter (usually) and very small samples in the other quarters of the year. Data for the small-sample quarters from 1971 through 1975 have not been published. The data from the small-sample surveys, even when available, are of questionable reliability concerning measurement of unemployment because German unemployment has been so low in most years that sampling errors are very high. Furthermore, it was necessary to develop a method which would not depend upon quarterly data in the future, since such data are no longer collected. Unemployment data from the large and the available small-sample surveys are shown in table B-9.

Some adjustments in Microcensus data, discussed below, have been made in order to: (1) Convert the survey data to approximately the same time of the month as the registration count; (2) exclude 14-year-olds; and (3) produce annual averages based on data for only 1 month of each year.

1. *Adjustment of survey data to end of month.* Beginning with 1963, all large-sample surveys have been conducted in the last full week of April or in early May.¹¹ During 1959-62, however, most of the surveys were conducted near the beginning of October.¹² In order to simplify the prorating of adjustment factors, the reported unemployment figures for 1959-62 were roughly adjusted to end-of-month estimates on the basis of the registered unemployed series (table B-10).
2. *Exclusion of 14-year-olds.* Since compulsory schooling is required until age 15 in Germany, 14-year-olds should be excluded from the unemployed count. Unemployment data by age are reported in the results of the 1-percent Microcensus each year. The proportion of the unemployed who are 14-year-olds is applied

¹¹ In 1965, 1973, and 1976 the survey was conducted during the first week of May; in 1975, during the second week of May.

¹² The October 1960 survey was conducted during the last week of the month.

Table B-9. Germany: Unemployment according to the Microcensus, 1959-76

(Thousands)			
Date	Number unemployed	Date	Number unemployed
1957: October ¹	2 431	1966: January	103
1958: October ¹	2 342	April ¹	49
1959: October ¹	214	July	66
1960: October ¹	152	October	66
1961: April	³ 81	1967: January	352
July	³ 61	April ¹	290
October ¹	91	July	212
1962: January	³ 159	October	191
April	89	1968: January	352
July	³ 45	April ¹	412
October ¹	102	July	306
1963: January	³ 238	October	232
April ¹	86	1969: January	300
July	³ 78	April ¹	214
October	³ 68	July	210
1964: January	139	October	203
April ¹	97	1970: January	242
July	63	April ¹	167
October	51	July	52
1965: January	118	1971: April ¹	206
May ¹	67	1972: April ¹	208
July	72	1973: May ¹	190
October	61	1974: April ¹	381
		1975: May ¹	918
		1976: May ¹	944

¹ Large-sample (1-percent) survey. Other surveys are the small-sample (0.1-percent) surveys.

² Excludes Saar.

³ Excludes West Berlin.

SOURCE: *Wirtschaft und Statistik* (Wiesbaden, Statistisches Bundesamt), various issues.

Table B-10. Germany: Adjustment of Microcensus unemployment¹ from early-in-month to end-of-month estimate, 1959-62

(Unemployed in thousands)			
Date	Microcensus unemployed	Ratio of end-of-month to early-in-month unemployed ²	Unemployed converted to end-of-month
October 4-10, 1959	214	1.03	220
October 23-29, 1960	152	(³)	152
October 1-7, 1961	91	1.02	93
October 7-13, 1962	102	1.06	108

¹ Figures for these surveys were reported both including and excluding West Berlin. The figures shown here include West Berlin.

² Based on registered unemployed. Since registered unemployed data refer to the last day of each month, end-of-month unemployment was taken as the registered unemployment figure for the current month and early-in-month unemployment was taken as the average of the registered unemployment in the current month and the preceding month. Thus, the ratio for October was computed as the registered unemployed in October divided by the average of registered unemployed in September and October.

³ Survey conducted in last week of month.

to the estimated annual average unemployed each year. The resulting number is negligible except in 1968, when an estimated 24,000 14-year-olds were unemployed.

3. *Estimation of annual averages.* Annual average adjustment factors for unemployment were derived by calculating the ratio of Microcensus unemployment from the 1-percent surveys (adjusted to end of month when necessary) to registered unemployment and prorating these ratios from year to year. Thus, the figures for October 1959 through October 1962 and April 1963 through the latest available survey date were prorated to obtain annual averages.

Table B-11 shows the adjustment factors used as well as adjustment factors resulting from using alternative methods. The method described above is "Method 1" which utilizes the results of the 1-percent surveys, disregarding the 0.1-percent surveys. Method 2 incorporates the 0.1-percent surveys as well as the 1-percent surveys, with prorating between surveys. Method 3 also incorporates all surveys, but uses the average of the four quarters (when available) of the Microcensus unemployed as an approximation of the annual average. Method 4 uses only the 1-percent surveys and annualizes the results based on the ratio of registered unemployment in the Microcensus month to registered unemployment for the entire year. These four methods produce unemployment rates which are quite close to each other, with the most significant deviations occurring in 1967 and 1970 (table B-12).¹³

The adjustment factors indicate that the registered unemployed series normally overcounts unemployment under survey concepts. In most years, the adjustment factor to be applied to the registration count is less than 100. Only in 1960 and 1968-71 was the adjustment factor over 100 (Method 1).

Labor force

Germany makes annual average estimates of the labor force which represent the sum of the employed under Microcensus concepts and the registered unemployed. The 1-percent Microcensus employment data were adjusted for seasonality on the basis of the 0.1-percent surveys, when available. Since these small-sample surveys are no longer conducted, the Microcensus employment data are now adjusted to annual averages on the basis of statistics on persons employed derived from notifications by employers to the statutory social insurance scheme and to the Federal Institute for Employment.

¹³ Although the differences in the adjustment factors were rather large, the unemployment rates using the alternative methods did not vary much because unemployment was at such low levels in Germany. Thus, adjustment factors of 124.8 (Method 1) and 100.9 (Method 3) yielded 1968 unemployment rates of 1.6 and 1.3 percent, respectively.

Table B-11. Germany: Adjustment ratios (Microcensus unemployed as percent of registered unemployed) using alternative methods

Year	Method 1 ¹	Method 2 ²	Method 3 ³	Method 4 ⁴
1959 ⁵ . . .	93.7	89.0	88.5	93.7
1960 ⁵ . . .	102.4	100.8	⁶ 72.7	107.0
1961 ⁵ . . .	90.3	70.2	⁶ 67.4	82.3
1962 ⁵ . . .	96.6	72.2	70.8	106.5
1963 ⁵ . . .	65.3	66.7	71.0	47.3
1964	60.5	53.2	52.1	66.3
1965	44.6	58.0	52.4	44.2
1966	44.7	48.6	44.1	40.4
1967	73.8	55.6	56.9	65.0
1968	124.8	116.3	100.9	124.5
1969	137.4	149.9	129.5	138.0
1970	135.7	90.8	96.0	138.3
1971	119.6 ⁷	115.3	—	126.6
1972	90.2	—	—	90.2
1973	82.3	—	—	83.9
1974	78.1	—	—	73.7
1975	88.2	—	—	90.1
1976	85.7	—	—	86.3
1978 (May)	85.7	—	—	90.1

¹ Adjustment ratios derived from 1-percent Microcensuses and prorated to obtain annual averages.

² Adjustment ratios derived from 0.1-percent and 1-percent Microcensuses and prorated to obtain annual averages.

³ Average of quarterly Microcensuses divided by annual average registered unemployed.

⁴ Unemployed from 1-percent Microcensus annualized by dividing by ratio of registered unemployed in Microcensus month to annual average registered unemployed.

⁵ Adjustments made in Microcensus data to reflect end-of-month figures and to include West Berlin.

⁶ Ratios for 1960 and 1961 estimated (Microcensus not conducted in all four quarters).

Employed persons, according to the Microcensus, comprise (a) all those, including unpaid family workers, who worked as much as 1 hour during the survey week and (b) all those who had jobs or businesses at which they had previously worked, but from which they were temporarily absent during the survey week because of illness or injury, industrial dispute, vacation or other leave of absence, or temporary disorganization of work for reasons such as bad weather or temporary breakdown. Persons on temporary layoff and career military personnel are also considered to be employed.

There are four differences between the U.S. and German concepts of the labor force. First, the United States excludes and Germany includes career military personnel. Second, the United States excludes and Germany includes unpaid family workers who work less than 15 hours per week. Third, the registered unemployed rather than the Microcensus unemployed are included. Finally, Germany includes 14-year-olds in the labor force, whereas the age at which compulsory schooling ends is 15.

Method of adjustment. The German annual employment estimates are adjusted by subtracting career military personnel, unpaid family workers who worked less than 15 hours per week, and persons 14 years of age. The number of

Table B-12. Germany: Estimated annual average Microcensus unemployed and unemployment rates based on alternative methods¹

Year	Unemployed (thousands)					Unemployment rates (percent)				
	Registered unemployed	Estimated Microcensus unemployed				Registered unemployment rate	Estimated Microcensus unemployment rate			
		Method 1	Method 2	Method 3	Method 4		Method 1	Method 2	Method 3	Method 4
1950	540	506	481	478	508	2.8	2.0	1.9	1.8	2.0
1950	271	278	273	197	290	1.3	1.1	1.1	.8	1.1
1951	181	163	127	122	149	.8	.6	.5	.5	.6
1952	154	149	111	108	164	.7	.6	.4	.4	.6
1953	186	121	124	132	88	.8	.5	.5	.5	.3
1954	189	102	90	88	112	.8	.4	.3	.3	.4
1955	147	86	85	77	65	.7	.2	.3	.3	.2
1956	161	72	78	71	65	.7	.3	.3	.3	.2
1967	459	339	256	261	266	2.1	1.3	1.0	1.0	1.0
1968	323	403	376	326	402	1.5	1.6	1.5	1.3	1.6
1969	179	246	268	232	247	.9	.9	1.0	.9	1.0
1970	149	202	135	143	206	.7	.8	.5	.5	.8
1971	185	221	213	—	238	.8	.8	.8	—	.9
1972	246	222	—	—	222	1.1	.8	—	—	.8
1973	273	226	—	—	229	1.2	.9	—	—	.9
1974	582	455	—	—	429	2.6	1.7	—	—	1.6
1975	1,074	947	—	—	968	4.7	3.7	—	—	3.8
1976	1,050	919	—	—	915	4.6	3.6	—	—	3.6

¹ See table B-11 for alternative methods.

² Using May 1976 factor only.

NOTE: For adjustment to U.S. concepts, one further adjustment (to exclude 14-year-olds) is made to the data shown (see table B-13).

career military personnel can be obtained from annual estimates of the labor force excluding military personnel reported to the Statistical Office of the European Communities. The proportion of unpaid family workers who usually work 15 hours or less was reported in the Microcensus through 1971. Since that time, only the number who actually worked 15 hours or less in the survey week has been reported. Figures on those who usually worked 15 hours or less are more desirable here in order to discount the seasonal factor in the Microcensus. Therefore, for 1972 and later years the reported figures on unpaid family workers working 15 hours or less have been adjusted to a "usual status" figure based on data for 1967-71, which indicate that 45 percent of the reported number of family workers working 15 hours or less usually do so. The number of 14-year-olds is obtained from the 1-percent Microcensus results. Instead of the registered unemployed, the Microcensus unemployed (adjusted to an annual average as described above) are added to the adjusted employed to arrive at the German labor force adjusted to U.S. concepts.

Unemployment rate

Until 1965, the official German unemployment rate was computed by the Ministry of Labor and Social Welfare by dividing the registered unemployed by the estimated wage and salary labor force. The Ministry's estimates of wage and salary employment were based on notifications which employers are required to submit to the employment exchanges showing all job hires and terminations. The Ministry has not made such estimates since 1963; therefore, 1964 and 1965 unemployment rates were computed using

the 1963 estimate of wage and salary earners. Beginning with 1966, the official unemployment rate has been computed by dividing the registered unemployed by the sum of the registered unemployed and wage and salary employment based on the Microcensus.

For comparison with the United States, estimated unemployment based on the Microcensus concepts is divided by the annual civilian labor force adjusted to U.S. concepts to obtain the estimated unemployment rate for Germany (table B-13).

Quarterly and monthly estimates

BLS estimates seasonally adjusted unemployment rates adjusted to U.S. concepts for Germany. The method used is as follows:

Unemployment. Data on the number of persons registered as unemployed require adjustment to correspond to U.S. definitions of unemployment. Annual adjustment factors are derived from the Microcensus and are applied on a prorated basis to the seasonally adjusted monthly number of registered jobless. The Deutsche Bundesbank seasonally adjusts registered unemployment each month, including data up to and including the most recent month, using the multiplicative version of the U.S. Census Bureau's Method II, X-11 Variant, seasonal adjustment program. The data are published in the *Statistische Beihefte zu den Monatsberichten der Deutsche Bundesbank, Reihe 4, Saisonbereinigte Wirtschaftszahlen*.

Labor force. The Deutsche Bundesbank seasonally adjusts Statistisches Bundesamt's quarterly estimates of em-

ployed wage and salary workers, using the same method as for the registered jobless. To make current quarterly estimates of employment adjusted to U.S. definitions, BLS applies the prior year's ratio of employment (adjusted to U.S. concepts) to the quarterly employed wage and salary worker figures. BLS then adds the seasonally adjusted quarterly number of unemployed (adjusted to U.S. concepts) to arrive at the seasonally adjusted quarterly wage and salary labor force. Revisions are made when Statistisches Bundesamt publishes its current year estimate of the total labor force.

Unemployment rate. Quarterly jobless rates are computed

by dividing the quarterly seasonally adjusted unemployed, adjusted to U.S. concepts, by the quarterly seasonally adjusted labor force, also adjusted to U.S. concepts. Monthly rates are calculated by dividing monthly seasonally adjusted (adjusted to U.S. definitions) joblessness by the quarterly adjusted labor force. Since estimates of the labor force are only available quarterly, the labor force is held constant for each of the months which comprise that quarter. Additionally, the latest available labor force figure is used until a more current estimate is published. At that time, the affected quarterly and monthly jobless rates are recalculated.

Table B-13. Germany: Labor force data adjusted to U.S. concepts, 1959-76

(Numbers in thousands)

Item	1959	1960	1961	1962	1963	1964	1965	1966	1967
Employment	26,797	26,247	26,591	26,690	26,744	26,753	26,887	26,801	25,950
Less: Career military personnel	228	293	343	401	425	456	454	481	489
Less: Unpaid family workers working less than 15 hours ¹	81	89	84	68	77	45	50	53	61
Less: 14-year-olds ²	143	158	163	160	76	85	69	53	13
Plus: Adjusted Microcensus unemployed	506	278	163	145	121	101	66	72	339
Adjusted civilian labor force	25,851	26,985	26,164	26,206	26,287	26,268	26,380	26,286	25,726
Rounded	25,850	26,990	26,160	26,210	26,290	26,270	26,380	26,290	25,730
Registered unemployed	540	271	181	154	186	169	147	161	459
Microcensus unemployed ³	506	278	163	149	121	102	66	72	339
Less: 14-year-olds ²	0	0	0	4	0	1	0	0	0
Adjusted unemployed	506	278	163	145	121	101	66	72	339
Rounded	510	280	160	150	120	100	70	70	340
Unemployment rates (percent):									
As published ⁴	2.6	1.3	.8	.7	.8	.8	.7	.7	2.1
Adjusted	2.0	1.1	.6	.6	.5	.4	.3	.3	1.3
	1968	1969	1970	1971	1972	1973	1974	1975	1976
Employment	25,968	26,356	26,668	26,725	26,855	26,712	26,215	25,322	25,076
Less: Career military personnel	477	485	499	500	529	510	526	524	532
Less: Unpaid family workers working less than 15 hours ¹	68	65	62	50	57	58	58	52	52
Less: 14-year-olds ²	18	10	10	8	13	8	8	10	10
Plus: Adjusted Microcensus unemployed	374	238	197	217	221	220	454	945	917
Adjusted civilian labor force	25,779	26,034	26,294	26,384	26,277	26,356	26,077	25,681	25,399
Rounded	25,780	26,030	26,290	26,380	26,280	26,360	26,080	25,680	25,400
Registered unemployed	323	179	149	185	248	273	582	1,074	1,060
Microcensus unemployed ³	403	246	202	221	222	225	455	947	919
Less: 14-year-olds ²	29	8	5	4	1	5	1	2	2
Adjusted unemployed	374	238	197	217	221	220	454	945	917
Rounded	370	240	200	220	220	220	450	940	920
Unemployment rates (percent):									
As published ⁴	1.5	.9	.7	.8	1.1	1.2	2.6	4.7	4.6
Adjusted	1.4	.9	.8	.8	.8	.8	1.7	3.7	3.6

¹ Ratio from 1-percent Microcensus of unpaid family workers usually working less than 15 hours to total unpaid family workers working less than 15 hours applied to reported annual average.

² Percentage of persons employed under age 15 from 1-percent Microcensus applied to reported annual average employment.

³ Microcensus unemployment adjusted to an annual estimate

(see table B-12, Method 1).

⁴ Percentage of persons unemployed under age 15 from 1-percent Microcensus applied to reported annual average unemployment.

⁵ Registered unemployed as a percent of the wage and salary labor force.

Great Britain

British unemployment statistics are the result of collection procedures, concepts, and definitions that differ substantially from those used in the United States. The British data are based on a count of registrants at employment offices (now called "Jobcenters") or the separate careers offices for young people. Adjustment to U.S. concepts is particularly difficult because, unlike all other countries studied here, Britain did not conduct a regular household survey until 1971. Adjustments for earlier years are based primarily on the results of the April 1961 population census and the April 1966 "sample census" of Britain, in which questions were asked similar to those of the U.S. labor force survey.

The introduction of the General Household Survey in 1971 fills significant gaps in our knowledge of British labor force characteristics. For instance, it provides annual average unemployment rates under definitions quite close to U.S. definitions. Figures from the censuses require many adjustments to adapt them to U.S. concepts and they relate to only one point in time—a week in April. The Household Survey also provides the first indication of the number of people classified as "looking for work" who were not actively doing so. Finally, the government has decided not to hold a mid-decade partial census as in 1966. Therefore, the yearly figures on population structure from the General Household Survey will become more and more important in filling the statistical gap between 1971 and the next decennial census. The results of the 1971 through 1974 surveys have been published and are analyzed here. When results of the later surveys become available, some revisions may have to be made in the adjusted data for 1975 onward.

Prior to the publication of the 1971 General Household Survey, British unemployment rates were adjusted to U.S. concepts based upon the 1961 census and 1966 sample census. For the years after 1966, adjustments based upon the 1966 sample census were applied. The use of adjustment factors from a year when unemployment was low to adjust data for years when unemployment was high is subject to a substantial margin of error. In view of the results of the 1971 household survey, the previously published adjusted unemployment rates for the period 1967-72 were significantly overstated. The 1971 survey indicates that the proportion of unemployed persons who register increases substantially as unemployment increases. The inverse of this relationship was confirmed in the 1973 survey results: The proportion of unemployed persons who registered decreased as unemployment declined.

Unemployment

Registered unemployed. The regularly published British unemployment statistics are based on a count of registrants at employment offices or youth employment service careers of-

fices as of the second Thursday in the month.¹⁴ Registrants must be seeking full-time work and be available to begin work currently. The count includes claimants to unemployment benefits and persons who are not claiming benefits, but it excludes persons temporarily laid off and severely disabled people who are unlikely to obtain work other than under special conditions. Separate figures are compiled for persons temporarily laid off.

The total registrations count includes unemployed "school leavers," defined as persons under 18 years of age who have not entered employment since terminating full-time education. However, adult students were excluded from the unemployed beginning in March 1976. Adult students are defined as persons age 18 or over who are registered for temporary employment during a school vacation, at the end of which they intend to continue in full-time education. Separate figures are still published on the number of adult students registered.

Until the mid-1970's, very few adult students registered as unemployed. However, beginning in about 1973, the British National Union of Students has been publicizing among college students the advantages of registering as unemployed during vacation periods. Although students are usually not eligible for unemployment benefits, they can claim supplementary benefits of approximately £7 per week. A record number of 121,000 adult students were registered as of January 8, 1976, constituting 9 percent of all those registering as unemployed and prompting British officials to examine their statistical treatment of such students. The Department of Employment subsequently decided to exclude adult students from the unemployed count, with the rationale that, unlike school leavers, students are not looking for permanent work but only for a vacation job or a passport to supplementary benefits. A change in administrative regulations was made for the 1976-77 school year under which the financial incentive to register during the short vacation breaks at Christmas and Easter was taken away. During summer vacations, students will still be eligible for supplementary benefits.

Registration is not compulsory but is required for receipt of unemployment benefits under the National Insurance Scheme or, for persons of working age and capable of work, allowances under the Supplementary Benefits (formerly termed "national assistance") programs. Supplementary benefits are payable to those unemployed persons who do not qualify for unemployment benefits or whose income, including unemployment benefits, falls short of their assessed needs and resources. In addition, employed persons not eligible for benefits may register to take advantage of the free services. In the past, the unemployment service made about 20 percent of all adult placements.¹⁵

¹⁴ Prior to October 1975, the unemployment count was taken as of the Monday nearest the middle of the month.

¹⁵ Manpower Services Commission, *Annual Report 1974-75* (London, Her Majesty's Stationery Office, 1974), p. 19.

Persons who register as unemployed receive credits toward their national insurance contributions. These credits are received even if persons have exhausted their benefits and, under 1975 legislation, even if they have been disqualified from receiving benefits. These credits provide a further incentive to register since they count toward a person's eligibility for retirement pension.

The completeness of coverage of the British unemployment statistics is a function of the extent to which persons looking for work register at the employment offices. Failure to register can occur for several reasons. Some persons looking for work and eligible for benefits may decide not to register immediately in order to avert the possibility of having to accept an undesirable job, if offered, on penalty of being disqualified from benefits.

Persons who are out of work and sick will be registered as such and not as unemployed. They are not entitled to register as unemployed and claim benefits since they cannot satisfy the condition of being available for work. Persons registered as unemployed who fall sick are transferred to the sickness register maintained by the Department of Health and Social Security. However, some persons may register as nonclaimants to benefits when they are nearly recovered from their illness in order to find a job quickly.

Persons also may not register because they are ineligible to receive unemployment benefits. Such persons include: (1) Married women and workers over retirement age (65 for men; 60 for women) who may accept the option of not joining the National Insurance System;¹⁶ (2) teenagers seeking their first job and other new entrants and reentrants to the labor force¹⁷ (persons must have at least 26 weeks of employment covered by the unemployment insurance system before they are eligible for benefits); (3) persons who have voluntarily quit their previous job or who were discharged for cause (such persons are ineligible for benefits for a maximum of 6 weeks); and (4) previously self-employed persons and unpaid family workers. Of course, some members of the above groups may register in order to obtain supplementary benefits, credits toward national insurance contributions, or help in finding a job. Married women are rarely eligible for supplementary benefits, but members of the other groups listed above may be eligible.

¹⁶According to a report in the British publication *Labour Research*, 75 percent of British married women "opt out" of the National Insurance Scheme. (See "Unemployment Still Rising," *Labour Research*, October 1970, p. 155). This represents an increase from 60 percent estimated by the Department of Employment in 1960.

¹⁷Young persons under 18 seeking their first employment who register for job placement with the youth employment service careers office are included in the British registered unemployment count. However, there is no compulsion to register and, in 1971, only about 15,000 school leavers who had not yet been in insured employment were included in the British registered unemployed total. By 1975, this figure had risen to 45,000 as labor market conditions worsened considerably.

It should be noted that, under the Social Security Act of 1975, women who marry after April 6, 1977, will no longer have the option of not joining the National Insurance System. The Department of Employment expects that removal of this option will result in a large increase in female unemployment registrations. Preliminary forecasts suggest that about 580,000 women will have lost the opportunity to "opt out" of the system by April 1978 and that this number will increase to about 2.2 million by 1988.

In two respects, British registered unemployment data are more inclusive than U.S. unemployment statistics. First, the British data include those out of work on the day of the count who worked during the rest of the week. Such persons would be counted as employed in the United States. Second, workers may continue to register as unemployed even though they have really given up hope of finding work. Such persons would be considered as discouraged workers in the U.S. labor force survey, and hence, would be enumerated as not in the labor force. In most other respects, however, British unemployment statistics are less comprehensive than those obtained from the U.S. labor force survey. The extent of undercount can be estimated by analysis of statistics from population censuses and the General Household Surveys.

Census statistics. Unemployment statistics, differing in concepts from the registered unemployed series, are available from the decennial population census of Great Britain. The most recent censuses were conducted in April 1961 and April 1971. Results of the 1971 population census are not analyzed here, however, because of the availability of the General Household Survey (GHS) for that year. Definitions used in the GHS are more closely comparable with U.S. concepts than the census statistics.

In addition, British statistical authorities conducted what they termed a "sample census" in April 1966, which also yielded detailed statistics on unemployment. Data were not collected in exactly the same way in 1961 and 1966, however, and certain adjustments must be made to put the two sources on an equivalent basis.

Although the population censuses are the major source for evaluating the British unemployment figures for the 1960's, they have important limitations. A major limitation of the decennial censuses is that persons reported as unemployed were not asked whether they were registered at the employment office. In the 1966 sample census and the General Household Surveys, this question was asked. In addition, the decennial censuses and the 1966 sample census are self-enumerations—i.e., the respondent fills in the forms himself. The Household Survey utilizes experienced interviewers, trained to interpret the questions carefully. Also, the more probing questions asked in the Household Survey allow for more precise counts of the unemployed. Finally, the Household Survey relates to the full year whereas the censuses relate to only 1 week in April.

In the 1966 sample census, persons were classified as "out of employment" if they were: (1) Registered as unem-

ployed; (2) not registered but otherwise looking for work; (3) unable to seek work because of temporary sickness or injury; or (4) had found a job and were waiting to start work at a future date.

In the 1961 census, the definition of "out of employment" simply stated "Economically active persons out of employment during the whole of the week before the census, or ceasing to be employed during that week . . . but expecting to work again." Also included were persons who were unable to seek work because of sickness or injury. In both the 1961 and 1966 censuses, persons at school (including university) were classified as economically inactive even if they were seeking work or did paid work during holidays, weekends, or other free time.

The 1961 census provided data on the number of persons "out of employment" according to two categories: sick and all other. In 1966, additional detail was obtained as to whether persons "out of employment" were registered at employment or careers offices. In 1961, only data with reference to the week preceding census day, April 23, were collected. Registered unemployed counts were taken on April 10 and May 15, 1961; therefore, there is no direct correspondence between registration and census dates for 1961. The 1966 census provided information as of the census day as well as the census week. The Monday of census week in 1966, April 18, corresponded to the date of the registered unemployed count for April.

Data from these censuses indicate that the registration statistics undercount unemployment in Great Britain to a large extent. The concept "out of employment" used in the British censuses is fairly close in definition to the U.S. concept of "unemployed." However, there are some important differences between the British census and U.S. survey definitions which should be accounted for before any conclusions are drawn.

A post-enumeration survey of the 1961 census indicated that the number of married women who reported themselves as economically active needed to be increased by 5 percent; for single, widowed, and divorced women, the corresponding figure was 1 percent. Furthermore, the Ministry of Labor (now Department of Employment) stated that these may well be underestimates of the census undercount.¹⁸ The 1966 sample census involved as underenumeration of 1.5 percent for all categories of persons.¹⁹

In the 1961 census, anyone who had a job but became unemployed during the census week was counted as "out of employment." The 1966 census data, as of census day, also include as "out of employment" persons who worked later in the week, but, in addition, the data provide information on the number of persons out of work the

entire week. Persons who do any work at all during the survey week are classified as employed in the United States.

Some persons who were enumerated as "out of employment, sick" in the censuses would probably not be counted as unemployed under U.S. definitions. This may have resulted from misinterpretation of the census questionnaire by persons permanently disabled or suffering illnesses of more than a temporary nature.²⁰ Also, persons collecting sickness or injury benefits would be likely to classify themselves as "out of employment, sick" even if they were not interested in obtaining a job when able to work again.

Persons on temporary layoff were classified as employed in the censuses. They would be counted as unemployed in U.S. statistics.

In the United States, a person must have taken active steps to find work in the past 4 weeks to be classified as unemployed (unless on layoff or waiting to start a new job). Neither the 1961 nor the 1966 census provided information on whether persons who said they were seeking work had actually taken steps to find work. Some information on this point was obtained from the household surveys.

Method of adjustment based on census statistics. Coefficients of adjustment were derived from the 1961 and 1966 census results and applied to the regularly published British statistics on the registered unemployed. Adjustment factors for 1962 through 1965 were interpolated from the 1961 results. Factors for 1959 and 1960 were assumed to be the same as for 1961. Because the degree of undercount varies considerably by age and sex, four separate adjustment factors were derived—for adult men, adult women, teenage boys, and teenage girls. Teenagers are defined as persons 15 to 19 years of age.

Derivation of adjustment factors from the 1961 and 1966 censuses required several modifications in the published census results in order to account for the differences noted above between the British censuses and the U.S. labor force survey (tables B-14 and B-15). Four adjustments were made:

1. *Increasing the number of unemployed adult women in the 1961 census to account for those improperly enumerated as economically inactive.* Based on the post-enumeration survey of the 1961 census, economically active married women should be increased by 195,000 and economically active single, widowed, and divorced women by 39,000. These uncounted women were persons who regarded their principal occupation as that of housewife or home duties and failed to enumerate themselves as employed, even though they were working at a part-time job, or as unemployed, even though they were looking for work.

²⁰ A follow-up survey of the 1966 sample census supports this conclusion. See Office of Population Censuses and Surveys, Social Survey Division, *A Quality Check on the 1966 10 Percent Sample Census of England and Wales* (London, Her Majesty's Stationery Office, 1972), p. 80.

¹⁸ *Ministry of Labour Gazette*, November 1965, p. 479.

¹⁹ *Unemployment Statistics: Report of an Inter-Departmental Working Party* (London, Her Majesty's Stationery Office, November 1972), p. 33.

It is a safe assumption that a high proportion of these omitted women were unemployed at the time of the census. In the absence of any information on this point, for this study it was arbitrarily assumed that 75 percent of the undercount represents part-time workers and 25 percent represents unemployed workers. This yields an upward adjustment of 59,000 to the adult women "out of employment" in the 1961 census. No similar adjustment was needed for the 1966 census results, since underenumeration was apparently proportionally the same for all groups (1.5 percent). A 1.5-percent increase in all categories, then, would not change the ultimate adjustment factors.

2. *Excluding persons classified as unemployed who worked at any time during census week.* The 1966 census indicated that 4 to 7 percent of those reported as "out of employment" on census day actually did some work during the week (proportions varied by the four age/sex categories for which adjustments were determined and also by whether persons were registered or not registered as unemployed). No data were collected on the number of persons classified as "out of employment" who worked during the census week in 1961; therefore, the 1966 proportions were assumed applicable to the 1961 data for adjustment purposes.

3. *Adjusting downward the number of persons reported as "out of employment, sick."* A very large number of persons were enumerated as "out of employment, sick" in both the 1961 and 1966 censuses. In 1966, 31 percent of the total number of persons "out of employment" on census day were listed as sick, down from 44 percent in 1961.

According to the 1966 census, only 10 percent of all persons registered as unemployed were also reported as sick; however, 45 percent of the unregistered persons "out of employment" were reported as sick. The 1961 census provided no data according to whether a person "out of employment" was registered or not registered.

It is assumed that the registered unemployed who were also sick in the 1966 census would be classified as unemployed under U.S. definitions (given above adjustment for those who worked sometime during the week). However, the unregistered unemployed who were sick probably included a substantial number of persons who would not be counted as unemployed in the United States. In order to arrive at a reasonable estimate, it was assumed that the proportion of persons registered as unemployed and also sick is the same as the proportion of unregistered persons who were sick.

Using this method of estimation, only 24,400 of the 185,100 unregistered, sick (adjusted to exclude those who worked during the week) in 1966 are assumed to be unemployed by U.S. definitions. In light of the results of the 1971 Household Survey, this appears to be a reasonable estimate. Again, 1966 relationships had to be assumed for 1961.

4. *Subtracting persons not actively seeking work.* The censuses do not provide any information on this point. However, the 1971 General Household Survey indicates that 22.3 percent of the number of persons seeking work but not registered as such had not actually taken any steps to find work in the survey week. No details were given by age or sex. Allowing for the possibility that some may have sought work in the previous 4 weeks, this percentage was scaled down to 15 percent for adjustment purposes. Thus, 15 percent of the "not registered, other" category—adjusted to exclude persons waiting to start a new job—was subtracted for each age/sex group.

No adjustment is included above for persons on temporary layoff. Since figures are available each year on which to base an estimate of the number of such persons, an adjustment is made on table B-18 rather than on tables B-14 through -16 to include them in the unemployed count. There is also no adjustment made to account for the fact that all full-time students are classified as economically inactive in the censuses. There is no information available as to the degree to which such persons register as unemployed. The Department of Employment began to separately identify registered unemployed adult (age 18 and over) students in July 1971 and has made annual estimates back to 1967. Further information on adult students appears in the section on the General Household Survey.

In summary, the numbers of registered and unregistered unemployed persons in the 1961 and 1966 censuses were adjusted to exclude those who did some work during the census week; further adjustments were made to the unregistered unemployed to exclude persons who were not actually seeking work. These adjustments deflate considerably the number of persons reported as unemployed for comparability with U.S. concepts. For example, 61 percent of the persons reported as "out of employment" in the 1961 census and 70 percent in the 1966 census are considered to be unemployed under U.S. concepts.

The adjusted unemployed totals were compared with the registered unemployed count for each of the four age/sex groups. The census day registration count was available from the results of the 1966 census; in the 1961 census, however, such data were not collected. For 1961, the adjustment factors were calculated based on interpolations of registered unemployed data made by the Department of Employment. The resultant adjustment factors to be applied to the regularly published unemployment statistics were as follows:

	1961	1966
Adult men	22	38
Adult women	93	182
Teenage boys	123	65
Teenage girls	152	101

The method of applying these factors is described later in the section titled "Combining the census and survey analyses."

These figures indicate that the propensity for unemployed adults to register declined between 1961 and 1966, whereas the teenage propensity to register increased. These changes in the propensity to register were unrelated to cyclical factors since recorded unemployment was 1.4 percent in both 1961 and 1966. The increased propensity to register on the part of teenagers is probably related to a more active effort by the Youth Employment Service. During the early 1960's much criticism was leveled at the service, perhaps spurring it to greater efforts to register young people.¹

A partial explanation for the large increase in under-registration or decline in the propensity to register of adults may have been the growing number of workers receiving payments in lieu of notice of dismissal. Such persons are ineligible to draw unemployment benefits simultaneously and, hence, would probably delay registration. Notice of dismissal (with length of notice based on length of service) became compulsory under the "Contracts of Employment Act" of 1963.²

Another element in the explanation is the Redundancy Payments Act of 1965 which gave workers the right to claim severance pay from their employers based on age and

¹The Youth Employment Service was reviewed by a Working Party of the National Youth Employment Council which published its report in December 1965. The report made a number of recommendations for improving the work of the service: (1) Youth employment offices should establish earlier contact with young people at school and with their parents; (2) there should be closer partnership between the service and the schools in the preparatory stages of career guidance; (3) the staffing of the service should provide for more specialization in dealing with the needs of particular groups of young people; and (4) the service should experiment with more intensive methods of following up the progress of young people at work. Action was taken to promote the further development of the service along the lines recommended in the report.

²This law imposes upon employers the obligation of giving a minimum period of notice to all employees continuously employed for over 26 weeks, as follows: 1 week's notice for those with up to 2 years' service; 2 weeks for 2-5 years' service; and 4 weeks for service of 5 years or more.

Table B-14. Great Britain: Derivation of adjustment factors from the 1961 census

(Numbers in thousands)

Item	Total	Adults		Teenagers ¹	
		Male	Female	Male	Female
Registered unemployed on Monday of census week ²	300.0	201.0	75.0	14.0	10.0
Out of employment ³	734.6	446.3	421.7	37.7	32.9
Registered ²	300.0	201.0	75.0	14.0	10.0
Sick ⁴	29.4	19.3	8.5	.6	1.0
Other ⁵	270.6	181.7	66.5	13.4	9.0
Not registered	434.6	245.3	142.7	23.7	22.9
Sick	268.1	192.2	65.4	4.1	6.4
Other	166.5	53.1	77.3	19.6	16.5
Percent unemployed on Census Monday who did not work in census week: ⁶					
Registered	—	96.0	93.9	93.9	92.6
Not registered	—	93.2	93.2	93.4	94.3
Census unemployed adjusted to exclude those who worked in census week: ⁷					
Registered	285.8	193.0	70.4	13.1	9.3
Not registered	405.3	228.6	133.0	22.1	21.6
Sick	249.9	179.1	61.0	3.8	6.0
Other	155.4	49.5	72.0	18.3	15.6
Unemployment adjusted to U.S. concepts:					
Registered	285.8	193.0	70.4	13.1	9.3
Not registered	172.4	54.8	81.2	19.1	17.3
Sick ⁸	17.0	5.3	9.2	.8	1.7
Other	155.4	49.5	72.0	18.3	15.6
Less: Persons not actively seeking work ⁹	11.7	2.7	6.6	1.0	1.4
Total adjusted unemployed	446.5	245.1	145.0	31.2	25.2
Percent of registered unemployed	149	122	193	223	152
Adjustment factor	49	12	93	123	152

¹15- to 19-year-olds.

²There were no questions asked on whether persons were registered as unemployed in the 1961 census. The data shown are interpolations by the Department of Employment from the registration counts of April 10 and May 15.

³Data (except for the registered unemployed) relate to persons "out of employment" the entire census week as well as to persons who had a job but became unemployed during the week.

⁴Includes 59,000 women not reported as unemployed in the 1961 census. This represents an adjustment for the underenumeration of economically active women.

⁵Breakdown of registered unemployed into "sick" and "other" estimated by using 1966 proportions.

⁶Figures from 1966 census. Such data were not collected in 1961.

⁷Estimated by applying above proportions of persons who did not work in census week to figures reported in census which include some persons who worked during census week.

⁸Calculated by assuming that ratio of "not registered, sick" to "not registered, other" is the same as ratio of "registered, sick" to "registered, other."

⁹Estimated as 15 percent of the "not registered, other" category, adjusted to exclude persons waiting to start a new job. (According to the 1971 General Household Survey, 83 percent of males and 39 percent of females in the "not registered, other" category were waiting to start a new job.)

Table B-15. Great Britain: Derivation of adjustment factors from the 1966 census
(Numbers in thousands)

Item	Total	Adults		Teenagers ¹	
		Male	Female	Male	Female
Registered unemployed on Monday of census week ²	296.3	194.2	57.3	26.2	18.6
Out of employment ³	731.2	393.5	238.6	50.6	48.5
Registered	296.3	194.2	57.3	26.2	18.6
Sick	28.0	18.7	6.5	1.1	1.7
Other	268.3	175.5	50.8	25.1	16.9
Not registered	434.8	199.4	181.3	24.3	29.8
Sick	198.6	116.1	69.6	4.1	8.8
Other	236.3	83.3	111.8	20.2	21.0
Percent unemployed on census Monday who did not work in census week:					
Registered	—	96.0	93.9	93.9	92.5
Not registered	—	93.2	93.2	93.4	94.3
Census unemployed adjusted to exclude those who worked in census week: ⁴					
Registered	282.2	186.4	53.8	24.7	17.3
Not registered	405.6	185.8	169.0	22.7	28.1
Sick	185.1	108.2	64.8	3.8	8.3
Other	220.6	77.6	104.2	18.9	19.8
Unemployment adjusted to U.S. concepts:					
Registered	282.2	186.4	53.8	24.7	17.3
Not registered	244.9	85.9	117.5	19.7	21.8
Sick ⁵	24.4	8.3	13.3	.8	2.0
Other	220.5	77.6	104.2	18.9	19.8
Less: Persons not actively seeking work ⁶	16.7	4.3	9.5	1.1	1.8
Total adjusted unemployed	510.4	268.0	161.8	43.3	37.3
Percent of registered	173	138	282	165	201
Adjustment factor	73	38	182	65	101

¹15- to 19-year-olds.

²Data on registrations were collected in the 1966 census.

³According to status of persons on Monday of census week.

⁴Estimated by applying above proportions of persons who did not work in census week to figures as of census Monday.

⁵Calculated by assuming that ratio of "not registered, sick" to "not registered, other" is the same as ratio of "registered, sick" to "registered, other."

⁶Estimated as 15 percent of the "not registered, other" category adjusted to exclude persons waiting to start a new job. (According to the 1971 General Household Survey, 63 percent of males and 39 percent of females in the "not registered, other" category were waiting to start a new job.)

Table B-16. Great Britain: Derivation of adjustment factors from the 1971 General Household Survey (GHS)

Item	Total		Adults		Teenagers ¹	
	Male	Female	Male	Female	Male	Female
GHS data inflated to universe levels: ²						
Total	582,000	357,000	493,000	285,000	89,000	72,000
Looking for work	448,000	224,000	—	—	—	—
Registered	412,000	104,000	—	—	—	—
Not registered	34,000	120,000	—	—	—	—
Persons in "looking for work" category not actively seeking work ³	5,000	18,000	4,000	14,000	1,000	4,000
Adjusted unemployed ⁴	577,000	339,000	489,000	271,000	88,000	68,000
Registered unemployed ⁵	840,000	119,000	562,000	83,000	78,000	36,000
Adjusted unemployed as percent of registered unemployed	90	285	87	327	113	189
Adjustment factor	-10	185	-13	227	13	89

¹15- to 19-year-olds. In the GHS, data are not shown separately for the age group 15-19. Figures are shown for 15- to 17-year-olds and 18- to 24-year-olds. The number of 18- to 19-year-olds in the 18-24 age group was estimated based on the results of the 1971 population census.

²Universe unemployment estimates were not published in the GHS. The figures shown were derived by estimating male and female civilian employment from other sources and utilizing the male and female unemployment rates reported in the GHS to solve

for unemployment in the following relationship: $U \div (E + U) = R$ (where U = unemployment; R = unemployment rate; E = employment).

³Estimated as 15 percent of persons looking for work, but not registered. Broken down into adult and teenage components according to same proportions as total unemployment.

⁴Total unemployment less persons not actively seeking work.

⁵As reported by Department of Employment.

length of service. At the maximum, the redundancy payments can provide 30 weeks' pay. Where redundancy payments are made, the initial effect is that the newly unemployed person will not be forced to register at the employment office because of an immediate need for money. Such a person can take the time to look for suitable work and not be obliged to be available at all times to answer the employment office's summons when a vacancy occurs.

The General Household Survey. A new type of survey, the General Household Survey, was conducted in Great Britain for the first time in 1971. It is a continuous multipurpose sample survey covering a total of about 12,000 private (noninstitutional) households containing about 35,000 people over the year. Although conducted monthly, the survey is designed so that the minimum period over which it is representative of Great Britain is a quarter-year; successive quarters are added together to provide annual figures. Results of the first year's interviews were published in 1973; the 1972 through 1974 surveys were published in 1975 through 1977.²³

The survey collects information about employment, unemployment, housing, education, health, mobility, and household makeup in such a way that each subject can be related to the others. It provides much information on social structure and trends.

A comparison between midyear estimates based on the 1971 census and GHS annual results indicates that the GHS gives a good representation of the population in private households. However, young people aged 15 to 24 may be underrepresented to some degree in the GHS; married women are probably slightly overrepresented.

The first two surveys covered the population 15 years of age and over. In 1973, when the school-leaving age was raised to 16, the survey also began to cover 16-year-olds and over. The Armed Forces are not excluded from the labor force by definition; they would be included if they reside in private households. However, most military personnel reside in military establishments which are not covered by the sample.

Employed persons, by GHS definition, are persons who had a job for pay or profit in the reference week, even if it was only for a few hours. Casual or seasonal workers are counted as employed only if they were working during the specified week. Persons absent from work because of holiday, strike, illness, or temporary layoff are regarded as employed. Unpaid family workers were classified as economically inactive in the 1971 through 1975 surveys. Beginning in 1976, wives working 15 hours or more in their husbands' businesses have been treated as employed whether

they were paid or not. Since the great majority of family workers are paid in Great Britain, this change will have a very small effect.

Full-time students who worked part time were counted as employed in the 1971 survey, unlike the practice in the censuses where full-time students are regarded as economically inactive. In 1972 and subsequent household surveys, however, working full-time students were placed in the economically inactive category. In 1972, data both including and excluding the working students were published. These data indicate that the annual average number of working students is so small that their exclusion does not affect the unemployment rate.

Persons taking courses in government training centers are normally classified as economically inactive in the GHS since the stipend they receive is not considered a wage payment. However, if an employer pays an employee to attend a course at a government training center, the person would be classified as employed.

Unemployed persons, by GHS definitions, consist of those who, in the reference week, were looking for work, would have looked for work if they had not been temporarily sick, or were waiting to take up a job they had already obtained. Because the Household Survey is conducted by experienced interviewers rather than by self-enumeration (as the census), the category of persons who would have been looking for work but for temporary illness is more precisely determined. Interviewers are given a definition of "temporary" for this question in the Household Survey—i.e., an illness lasting 28 days or less. No such definition appeared in the census questionnaires or instructions.

As noted earlier, persons on temporary layoff are regarded as employed rather than unemployed. Full-time students who were looking for work would be counted as unemployed in 1971 and not in the labor force in 1972 and following years. The number of students looking for work was apparently almost nil in 1972. It should be noted that students in boarding schools are not surveyed in the GHS, which relates to private households only. Thus, students are most likely underrepresented in the GHS.

Persons who said they were looking for work in the GHS were asked, additionally, what steps they took to find work in the survey week. In 1971, this question elicited the fact that 22.3 percent of the people looking for work but not registered as unemployed did nothing more than look at job vacancies in the newspapers or simply wait for "something to turn up."

In 1971, the GHS did not divide those waiting to take up jobs and those temporarily sick by whether or not they were registered. Data on the unregistered unemployed were restricted to persons who said they were looking for work in the survey week. In the 1972 and 1973 surveys, questions on registration as unemployed were asked of persons looking for work and persons waiting to start a new job. In 1974 and following surveys, all categories of unemployed persons were asked whether they were registered as unem-

²³Office of Population Censuses and Surveys, Social Survey Division, *The General Household Survey: Introductory Report* (London, Her Majesty's Stationery Office, 1973); *The General Household Survey 1972* (London, HMSO, 1975); *The General Household Survey 1973* (London, HMSO, 1976); and *The General Household Survey 1974* (London, HMSO, 1977).

British General Household Survey Questionnaire (Excerpt)

GENERAL HOUSEHOLD SURVEY

SS 457/3B

IN CONFIDENCE

INDIVIDUAL SCHEDULE

						PER.
Date of Interview →			AREA.	SER.	HLD.	
DAY	MONTH	YEAR				

Time Individual Schedule started

TO ALL EMPLOYMENT		CODE	
1.	Were you working for pay or profit at any time last week - that is the 7 days ending last Sunday? Yes No → X ASK (a)	1	GO TO Q.2
IF NO	(a) Even though you weren't working did you have a job which you were away from last week? Yes No → X ASK (1)	1	GO TO Q.2
IF NO	(1) Last week were you waiting to take up a job which you had already obtained?	3	} GO TO Q.2
PROMPT AND RING FIRST THAT APPLIES	out of employment but looking for work? ..	4	
	or would you have looked for work but for temporary sickness or injury?	5	
	NONE OF THESE	6	GO TO Q.23 ON PAGE 9
IF CODED 1 OR 3-5 AT Q.1			
2.	Do you consider yourself to be a part-time worker or a full-time worker? Part-time Full-time	1 2	
3.	Do you consider yourself to be a seasonal worker - that is, someone who reckons to work part of the year only? Yes No	1 2	
MAIN JOB LAST WEEK (MOST RECENT IF CODED 3, 4 OR 5 AT Q.1)			
4.	Occupation		
	NEVER WORKED, RING → X		
	.....	OFF. USE	
	.....	I	
	.....	II	
	.....	III	
		
	employee	1	
	self-employed	2	
IF MANAGER, SUPERINTENDENT OR SELF-EMPLOYED			
	IF NOT MANAGER ETC, DINA	X	
(a)	Number of employees in the establishment	25 or more 1-24 Nil	1 2 0

NOW REFER BACK TO Q.1
 If coded 1 go to Q.5 on page 2
 If coded 3 go to Q.17 on page 7
 If coded 4 go to Q.16 on page 7
 If coded 5 go to Q.19 on page 8

British General Household Survey Questionnaire (Excerpt)

		CODE	
TO THOSE WORKING LAST WEEK (CODED 1 AT Q.1)			
5. Last week did you have any other job or business in addition to the one you have just told me about?	Yes ...	1	ASK (a)
	No	2	ASK Q.6
IF YES			
(a) Occupation			
.....			
Industry			
.....			
employee		1	
self-employed		2	
6. How many hours a week do you usually work (in your main job) excluding meal breaks and overtime? →			
7. Were you away from work at all last week for reasons other than business?			
	Yes	1	ASK (a)
	No	2	SEE Q.8
IF YES			
(a) Why were you away from work?			
Own illness or accident		1	ASK (b)
Holiday		2	
Strike at own place of work		3	
Short-time/lay off		4	ASK (c)&
Began or lost job in week		5	(d)
Other (SPECIFY)		6	
.....			
(b) Were you paid, or will you be paid, any National Insurance Sickness Benefit for last week?			
	Yes	1	ASK (b1)
	No	2	ASK (c)&
			(d)
(1) Did this include or were you also paid any supplementary allowance?			
ALTERNATIVE WORDING WHERE APPROPRIATE	Yes ...	1	ASK (c)&
Will this include or will you also be paid any supplementary allowance?	No	2	(d)
(c) When did this period away from work start? DATE			
(d) When did it finish? DATE			
IF DID NOT FINISH DURING LAST WEEK, RING → 1			

British General Household Survey Questionnaire (Excerpt)

<u>TO EMPLOYEES ONLY</u>	IF SELF-EMPLOYED, DNA	CODE	GO TO
		X	Q.10
8. Does your employer pay you anything when you are off sick?			
	Yes	1	
	No	2	
	DK	3	
9. Do you expect to receive a pension from your employer when you retire?			
	Yes	1	NOW ASK Q.10
	No	2	
	DK	3	
<hr/>			
<u>TO ALL EMPLOYEES AND SELF-EMPLOYED</u>			
10. Have you retained any pension rights from a previous job which you are either drawing now or will be able to draw in the future?			
	Yes	1	
	No	2	
11. Have you been with your present employer/self-employed (in your main job)			
RUNNING	for less than 6 months?	1	ASK (a)- (c) GO TO Q.12
PROMPT	for 6 months but less than 12 months?	2	
	for 12 months or more?	3	
(a) How many changes of employer have you made in the last 12 months? ----->			
IF NO PREVIOUS EMPLOYMENT IN LAST 12 MONTHS, ENTER "0"			
(b) How long had you been actively looking for work before you <u>found</u> your present job?			
	Days		
	Weeks		
	Months		
	(STATE CALENDAR, 4 WEEKLY ETC.)		
(c) How did you <u>first</u> hear about your present job - was it through			
	an employment exchange?	1	
RUNNING	a private employment agency?	2	
PROMPT	an advertisement?	3	
BUT CODE	a relative or friend?	4	
ONE	direct application to an employer?	5	
ONLY	or in some other way? (SPECIFY)	6	
		
		

British General Household Survey Questionnaire (Excerpt)

<u>TO THOSE WORKING LAST WEEK (CODED 1 AT Q.1)</u>		CODE	
HAND INFORMANT CARD A.			
12. Which of the statements on this card comes nearest, on the whole, to what you think about your present (main) job?	Very satisfied	1	ASK Q.13
	Fairly satisfied	2	ASK (a)
	Neither satisfied nor dissatisfied	3	
	Rather dissatisfied	4	ASK (b)
	Very dissatisfied	5	
(a) Is there any reason why you are not completely satisfied with your job?			
(b) Why are you dissatisfied?			
<hr/>			
13. Are you seriously thinking of changing or leaving your job?	Yes	1	ASK (a)
	No	2	ASK Q.14
IF YES			
(a) (May I check) why is this?			
	For reasons already given at 12(a) or (b).....	Y	
	For other reasons	X	
	(SPECIFY BELOW)		
<hr/>			
14. How long does it usually take you to get from home to work?	Hrs. Mins.		
	Work at home	X	NOW GO TO TRAVEL
	No usual place of work	O	PAGE 8

ployed, so that these surveys indicate overall proportions for registration and non-registration.

Results of the 1971 GHS indicate that between one-fifth and one-quarter of all those who described themselves as looking for work were not registered with the Department of Employment. Roughly, 7.5 percent of men looking for work were unregistered; for women, 53.7 percent were unregistered.

The results of the 1971 GHS indicate an average unemployment rate for Great Britain of 3.9 percent of the civilian labor force. The rate for men was 3.9 percent and for women, 3.8 percent. The Department of Employment figures on registered unemployment for 1971 yield an overall figure of 3.1 percent—4.1 percent for men and 1.3 percent for women. (These rates from the registered unemployed series, normally published as a percent of the wage and salary labor force, are based on the wage and salary plus self-employed labor force in order to make meaningful comparisons with the GHS.)

The above figures indicate that the registered unemployed figures slightly overstated male unemployment rates in 1971, but that female rates were substantially understated. The overstatement of male unemployment is surprising in view of the results of the 1961 and 1966 censuses. Also, the GHS itself indicates that 7.5 percent of unemployed men seeking work were unregistered. There are two reasons for the higher unemployment of men in the registered series. First, male registrants who did some work in the reference week of the GHS would be counted as employed rather than unemployed in the GHS. The 1966 sample census results indicate that about 4 percent of registered unemployed men did some work in the census week. Second, "occupational pensioners," who are not in fact seeking work, are required to stay on the register until age 65 in order to maintain eligibility for a pension without making national insurance contributions.²⁴ Such persons would probably declare themselves as retired in the GHS. A special survey conducted in October 1973 found that 12 percent of the persons registered as unemployed that month regarded themselves as not really being in the labor market. Apart from occupational pensioners, those with little interest in working were largely women and older, disadvantaged workers who had become resigned to their lot—i.e., "discouraged workers."

Unfortunately, data reported in the GHS are not inflated to a universe level, and published information on sampling characteristics is not complete enough to allow calculation of sampling ratios to apply to the actual figures reported. Therefore, BLS has made an estimate of aggregate employment for 1971 by first determining the level of employment compatible with GHS concepts and then deriv-

²⁴Such persons were included in the registered unemployed statistics as a result of parliamentary decisions. In accordance with the Social Security Act of 1973, the rules were changed in April 1975 so that occupational pensioners are no longer required to register as unemployed.

ing unemployment by applying the GHS unemployment rate of 3.9 percent (table B-16). Civilian employment compatible with GHS concepts was taken to be the 4-quarter employment average from the establishment census plus an estimate of self-employed persons and domestics who are not covered by the establishment census, less an estimate of multiple jobholders. (See section on labor force adjustments for further explanation.) This employment figure includes wage and salary workers and self-employed persons, but excludes unpaid family workers. Its coverage is, therefore, the same as the GHS. The 1971 civilian employment figure, thus determined, is 23,106,000. This figure and the GHS unemployment rate are compatible with a total unemployment level of 938,000.²⁵

Figures for 15- to 19-year-olds were not separately reported in the GHS. Instead, data for 15- to 17-year-olds and 18- to 24-year-olds were shown. In order to determine an adjustment factor for teenagers, an estimate was made, based on 1971 census proportions, of the number of 18- and 19-year-olds in the 18-24 age group.

Besides adding persons on temporary layoff (done in table B-18), only one adjustment must be made in GHS unemployment data for comparability with U.S. concepts. Persons enumerated as seeking work who have not taken any recent actions to do so should be excluded. The 1971 GHS indicates that 22.3 percent of the number of persons seeking work but not registered as such had not actually taken steps to find work in the reference week. Allowing for the possibility that some may have taken active steps in the previous 4 weeks, this percentage was scaled down to 15 percent for adjustment purposes. Thus, 15 percent of the unregistered unemployed seeking work is subtracted from aggregate unemployment under GHS definitions. This amounts to 5,000 men and 18,000 women.

GHS unemployment, adjusted as described above, was then related back to the registered unemployed series to obtain adjustment factors (table B-16).

The following tabulation shows the 1971 adjustment factors in relation to those derived from the 1961 and 1966 censuses:

	1961	1966	1971
Adult men	22	38	- 13
Adult women	93	182	227
Teenage boys	123	65	13
Teenage girls	152	101	89

²⁵The results of the 1971 population census can be compared with the above estimate. The census reported 1,298,800 persons "out of employment" during the entire week of the census. April and May were relatively low unemployment months compared with the annual average for 1971—representing about 95 percent of the annual average. (The average of the April and May counts is taken to approximate the timing of the 1971 census which enumerated persons according to their status as of April 25. Registered unemployed counts were taken on April 5 and May 10). Dividing the census "out of employment" by 95 percent yields 1,367,000. Annual unemployment from the GHS, as estimated above, is 69 percent of this figure. This confirms the results of the analysis of the 1961 and 1966 censuses, in that the "out of employment" category significantly overstates unemployment by U.S. concepts.

Shifts in the propensity to register between 1961 and 1966 have already been discussed. Between 1966 and 1971, the adult female propensity to register continued its decline. This finding is supported by the fact that, as reported unemployment rates rose from 1.4 to 3.4 percent and female unemployment rates from 0.8 to 1.4 percent, those for married women rose only slightly from 0.6 to 0.7 percent, based on the registered unemployed series. Rather than being a true reflection of labor market conditions, this small increase in registered unemployment for married women probably resulted from a further decline in the propensity to register.²⁶

While the adult female propensity to register declined between 1966 and 1971, the adult male propensity to register rose sharply—to the point where there was “over-registration” of males age 20 and over. Thus the tendency of unemployed men not to register as unemployed was outweighed by the tendency of registered unemployed males to do some work during the week of registration and for pensioners, not actually seeking work, to register as unemployed.

The rise in the propensity of adult males to register is undoubtedly related to the deterioration of economic conditions between 1966 and 1971. Reported unemployment rates more than doubled between these 2 years, rising from 1.4 to 3.4 percent. There are reasons for supposing that, in periods of exceptionally high unemployment, the propensity to register increases. The more serious the problem, the more people are aware of the problem and of their rights to unemployment compensation. Furthermore, persons who would normally search for jobs on their own during times when jobs are easy to find would increasingly turn to the Employment Service for help in obtaining employment.

A further incentive to register was the introduction of earnings-related unemployment benefits in October 1966. Previously, unemployment compensation consisted of a flat benefit unrelated to prior earnings. Earnings-related benefits amount to one-third of a person's former earnings between certain specified amounts. Also, increases in flat-rate benefits were large, amounting to a 20-percent increase in 1971 alone.

The propensity to register on the part of teenagers continued to increase between 1966 and 1971. There was a sharp increase for teenage boys and a slight increase for teenage girls. Continued development and improvement of the Youth Employment Service played a role in this trend.

Combining the census and survey analyses. Coefficients of adjustment were derived from the 1961 and 1966 censuses and the General Household Surveys to be applied to the regularly published British statistics on the registered unemployed. Adjustment factors for 1962 through 1965 were interpolated from the 1961 and 1966 results; factors for

1959 and 1960 were assumed to be the same as for 1961. For 1967-70, factors were interpolated from the 1966 and 1971 results; factors for 1972 through 1974 were derived from the surveys conducted in those years. Aggregate unemployment levels were derived from these surveys by the same method used for the 1971 survey—i.e., determination of a universe-level employment and derivation of unemployment by applying the GHS unemployment rate for that year. Since linking with earlier years was not required, it was not necessary to calculate adjustment factors for different age and sex categories after 1971. The aggregate unemployment levels for 1972 through 1974 were adjusted to exclude persons not actively seeking work. From 1972 onward, the proportion of persons who had not actively sought work was not published. Unpublished tabulations obtained from The Office of Population Censuses and Surveys indicate that a smaller proportion of persons were not actively seeking work in 1972 through 1974, compared with 1971. Therefore, 10 percent of the “not registered, other” category was subtracted (compared with 15 percent in 1971).

Persons on temporary layoff are not included in either the census or the GHS unemployed. Since they should be included for comparability with U.S. concepts, the number of persons on temporary layoff has been estimated from figures published on the number of workers in manufacturing who were laid off the entire week. These figures were inflated to include nonmanufacturing by using the ratio of manufacturing workers to all workers temporarily laid off and receiving benefits (normally a ratio of 85 to 90 percent).

Table B-17 shows the annual adjustment factors for 1959-71, the registered unemployed, and the estimate of unregistered unemployed derived by applying the adjustment factors. The unregistered unemployed are added to the registered unemployed and persons on temporary layoff in table B-18 to obtain total British unemployment adjusted to U.S. concepts. For example, registered unemployment of 752,000 in 1971 is adjusted upward to 930,000 for comparability with U.S. concepts.

A small adjustment for a few years had to be made in the data for adult students to regularize the date of the unemployment count. The counts of adult student registrations were not always taken at the same time in the month—e.g., sometimes they were taken in early January and sometimes in late January. This had a large effect on the data since school vacations were over by late January. The adjustments, although significant in some months, were very small on an annual basis.

For 1975 and 1976, in lieu of survey results, the proportion of unregistered to registered unemployed in 1972 was applied (19 percent). This was done because 1972, like 1975 and 1976, was a year of relatively high unemployment. As results from General Household Surveys for 1975 and later years are analyzed, the estimates of adjusted unemployment since 1974 will probably require some revision.

²⁶For some explanations of this trend, see Guy Standing, “Hidden Workless,” *New Society*, October 14, 1971, pp. 716-19.

Table B-17. Great Britain: Calculation of the unregistered unemployed, 1959-71

Item	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
	Percent												
Adjustment factors: ¹													
Teenagers:													
Male	123	123	123	111	100	88	77	65	55	44	34	23	13
Female	152	152	152	142	131	121	110	101	99	96	94	81	89
Adults:													
Male	22	22	22	25	28	32	35	38	28	18	7	-3	-13
Female	93	93	93	111	129	146	164	182	191	200	209	218	227
	Thousands												
Registered unemployed ²	445	346	312	432	521	372	317	331	521	549	544	582	758
Teenagers:													
Male	39	28	25	55	72	48	43	42	67	80	67	75	114
Female	24	17	14	33	43	29	28	26	44	41	46	53	78
Male	15	11	11	22	29	19	17	16	23	19	21	23	36
Female	406	318	287	377	449	324	274	289	454	489	477	506	644
Adults:													
Male	299	231	212	289	351	251	215	234	377	420	416	442	562
Female	107	87	75	88	98	74	59	55	77	70	61	64	83
Unregistered unemployed ³	219	170	151	238	305	237	211	222	300	252	192	180	157
Teenagers:													
Male	53	38	34	68	81	49	39	33	47	36	36	33	42
Female	30	21	17	37	43	26	20	17	24	18	16	12	10
Male	23	17	17	31	38	23	19	16	23	18	20	21	32
Female	166	132	117	170	224	188	172	189	253	216	156	127	115
Adults:													
Male	66	51	47	72	98	80	75	89	106	76	29	-13	-73
Female	100	81	70	98	126	108	97	100	147	140	127	140	188

¹ 1961 factors derived from population census; 1966 factors from "sample census;" 1971 factors from General Household Survey, 1968 and 1969 factors assumed same as 1961; 1962-65 and 1967-70 factors interpolated.

² Annual average data by sex divided into age groups according to midyear proportions of the registered wholly unemployed.

³ Computed by applying adjustment factors to registered unemployed data.

Labor force

British civilian labor force estimates are obtained by adding civilian wage and salary workers (employed and unemployed) and estimates of the self-employed and employers. Unpaid family workers, a small category, are excluded. Estimates of the self-employed and employers are interpolated by British statistical authorities from results of population censuses. The number of unemployed wage and salary workers is obtained from the registered unemployed figures reported by the Department of Employment. The number of employed wage and salary workers was based solely upon quarterly counts of National Insurance cards until June 1971 when an annual employment census was instituted. Quarterly estimates of employed wage and salary workers are now derived from the annual census and quarterly sample surveys of establishments. To provide a link between the old and new systems, both the card count and a census were taken in June 1971 and the card count system was continued through 1972. Estimates on the census basis were made for earlier years by the British statistical authorities.

British statistics on the civilian working population (labor force) differ from U.S. concepts in three respects:

(1) The establishment census overcounts wage and salary employment under U.S. concepts. Because it is an establishment inquiry, a person who had two regular jobs with different employers in the census or survey week would be counted twice. Thus, it is a measure of the

number of jobs rather than the number of workers in Great Britain. The U.S. labor force survey measures the number of workers. In another respect, the establishment census undercounts employment: Persons in private domestic service are excluded. There were 90,000 such persons in the 1971 National Insurance card count.

(2) Unpaid family workers are also excluded from the establishment census, which covers only wage and salary workers. Such persons are included in the U.S. labor force if they worked 15 or more hours during the survey week.

(3) The unregistered unemployed are not included in the British labor force statistics. Unemployed persons do not appear in the British count of the working population unless they have registered as such. Persons on temporary layoff are included in the British statistics on employment.

Method of adjustment. The British statistics on the labor force were adjusted to U.S. concepts based on information from the population census and the General Household Surveys.

1. *Adjustment for overcount of employment.* According to the results of the 1971 GHS, 3.3 percent of the male workers and 2.8 percent of the female workers were multiple jobholders. About 57 percent of the multiple jobholders held more than one wage or salary job (a male-female breakdown was not available on this point). It was assumed that 57 percent of the 3.3 percent of male workers were multiple jobholders in the establishment census. Thus, 1.9 percent of all men reported as working in the establishment

census were multiple jobholders. Similarly 1.6 percent of the women held more than one wage or salary job. These percentages were applied to the reported number of male and female employees in the establishment census to arrive at an estimate of the overcount due to multiple jobholding. For 1971, using this method, there were 385,000 multiple jobholders in the establishment census figures.²⁷ Domestic, who were not covered in the establishment census, should be added. They numbered about 90,000 in 1971. Thus a net overcount of 295,000 (385,000 - 90,000) was estimated for 1971.

In 1972, using the same method discussed above, it was estimated that 2.2 percent of the men and 1.6 percent of the women in the establishment census were multiple jobholders. Data on multiple jobholding was not available from the 1973 and 1974 surveys. Therefore, for years after 1972, the 1972 relationships have been used. The number of domestics was assumed to be 0.4 percent of civilian employment each year, based on the 1971 census.

The proportion of multiple jobholders in the 1966 sample census was somewhat less than in 1971—2.5 percent versus 3.1 percent for both sexes. The adjustment for multiple jobholders was scaled down to 1.5 percent for men and 1.4 percent for women in 1966 and prorated through 1971.

2. *Unpaid family workers.* There are very few unpaid family workers in Great Britain because British tax laws are such that the majority of family workers are paid. Data on the number of family workers are available from the population censuses, but there is no indication as to how many are unpaid and how many work fewer than 15 hours during the week. It was decided that the number of unpaid family workers is probably too small to warrant an adjustment to include them. This assumption can be tested when results of the 1976 General Household Survey become available, since this survey will enumerate wives who work in their husband's business without pay.

3. *The number of unregistered unemployed,* as determined above, was added to the reported labor force.

Unemployment rate

The published British unemployment rate is computed by dividing the number of registered unemployed (including school leavers but excluding adult students) by the total wage and salary labor force (employed and unemployed). The unemployment rate adjusted to U.S. concepts is computed by dividing the sum of the registered (including adult students) and estimated

²⁷This figure may be somewhat overestimated because in the GHS a person may be coded as having more than one job when the different jobs are all with the same employer; such a person could be counted only once in the Census of Employment. However, there is no information on the amount by which the 385,000 should be reduced.

unregistered unemployed and persons on temporary layoff by the civilian labor force adjusted for overcount and registered unemployed. (See table B-13.)

Quarterly and monthly estimates

The Bureau of Labor Statistics estimates seasonally adjusted unemployment rates adjusted to U.S. definitions for Great Britain. The method used in making these adjustments is as follows:

Unemployment. To arrive at the number of unemployed, adjusted to U.S. concepts, BLS adds together the wholly unemployed (which excludes school leavers and adult students), school leavers, persons temporarily laid off, the unregistered unemployed, and adult students.

The number of wholly unemployed excluding school leavers and adult students is the seasonally adjusted series published by the Department of Employment. Since 1972, the series has been adjusted using the additive version of the X-11 Variant of the U.S. Bureau of the Census Method II seasonal adjustment program. Prior to 1972, a multiplicative seasonal adjustment program devised by the Central Statistical Office was used. School leavers and the temporarily laid off are seasonally adjusted by BLS using the multiplicative option of the X-11. The number of unregistered unemployed is calculated by multiplying the sum of the wholly unemployed and school leavers, both of which are seasonally adjusted, by annual factors, derived from the General Household Survey.

The number of adult students added to the unemployed for adjustment to U.S. concepts is a constant based on the annual average number of adult students registered as unemployed. As noted above, an increasing number of adult students in the period 1970-76 registered as unemployed during their holidays in order to collect supplementary benefits. The registration of these persons caused distortions in BLS's seasonal adjustment of this series. Therefore, a constant number of adult students is added to the quarterly and monthly estimates of the unemployed. In 1977, fewer adult students registered during the short school holidays, because regulations were changed so that they were no longer entitled to benefits.

Labor force. Monthly estimates of the labor force cannot be made because employment statistics are published only quarterly. Quarterly estimates of the labor force adjusted to U.S. definitions are derived by adding reported employment (employees in employment plus the self-employed), seasonally adjusted by the Department of Employment, to the seasonally adjusted number of unemployed adjusted to U.S. concepts. Estimates of the number of persons temporarily laid off the entire week and multiple jobholders are subtracted. The figure used for multiple jobholders is a constant derived from the latest available General Household Survey.

Table B-18. Great Britain: Adjustment of labor force data to U.S. concepts, 1959-76

(Numbers in thousands)

Item	1959	1960	1961	1962	1963	1964	1965	1966	1967
Reported civilian employment	22,785	23,177	23,487	23,631	23,698	24,036	24,260	24,332	24,021
Plus: Registered unemployed	444	346	312	432	521	372	317	331	519
Reported civilian labor force	23,229	23,523	23,799	24,063	24,219	24,408	24,577	24,663	24,540
Less: Net overcount	219	225	230	232	233	228	232	232	241
Plus: Adult students ¹	—	—	—	—	—	—	—	—	—
Plus: Unregistered unemployed ²	219	170	151	238	305	237	211	222	300
Adjusted civilian labor force	23,229	23,468	23,720	24,069	24,291	24,417	24,556	24,653	24,601
Rounded	23,230	23,470	23,720	24,070	24,290	24,420	24,560	24,650	24,600
Registered unemployed	444	346	312	432	521	372	317	331	519
Plus: Adult students ¹	—	—	—	—	—	—	—	—	—
Plus: Temporarily laid off ³	7	1	6	9	7	—	—	—	7
Plus: Unregistered unemployed ²	219	170	151	238	305	237	211	222	300
Adjusted unemployed	670	517	469	679	833	610	533	557	828
Rounded	670	520	470	680	830	610	530	560	830
Unemployment rate (percent):									
As published ⁴	2.0	1.5	1.4	1.9	2.3	1.6	1.4	1.4	2.2
Adjusted to U.S. concepts	2.9	2.2	2.0	2.8	3.4	2.5	2.2	2.3	3.4
	1968	1969	1970	1971	1972	1973	1974	1975	1976
Reported civilian employment	23,916	23,924	23,811	23,402	23,570	24,088	24,169	24,004	23,830
Plus: Registered unemployed	546	540	577	752	835	588	585	936	1,305
Reported civilian labor force	24,462	24,464	24,388	24,154	24,405	24,676	24,754	24,940	25,135
Less: Net overcount	261	260	279	295	337	336	337	5,333	5,330
Plus: Adult students ¹	3	4	5	6	9	9	11	35	44
Plus: Unregistered unemployed ²	252	192	160	157	160	176	85	5,180	5,251
Adjusted civilian labor force	24,456	24,400	24,274	24,022	24,237	24,525	24,510	24,822	25,100
Rounded	24,460	24,400	24,270	24,020	24,240	24,530	24,510	24,820	25,100
Registered unemployed	546	540	577	752	835	588	585	936	1,305
Plus: Adult students ¹	3	4	5	6	9	9	11	35	44
Plus: Temporarily laid off ³	2	5	5	11	10	6	9	16	6
Plus: Unregistered unemployed ²	252	192	160	157	160	176	85	5,180	5,251
Adjusted unemployed	803	741	747	926	1,014	779	690	5,186	5,606
Rounded	800	740	750	930	1,010	780	690	5,170	5,610
Unemployment rate (percent):									
As published ⁴	2.4	2.4	2.5	3.4	3.7	2.6	2.6	4.1	5.6
Adjusted to U.S. concepts	3.3	3.0	3.1	3.9	4.2	3.2	2.8	5.4	5.6

¹ Adult students registered as unemployed adjusted slightly to regularize date of count.

² For 1959-71 see table B-17 for method of estimation. For 1972 through 1974, unemployment from household surveys inflated to universe levels and adjusted to U.S. concepts. Surveys for 1975 onwards have not been published; unregistered unemployed figures for 1975 and 1976 are estimated as described in text.

³ Manufacturing workers laid off the entire week inflated to include nonmanufacturing based on data on registrations for temporary layoff benefits.

⁴ Registered unemployed as a percent of the civilian wage and salary labor force.

⁵ Preliminary estimate.

Unemployment rate. Quarterly unemployment rates are estimated by dividing the 3-month seasonally adjusted average of unemployment (adjusted to U.S. definitions) by the seasonally adjusted (adjusted to U.S. concepts) labor force. Since labor force data are only available quarterly, the labor force is held constant for each of the 3 months which make up that quarter. Additionally, the latest available labor force figure is used until the next quarterly figure is published. At that time, the unemployment rates are recalculated. The labor force figures generally lag by 4 months.

Italy

Prior to 1963, the International Labour Office (ILO) published the number of registered unemployed persons as representative Italian unemployment figures. The unemployment rate was computed by dividing the number of registered unemployed by the economically active population (excluding persons seeking first employment) reported in the 1951 population census. Beginning in 1963, however, the ILO began publishing the results of a quarterly sample survey as the more representative unemployment figures.

**Italy: English translation of labor force survey questions relating to labor force status:
Questionnaire used prior to 1977**

Columns 8-19. To be completed only for persons 14 years of age and over:

Column 10. Status:

- Professional
 - Employed
 - Seeking a new job
- Nonprofessional
 - In search of first job
 - Military conscript
 - Housewife
 - Student
 - Unable to work
 - Retired
 - Other (financially independent, old age, prisoner, vagabond, etc.)

Columns 11-16. To be completed for all employed persons and persons seeking a new job and for persons whose status is nonprofessional if they worked during the reference week:

Column 11. Hours worked during the reference week

Columns 12-13. If less than 40 hours, indicate:

Column 12. Reason:

- Sickness or maternity
- Labor dispute
- Vacation or holiday
- Bad weather
- Start or termination of job during the reference week
- Work contract or terms of employment
- Underemployed
 - seasonal reasons
 - other reasons
- Not convenient or interested in working longer hours
- Other (specify)

Column 13. Are you taking advantage of the Wage Supplement Fund?

Column 14. Industry

Column 15. Class of worker (self-employed, wage or salary worker, unpaid family worker)

Column 16. Occupation

Column 17. Duration of seeking employment (to be completed for persons whose status is seeking a new job or in search of first job)

**Italy: English translation of labor force survey questions relating to labor force status:
Questionnaire used from 1977 onward**

Columns 8-24. To be completed only for persons 14 years of age and over:

Column 10. Status:

1. Employed
2. Seeking a new job
3. In search of first job
4. Military conscript
5. Housewife
6. Student
7. Unable to work
8. Retired
9. Other (financially independent, old age, etc.)

Column 11. Whatever the status declared, did you do any work at all in the reference week? If yes, indicate the number of hours worked in all the activities in which the individual or the family made earnings or profits.

Columns 12-19. To be completed for all employed persons and persons seeking a new job. For all other persons, complete only if 1 hour or more of work has been done in the reference week.

Column 12. Profession

Column 13. Position in the profession

Column 14. Branch of economic activity

Column 15. Hours worked during the reference week

Column 16. If less than 40 hours, indicate the reason:

1. Sickness or maternity
2. Labor dispute
3. Vacation or holiday
4. Bad weather
5. Start or termination of job during reference week
6. Work contract or terms of employment
7. Seasonal cause
8. Reduced business activity
9. Have not found opportunity for more work
10. Not convenient or interested in working longer hours
00. Other

Column 17. Place of work

Column 18. Regularity of activity (regular, seasonal, occasional, etc.)

**Italy: English translation of labor force survey questions relating to labor force status:
Questionnaire used from 1977 onward—Continued**

Column 19. Aside from your principal activity, do you do other work at another time of the year?

Column 20. To be completed by all persons age 14 or over, whatever the status reported in column 10.
Are you actively seeking work?

1. Yes, seeking a wage or salary job
2. Will soon begin a wage or salary job
3. Will begin, subsequent to reference week, self-employment and already have the necessary means
4. Intend to become self-employed, but do not yet have the necessary means to do so
5. No, would seek work only under certain conditions
6. No, do not have the possibility or the interest in seeking work
7. No, have a job and not seeking another

Columns 21 to 23. To be completed by all who responded according to number 1 or number 2 in column 20.

Column 21. How long have you been looking for work? (If the search has not begun, enter zero.)

Column 22. What definite actions have you taken to find work?

1. Registered at public employment office
2. Registered at private employment agency
3. Visited employers
4. Brought to attention of an employer by friends or acquaintances
5. Sent a resume to an employer or took a competitive exam
6. Placed an ad in a newspaper
7. Responded to an ad in a newspaper
8. Have not yet taken active steps to find work

Column 23. When did you last take definite action to find work?

1. In the last 30 days
2. One to six months ago
3. Over 6 months ago
4. Have not begun job search

Column 24. To be completed by those who responded according to number 5 or 6 in column 20.

Column 24. Why are you not actively seeking work? (The interviewer does not read the causes listed, but records response of the person interviewed.)

1. Family reasons
2. Studies
3. Retired
4. Health, invalidity, or other physical impediment
5. Absence of need
6. Searched in vain in the past
7. Insufficient professional preparation
8. Too young or too old
9. Military duty
10. Don't know

The results of the sample survey form the basis of the adjustment to U.S. concepts.

A major revision in survey methods was made in January 1977. The definition of unemployment remained essentially the same, but more probing questions were incorporated in the survey questionnaire. The more probing style of questioning resulted in significant increases in the number of persons enumerated as employed and unemployed. In addition, questions are now asked on work-seeking activities, and it is possible to determine the number of persons who have not taken active steps to find work in the past 30 days. The results indicate that there are a large number of such persons, who would probably be classified as "discouraged workers" rather than as unemployed under U.S. concepts. However, many may be registered unemployed persons who do not consider the listing of one's name on the unemployment register to be an active job search step in the last 30 days.

At the time this section was prepared, BLS had the summary results of the January and April 1977 surveys and the new survey definitions and questionnaire. BLS may revise its adjusted estimates of Italian labor force data after the complete results of the new surveys are obtained and certain remaining points have been clarified.

Unemployment

Registered unemployed. Italy tabulates the number of job-seekers 15 years of age and over registered at the local employment offices of the Ministry of Labor on the last day of each month. They are divided into five classes: (1) Unemployed formerly employed persons seeking work; (2) youths under age 21 and others seeking their first job and jobseekers released from military service; (3) housewives seeking work for the first time; (4) pensioners seeking employment; and (5) employed persons seeking other jobs. Usually classes (1) and (2), representing over 90 percent of the total in recent years, are used as a measure of unemployment.

Until the recent modifications in the Italian labor force survey, the registrations series was commonly acknowledged to overstate the level of unemployment because of failure of registrants to cancel their registrations promptly after obtaining jobs. The registration figures formerly were considerably higher than the unemployment data derived from the labor force survey. For example, in 1975 an average of 1,202,000 persons²⁸ were registered as unemployed; according to the labor force survey, 654,000 were unemployed. However, in January 1977, when more probing questions were incorporated in the survey, the survey enumerated 1,459,000 unemployed persons, while the registrations series counted 1,314,000.

Labor force surveys. Beginning with January 1959, the Italian Central Institute of Statistics (ISTAT) has conducted quarterly labor force surveys, usually in January,

²⁸Classes 1 and 2 of registered unemployed persons.

April, July, and October and with reference to the calendar week which includes the 20th of the month. Earlier surveys were conducted in September 1952, May 1954, May 1955, April 1956, May and November 1957, and October 1958. The surveys currently cover about 83,000 households distributed among some 1,400 communities representative of the whole country. They are carried out by personal interview.

Until 1972 the surveys covered the noninstitutional *resident population*, including persons temporarily working abroad and accompanying family members. Separate results were also published for the *present-in-area population*, which excludes persons temporarily abroad. Beginning in 1972, only the present-in-area population has been surveyed. Summary survey results are published by ISTAT in the *Bollettino Mensile di Statistica* and the *Notiziario ISTAT (foglio 34)*. More detailed results are published annually in the *Annuario di Statistiche de Lavoro*.

Modifications in the survey were made in January 1964 and January 1977. Beginning in January 1964, unemployed persons were defined as all those 14 years of age and over who did not work at all in the survey week and were actively seeking work. Prior to 1964, unemployed persons were defined as all those 14 years of age and over who actively sought work during the survey week and (a) did not work at all or (b) stated they did not have jobs (even though they may have done some work in the survey week).

In the surveys prior to January 1977, one question determined a person's labor force status. This question inquired as to the respondent's "condition" during the reference week. The possible answers on the survey form were as follows:

Professional:
Employed
Seeking a new job

Nonprofessional:
Seeking first job
Military conscript
Housewife
Student
Unable to work (handicapped)
Pensioner
Other (independent means, aged, etc.)

According to the definitions appearing on the survey form, persons enumerated as "seeking a new job" were those who had lost their job, were looking for another job, and were in a condition to accept a job if it was offered. This group of persons is referred to as the unemployed—*disoccupati*—in the survey results. Persons enumerated as "seeking first job" were those who had never been employed and were actively seeking work. The sum of the unemployed and the first-time jobseekers is referred to as those in search of work—in *cerca di occupazione*—in the survey results.

According to ISTAT, persons on layoff who were waiting to return to their jobs would most likely respond that they were employed. Persons not looking for work in

the survey week because of temporary illness and persons waiting to start a new job would most likely be classified as not in the labor force since they were not actively seeking work. However, no specific questions were asked on any of these categories.

Although the survey definitions stated that persons "seeking a new job" or "seeking first job" should be actively seeking work, there was no test or time period specified for workseeking activities. All persons enumerated as seeking work were asked the duration of their job search, and all persons responded according to some duration. Thus, there was no category of persons who had not begun looking for work. However, persons who had taken active steps to look for work more than 1 month ago, but had not done anything to find work during the month including the reference week, were counted as unemployed. Also, current availability for work was noted in the definition of persons "seeking a new job" but not in the definition of persons "seeking first job." There was no test of current availability in the survey questionnaire.

Special surveys of persons "not in the labor force" conducted in April 1973 and April 1975 indicated that many people were looking for work but not stating that they were unemployed or seeking a first job in the regular Italian surveys.²⁹ These surveys, unlike the regular Italian survey described above, contained more probing questions. They attempted to elicit information on the Italian population's attitude toward the labor market and reasons for nonparticipation in the labor force. Persons age 14 through 70 were interviewed.

The April 1973 and 1975 surveys were coordinated with the regular April labor force surveys. They classified the population in Italy into four categories according to degree of economic activity (table B-19): (1) Persons age 14 or over who are employed, unemployed, or looking for their first job. This represents the labor force in its most strict sense, and comprises those persons who respond that they are economically active in the above senses (employed, unemployed, etc.) when asked their current "condition." In April 1973, there were 19 million such persons. (2) Persons who say they are looking for a job who did not term themselves as unemployed or seeking their first job in the question concerning current "condition." There were 660,000 such persons in April 1973. (3) Persons who say they are not looking for work but who would accept it under certain conditions. In April 1973, there were 1.1 million persons in this category. (4) Persons who, although they are of working age (14-70), say that they are not working, are not looking for work, and are not disposed to accept work. In April 1973, there were 17.5 million persons in this category.

²⁹ A special survey of persons "not in the labor force" was also conducted in February 1971. However, it is of limited usefulness because it did not contain questions on workseeking activities. Also, it was not conducted in conjunction with the regular quarterly survey.

In January 1977, more probing questions were incorporated into the regular Italian labor force survey questionnaire and the definition of unemployment was made more precise. In addition to asking about a person's condition during the survey week, specific questions concerning workseeking activities are now asked. The current definition of unemployment—*persone in cerca di occupazione*—refers to all persons looking for work, including: (1) Those *previously employed*, namely persons age 14 and over who have lost previously held paid employment, have not performed any work during the reference week, and stated (a) that they were seeking paid employment and were able to accept it if offered to them; or (b) that they would begin, subsequent to the survey period, paid employment and had already found such employment; or (c) that they would become, subsequent to the survey period, self-employed and already had the necessary means.³⁰ (2) Those *seeking first job*, namely, persons age 14 and over who had never worked, or have been self-employed, or who have voluntarily discontinued working for a period of time not less than 1 year and fall within one of the three categories ("a," "b," or "c") noted under the previously employed above. (3) Those persons in *occupations not classified as employment*, namely, persons age 14 and over who stated initially that they were housewives, students, ex-workers, etc., but in answer to a second question in the course of the interview affirmed that they were looking for employment. Included in this group are the persons who described themselves as previously employed or seeking their first job (1 and 2 above) and intended to become self-employed but did not yet have the necessary means to do so.

The questions asked in the Italian survey concerning workseeking activities are as follows: (1) Are you actively seeking work? (2) How long have you been looking for work? (3) What definite actions have you taken to find work? and (4) When did you last take definite action to find work? Only an affirmative answer to the first question or an answer expressing intent to begin a new job or self-employment at a later date is required for enumeration of a person as unemployed. If the later questions elicit that the person has not actually begun his job search or has not taken any recent steps to find work, he is still classified as unemployed.

Question (4) noted above is unique to the Italian survey as a test of workseeking activity. For example, the U.S. survey asks "What have you been doing to look for work in the past 4 weeks?" The difference here is that the U.S. question specifically mentions a time period—4 weeks—while the Italian question asks when the person last actively sought work. One of the answers to the Italian question on the survey form is "in the last 30 days."

³⁰ In past surveys, persons who were seeking work who have been self-employed were included in the "previously employed" category. They are now included in the "seeking first job" category. Also, groups "b" and "c" were not identified in previous interviews.

Table B-19. Italy: Selected results from special labor force surveys, April 1973 and April 1975

Item	April 1973			April 1975		
	Total	Men	Women	Total	Men	Women
Labor force	18,999	13,804	5,195	19,436	13,984	5,452
Employed	18,264	13,357	4,907	18,769	13,585	5,184
Seeking another job	(1)	(1)	(1)	1,055	783	272
Unemployed or seeking first job	735	447	288	667	399	268
Not in the labor force (ages 14-70)	19,265	4,889	14,376	19,710	5,132	14,578
Looked for work but did not declare themselves as unemployed in a previous question	658	153	505	496	140	356
Did not look for work, but would accept work under certain conditions	1,121	190	931	908	158	750
Neither seeking work nor interested in work under certain conditions	17,486	4,546	12,940	18,306	4,834	13,472

¹ Not available.

SOURCE: Istituto Centrale di Statistica, *Annuario di Statistiche del Lavoro*, 1975 (for April 1973 survey), pp. 109-16; and 1976 (for April 1975 survey), pp. 103-15.

BLS is not certain that all persons who do not respond "in the last 30 days" should be excluded from the Italian unemployment figures for comparability with U.S. concepts, which require active jobseeking within the past 4 weeks. In the Italian survey, there could be a number of persons registered as unemployed who do not consider their act of registration to be their last definite action to find work, especially if reregistration is not required each month in order to obtain unemployment benefits. A cross-classification between jobseeking activities and time of last active job search would help to resolve this point.

Results from the January and April 1977 surveys, like the results of the special April 1973 and 1975 surveys, indicate that a large number of persons classified as "not in the labor force" in former surveys were actually actively seeking work by registering at official or private employment agencies, answering or placing advertisements in the newspapers, sending letters, or meeting with prospective employers. As noted above, the 1977 surveys also indicated that a significant proportion of persons previously enumerated as unemployed did not take any recent—i.e., within the past 30 days—active steps to find work.³¹ The major results of the January 1977 survey are shown in table B-20.

Beginning in January 1977, persons who are waiting to begin new jobs are enumerated as unemployed. There is no specific question on this point, but it is one of the responses listed to the question "Are you actively seeking work?" Such persons were most likely classified as not in

the labor force in earlier surveys. The category of persons seeking their first job was defined more broadly in January 1977 to include persons who had voluntarily discontinued working for a period of time not less than 1 year. Under the previous definition, such reentrants to the labor force were not included among the first-time jobseekers. They were classified as "seeking a new job."

Table B-20. Italy: Major results of the January 1977 labor force survey

Item	Total	Men	Women
Labor force	21,357	14,551	6,806
Employed	19,898	13,904	5,994
Persons stating they have a job	18,991	13,499	5,492
Persons first stating they were unemployed, but then admitting to some type of work in reference week	907	405	502
Unemployed	1,459	647	812
Previously employed	253	159	94
Seeking first job	619	308	311
Persons who first stated they were inactive but subsequently affirmed they were looking for work	587	180	407
Nonworking population	34,132	12,517	21,615
Persons of working age ¹	18,220	4,784	13,436
Not seeking employment but would accept work under certain conditions	1,122	233	889
Persons not of working age ²	15,912	7,733	8,179
Total population ³	55,489	27,068	28,421

¹ Ages 14 through 70.

² Under age 14 and over age 70.

³ Sum of labor force and nonworking population.

SOURCE: Istituto Centrale di Statistica.

³¹ The January 1977 results indicate that 65 percent of the previously employed unemployed took active steps to find work in the past 30 days; for the first-time jobseekers, the proportion was 55 percent; for those who first did not declare themselves as employed, the proportion was 32 percent. In the April 1977 survey, the corresponding proportions were 63, 53, and 33 percent.

Method of adjustment. From January 1977 onward, the only adjustment made to the reported number of unemployed is the exclusion of those who had not taken any active steps to find jobs in the past 30 days. As noted above, BLS is not certain that all persons should be excluded who reported no active steps in the past 30 days. The large number of persons in this category indicates a massive number of "discouraged workers" in Italy or an interpretation by many registered unemployed persons that their presence on the unemployment register does not constitute an active step to find work in the past 30 days. In the adjustments shown here, BLS has excluded all persons who reported no active steps to find work in the past 30 days. This adjustment may be modified when more information on the 1977 survey, and more detailed results, become available. In January 1977, 52.6 percent of the reported unemployment has been subtracted; in April, the proportion subtracted was 54.4 percent.

No adjustment has been made to exclude persons on layoff from the unemployed count. For many years Italy has had a Wage Supplement Fund (*Cassa Integrazione Guadagni*) maintained by employer contributions, which provides payments to compensate workers put on part time for economic reasons of a temporary nature. Also, legal restraints make it very difficult for firms to lay off workers. For these reasons, the term layoff has a somewhat different, more structured meaning in Italy than in the United States. Thus, when the activity of a plant declines, workers are put on short-time schedules, if at all possible, rather than laid off. According to a 1969 report from the U.S. Embassy in Rome, the number on part time who did no work at all during the reference week could not be accurately reported by ISTAT because there were so few workers in that category.

ISTAT will not make a reconciliation between the old and new surveys until some time in 1978. It is not yet known what the nature of this reconciliation will be and whether historical adjustments will be made. BLS has decided to await the ISTAT reconciliation rather than make any preliminary adjustments for the period 1959-76. Thus, the reported unemployment figures from the old Italian survey are used here, with only a small adjustment to the data for 1959-63 (discussed later). The differences between the old series and the adjusted new series may tend to cancel each other out. The old series excluded the workseekers who did not initially declare themselves as unemployed; also excluded were persons waiting to begin a new job. On the other hand, the old series included as unemployed those persons who took no active steps to find work in the past 30 days. The results from January and April 1977 indicate that the old series may have overstated unemployment somewhat because the number of persons who did not actively seek work in the past 30 days is greater than the number of workseekers who did not initially say they were unemployed.

The results of the special April 1973 and 1975 labor force surveys provided information on the number of jobseekers who did not initially declare they were unemployed. However, these surveys were not used to adjust the unemployment data because they did not provide any information on the time period in which active jobseeking last occurred. Thus, no adjustment could be made to exclude the inactive workseekers.

One other minor adjustment has been made to the data for 1959 to 1963. According to the report of the Statistical Office of the European Communities on the results of the October 1960 labor force survey conducted in the six member countries, 4.4 percent of those reported as unemployed in Italy in October 1960 were engaged in some work during the survey week. However, this would probably include some unpaid family workers who worked less than 15 hours in the survey week and who would be classified as unemployed according to U.S. definitions if they were seeking paid employment. To roughly adjust the Italian unemployment figures for 1959-63 to exclude persons who worked during the survey week, the published figures have been reduced by 3 percent. No adjustments are needed after 1963 since such persons were excluded from the reported unemployed after that date.

Labor force

The labor force consists of all employed and unemployed persons 14 years of age and over; career military personnel are included. Prior to 1964, the labor force consisted of all "regularly" employed persons 10 years of age and over and unemployed persons 14 years of age and over. Unpaid family workers are included in the labor force regardless of the number of hours worked.

The employed consist of persons age 14 and over who worked for pay or profit during the survey week or who were temporarily absent from work as a result of sickness, holidays, or temporary layoff. Prior to 1964, employed persons consisted of all those 10 years of age or over who stated they had jobs, regardless of the number of hours they worked. Persons 10 years of age and over who did some work in the survey week but who stated they did not have jobs were classified as either (a) occasional workers and "not in the labor force" or (b) unemployed, if 14 years of age or over and actively seeking a job. Beginning in 1964, the occasional worker category was dropped in favor of underemployed persons—defined as persons who worked less than 33 hours in the reference week because of economic reasons, i.e., lack of work, and not because of their own preference.³² Underemployed persons are classified as a subcategory of employed persons and therefore as "in the labor force." ISTAT revised data for 1963 by (1)

³² Beginning in January 1977, underemployed persons are defined as those who worked less than 26 hours for economic reasons.

adding all persons formerly classified as occasional workers to the employed category and (2) reclassifying part of the new total employed category into the underemployed sub-category. (The new definitions were apparently introduced in 1963 so that 1963 survey results could be classified according to both the old and new labor force status definitions.) For years prior to 1963, ISTAT added the total "occasional worker" category to the employed total.

The January and April 1977 labor force surveys indicated that employment as well as unemployment was understated by prior surveys. Approximately 1 million persons who did not initially respond that they were employed stated, under further questioning, that they had done some work during the reference week.³³ Unfortunately, no information on this point was obtained in the special surveys conducted in April 1973 and 1975.

Method of adjustment. Data on career military personnel in Italy can be obtained from figures reported to the Statistical Office of the European Communities. The career military are subtracted from the reported labor force to arrive at the civilian labor force.

Employed youths under the age of 14 are subtracted, including those classified as occasional workers in 1959-62; no adjustment is needed on this point after 1965.

Unpaid family workers not at work in the survey week are subtracted. These figures are reported in the survey. "Regularly employed" unpaid family workers at work 1 but less than 16 hours in the survey week are also subtracted. U.S. definitions would exclude unpaid family workers at work less than 15 hours in the survey week; however, the Italian data do not provide a break at the less-than-15-hours level.

For the years 1959-63, the number of "occasional workers" at work less than 16 hours in the survey week as unpaid family workers is subtracted. In 1963, 75,000 "occasional workers" worked as unpaid family workers, of whom 25,000 worked less than 16 hours. Prior to 1963, the number of unpaid family "occasional workers" was not classified by number of hours worked. Since one-third of the unpaid family occasional workers worked less than 16

hours in 1963, it is roughly estimated that one-third of unpaid family occasional workers worked less than 16 hours in prior years, and they have been subtracted from the labor force.

Results of the January and April 1977 labor force surveys indicate that employed Italian men were undercounted by 3 percent and women by 9 percent. These figures were also reported by economic sector. To make adjustments for the unreported employed for the entire 1959-76 period, adjustment factors were applied for four separate categories of the employed: (1) Men in agriculture; (2) men in nonagricultural activities; (3) women in agriculture; and (4) women in nonagricultural activities. Factors relating to sectors as well as sex were used because there has been a massive shift out of the agricultural sector in Italy since 1959. The figures for January and April 1977 indicate that unreported employment is predominantly in the agricultural sector.

The adjustment factors used were averages calculated from the January and April 1977 data. The factors, relating to unreported as a percent of reported employment, were as follows: For men in agriculture—10.1 percent; for men in nonagricultural activities—2 percent; for women in agriculture—21.7 percent; for women in nonagricultural activities—6.7 percent. A further adjustment was made to exclude persons in the unreported employed category who were unpaid family workers who worked 15 hours or less in the reference week. Data are not yet available on this point from the 1977 surveys. However, these surveys indicated that about 60 percent of the previously unreported employed were either self-employed or unpaid family workers. It is believed that a significant proportion of the unreported employed could be unpaid family workers who worked only a few hours a week. Persons in this category should be excluded for comparability with U.S. concepts. Persons with such a marginal attachment to the labor force would most likely initially respond that their status was other than employed—e.g., housewife, student, etc. In the absence of exact data on this point, 10 percent of the "unreported employed," as calculated above for the years 1959-76, was subtracted to account for unpaid family workers who worked less than 15 hours. BLS is attempting to get precise figures on this point from ISTAT, perhaps from unpublished tabulations. Table B-21 shows the method of obtaining unreported employment for 1959-76. The labor force therefore has been adjusted to U.S. concepts by adding estimates of unreported employment and subtracting career military personnel, employed youths under age 14, and unpaid family workers who worked less than 16 hours in the survey week. There may be some duplication between the latter two categories—that is, unpaid family workers under age 14 who worked less than 16 hours in the survey week. However, after 1965 there have been no employed youths under age 14 reported and duplication in prior years could not have been large.

³³There is also a large sector of illegal unreported unemployment in Italy known as *il lavoro nero*, or the labor black market. Use of the labor black market allows firms to pay lower wages and avoid payments into social security and similar funds, which are very high in Italy relative to wages. Also, firms using black market labor can bypass laws that make it virtually impossible to lay off workers in slack periods. Because the jobs are unreported, there are also no tax or social security deductions from the wages received by the workers. No attempt has been made here to determine the effect of the labor black market on the labor force survey results. Some illegally employed workers may report their employment in the survey, but it is likely that many will respond that they are either not in the labor force or unemployed. For a discussion of hidden employment in Italy see CENSIS, *L'Occupazione Occulta*, CENSIS Ricerca No. 2 (Rome, CENSIS, 1976).

Table B-21. Italy: Calculation of unreported employment, 1959-76

(Thousands)

Year	Reported employment				Total	Estimated unreported employment ¹				Adjusted unreported employment ²
	Agricultural		Nonagricultural			Agricultural		Nonagricultural		
	Men	Women	Men	Women		Men	Women	Men	Women	
1959	34,449	32,301	39,315	33,822	1,390	449	499	186	256	1,251
1960	34,353	32,124	39,596	33,792	1,347	440	461	192	254	1,212
1961	34,060	32,072	39,900	33,904	1,320	410	450	198	262	1,188
1962	33,781	31,988	39,190	33,879	1,277	382	431	204	260	1,149
1963	33,500	31,765	39,406	33,868	1,204	354	383	208	259	1,084
1964	33,307	31,621	39,715	33,807	1,155	334	352	214	255	1,039
1965	33,349	31,544	39,398	33,693	1,128	338	335	208	247	1,015
1966	3,192	1,297	10,428	3,620	1,077	322	303	209	243	969
1967	3,122	1,258	10,697	3,669	1,070	315	295	214	246	963
1968	2,869	1,304	10,880	3,747	1,042	290	283	218	251	918
1969	2,706	1,245	10,879	3,781	1,020	273	270	218	259	881
1970	2,499	1,114	11,170	3,910	979	252	242	223	262	881
1971	2,453	1,135	11,164	3,893	978	248	246	223	261	880
1972	2,274	1,024	11,176	3,857	934	230	222	224	258	841
1973	2,176	1,016	11,306	4,002	934	220	220	226	268	841
1974	2,195	1,006	11,571	4,216	944	213	218	231	282	850
1975	1,999	965	11,717	4,315	934	202	209	234	289	841
1976	1,959	970	11,742	4,455	941	198	210	235	298	847

¹ Adjustments based on figures from the January and April 1977 labor force surveys. For men in agriculture—10.1 percent of reported employment; for women in agriculture—21.7 percent; for men in nonagricultural activities—2 percent; for women in non-agricultural activities—6.7 percent.

² Total unreported employment less 10 percent to account for unpaid family workers who worked less than 15 hours in the reference week.

³ Adjusted to exclude employed persons under age 14.

Unemployment rate

The figure for the unemployed (adjusted to exclude those who worked in 1959-63) is divided by the adjusted labor force figure to arrive at Italian unemployment rates compatible with U.S. concepts. The resulting rates for 1959 through 1963 are about two-tenths of a percentage point lower than the reported Italian unemployment rate (table B-22). For 1964-76, the adjusted unemployment rates are one-tenth of a percentage point lower than the published rates. Beginning in January 1977, however, the published Italian unemployment data are on the revised basis and are much higher than previously reported. The adjusted figures are much lower than the reported unemployment rates because of the exclusion of a large number of inactive work-seekers.

Annual average unemployment rates are calculated by ISTAT as the average of the relevant data for January, April, July, and October. The average for these four dates is not exactly representative of the calendar year; however, BLS has not adjusted these data to a calendar-year basis.

Quarterly estimates

BLS estimates seasonally adjusted unemployment

rates adjusted to U.S. concepts for Italy. Since the Italian labor force survey is conducted quarterly, no monthly estimates of joblessness on the labor force survey basis are made.

Unemployment. Italy does not publish seasonally adjusted labor force data. For 1970 through 1976, BLS seasonally adjusted the reported Italian unemployment figures; no adjustments for comparability with U.S. concepts have been made to these figures. Seasonal adjustment is by the multiplicative version of the U.S. Bureau of the Census X-11 Variant, Method II, seasonal adjustment program.

The unemployment data beginning in 1977 do require adjustment for comparability with U.S. concepts. After adjustment, the data have been seasonally adjusted based on the previous year's seasonal factors. This assumes that seasonal factors based on the pre-1977 survey results are applicable to the new, adjusted, survey results.

Labor force. BLS seasonally adjusts the reported quarterly Italian labor force data and then applies factors to adjust the figures for comparability with U.S. definitions.

Table B-22. Italy: Labor force data adjusted to U.S. concepts, 1959-76

(Numbers in thousands)

Item	1959	1960	1961	1962	1963	1964	1965	1966	1967
Reported labor force	21,286	20,972	20,882	20,629	20,137	20,026	19,717	19,396	19,525
Less: Career military personnel	182	134	154	160	155	192	188	176	185
Less: Employed persons under age 14	282	271	238	180	94	27	19	0	0
Less: Unpaid family workers not at work	175	70	62	38	58	21	19	237	231
Less: Unpaid family workers at work less than 16 hours	60	55	41	27	62	66	76	60	49
Less: Unpaid family "occasional workers" at work less than 16 hours	3206	3139	3130	2966	225	(4)	(4)	(4)	(4)
Plus: Unreported employment ²	1,251	1,212	1,188	1,149	1,084	1,039	1,015	969	963
Adjusted civilian labor force	21,732	21,515	21,447	21,287	20,827	20,759	20,430	20,092	20,223
Rounded	21,730	21,520	21,450	21,290	20,830	20,760	20,430	20,090	20,220
Reported unemployment ⁵	1,117	836	710	611	504	549	714	759	679
Less: Reported unemployed who worked in the survey week	34	25	21	18	15	(4)	(4)	(4)	(4)
Adjusted unemployed	1,083	811	689	593	489	549	714	759	679
Rounded	1,080	810	690	590	490	550	710	760	680
Unemployment rate (percent):									
As published	5.2	4.0	3.4	3.0	2.5	2.7	3.6	3.9	3.5
Adjusted to U.S. concepts	5.0	3.8	3.2	2.8	2.4	2.6	3.5	3.8	3.4
	1968	1969	1970	1971	1972	1973	1974	1975	1976
Reported labor force	19,484	19,266	19,302	19,254	19,028	19,169	19,458	19,650	19,858
Less: Career military personnel	195	198	182	190	191	191	183	169	169
Less: Employed persons under age 14	0	0	0	0	0	0	0	0	0
Less: Unpaid family workers not at work	235	217	219	218	221	222	217	214	212
Less: Unpaid family workers at work less than 16 hours	60	51	35	61	44	50	46	39	36
Less: Unpaid family "occasional workers" at work less than 16 hours	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Plus: Unreported employment ²	938	918	881	860	841	841	850	841	847
Adjusted civilian labor force	20,132	19,818	19,947	19,865	19,613	19,747	20,062	20,269	20,488
Rounded	20,130	19,920	19,950	19,870	19,610	19,750	20,060	20,270	20,490
Reported unemployment ⁵	684	655	609	609	697	668	560	654	732
Less: Reported unemployed who worked in the survey week	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Adjusted unemployed	684	655	609	609	697	668	560	654	732
Rounded	680	660	610	610	700	670	560	650	730
Unemployment rate (percent):									
As published	3.5	3.4	3.2	3.2	3.7	3.5	2.9	3.3	3.7
Adjusted to U.S. concepts	3.4	3.3	3.1	3.1	3.6	3.4	2.8	3.2	3.6

¹ Estimated based on 1960 ratios.² Includes unknowns.³ Estimated as one-third of all "occasional workers" who worked as family workers.⁴ Not applicable after 1963.⁵ See table B-21.⁶ Sum of reported unemployed and first-time jobseekers.

Sweden

Sweden depended for many years on unemployment statistics maintained by trade unions. From 1956 to mid-1974, however, the Swedish Labor Market Board used monthly statistics on registrations of the unemployed at local unemployment offices. In July 1974, these monthly counts were replaced by new statistics showing the total volume of employment applications passing through the employment offices. At the same time, the monthly labor force sample survey, begun on a regular quarterly basis in 1962 and on a monthly basis in 1970, was established as the official source for Swedish unemployment figures.

Unemployment

Registered unemployed. Prior to July 1974, registration statistics comprised all persons registered as unemployed with the employment offices on the Monday in the week including the 15th of the month. The new employment application statistics, introduced in July 1974, represent the first phase of a coordinated statistical information system covering employment applications, job vacancies, and labor market policy measures. This system is intended to form the basis for planning activities at all levels of the employment service organization.

The new statistics cover all persons who file employment applications at the employment offices, whether employed or not. They show for each month the total inflow and outflow of applicants, the number of individuals transferring to retraining programs or public works projects, and the number of applicants remaining on the registers at the end of each month. Statistics on registered insured unemployment are also available. These figures comprise registrants for unemployment benefits by members of unemployment insurance funds established by trade unions. About two-thirds of the labor force belong to these funds. Statistics on applications at employment offices and on insured unemployment are published monthly by the National Labor Market Board in *Arbetsmarknadsstatistik* (Labor Market Statistics).

Labor force surveys. Since 1959, the Swedish Central Bureau of Statistics has made sample surveys of the labor force which are closely comparable in concepts and definitions to the U.S. survey. The 1959 surveys, conducted in May and November, were experimental. Two more were made in 1960 and three more in 1961. From 1962 through 1969, quarterly surveys were conducted in February, May, August, and November. Beginning in 1970, surveys have been made on a monthly basis. The surveys are conducted by telephone interview and relate to the week including the 15th of the month. Results are published monthly by the Central Bureau of Statistics in *Arbetskraftsundersökningen* (The Labor Force Survey).

About 12,000 persons were interviewed in the quarterly surveys. The sample size of the monthly surveys is currently 23,000 persons.

The unemployed consist of all persons (excluding invalids and institutionalized persons) between the ages of 16 and 74 who were not at work in the survey week (unpaid family workers who worked less than 15 hours in the survey week are considered not at work) who:

1. State they were looking for work (including persons awaiting the results of previous applications) within the past 60 days (counted from the last day of the survey week); or
2. Were waiting to be called back to a job from which they were laid off without pay; or
3. Were waiting to start a new job within 30 days; or
4. Would have looked for work except for being temporarily ill.

Prior to 1970, all persons 14 years of age and over were covered by the labor force surveys. However, data for these years were collected in such a way that revision to the new age limits of 16 to 74, instituted in 1970, could be made by Swedish authorities.

The 1967 revisions of the U.S. definitions brought them closer to the Swedish definitions. Under the revised U.S. definitions, a person must have engaged in some specific jobseeking activity within the past 4 weeks to be counted as unemployed. Prior to the revisions, there had been no specific question concerning methods of seeking work. In the Swedish survey there is a specific question—"In what way did you seek work?"—which is partially a check on the earlier question—"Were you looking for work?" This is quite similar to the current U.S. procedure. However, the time limit in the Swedish survey is 60 days rather than the 4-week period specified in the U.S. survey.

As in the United States, discouraged workers are classified as not in the labor force in Sweden.³⁴ Until 1976, Sweden collected data on discouraged workers by asking the question: "Would you have looked for work if you believed suitable work was available in your area?" In 1976, the phrasing of the question was changed, and the following three questions are now asked of persons not in the labor force: "Would you have liked to have worked last week?" "Were you prevented from working last week?" and "Why were you prevented from working last week?" In the United States, the questioning procedure relating to discouraged workers is similar to that now used in Sweden.

In the Swedish survey, students seeking work and currently available for work are supposed to be classified as unemployed, i.e., the classification used in the U.S. survey for such persons. However, a problem in enumerating unemployed students arises from the fact that there is no specific test of current availability for work in the Swedish questionnaire. In practice, therefore, the interviewers are

³⁴In Sweden, discouraged workers are referred to as the "latent unemployed."

instructed to consider full-time students as unavailable for work except during school vacations in order that a student seeking work during the school term, but available for work only during school vacation, would be excluded from the unemployed count—the same practice as in the United States. This practice, however, results in the classification of Swedish students seeking part-time work after school hours as not in the labor force. In the United States, they would be regarded as unemployed.

In Sweden, "active labor market" policies are highly developed and provide a comprehensive system of institutions for training and retraining. Persons who are given a wage or salary payment while receiving on-the-job training or attending courses at the request of the employer are classified as employed in the Swedish labor force survey. This is the practice followed in the United States. Unlike the United States, however, Sweden classifies as "not in the labor force" persons receiving government-sponsored vocational training or retraining without wage or salary payment. Such persons generally would be regarded as unemployed in the United States.

Method of adjustment. No adjustments have been made in the Swedish unemployed count as measured by the labor force surveys. It is not necessary to add figures for unemployed persons age 75 and over since unemployment among such persons is negligible.

No adjustment has been made for students seeking work during the school term. Data derived from the new questions on discouraged workers indicate that the number of such students is small. The number of students who would have liked a job and who were currently available for work during the survey week averaged about 4,000 in 1976. However, this represents an upper limit of the possible number of unemployed students who should be added because not all of these students were actively seeking work. Even at the upper limit, the resulting increase in the unemployment rate would be only about one-tenth of 1 percent.

No adjustment could be made for the more lengthy period allowed for jobseeking activities in Sweden—60 days as opposed to the 4-week period specified in the U.S. survey. The longer period allowed in Sweden undoubtedly results in some upward bias in the Swedish unemployment data when compared with U.S. figures.

No adjustment could be made for the classification of persons in government-sponsored institutional training programs as outside the labor force rather than unemployed. The monthly average number of persons in training for labor market reasons rose continuously from 8,100 in 1961 to 46,000 in 1973, then moved downward to 36,000 in 1975. However, all such persons would not be regarded as unemployed under U.S. concepts. For example, some Swedish training programs for youth are similar to the U.S. Job Corps program. Participants in the Job Corps are considered as not in the labor force. Also, an unknown number

of persons in the Swedish training programs receive a wage or salary in connection with on-the-job training. These persons are counted as employed in both Sweden and the United States.

Inclusion of all persons in Swedish training and retraining programs in the unemployed count would raise the comparative Swedish rate by two-tenths of a percentage point in 1961 (from 1.5 to 1.7) and by 1.1 percentage points in 1973 (from 2.5 to 3.6). These figures, of course, represent the outer limits of the probable effect of reclassifying these persons according to the U.S. method. The effect is much smaller if we focus only upon special retraining programs for persons previously unemployed. There were 4,700 persons in such courses in 1961 and 17,100 in 1973. Addition of these persons to the unemployed count would raise the Swedish rate by one-tenth of a percentage point in 1961 and four-tenths of a percentage point in 1973.

Labor force

The labor force figures used in Sweden include career military personnel. The civilian labor force is used in U.S. calculations of unemployment rates. Therefore, adjustments are made to the reported Swedish labor force to eliminate the career military (about 18,000 persons). Data on career military personnel are obtained from Swedish population censuses. A small adjustment is also made to include in the labor force persons age 75 and older. Data on these persons were available from the quarterly surveys conducted in the 1961-69 period. From 1970 onward, these data are derived from special tabulations.

Unemployment rate

The published Swedish unemployment rate is calculated by dividing the unemployed by the total labor force aged 16 to 74. The adjusted rate is computed by dividing the unemployed by the civilian labor force, adjusted to include those 75 years old and over and to exclude career military personnel. The effects of the adjustments are so small that the reported and adjusted rates are identical in most years (table B-23).

Quarterly and monthly estimates

The Bureau of Labor Statistics calculates seasonally adjusted unemployment rates adjusted to U.S. concepts for Sweden. The method used to make these estimates is as follows:

Unemployment. Since the Swedish labor force survey concept of unemployment is quite similar to that of the U.S., no adjustment is made for comparability. BLS uses the Central Bureau of Statistics' (SCB) seasonally adjusted unemployment series. The SCB seasonally adjusts using the

Table B-23. Sweden: Labor force data adjusted to U.S. concepts, 1961-76

(Numbers in thousands)

Item	1961	1962	1963	1964	1965	1966	1967	1968
Registered unemployed	21.0	23.3	24.8	21.2	20.0	26.7	35.9	40.1
Registered insured unemployed	16.6	18.6	20.1	17.0	16.8	22.2	28.8	33.4
Percent of total insured	1.2	1.3	1.4	1.1	1.1	1.4	1.7	2.0
Labor force survey data:								
Reported labor force: ¹								
Age 14 and above	23,670	3,746	3,813	3,779	3,796	3,847	3,817	3,867
Age 16 to 74	23,592	3,676	3,749	3,710	3,738	3,792	3,774	3,822
Age 14 and 15	54	46	42	49	38	34	27	27
Age 75 and over ³	24	24	22	20	20	21	16	18
Labor force age 16 and over	3,816	3,700	3,771	3,730	3,758	3,813	3,780	3,840
Less: Career military personnel	18	18	18	19	19	19	19	18
Adjusted civilian labor force	3,598	3,682	3,753	3,711	3,739	3,794	3,771	3,822
Reported unemployed:								
Age 16 to 74	252	54	63	57	44	59	79	85
Reported unemployment rate (percent)								
Age 16 to 74	21.4	1.5	1.7	1.6	1.2	1.6	2.1	2.2
Adjusted unemployment rate (percent) ⁴	1.4	1.5	1.7	1.5	1.2	1.6	2.1	2.2
	1969	1970	1971	1972	1973	1974	1975	1976
Registered unemployed	36.0	36.5	59.6	69.0	66.2	—	—	—
Registered insured unemployed	29.9	29.5	45.3	48.2	46.0	39.0	36.7	32.7
Percent of total insured	1.7	1.5	2.0	2.0	1.9	1.5	1.4	1.2
Labor force survey data:								
Reported labor force: ¹								
Age 14 and above	3,877	—	—	—	—	—	—	—
Age 16 to 74	3,840	3,913	3,961	3,969	3,977	4,043	4,129	4,155
Age 14 and 15	23	—	—	—	—	—	—	—
Age 75 and over ³	14	14	12	12	12	12	12	12
Labor force age 16 and over	3,854	3,927	3,973	3,981	3,989	4,055	4,141	4,167
Less: Career military personnel	18	18	18	18	18	18	18	18
Adjusted civilian labor force	3,836	3,909	3,955	3,963	3,971	4,037	4,123	4,149
Reported unemployed:								
Age 16 to 74	72	59	101	107	98	80	67	66
Reported unemployment rate (percent)								
Age 16 to 74	1.9	1.5	2.5	2.7	2.5	2.0	1.6	1.6
Adjusted unemployment rate (percent) ⁴	1.9	1.5	2.6	2.7	2.5	2.0	1.6	1.6

¹ Beginning January 1970, the age limits of the Swedish labor force survey were revised to cover persons age 16 to 74. Previously, persons age 14 and above were covered. A revised series of data back to 1962 based on the new age limits has been published by Swedish authorities.

² Only three surveys were conducted in 1961. Therefore, the average figures for the three surveys have been adjusted slightly (based on ratios obtained from the 1962 surveys) to compensate for the missing February data.

³ Labor force age 14 and above minus labor force age 16 to 74 and labor force age 14 and 15 for 1961-69; figures on persons 75 years old and over were published in special tabulations for 1970 and 1971. The 1971 figure is being used for 1972 and later years until special tabulations for those years become available.

⁴ Reported unemployment age 16 to 74 as percent of adjusted civilian labor force. The number of unemployed persons age 75 and over is negligible.

multiplicative version of the SA-4 program of the Swedish Institute of Economic Research. This series is published in the SCB monthly, *Arbetskraftsundersökningen*. The SCB revises its seasonally adjusted series when full-year data are available.

Labor force. Swedish labor force data require a small adjustment for comparability to U.S. definitions. The ratio of annual average labor force adjusted to U.S. concepts to annual average "as published" labor force is applied to seasonally adjusted monthly labor force data. The SCB does

not publish a seasonally adjusted labor force series; therefore, BLS seasonally adjusts the Swedish labor force using the multiplicative version of the U.S. Bureau of the Census X-11 Variant, Method II, seasonal adjustment program.

The previous year's seasonal factors are applied to current data until the full year's experience can be incorporated into the seasonal adjustment program.

English Translation of Swedish Labor Force Survey Questionnaire

1. Did you do any paid work last week?
(week , i. e.)?

2. We will include paid work and work in your own business (farmers included) or freelance work, even if it did not take more than an hour. Did you do any work of this kind last week (.)?

3. How did you spend most of last week? Were you running your own home (studying) or doing something else?
 - AH = Running your own home
 - ST = Studying
 - Ö = Miscellaneous
 - FR = Temporarily absent from work
 - SÖ = Looking for work
 - VPL = Military service
 - IA = Admitted for institutional treatment
 - LS = Chronically ill or an invalid

4. Has any member of your family (Has your husband or any other member of your family) whom you live with a business of his/her own (including a farm) or a freelance type of job?

5. Did you do any work in his/her business last week (.) without being paid money for it?

English Translation of Swedish Labor Force Survey Questionnaire

6. How many hours did you work last week (.....)?
Include any overtime, as well as extra work or an extra job.
7. Are you employed even though you did not do any paid work last week?
Or are you self-employed (including farmers) or a freelance?
8. Were you looking for work last week (.....)?
.....)?
9. Why were you away from work last week (.....)?
- 1 = ill
 - 2 = on holiday
 - 3 = on military service
 - 4 = industrial dispute
 - 5 = leave of absence or some other reason
 - 6 = temporarily laid off without pay
 - 7 = waiting to start a new job within 30 days
10. In what way did you look for work?
- Af = Employment Service
 - Ag = employer
 - An = advertisement (s)
 - Ö = some other way (s)
11. How many weeks have you been looking for work (or laid off)?
12. Do you belong to an approved unemployment benefit society?
- 13A. Who was your main employer last week
(when you were last employed)?
- 13B. Is the firm a limited company?

English Translation of Swedish Labor Force Survey Questionnaire

14. What is the main line of business (production) of the firm (work-place)?
- 15A. What was your main work last week (when you were last employed)?
- 15B. In what occupation would you class this work?
16. Last week (when you were last employed), did you work as ...
1. a self-employed person
 2. an employee
 3. a member of the family, helping without being paid money
17. Did you have any employees?
18. Were you employed by
3. state/national authorities
 4. municipal/local authorities or
 5. a private employer?
19. Last week, then, you worked for hours.
Would you have liked more work?
20. Could you have taken on more work last week?
21. How many hours would you have liked to have worked altogether last week (.....)?
22. How many hours do you normally put in every week at your job
(IF MORE THAN ONE/OM FLERA: at your jobs)?
23. Why did you work less than 35 hours last week?
24. Why do you usually work less than 35 hours per week?

English Translation of Swedish Labor Force Survey Questionnaire

25. Why did you work less than 35 hours last week and not any other week?

- 01 Not enough work to be had, factory/machinery being repaired, shortage of materials, production reduced
- 02 Busy looking after the home and family
- 03 Ill myself
- 04 Studying
- 05 Full working week less than 35 hours
- 06 Leave of absence or some other reason
- 07 Do not want to work full time
- 08 Left a job or started a new one during the week
- 09 On holiday
- 10 Bad weather
- 11 Industrial dispute

26. How many hours do you normally put in every week at your job

(IF MORE THAN ONE/OM FLERA: at your jobs)?

27. Why do you usually work less than 35 hours per week?

- 1. Not enough work to be had, factory/machinery being repaired, shortage of materials, production reduced
- 2. Busy looking after the home and family
- 3. Ill myself
- 4. Studying
- 5. Full working week less than 35 hours
- 6. Other reason(s)
- 7. Do not want to work full time

28. Would you have liked to have had work last week (.....)?

29. Could you have taken on work last week, or were you prevented from doing so?

English Translation of Swedish Labor Force Survey Questionnaire

30. What was your main reason for not being gainfully employed last week or for not applying for gainful employment?
- 1 No suitable job opportunities in the area
 - 2 Person interviewed rates his/her chances of obtaining employment as small
 - 3 Other reason(s)
31. What was your main reason for being unable to take on work last week?
- 4 Nobody to look after the children
 - 5 Too busy with housework and/or with nursing in the family
 - 6 Busy studying
 - 7 Ill or temporarily admitted for institutional care
 - 8 Other reason(s)
32. How many hours would you have liked to have worked last week?
33. Have you ever applied for work, and if so, when?
34. When did you last apply for work?
35. How many hours would you have liked to have worked last week?
37. One can start looking for a job immediately after leaving another job, or one may wish to start working again after a period without work.
- How did you start to look for work? "Immediately" here means not more than one month?

English Translation of Swedish Labor Force Survey Questionnaire

38. Did you leave your job in connection with personnel or production cuts, because the work you were engaged for was completed or for some other reason?
- 1 Personnel or production cut
 - 2 Work completed
 - 3 Reasons of health (including early retirement)
 - 4 Child care, housework
 - 5 Studies
 - 6 Retirement
 - 7 Removal to another area
 - 8 Other reason(s)
39. What is your marital status?
- 1 Married
 - 2 Unmarried
 - 3 Formerly married (widow, widower, divorced)
40. Have you any children living at home who are under 17?
- a. How many?
 - b. How old are they?
- A. We shall be coming back for an interview in(month). Can we then
- a. get in touch with you via the same telephone number?
(IF YOUR PHONE NUMBER WILL BE DIFFERENT/OM NYTT TELEFON NUMMER):
 - Will you also be changing your address?
 - What will your new address be?
 - b. get in touch with you by phone?
(IF SO/OM JA):
 - What will your phone number be?
 - Will you still have the same address in(month)?
(IF NOT/OM NEJ):
 - What will your new address be?
- B. When do you think we will be likeliest to find you at home?

Appendix C. Methods of Adjustment by Age and Sex

The adjusted unemployment rates by age and sex (chapter 3) are less reliable than the overall adjusted unemployment rates. Whereas adjustments made to the overall unemployment rates were based on published statistics generally available each year, adjustments by age and sex were often partially estimated on the basis of data for years other than those studied. For example, career military personnel and unpaid family workers working less than 15 hours a week had to be excluded from the labor force in most countries for comparability with U.S. data. Such adjustments by age group for France and Italy were based on age distributions from the 1960 labor force survey coordinated by the Statistical Office of the European Communities. (See appendix E.) For Japan, age distributions of career military personnel were taken from the 1965 census.

The following sections present descriptions of the methods of deriving comparative data by age and sex in the nine countries studied.¹ Since the methods used in 1968, 1970, and 1974-76 were identical, tables are shown only for the 1968 adjustments (1971 for Great Britain).

Canada

Prior to the 1976 revision in the Canadian survey, data were published with a lower age limit of 14. Separate data were published on 14-year-olds, however, and they have been excluded. The figures for 1968 and 1970 from the old Canadian survey significantly understated female unemployment and overstated male unemployment. Statistics Canada prepared a revised series for 1968 and 1970, but did not show all detailed age breakdowns. For 1974, figures for all age groups adjusted to the new survey concepts, which are comparable with U.S. statistics, were available. For comparison, 1968, 1970, and 1974 figures based on both the old and new surveys are shown.

Australia

No adjustments were made for Australia, since the regularly published data are regarded as comparable with U.S. statistics.

¹ See appendix B for detailed descriptions of the methods used to adjust each country's overall unemployment rate to U.S. concepts. This appendix relates to additional estimates that have been made to derive unemployment rates by age and sex.

Japan

The reported Japanese labor force includes career military personnel and unpaid family workers working less than 15 hours. The age distribution of the career military labor force was based on the 1965 census age distribution of protective service workers, of which the national defense force is a part. The age and sex distribution of unpaid family workers working less than 15 hours was based on the ratios for all unpaid family workers. The published unemployed figures do not require adjustment. The adjusted unemployment rates by age and sex for Japan are virtually the same as the rates based on published data (table C-1).

France

Both the labor force and the number unemployed require adjustment to U.S. concepts (table C-2). The reported labor force in the French labor force surveys includes career military and military contingents. Separate totals for these groups are shown by sex in the survey but are not broken down by age. Age distributions, therefore, were assumed to be the same as in the 1960 survey coordinated by the Statistical Office of the European Communities. A further adjustment needs to be made to include persons living in collective households, such as hotels, which are not within the scope of the survey. (See appendix B.) Such persons are assumed to be employed and to have the same age distribution as the surveyed labor force. After subtracting career military and military contingents and adding an estimate of the civilian labor force not covered by the surveys, the resulting civilian labor force is not entirely compatible with U.S. concepts because it includes unpaid family workers not at work or working less than 15 hours during the week, persons reporting themselves as employed but who were not at work because of "durable reasons" (personal convenience or the nature of the job), unemployed persons who had not commenced seeking work or are not currently available for work, and 15-year-olds. Data are available by sex for all of the above items except persons not currently available for work. Such persons were distributed by sex according to the same proportions as unemployed persons who had not commenced seeking work. Data by age are not separately available for any of these items except 15-year-olds. Therefore, adjustment by age for the other items is made by dividing each age-sex group of the reported civilian labor force by the overall male and

Table C-1. Japan: Labor force and unemployment adjusted to U.S. concepts, by age and sex, 1968 (K.J.)

(Numbers in thousands)

Employment status	Total 15 years and over	15 to 19 years	20 to 24 years	25 to 54 years	55 years and over
Labor force					
Both sexes	50,610	3,960	7,230	32,060	7,360
Less: Career military personnel ¹	240	20	40	160	20
Less: Unpaid family workers working less than 15 hours ²	690	40	60	450	130
Adjusted civilian labor force	49,680	3,900	7,130	31,450	7,210
Male	30,580	1,980	3,910	19,900	4,790
Less: Career military personnel ¹	240	20	40	160	20
Less: Unpaid family workers working less than 15 hours ²	120	20	20	60	10
Adjusted civilian labor force	30,220	1,940	3,850	19,680	4,760
Female	20,030	1,990	3,320	12,140	2,580
Less: Unpaid family workers working less than 15 hours ²	560	20	40	390	110
Adjusted civilian labor force	19,470	1,970	3,280	11,750	2,470
Unemployed					
Both sexes	590	90	130	300	90
Male	370	50	70	190	70
Female	230	40	60	110	20
Unemployment rate (percent)					
Adjusted to U.S. concepts:					
Both sexes	1.2	2.3	1.8	1.0	1.2
Male	1.2	2.6	1.8	1.0	1.5
Female	1.2	2.0	1.8	.9	.8
As published:					
Both sexes	1.2	2.3	1.8	.9	1.2
Male	1.2	2.5	1.8	1.0	1.5
Female	1.1	2.0	1.8	.9	.8

¹ Age distribution of career military personnel based on 1965 census age distribution of protective service workers.

² Based on age distribution of all unpaid family workers.

NOTE: Because of rounding, subtotals may not add to totals.

SOURCE: *Annual Report on the Labour Force Survey, 1975* (Tokyo, Office of the Prime Minister, Bureau of Statistics) and BLS adjustments.

female ratios of reported to adjusted civilian labor force 16 years of age and over.

The reported unemployment figures for France include persons who did some work but were looking for other jobs in the survey week, persons who had not begun to seek work or were not currently available for work, and 15-year-olds. These persons should be excluded for comparability with U.S. concepts. On the other hand, the French unemployed count does not include persons who stated they were employed but who did no work at all during the survey week because of partial unemployment or slack work or because they were either waiting to start a new job or left their previous employment. Such persons should be included for comparability with U.S. concepts. Breakdowns by age are not available for the above items; however, sex breakdowns are available except for those persons not currently available for work, discussed above. The number of unemployed 15-year-olds is estimated by assuming they have the same unemployment rate as all teenagers 15 to 19 years of age. Adjustments by age for the other differences are then made by dividing the reported number un-

employed in each age-sex group by the overall male and female ratios of reported to adjusted unemployed 16 years of age and over.

The resulting adjusted unemployment rates for males are only slightly lower than the figures based on the reported survey data. For females, however, the downward adjustment is considerable. This is because reported female unemployment contains a high proportion of the number of persons who had not yet commenced seeking work or were not currently available for work (table C-2).

Germany

The German labor force as reported in the April Microcensus includes career military personnel, unpaid family workers working less than 15 hours, and 14-year-olds. These groups must be excluded for comparability with U.S. statistics. All career military personnel in Germany are males and their age distribution can be determined from published age distributions of the labor force including and excluding the career military. The number of

Table C-2. France: Labor force and unemployment adjusted to U.S. concepts, by age and sex, March 1968
(Numbers in thousands)

Employment status	Total		16 to 19 years	20 to 24 years	25 to 54 years	55 years and over
	15 years and over	16 years and over				
Labor force						
Both sexes	21,069	20,972	1,559	2,516	12,845	4,052
Less: Career military personnel ¹	265	265	1	20	231	13
Plus: Labor force not surveyed ²	500	500	30	67	312	90
Civilian labor force	21,304	21,207	1,588	2,563	12,926	4,129
Adjusted to U.S. concepts ³	20,958	20,861	1,560	2,513	12,728	4,061
Male	13,133	13,064	867	1,279	8,433	2,486
Less: Career military personnel ¹	228	228	1	16	201	10
Plus: Labor force not surveyed ²	310	310	17	34	203	55
Civilian labor force	13,215	13,146	883	1,297	8,435	2,531
Adjusted to U.S. concepts ³	13,137	13,068	878	1,289	8,385	2,516
Female	7,937	7,909	692	1,237	4,413	1,566
Less: Career military personnel ¹	37	37	-	4	30	3
Plus: Labor force not surveyed ²	190	190	13	33	109	35
Civilian labor force	8,090	8,062	705	1,266	4,492	1,598
Adjusted to U.S. concepts ³	7,822	7,794	682	1,224	4,343	1,545
Unemployed						
Both sexes	656	648	141	111	294	103
Adjusted to U.S. concepts ⁴	530	523	114	88	233	86
Male	269	265	60	41	105	58
Adjusted to U.S. concepts ⁴	250	246	56	38	97	54
Female	387	385	81	70	189	45
Adjusted to U.S. concepts ⁴	280	277	58	50	136	32
Unemployment rate (percent)						
Adjusted to U.S. concepts:						
Both sexes	2.5	2.5	7.3	3.5	1.8	2.1
Male	1.9	1.9	6.4	2.9	1.2	2.1
Female	3.6	3.6	8.5	4.1	3.1	2.1
As published:						
Both sexes	3.1	3.1	9.0	4.4	2.3	2.5
Male	2.1	2.0	6.9	3.2	1.2	2.3
Female	4.9	4.9	11.7	5.7	4.3	2.9

¹ Age distribution based on figures from 1960 EEC labor force survey.

² Age distribution based on proportions from surveyed labor force by age.

³ Adjusted to exclude unpaid family workers not at work or working less than 15 hours; employed persons not at work for "durable" reasons; and unemployed persons who have not commenced seeking work or are not currently available for work. Figures on these exclusions are available in total end by sex, but not by age. Therefore, the adjusted figures by age group are derived by dividing each age-sex group of civilian labor force by the overall male and female ratios of reported to adjusted civilian labor force for 16-year-olds and over (male: 100.60; female: 103.44).

⁴ Adjusted to exclude persons classified as unemployed who

worked during the survey week, had not commenced seeking work, or were not currently available for work, and to include persons classified as employed who were not at work owing to the start or cessation of a job or slack work. Figures for these adjustments are available in total end by sex, but not by age. Therefore, the adjusted figures by age group are derived by dividing the reported number unemployed in each age-sex group by the overall male and female ratios of reported to adjusted unemployed age 16 and over (male: 107.72; female: 138.99).

SOURCE: *Enquêtes Sur L'Emploi de 1968 et 1969, Résultats détaillés* (Paris, Institut National de la Statistique et des Etudes Economiques) and BLS adjustments.

unpaid family workers working less than 15 hours is published by sex. No age distributions are published, however. Therefore, it was assumed that the age distribution of unpaid family workers who worked less than 15 hours was the same as that for all unpaid family workers. Separate data on 14-year-olds by sex are available from the Microcensus results.

Microcensus unemployment is adjusted only to ex-

clude 14-year-olds. The distribution of unemployed by age was not published as such by Germany in 1968, but can be derived by subtracting data on the employed by age and sex from data on the labor force by age and sex. The number of 14-year-olds in the unemployed count is obtained in this manner. Unemployment has been reported by age in more recent years.

The resulting adjusted unemployment rates for Germany by age and sex are identical to or only one-tenth of a percentage point higher than the rates based on the published data (table C-3).

Great Britain

Adjusted figures by age and sex for Great Britain could be reliably prepared for 1971, the year of the first General Household Survey, and later years. The regularly published British data are from registered unemployment statistics rather than a labor force survey. Data on registered unemployed persons are particularly weak for comparisons of youth unemployment, since a high proportion of unemployed youths are new entrants to the labor force. Such persons are generally not eligible to collect unemployment benefits and are, therefore, much less likely to register with employment offices than the experienced unemployed. Many unemployed women also do not register in Great

Britain. The method of adjustment of the British data by age and sex is based, therefore, on the General Household Surveys (GHS) which cover the labor force groups generally excluded from registration statistics.

Figures on the labor force and unemployed were reported by age and sex in the 1971 GHS, but were not inflated to universe levels—i.e., levels representing the entire country. In table C-4, all data shown are representative of the entire country. Reported figures on employees, self-employed, and registered unemployed have been augmented by adding the estimated number of unregistered unemployed. An estimate of the overcount in the reported figures on employees has been subtracted. (See appendix B for details.) The resulting adjusted civilian labor force, broken down into its male and female components, was then distributed by age according to the age-sex distribution of the civilian labor force (unadjusted to U.S. concepts) from the 1971 GHS. The GHS did not report data for the age groups 15-19 and 20-24; instead, figures for age

Table C-3. Germany: Labor force and unemployment adjusted to U.S. concepts, by age and sex, April 1968

(Numbers in thousands)

Employment status	Total		15 to 19 years	20 to 24 years	25 to 54 years	55 years and over
	14 years and over	15 years and over				
Labor force						
Both sexes	26,766	26,719	2,487	2,705	16,343	5,186
Less: Career military personnel ¹	485	485	32	169	282	2
Less: Unpaid family workers working less than 15 hours ²	68	68	4	3	40	22
Adjusted civilian labor force	26,213	26,166	2,451	2,533	16,021	5,162
Male	17,157	17,131	1,309	1,556	10,795	3,472
Less: Career military personnel ¹	485	485	32	169	282	2
Less: Unpaid family workers working less than 15 hours ²	11	11	2	1	4	4
Adjusted civilian labor force	16,661	16,635	1,275	1,386	10,509	3,466
Female	9,609	9,588	1,178	1,149	5,548	1,715
Less unpaid family workers working less than 15 hours ²	57	57	2	2	36	18
Adjusted civilian labor force	9,552	9,531	1,176	1,147	5,512	1,697
Unemployed						
Both sexes	412	382	94	36	171	81
Male	229	213	47	18	92	56
Female	183	169	47	18	79	25
Unemployment rate (percent)						
Adjusted to U.S. concepts:						
Both sexes	1.6	1.5	3.8	1.4	1.1	1.6
Male	1.4	1.3	3.7	1.3	.9	1.6
Female	1.9	1.8	4.0	1.6	1.4	1.5
As published:						
Both sexes	1.5	1.4	3.8	1.3	1.0	1.6
Male	1.3	1.2	3.6	1.2	.9	1.6
Female	1.9	1.8	4.0	1.6	1.4	1.5

¹Age distribution derived from age distributions of labor force including and excluding career military personnel.

²Based on age-sex distribution of all unpaid family workers in April 1968.

SOURCE: *Hauptergebnisse der Arbeits- und Sozialstatistik 1968* (Bonn, Der Bundesminister Für Arbeit und Sozialordnung), *Statistisches Jahrbuch für Die Bundesrepublik Deutschland 1969* (Wiesbaden, Statistisches Bundesamt, July 1969), and BLS adjustments.

NOTE: Because of rounding, subtotals may not add to totals.

Table C-4. Great Britain: Labor force and unemployment adjusted to U.S. concepts, by age and sex, 1971

(Numbers in thousands)

Employment status	Total 15 years and over	15 to 19 years	20 to 24 years	25 to 54 years	55 years and over
Labor force					
Both sexes:					
Employees in employment	21,554	--	--	--	--
Plus: Self employed	1,848	--	--	--	--
Plus: Registered unemployed ¹	758	--	--	--	--
Less: Net overcount	295	--	--	--	--
Plus: Unregistered unemployed	157	--	--	--	--
Adjusted civilian labor force ²	24,022	2,276	2,731	14,477	4,539
Rounded	24,020	2,280	2,730	14,480	4,540
Male:					
Employees in employment	13,376	--	--	--	--
Plus: Self employed	1,477	--	--	--	--
Plus: Registered unemployed ¹	640	--	--	--	--
Less: Net overcount	254	--	--	--	--
Plus: Unregistered unemployed	-63	--	--	--	--
Adjusted civilian labor force ²	15,176	1,214	1,669	9,257	3,035
Rounded	15,180	1,210	1,670	9,260	3,040
Female:					
Employees in employment	8,178	--	--	--	--
Plus: Self employed	371	--	--	--	--
Plus: Registered unemployed ¹	119	--	--	--	--
Less: Net overcount	41	--	--	--	--
Plus: Unregistered unemployed	220	--	--	--	--
Adjusted civilian labor force ²	8,847	1,062	1,062	5,220	1,504
Rounded	8,850	1,060	1,060	5,220	1,500
Unemployed					
Both sexes:					
Registered unemployed ¹	758	--	--	--	--
Plus: Temporarily laid off	11	--	--	--	--
Plus: Unregistered unemployed	157	--	--	--	--
Adjusted unemployed ²	926	156	133	478	160
Rounded	930	160	130	480	160
Male:					
Registered unemployed ¹	640	--	--	--	--
Plus: Temporarily laid off	10	--	--	--	--
Plus: Unregistered unemployed	-63	--	--	--	--
Adjusted unemployed ²	587	88	82	288	129
Rounded	590	90	80	290	130
Female:					
Registered unemployed ¹	119	--	--	--	--
Plus: Temporarily laid off	1	--	--	--	--
Plus: Unregistered unemployed	220	--	--	--	--
Adjusted unemployed ²	340	68	51	190	31
Rounded	340	70	50	190	30
Unemployment rates (percent)					
Adjusted to U.S. concepts:					
Both sexes	3.9	7.0	4.8	3.3	3.5
Male	3.9	7.4	4.8	3.1	4.3
Female	3.8	6.6	4.7	3.6	2.0

¹ Includes adult students.² Distributed by age according to the 1971 General Household Survey. Data for 15- to 19-year-olds and 20- to 24-year-olds were estimated by utilizing the 1971 Population Census. The GHS reported data for 15- to 17-year-olds and 18- to 24-year-olds.SOURCE: *The General Household Survey: Introductory Report* (London, Office of Population Censuses and Surveys, Social Survey Division) and BLS adjustments.

groups 15-17 and 18-24 were reported. The number of 18- and 19-year-olds in the 18-24 category was estimated by utilizing proportions of the labor force by age and sex from the 1971 population census. For 1973 and 1974, no breakdown of the 16-24 age group was made because of the lack of relevant data. It should be noted that the lower age limit for British statistics was raised from 15 to 16 in 1973.

The registered unemployed figures were adjusted to U.S. concepts by sex by adding the unregistered unemployed and persons on temporary layoff. The resulting figures, by sex, were then distributed by age according to the age-sex distribution of the unemployed (unadjusted to U.S. concepts) from the 1971 GHS, supplemented by the 1971 population census. Data on unemployment by age and sex as measured by the population census (persons "out of employment") were used to estimate the number of unemployed 18- and 19-year-olds in the 18-24 age group (table C-4).

Italy

Italian labor force data by age and sex could not be reliably adjusted to U.S. concepts. Therefore, only published

age and sex breakdowns were shown for Italy in chapter 3. It is not known how well these published breakdowns approximate U.S. concepts. The figures exclude persons who were actively seeking work but who did not report themselves as unemployed. On the other hand, they include a large number of persons who took no active steps to find work in the past 30 days.

Sweden

The reported Swedish labor force includes career military personnel. In addition, in 1968 the labor force included 14- and 15-year-olds; in 1970 and subsequent years 14- and 15-year-olds were excluded but persons 75 years old and over were also excluded. The age distribution of the career military was based on a special survey conducted in Sweden in February 1964. Data on 14- and 15-year-olds for 1968 were provided by the National Central Bureau of Statistics in unpublished tabulations. For those 75 years old and over, figures are published once a year in the labor force survey. The Swedish unemployed figures require only the age adjustments discussed above. The resulting adjusted unemployment rates by age and sex are virtually the same as the published rates (table C-5).

Table C-5. Sweden: Labor force and unemployment adjusted to U.S. concepts, by age and sex, 1968

(Numbers in thousands)

Employment status	Total		16 to 19 years	20 to 24 years	25 to 64 years	65 years and over
	14 years and over	16 years and over				
Labor force						
Both sexes	3,868	3,840	251	469	2,330	791
Less: Career military personnel ¹	18	18	2	6	10	0
Adjusted civilian labor force	3,850	3,822	249	463	2,320	791
Male	2,399	2,382	130	264	1,446	542
Less: Career military personnel ¹	18	18	2	6	10	0
Adjusted civilian labor force	2,381	2,363	128	258	1,436	542
Female	1,469	1,458	121	206	884	249
Unemployed						
Both sexes	86	85	14	14	40	17
Male	54	54	7	8	26	14
Female	32	31	8	6	14	3
Unemployment rate (percent)						
Adjusted to U.S. concepts:						
Both sexes	2.2	2.2	5.6	3.0	1.7	2.1
Male	2.3	2.3	5.5	3.1	1.8	2.6
Female	2.2	2.1	6.8	2.9	1.6	1.2
As published:						
Both sexes	2.2	2.2	5.6	3.0	1.7	2.1
Male	2.3	2.2	5.4	3.0	1.7	2.6
Female	2.2	2.1	6.8	2.9	1.6	1.2

¹ Age distribution based on special survey conducted in February 1964.

SOURCE: *The Labour Force Surveys, 1961-69* (Stockholm, National Central Bureau of Statistics) and BLS adjustments.

Appendix D. Calculation of Labor Force Participation Rates and Employment-Population Ratios

Participation rates

Labor force participation rates as shown in chapter 4 of this bulletin are defined as the proportion of the civilian population of working age that is in the labor force. The labor force used in these calculations is the civilian labor force adjusted to U.S. concepts. Since participation rates by sex were also needed, the adjusted labor force had to be broken down into its male and female components. This was done according to the procedures described in appendix C on methods of adjustment by age and sex, except for Germany and Great Britain.

For Germany, age-sex adjustments, as described in appendix C, were made to the April or May Microcensus figures. The 1960-76 participation rate data, however, are annual averages derived from annual estimates of the labor force by sex. These figures are adjusted to U.S. concepts on the basis of the Microcensus.

In the age-sex adjustment section for Great Britain, only data from the British General Household Survey which began in 1971 were considered. However, since participation rates were required for the entire 1960-76 period, the 1971 survey was inadequate. Instead, figures on the labor force by sex were adjusted to U.S. concepts by first obtaining the published British figures, subtracting an estimated overcount, and adding the unregistered unemployed. These adjustments are described in detail in the methods section for Great Britain (appendix B). The overcount factor and the unregistered unemployed are originally derived by sex, as explained in the methods section.

The population base for the participation rate calculations is defined as the civilian population of working age. Such data are usually reported in labor force surveys. For most countries, the Armed Forces had to be excluded from the regularly published population figures. Working age was defined so as to cover the same ages as the adjusted labor force figures—e.g., persons age 16 and over in the United States; age 15 and over in Germany, etc. Where population figures were not available on this basis, estimates of working age population had to be made. For Italy, working age population data were not reported in the labor force survey. Therefore, estimates of mid-year population as reported to the OECD were used. The Armed Forces were subtracted from these figures so that they would relate to the civilian population. OECD population estimates were also used for Germany, since annual rather than April data were used for the labor force.

Employment-population ratios

The employment-population ratios shown in chapter 4 were obtained by dividing civilian employment by the civilian population of working age. Civilian employment adjusted to U.S. concepts was obtained by subtracting the adjusted unemployed from the adjusted labor force for each year. The civilian population of working age was obtained in the same way as for the participation rates described above. No breakdowns of employment ratios by sex were made.

Appendix E. European Community Labor Force Surveys

The Statistical Office of the European Communities has been working to promote comparability of employment and unemployment statistics among member countries. In October 1960, labor force surveys using common definitions were conducted in each of the six member countries—Belgium, France, Germany, Italy, Luxembourg, and the Netherlands.¹ The surveys were repeated annually from 1968 to 1971, but not all Community countries participated; Luxembourg did not take part in the 1968 survey, and the Netherlands did not participate in the three following surveys. The 1968 to 1971 surveys were conducted in the spring.

The survey was conducted again in the spring of 1973 in the six original member countries and in the United Kingdom. In 1975, all member countries took part, including Ireland and Denmark. The survey was again conducted in 1977 and will henceforth be conducted every two years.

Collection of data

For the 1960 and each subsequent survey, a standard questionnaire and rules to be followed in collecting the data were drawn up by the Statistical Office of the European Communities. The sampling and visits to households were carried out by the national statistical institutes who were also responsible for sending the results to the Statistical Office. The Statistical Office handled all the processing of data.

Scope of survey

The survey covers all persons whose place of residence is in one of the member states of the Community during the reference week. For technical reasons, it was not

¹Survey results may be found in the following publications of the Statistical Office of the European Communities: *Une enquête par sondage sur les forces de travail dans les pays de la CEE en 1960*, Informations Statistiques 1963, Number 2; *Population et forces de travail en 1968*, Statistiques Sociales 1969, Number 6; *Population et forces de travail en 1969*, Statistiques Sociales 1970, Number 4; *Enquête par sondage sur les forces de travail en 1970*, Statistiques Sociales 1971, Number 2; *Enquête par sondage sur les forces de travail en 1971*, Statistiques Sociales 1972, Number 3; *Population and Employment, 1968-1972*, Social Statistics 1973, Number 2; *Labor Force Sample Survey 1973*, Social Statistics 1975, Number 1; and *Labor Force Sample Survey 1975*, Eurostat, 1977. Beginning with the publication *Population and Employment, 1968-72* the descriptions and table headings appear in English as well as the other languages of the Community.

possible to include collective households such as hostels, boarding schools, hospitals, or workers' lodgings in all countries. Therefore, the survey has been limited to private households. Members of private households make up about 97 percent of the total population of the Community.

The 1960 survey was based on a sample of 1 percent; for the subsequent surveys, the sample size varied each year according to country (for example, 1968, 0.5 percent in the Netherlands and Belgium; 1 percent in Germany).

Comparability of historical series

According to the EC Statistical Office, a comparison of the results of the 1960, 1968-71, 1973, and 1975 surveys must be made with caution. Random errors are a feature of all sample surveys and can, in certain cases, exceed the magnitude of the variations from one year to another. Also, although these surveys were synchronized in that they all took place in the spring of each year (except in 1960), they were carried out over different periods in the different countries and were spread over several weeks in some countries. Finally, it has been necessary to revise figures for various reasons after publication of the first results. Thus, the final French results for 1968 have been published along with the 1969 results and the 1969 figures for Belgium have been revised in the 1970 publication.

The results of the 1960 survey, as published in 1963, cannot be considered comparable with those of the subsequent surveys. Nevertheless, the Statistical Office has attempted to bring the different surveys into line as far as possible by using unpublished working documents in Number 2/1973 of the *Social Statistics* series.

Following certain improvements introduced in the 1973 survey, notably concerning the distinction between the "usual" situation with regard to economic activity and the actual situation in the reference week, strict comparisons between the 1973 and 1975 results and those of previous surveys are not always possible.

Definitions of the labor force

The definitions used in the European Community surveys are essentially based on ILO definitions. However, a rigorous application of the international definitions was not possible because of the necessity of avoiding too detailed a survey requiring complicated computer calculations.

The use of definitions common to all the Community countries means that the results may not be the same as those used nationally. As the Statistical Office tries to achieve comparable results, these results do not always agree with data from the same surveys processed according to national definitions.

The labor force in the Community surveys is defined as all persons age 14 and over whose normal residence is in a private household in one of the Community countries participating in the survey and who, during the reference week, was employed or unemployed according to the following definitions.

Employed. Employed persons comprise all persons age 14 or over who:

1. Have carried out remunerative work as their main occupation during the reference week;
2. are normally employed, but who, during the course of the reference week, were not at work because of illness, accident, holiday, strike, or other circumstances. People who have not worked because of technical breakdowns or bad weather are also included in this group.
3. carry out unpaid work assisting in a family business or farm as long as this work occupies more than 14 hours per week.

Specifically excluded from the employed are:

1. Persons who temporarily or for an unlimited period have no work and are not paid during the reference week;
2. persons without paid employment and who have neither a farm nor any other business, but who have taken steps to start a new job, farm, or business at a later date;
3. unpaid family workers who have worked less than 15 hours in the reference week;
4. military conscripts (career military personnel are included in the employed).

Unemployed. Unemployed persons comprise all those who have declared themselves to be unemployed and who fall into one of the following categories:

1. Employable workers who were unemployed and seeking paid work during the reference week because their employment contract had come to an end or had been temporarily suspended;
2. persons with no previous employment, or whose last employment was not that of a paid worker (former employers, etc.), or who had ceased working for a period of time, and who, during the reference week, were capable of working and seeking paid employment;
3. persons without work and capable of working immediately who had made arrangements to start a new job at a later date;

4. people laid off temporarily or for an indefinite period without pay.

Inactive population. This covers all persons who were under 14 years of age or who were 14 years old or older but could not be considered either employed or unemployed under the above definitions. The inactive population includes persons who declare themselves to be unemployed, but who are not seeking paid employment—for example, persons making arrangements to set themselves up in business.

Family workers who have declared that they are employed but have only worked between 1 and 14 hours during the reference week are also part of the inactive population. Also, inactive persons can be in the process of seeking employment (students looking for a first job, for example) or have a part-time job (a housewife working for other households, for example).

Differences between European Community and U.S. definitions

The European Community surveys differ from the U.S. labor force survey with respect to age limits, classification of military personnel, and with regard to the "inactive population" as defined by the European Community. The EC surveys use a lower age limit of 14, whereas the U.S. surveys use age 16 as the lower limit. Career military personnel are included in the labor force as defined by the EC and excluded in the United States. Some persons in the EC's "inactive population" would be regarded as in the U.S. labor force, either as employed or unemployed. Thus, persons who do not declare in the EC survey that they have a "main occupation" or that they are "unemployed" are not classified in the labor force even if they are performing some part-time work or are seeking work. This is similar to the procedure in the French labor force survey in which work seekers are classified as "unemployed" or "marginally unemployed." The concept of "marginally unemployed" in the French survey corresponds closely to the category "inactive workseekers" in the EC survey.

European Community survey results

The EC surveys provide a wealth of comparative data, including data on labor force, employment, and unemployment by age and sex. Data on activity rates, part-time workers, sectoral employment, professional and territorial mobility, hours of work, and methods and duration of workseeking are included. There is also a great deal of information broken down by region in each country. Table E-1 shows some of the data obtained from the 1973 labor force survey.

Table E-1. Population of the European Community by type of activity, spring 1973

(Thousands)

Type of activity	Belgium	France	Germany	Italy	Luxembourg	Netherlands	United Kingdom
1. Persons with a job	3,516	20,194	25,584	17,019	134	4,306	23,683
With 2 or more jobs	25	(¹)	617	461	5	106	442
Looking for another job	82	539	(¹)	817	1	137	790
2. Persons who have declared themselves to be unemployed	59	374	133	717	1	82	515
Looking for a first job	12	64	26	451	(¹)	10	26
3. Total labor force (1+2)	3,575	20,568	25,717	17,736	135	4,388	24,198
4. Inactive persons	3,884	17,921	22,418	23,849	146	5,340	18,209
With an occasional job	39	629	731	1,149	3	315	384
Looking for a job	17	368	(¹)	841	1	65	394
5. Persons less than 14 years old	2,087	10,878	12,442	11,866	66	2,802	11,610
6. Total population (3+4+5)	9,546	49,366	60,577	53,451	347	12,530	54,017

¹Not available.SOURCE: Statistical Office of the European Communities, *Social Statistics*, Number 1, 1975.

Appendix F. Unemployment Rates on a Total Labor Force Basis

Table F-1. Total labor force (including Armed Forces) and unemployment rates, adjusted to U.S. concepts, 1959-76

Year	United States	Canada	Australia	Japan	France	Germany	Great Britain	Italy	Sweden
Total Labor Force (Thousands)									
1959	70,921	6,334	(¹)	43,530	19,890	26,080	23,780	22,160	(¹)
1960	72,142	6,501	(¹)	44,330	19,920	26,260	23,920	21,890	(¹)
1961	73,031	6,612	(¹)	44,820	19,890	26,530	24,190	21,850	3,644
1962	73,442	6,710	(¹)	45,260	19,960	26,620	24,510	21,690	3,728
1963	74,571	6,838	(¹)	45,640	20,030	26,720	24,720	21,230	3,799
1964	75,830	7,017	4,611	46,260	20,300	26,730	24,840	21,170	3,759
1965	77,178	7,217	4,745	47,000	20,320	26,850	24,980	20,820	3,787
1966	78,893	7,801	4,901	48,080	20,560	26,770	25,070	20,480	3,841
1967	80,793	7,854	5,035	49,040	20,650	26,220	25,020	20,620	3,818
1968	82,272	8,052	5,151	49,920	20,950	26,260	24,850	20,560	3,857
1969	84,239	8,292	5,297	50,380	21,220	26,520	24,780	20,350	3,880
1970	85,903	8,491	5,465	50,970	21,540	26,790	24,640	20,330	3,953
1971	86,929	8,732	5,569	51,350	21,770	26,880	24,390	20,290	4,000
1972	88,991	9,004	5,670	51,550	21,990	26,810	24,610	20,000	4,008
1973	91,040	9,404	5,796	52,820	22,210	26,870	24,890	20,140	4,012
1974	93,240	9,787	5,937	52,680	22,550	26,610	24,860	20,410	4,078
1975	94,793	10,139	6,055	52,770	22,620	26,160	² 25,160	20,600	4,161
1976	96,917	10,388	6,140	53,340	22,760	25,930	² 25,440	20,820	4,185
Unemployment Rate (Percent)									
1959	5.3	5.9	(¹)	2.2	1.9	2.0	2.8	4.9	(¹)
1960	5.3	6.8	(¹)	1.7	1.8	1.1	2.2	3.7	(¹)
1961	6.4	7.0	(¹)	1.5	1.5	.6	1.9	3.2	1.4
1962	5.3	5.8	(¹)	1.3	1.4	.6	2.8	2.7	1.4
1963	5.5	5.4	(¹)	1.3	1.3	.4	3.4	2.3	1.7
1964	5.0	4.6	1.4	1.2	1.4	.4	2.5	2.6	1.5
1965	4.4	3.9	1.3	1.3	1.5	.3	2.1	3.4	1.2
1966	3.8	3.3	1.5	1.4	1.8	.3	2.2	3.7	1.5
1967	3.7	3.8	1.6	1.3	1.9	1.3	3.3	3.3	2.1
1968	3.4	4.5	1.5	1.2	2.5	1.4	3.2	3.3	2.2
1969	3.4	4.4	1.5	1.1	2.3	.9	3.0	3.2	1.9
1970	4.8	5.6	1.4	1.2	2.5	.8	3.0	3.0	1.5
1971	5.7	6.2	1.6	1.2	2.7	.8	3.8	3.0	2.5
1972	5.4	6.2	2.2	1.4	2.8	.8	4.1	3.5	2.7
1973	4.7	5.5	1.9	1.3	2.6	.8	3.1	3.3	2.4
1974	5.4	5.3	2.2	1.4	2.9	1.7	2.8	2.7	2.0
1975	8.3	6.9	4.4	1.9	4.1	3.6	14.6	3.2	1.6
1976	7.5	7.1	4.4	2.0	4.5	3.5	16.3	3.5	1.6

¹ Not available.² Preliminary estimate based on incomplete data.

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SUPPLEMENT TO BULLETIN 1979, INTERNATIONAL COMPARISONS OF
UNEMPLOYMENT¹*General Note*

This supplement updates selected international labor market statistics which were published in Bulletin 1979, International Comparisons of Unemployment (U.S. Bureau of Labor Statistics, 1978). The tables are keyed to those published in the Bulletin. Data for 1977 and 1978 are included wherever possible.

Revisions of the estimates published in Bulletin 1979 are indicated by the letter "R". The revisions for France, Germany, and Great Britain arise from the incorporation of more current labor force survey results. The revisions for Canada and Australia are based on revised population estimates. The revisions of seasonally adjusted quarterly unemployment rates reflect the incorporation of full-year data into the seasonal adjustment programs for all nine nations.

The revisions of the French data are based on published detailed results from the 1973-77 labor force surveys and preliminary results from the March and October 1978 surveys. The estimates in Bulletin 1979 had been based on preliminary results from the 1973-76 surveys. Beginning in 1977, the survey was converted from an annual survey (generally March) to a semi-annual survey (March and October), and detailed results are available from both 1977 surveys. Revisions of the German data are based on published results of the 1976-78 annual labor force surveys. The effects of the revisions for both France and Germany are very small—a change in unemployment rates of two-tenths of a percent or less.

The 1975 and 1976 General Household Surveys for Great Britain, however, indicated that the previous estimates of unemployment based on surveys through 1974 should be revised downward significantly. For example, the previously published rate of 4.7 percent for 1975 has been lowered to 4.1 percent and the rate for 1976 has been lowered from 6.4 to 5.5 percent.

The Canadian labor force results for 1975 to 1977 have been revised based on revised population estimates derived from the 1971 and 1976 Population Census results. The impact of these revisions was to lower labor force, employment, and unemployment estimates by about 1 percent. The jobless rates remained the same.

Australian labor force survey results for 1970 to 1977 have been revised, based on revised population estimates derived from the 1966, 1971, and 1976 Population Census results adjusted for underenumeration. The revised jobless rates have been raised by an average of four-tenths of a percent for 1970 through 1977.

Beginning in February 1978, the quarterly Australian labor force survey became a monthly survey. At the same time, a new questionnaire and sample were introduced. In the revised questionnaire, the definitions of employment and unemployment were reworded for clarity but were not changed in substance. The former and revised surveys were both carried out in November 1977, but data are not yet available for analyzing the impact, if any, of the revised questionnaires.

¹ Prepared by the U.S. Department of Labor, Bureau of Labor Statistics, July 1979.

SUPPLEMENT TO TABLE 3.—LABOR FORCE, EMPLOYMENT, AND UNEMPLOYMENT IN 9 COUNTRIES, 1970-78

[Number in thousands; rate in percent]

Year	United States ¹	Canada ¹	Australia ¹	Japan	France	Germany	Great Britain	Italy	Sweden
CIVILIAN LABOR FORCE									
Approximating U.S. concepts:									
1970	82,715	8,399	*5,525	50,730	*20,880	26,290	24,270	19,950	3,909
1971	84,113	8,644	*5,621	51,120	*21,070	26,380	*23,980	19,870	3,955
1972	86,542	8,920	*5,752	51,320	*21,250	26,280	*24,230	19,610	3,963
1973	88,714	9,322	*5,901	52,590	*21,510	26,360	*24,450	19,750	3,971
1974	91,011	9,706	*6,053	52,440	*21,730	26,080	*24,490	20,060	4,037
1975	92,613	*9,974	*6,169	52,530	*21,620	*25,710	*24,610	20,270	4,123
1976	94,773	*10,206	*6,244	53,100	*21,820	*25,440	*25,050	20,490	4,149
1977	97,401	10,498	6,358	53,820	22,050	25,370	25,300	20,500	4,168
1978	100,420	10,882	6,384	54,600	22,160	25,320	25,370	20,620	4,203
As published: ³									
1970	82,715	8,399	*5,525	51,530	*20,854	26,817	24,388	19,302	3,913
1971	84,113	8,644	*5,621	51,860	*21,007	26,910	24,154	19,254	3,961
1972	86,542	8,920	*5,752	51,990	*21,147	26,901	24,405	19,028	3,969
1973	88,714	9,322	*5,901	53,260	*21,391	26,985	24,676	19,169	3,977
1974	91,011	9,706	*6,053	53,100	*21,573	26,797	24,754	19,458	4,043
1975	92,613	*9,974	*6,169	53,230	*21,595	26,397	*24,946	19,650	4,129
1976	94,773	*10,206	*6,244	53,780	*21,783	26,148	*25,198	19,858	4,155
1977	97,401	10,498	6,358	54,520	22,027	25,074	25,402	21,608	4,174
1978	100,420	10,882	6,384	55,320	22,090	26,202	25,482	21,731	4,209
EMPLOYMENT									
Approximating U.S. concepts:									
1970	78,627	7,919	*5,437	50,140	*20,340	26,090	23,520	19,340	3,850
1971	79,120	8,107	*5,518	50,480	*20,480	26,170	*23,100	19,260	3,854
1972	81,702	8,363	*5,601	50,590	*20,640	26,060	23,230	18,920	3,856
1973	84,409	8,802	*5,765	51,910	*20,920	26,140	*23,730	19,080	3,873
1974	85,936	9,185	*5,891	51,710	*21,080	25,630	*23,780	19,500	3,957
1975	84,773	*9,284	*5,866	51,530	*20,680	24,780	*23,610	19,620	4,056
1976	87,485	*9,479	*5,946	52,020	*20,800	24,510	*23,660	19,760	4,083
1977	90,546	9,648	6,000	52,720	20,940	24,460	23,740	19,800	4,093
1978	94,373	9,972	5,975	53,300	20,960	24,450	23,830	19,890	4,109
EMPLOYMENT									
As published: ³									
1970	78,627	7,919	*5,437	50,900	*20,344	26,668	23,811	18,693	3,854
1971	79,120	8,106	*5,518	51,210	*20,438	26,725	23,402	18,645	3,860
1972	81,702	8,363	*5,601	51,260	*20,552	26,655	23,570	18,331	3,862
1973	84,409	8,802	*5,765	52,590	*20,815	26,712	24,088	18,500	3,879
1974	85,936	9,185	*5,891	52,370	*20,958	26,215	24,169	18,898	3,963
1975	84,773	*9,284	*5,866	52,230	*20,693	25,322	*24,010	18,996	4,062
1976	87,485	*9,479	*5,946	52,700	*20,790	*25,088	*23,893	19,127	4,089
1977	90,546	9,648	6,000	53,420	20,922	25,044	23,980	20,062	4,099
1978	94,373	9,972	5,975	54,080	20,921	25,209	24,072	20,160	4,115
UNEMPLOYMENT									
Approximating U.S. concepts:									
1970	4,088	480	*88	590	540	200	750	610	59
1971	4,993	538	*103	640	590	220	*880	610	101
1972	4,840	557	*150	730	610	220	*1,000	700	107
1973	4,304	520	*136	680	*590	220	*720	670	98
1974	5,076	521	*162	730	650	450	*710	560	80
1975	7,830	*690	*302	1,000	*940	*930	*1,000	650	67
1976	7,288	*727	*298	1,080	1,020	930	*1,390	730	66
1977	6,855	850	358	1,100	1,110	900	2 1,560	700	75
1978	6,047	911	410	1,240	2 1,200	2 870	2 1,540	730	94
As published: ⁴									
1970	4,088	480	*88	590	*510	149	577	609	59
1971	4,993	538	*103	640	*569	185	752	609	101
1972	4,840	557	*150	730	*595	246	835	697	107
1973	4,304	520	*136	680	*576	273	588	668	98
1974	5,076	521	*162	730	615	582	585	560	80
1975	7,830	*690	*302	1,000	*902	1,074	936	654	67
1976	7,288	*727	*298	1,080	993	1,060	1,305	732	66
1977	6,855	850	358	1,100	1,105	1,030	1,422	1,545	75
1978	6,047	911	410	1,240	1,169	993	1,410	1,571	94

See footnotes at end of table.

SUPPLEMENT TO TABLE 3.—LABOR FORCE, EMPLOYMENT, AND UNEMPLOYMENT IN 9 COUNTRIES, 1970-78—Con.

[Number in thousands; rate in percent]

Year	United States ¹	Canada ¹	Australia ¹	Japan	France	Germany	Great Britain	Italy	Sweden
UNEMPLOYMENT RATE									
Approximating U.S. concepts:									
1970	4.9	5.7	*1.6	1.2	2.6	0.8	3.1	3.1	1.5
1971	5.9	6.2	*1.8	1.3	2.8	.8	*3.7	3.1	2.6
1972	5.6	6.2	*2.6	1.4	*2.9	.8	*4.1	3.6	2.7
1973	4.9	5.6	*2.3	1.3	2.7	.8	*2.9	3.4	2.5
1974	5.6	5.4	*2.7	1.4	3.0	1.7	*2.9	2.8	2.0
1975	8.5	6.9	*4.9	1.9	*4.3	*3.6	*4.1	3.2	1.6
1976	7.7	7.1	*4.8	2.0	*4.7	3.6	*5.5	3.6	1.6
1977	7.0	8.1	5.6	2.0	5.0	*3.6	*6.2	3.4	1.8
1978	6.0	8.4	6.4	2.3	*5.4	*3.4	*6.1	3.5	2.2
As published: ²									
1970	4.9	5.7	*1.6	1.1	*2.4	.7	2.5	3.2	1.5
1971	5.9	6.2	*1.8	1.2	*2.7	.8	3.4	3.2	2.5
1972	5.6	6.2	*2.6	1.4	*2.8	1.1	3.7	3.7	2.7
1973	4.9	5.6	*2.3	1.3	*2.7	1.2	2.6	3.5	2.5
1974	5.6	5.4	*2.7	1.4	2.8	2.6	2.6	2.9	2.0
1975	8.5	6.9	*4.9	1.9	*4.2	4.7	4.1	3.3	1.6
1976	7.7	7.1	*4.8	2.0	*4.6	4.6	5.6	3.7	1.6
1977	7.0	8.1	5.6	2.0	5.0	4.5	6.2	7.2	1.8
1978	6.0	8.4	6.4	2.2	5.3	4.3	6.0	7.2	2.2

*Revisions of the estimates published in Bulletin 1979.

¹ Published and adjusted data for the United States, Canada, and Australia are identical.² Preliminary estimates based on incomplete data.³ Including military personnel for Japan, Germany, Italy, and Sweden.⁴ For the United States, Canada, Australia, Japan, Italy, and Sweden, unemployment as recorded by sample labor force surveys; for France, annual estimates of unemployment; and for Germany and Great Britain, the registered unemployed.⁵ For France, unemployment as a percent of the civilian labor force; for Japan, Italy, and Sweden, unemployment as a percent of the civilian labor force plus career military personnel; for Germany and Great Britain, registered unemployed (excluding adult students) as a percent of employed wage and salary workers plus the unemployed. With the exception of France, which does not publish an unemployment rate, these are the usually published unemployment rates for each country. Published rates shown for Germany and Great Britain cannot be computed from data contained in this table.

Note: Data for the United States relate to the population 16 yr of age and over. Published data for France, Germany, and Italy relate to the population 14 yr of age and over; for Sweden, to the population aged 16 to 74; and for Canada, Australia, Japan, and Great Britain, to the population 15 yr of age and over. Beginning in 1973, published data for Great Britain relate to the population 16 yr of age and over. The adjusted statistics have been adapted, insofar as possible, to the age at which compulsory schooling ends in each country. Therefore, adjusted statistics for France relate to the population 16 yr of age and over and for Germany, to the population 15 yr of age and over. The age limits of adjusted statistics for Canada, Australia, Japan, Great Britain, and Italy coincide with the age limits of the published statistics. Statistics for Sweden remain at the lower age limit of 16, but have been adjusted to include persons 75 yr of age and over.

SUPPLEMENT TO TABLE 6.—QUARTERLY UNEMPLOYMENT RATES, SEASONALLY ADJUSTED, 1976-78

Period	United States	Canada	Australia	Japan	France ¹	Germany ¹	Great Britain ¹	Italy ²	Sweden
1976	7.7	7.1	*4.8	2.0	*4.7	3.6	*5.5	3.6	1.6
I	*7.7	*6.7	*4.7	2.0	*4.7	3.8	*5.3	*3.5	1.6
II	*7.5	*7.0	*4.6	2.1	*4.6	3.6	*5.5	*3.6	1.6
III	*7.7	*7.2	*4.9	2.1	*4.6	3.6	*5.6	*3.6	*1.5
IV	*7.8	*7.5	*4.9	1.9	*4.7	3.5	*5.7	*3.6	1.6
1977	7.0	8.1	5.6	2.0	5.0	3.6	6.2	3.4	1.8
I	*7.5	*7.9	*5.1	1.9	*4.9	3.6	*6.0	*3.4	1.7
II	*7.2	*8.0	*5.8	2.1	*5.1	3.6	*6.0	*3.4	1.7
III	*6.9	8.2	*5.8	2.1	*5.2	3.6	*6.3	*3.5	*1.9
IV	6.6	8.4	5.9	2.1	4.8	3.5	6.4	3.4	2.0
1978	6.0	8.4	6.4	2.3	5.4	3.4	6.1	3.5	2.2
I	6.2	8.4	6.7	2.2	4.9	3.5	6.3	3.5	2.1
II	6.0	8.5	6.4	2.3	5.4	3.5	6.1	3.5	2.3
III	6.0	8.4	6.4	2.3	5.8	3.4	6.1	3.6	2.5
IV	5.8	8.2	6.3	2.3	5.6	3.3	5.9	3.6	2.0

*Revisions of the estimates published in Bulletin 1979.

¹ Preliminary for France from 1978 onward and for Germany and Great Britain from 1977 onward.² Data for 1977 onward are not strictly comparable with data for earlier years (see app. X B).

Note: Quarterly figures for France, Germany, Italy, and Great Britain are calculated by applying annual adjustment factors to current published data, and therefore should be viewed as less precise indicators of unemployment under U.S. concepts than the annual figures. Published data for Australia, Canada, Japan, and Sweden require little or no adjustment.

SUPPLEMENT TO TABLE 8A.—EMPLOYMENT BY ECONOMIC SECTOR, 1970-78

[In thousands]

Year	United States	Canada	Australia	Japan	France	Germany	Great Britain ¹	Italy ²	Sweden
Total civilian employment:									
1970	78,627	7,919	*5,437	50,140	*20,344	26,169	24,748	18,460	3,836
1971	79,120	8,107	*5,518	50,470	*20,438	26,225	24,376	18,376	3,842
1972	81,702	8,363	*5,602	50,580	*20,552	26,125	24,376	18,075	3,845
1973 ³	84,409	8,802	*5,765	51,900	*20,815	26,201	24,948	18,239	3,861
1974	85,936	9,185	*5,891	51,710	*20,958	25,688	*25,056	18,644	3,944
1975	84,783	*9,284	*5,867	51,530	*20,693	24,798	*24,942	18,765	4,044
1976	87,485	*9,479	*5,946	52,020	*20,790	*24,556	*24,772	*18,882	4,070
1977	90,546	9,648	6,000	52,720	20,922	24,511	24,897	19,799	4,081
1978	94,373	9,972	5,975	53,360	20,921	24,679	24,949	19,880	4,097
Agriculture:⁴									
1970	3,566	605	*432	8,490	*2,835	2,262	699	3,574	314
1971	3,503	608	*424	7,840	*2,683	2,144	674	3,530	300
1972	3,585	576	*440	7,310	*2,529	2,038	671	3,255	287
1973 ³	3,554	574	*422	6,810	*2,379	1,954	681	3,141	276
1974	3,588	583	*408	6,540	*2,236	1,882	*661	3,072	264
1975	3,476	*564	*405	6,380	*2,107	1,823	*639	2,934	261
1976	3,417	*561	*390	6,210	*2,037	*1,743	*633	2,902	254
1977	3,383	553	398	6,110	1,974	1,655	632	3,122	248
1978	3,501	573	383	6,100	1,907	1,608	625	3,063	250
Industry:⁵									
1970	26,066	2,359	*1,868	17,880	*7,908	*12,711	11,114	8,112	1,456
1971	25,117	2,383	*1,893	18,140	*7,940	*12,642	10,728	8,150	1,424
1972	25,709	2,446	*1,873	18,290	*7,973	12,214	10,470	8,030	1,396
1973 ³	27,086	2,602	*1,917	19,210	*8,088	12,225	10,592	8,047	1,401
1974	26,988	2,710	*1,962	18,902	*8,115	11,932	*10,563	8,251	1,434
1975	25,022	*2,613	*1,871	18,370	*7,853	*11,169	*10,161	8,300	1,449
1976	25,976	*2,761	*1,866	18,520	*7,775	*10,975	*9,910	8,225	1,416
1977	26,955	2,673	1,845	18,510	7,730	*10,876	9,976	7,661	1,375
1978	28,368	2,746	1,781	18,550	7,588	*10,897	9,922	7,628	1,328
Manufacturing:⁶									
1970	20,737	1,768	*1,326	13,750	*5,677	*10,309	9,022	5,864	1,064
1971	19,564	1,767	*1,345	13,420	*5,742	*10,220	8,724	5,910	1,054
1972	19,866	1,828	*1,323	13,810	*5,794	9,550	8,446	5,826	1,046
1973 ³	20,942	1,937	*1,354	14,420	*5,907	9,541	8,498	5,894	1,066
1974	20,879	1,994	*1,380	*14,325	*5,957	9,410	*8,539	6,100	1,120
1975	19,275	*1,871	*1,275	13,430	*5,780	8,890	*8,154	6,128	1,138
1976	20,044	*1,921	*1,289	13,440	*5,721	8,784	*7,912	6,143	1,100
1977	20,637	1,888	*1,281	13,350	5,690	8,757	8,018	5,473	1,060
1978	21,497	1,956	(?)	13,220	(?)	(?)	7,967	5,421	1,023
Services:⁸									
1970	48,994	4,955	*3,012	23,770	*9,601	*11,196	12,935	6,772	2,066
1971	50,500	5,116	*3,077	24,510	*9,815	*11,439	12,975	6,695	2,118
1972	52,408	5,341	*3,165	24,980	*10,050	11,873	13,236	6,790	2,162
1973 ³	53,770	5,626	*3,301	25,880	*10,348	12,022	13,676	7,049	2,185
1974	55,360	5,892	*3,519	26,140	*10,607	*11,974	*13,832	7,321	2,246
1975	56,285	*6,107	*3,592	26,770	*10,733	*11,806	*14,141	7,531	2,334
1976	58,092	*6,217	*3,690	27,290	*10,978	*11,838	*14,229	*7,755	2,400
1977	60,208	6,422	3,757	28,100	11,218	*11,983	14,289	9,016	2,439
1978	62,504	6,653	3,811	28,720	11,426	*12,177	14,402	9,196	2,519

*Revisions of the estimates published in Bulletin 1979.

¹ Includes Northern Ireland.² Data for Italy prior to 1977 have not been adjusted for the undercount of employment which was revealed by the revised Italian labor force survey (see app. B). Data are not available on the extent of undercount by economic sector.³ From 1973 onwards, Japan includes Okinawa.⁴ Agriculture, forestry, hunting, and fishing.⁵ Manufacturing, mining, and construction.⁶ Preliminary.⁷ Not available.⁸ Transportation, communication, public utilities, trade, finance, public administration, private household services, and miscellaneous services.

Note: Civilian employment totals may not coincide with those in table 3 because the data can not be fully adjusted for comparability with U.S. definitions. Also, some employment could not be distributed by economic sector. Because of rounding, subtotals may not add to totals.

SUPPLEMENT TO TABLE 8B.—PERCENT DISTRIBUTION OF EMPLOYMENT BY ECONOMIC SECTOR, 1970-78

Year	United States	Canada	Australia	Japan	France	Germany	Great Britain ¹	Italy ²	Sweden
Total civilian employment: Each year...	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Agriculture:³									
1970.....	4.5	7.6	*7.9	16.9	*13.9	8.6	2.8	19.4	8.2
1971.....	4.4	7.5	*7.7	15.5	*13.1	8.2	2.8	19.2	7.8
1972.....	4.4	6.9	7.8	14.4	*12.3	7.8	2.8	18.0	7.5
1973 ⁴	4.2	6.5	*7.3	13.1	*11.4	7.5	2.7	17.1	7.1
1974.....	4.2	6.3	*6.9	12.6	*10.7	7.3	2.6	16.5	6.7
1975.....	4.1	6.1	*6.9	12.4	*10.2	*7.3	2.6	15.6	6.5
1976.....	3.9	5.9	*6.6	11.9	*9.8	7.1	2.6	15.4	6.2
1977.....	3.7	5.7	6.6	11.6	9.4	6.7	2.5	15.8	6.1
1978.....	3.7	5.7	6.4	11.4	9.1	6.5	2.5	15.4	6.1
Industry:⁵									
1970.....	33.2	29.8	*34.4	35.7	*38.9	*48.6	44.9	43.9	38.0
1971.....	31.9	29.4	*34.3	35.9	*38.8	*48.2	44.0	44.4	37.1
1972.....	31.5	29.4	*33.4	36.2	*38.8	46.8	43.0	44.4	36.3
1973 ⁴	32.1	29.6	*33.2	37.0	*38.9	46.7	42.5	44.4	36.3
1974.....	31.4	29.5	*33.3	36.8	*38.7	46.4	42.2	44.3	36.4
1975.....	29.5	28.1	*31.9	35.6	*38.0	45.0	40.7	44.2	35.8
1976.....	29.7	28.5	*31.4	35.6	*37.4	*44.7	40.0	43.6	34.8
1977.....	29.8	27.7	30.7	35.1	36.9	*44.4	40.1	38.7	33.7
1978.....	30.1	27.5	29.8	34.8	36.3	*44.2	39.8	38.4	32.4
Manufacturing:									
1970.....	26.4	22.3	*24.4	27.4	*27.9	*39.4	36.5	31.8	27.7
1971.....	24.7	21.8	*24.4	26.6	*28.1	*39.0	35.8	32.2	27.4
1972.....	24.3	21.9	*23.6	27.3	*28.2	36.6	34.6	32.2	27.2
1973 ⁴	24.8	22.0	*23.5	27.8	*28.4	36.4	34.1	32.3	27.6
1974.....	24.3	21.7	*23.4	25.6	*28.4	36.6	34.1	32.7	28.4
1975.....	22.7	20.2	*21.7	26.1	*27.9	35.8	32.7	32.7	28.1
1976.....	22.9	20.3	*21.7	25.8	27.5	*34.8	*31.9	32.5	27.0
1977.....	22.8	19.6	21.3	25.3	27.2	35.7	32.2	27.6	26.0
1978.....	22.8	19.6	(?)	24.8	(?)	(?)	31.9	27.3	26.0
Services:⁶									
1970.....	63.2	62.6	*57.7	47.4	*47.2	*42.8	52.3	36.7	53.9
1971.....	63.8	63.1	*58.0	48.6	*48.0	*43.6	53.2	36.4	55.1
1972.....	64.1	63.9	*58.7	49.4	*48.9	45.4	54.3	37.6	56.2
1973 ⁴	63.7	63.9	*59.4	49.9	*49.7	45.9	54.8	38.6	56.6
1974.....	64.4	64.1	*59.7	50.6	*50.6	*46.2	55.2	39.3	56.9
1975.....	66.4	*65.8	*61.2	52.0	*51.9	47.6	56.7	40.1	57.7
1976.....	66.4	*65.6	*62.1	52.5	52.8	*48.2	*57.4	*41.0	59.0
1977.....	66.5	66.6	62.6	53.3	53.6	48.9	57.4	45.5	60.2
1978.....	66.2	66.7	63.8	5.38	54.6	*49.3	57.7	46.2	61.5

* Revisions of the estimates published in Bulletin 1979.

¹ Includes Northern Ireland.

² Data for Italy prior to 1977 have not been adjusted for the undercount of employment which was revealed by the revised Italian labor force survey (see app. B). Data are not available on the extent of undercount by economic sector.

³ Agriculture, forestry, hunting, and fishing.

⁴ From 1973 onwards, Japan includes Okinawa.

⁵ Manufacturing, mining, and construction.

⁶ Preliminary.

⁷ Not available.

⁸ Transportation, communication, public utilities, trade, finance, public administration, private household services, and miscellaneous services.

SUPPLEMENT TO TABLE 10.—UNEMPLOYMENT RATES BY AGE AND SEX, 1977

Sex and age	1977					1976			1977 Sweden
	United States	Canada	Australia	Japan	France ¹	Germany ²	Great Britain	Italy ³	
Both sexes:									
All working ages.....	7.0	8.1	5.2	2.0	4.8	3.7	5.5	3.7	1.8
Teenagers ⁴	17.7	17.5	16.1	4.8	11.8	6.9	11.4	19.2	6.7
20 to 24 yr.....	10.9	12.4	7.2	3.5	3.5	5.7	4.3	11.6	3.2
25 to 54 yr.....	5.1	6.0	3.2	1.7		3.2		1.7	1.3
55 yr and over.....	4.1	4.7	2.2	2.5		2.6		.5	1.2
Male:									
All working ages.....	6.2	7.3	4.3	2.1	3.3	3.1	5.5	3.1	1.5
Teenagers ⁴	17.3	18.2	14.7	5.7	8.7	6.0	12.1	17.8	5.8
20 to 24 yr.....	10.7	12.8	7.1	3.6	2.4	5.1	4.2	11.6	3.0
25 to 54 yr.....	4.3	5.0	2.6	1.6		2.6		1.6	1.1
55 yr and over.....	3.9	4.5	2.3	3.3		2.4		.6	1.1
Female:									
All working ages.....	8.2	9.5	6.8	1.9	7.2	4.6	5.6	5.2	2.2
Teenagers ⁴	18.3	16.8	17.7	2.6	15.1	8.0	10.4	21.1	7.8
20 to 24 yr.....	11.2	11.8	7.4	3.2	5.2	6.2	4.4	11.7	3.3
25 to 54 yr.....	6.4	7.8	4.3	1.8		4.0		2.2	1.6
55 yr and over.....	4.5	5.0	(⁵)	1.0		3.0		.2	1.4

¹ Data are for March 1977.² Data are for May 1977.³ Data are not adjusted to U.S. concepts.⁴ 14- to 19-yr-olds in Italy; 15- to 19-yr-olds in Australia, Canada, Germany, and Japan; 16- to 19-yr-olds in the United States, France, Great Britain, and Sweden.⁵ Not statistically significant.

Note: Australian data have not been adjusted to reflect the recently revised population estimates.

SUPPLEMENT TO TABLE 10.—UNEMPLOYMENT RATES BY AGE, 1978

	1978				1977			Sweden
	United States	Canada	Australia	Japan	France ¹	Italy ²	1977	
All working ages:								
Teenagers ³	6.0	8.4	6.3	2.3	5.1	4.9	2.2	
20-24 yr ⁴	16.3	17.9	17.3	4.7	23.2	25.2	8.2	
25 yr and over.....	9.5	12.2	8.8	3.6	11.7	15.7	4.3	
55 yr and over.....	4.0	6.1	3.9	2.0	3.3	2.0	1.6	

¹ Data are for October.² Data could not be adjusted to U.S. concepts by age. The figures shown are as published by the Italian Central Statistical Office.³ 16- to 19-yr-olds in the United States and Sweden; 16- and 17-yr-olds in France; 15- to 19-yr-olds in Canada, Australia, and Japan; and 14- to 19-yr-olds in Italy.⁴ 18- to 24-yr-olds in France.

SUPPLEMENT TO TABLE 12. LABOR FORCE PARTICIPATION RATES BY SEX, 1970-78

Year	United States	Canada	Australia	Japan	France ¹	Germany	Great Britain	Italy	Sweden
Both sexes:									
1970	60.4	57.8	*61.4	64.5	*56.2	57.0	59.4	49.5	62.9
1971	60.2	58.1	*61.4	64.2	*55.9	56.5	*59.0	49.2	63.2
1972	60.4	58.6	*61.5	63.8	*56.1	55.8	59.4	48.0	63.1
1973	60.8	59.7	*61.8	64.0	*56.0	55.4	*60.6	47.9	63.0
1974	61.2	60.5	*62.1	63.0	*56.2	54.4	60.5	47.9	63.8
1975	61.2	61.1	*62.3	62.4	*56.9	53.5	*60.5	47.9	64.9
1976	61.6	61.1	*61.9	*62.4	*56.9	*52.8	*61.4	*48.1	*65.0
1977	62.3	61.5	61.9	62.5	57.2	*52.8	*61.7	47.9	65.1
1978	63.2	62.6	61.1	62.8	(²)	*52.8	*61.6	48.0	65.4
Male:									
1970	79.7	77.8	83.2	81.5	*74.6	78.8	79.8	74.5	77.2
1971	79.1	77.4	*82.8	81.9	*74.2	77.7	79.1	74.1	76.8
1972	79.0	77.5	*82.7	*81.9	*73.8	76.4	78.8	72.6	76.1
1973	78.8	78.2	*82.3	*81.9	*73.1	75.2	*79.7	71.7	75.7
1974	78.7	78.7	*81.7	*81.6	*72.7	73.6	*78.1	71.3	75.7
1975	77.9	78.4	*81.2	*81.2	*73.0	72.1	*77.8	71.0	76.0
1976	77.5	*77.6	80.6	*81.0	*72.4	*71.1	*78.5	70.5	*75.4
1977	77.7	77.6	80.1	80.4	71.4	*70.8	*78.1	(²)	74.6
1978	77.9	77.9	78.9	80.1	(²)	*70.8	(²)	(²)	74.3
Female:									
1970	43.3	38.3	*39.8	49.3	*40.0	38.6	41.1	26.8	49.0
1971	43.3	39.4	*40.4	47.7	*39.7	38.4	41.3	26.6	50.0
1972	43.9	40.2	*40.6	46.8	*40.4	38.1	41.9	25.7	50.5
1973	44.7	41.8	*41.8	47.3	*40.9	38.3	43.6	26.1	50.8
1974	45.6	42.9	*42.8	45.7	*41.5	37.9	*44.6	26.6	52.4
1975	46.3	*44.4	*43.7	44.8	*42.4	37.5	*45.0	26.9	54.2
1976	47.3	*45.2	*43.6	*44.8	*42.9	*37.2	*46.0	27.6	*54.9
1977	48.4	46.4	44.2	45.7	44.1	*37.4	*46.8	(²)	55.9
1978	50.0	47.8	43.8	46.4	(²)	*37.6	(²)	(²)	56.9

* Revisions of the estimates published in Bulletin 1979.

¹ Data are for March of each year.

² Preliminary estimate.

³ Not available.

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

SUPPLEMENT TO TABLE 13.—EMPLOYMENT-POPULATION RATIOS,¹ 1970-78

Year	United States	Canada	Australia	Japan	France	Germany	Great Britain	Italy	Sweden
1970	57.4	54.5	*60.9	63.8	*55.3	56.6	57.5	48.0	61.9
1971	56.6	54.5	*60.2	63.4	*55.0	56.1	*56.9	47.7	61.6
1972	57.0	54.9	*59.9	62.8	*54.9	55.3	56.9	46.4	61.4
1973	57.8	56.4	*60.4	63.2	*55.1	54.9	*58.8	46.2	61.4
1974	57.8	57.3	*60.4	62.2	*55.0	53.5	*58.7	46.6	62.6
1975	56.0	*56.9	*59.2	61.2	*53.5	*51.6	*58.1	46.4	63.8
1976	56.8	56.7	*59.0	61.1	*53.3	*50.9	*58.0	46.3	*63.9
1977	57.9	56.6	58.5	61.2	53.2	*51.0	*57.9	46.3	63.9
1978	59.4	57.4	57.3	61.3	*53.1	*51.0	*57.8	46.3	64.0

* Revisions of the estimates published in Bulletin 1979.

¹ Civilian employment approximating U.S. concepts as a percent of the civilian working age population. The data relate to persons 16 and over in the United States, France, and Sweden; 15 and over in Canada, Australia, Japan, and Germany; and 14 and over in Italy. For Great Britain, the lower age limit was raised from 15 to 16 in 1973.

² Preliminary estimate.

Senator SARBANES. Is there a study here—do you have a bulletin which sets out what new, young entrants into the labor force can anticipate in terms of the chances of getting a job?

Ms. NORWOOD. We have a program of occupational outlook which looks at various occupations and tries to explain them—the conditions of employment and some of the outlook for those occupations over the next 10 or 15 years. We also do some work involving specific occupations. And then we have a quarterly publication which looks at

special kinds of issues. It is oriented toward young people. These materials are used to a large extent by guidance people and high schools and traditional educators.

Senator SARBANES. I want to go back to the deterioration in the unemployment rate in 1974 and 1975 at that rapid pace. Is it your experience in the past that, as unemployment worsens, it does so gradually, or in these real leaps? In other words, it was going at one-half percent to 1 percent a month, month to month, at certain times in the period which you have just outlined for us.

Ms. NORWOOD. Obviously, once the economy turns into a clear recession and begins going down, generally in the past the unemployment rate has gone up. But that increase has edged up and then it has gone up more sharply. But that, too, is something we can look at in terms of the number of months it took to really take off and change.

Senator SARBANES. Thank you, Senator Proxmire.

Senator PROXMIRE. Would the 8.2-percent unemployment be the worst that we have had in any recession since the Great Depression, with the exception of 1973-75?

Ms. NORWOOD. Yes, sir.

Senator PROXMIRE. What would be the next level, the next highest level we have had?

Mr. STEIN. In 1958 we went as high as 7.5 percent.

Senator PROXMIRE. This would be, by a considerable margin, the worst recession we've had since the depression, with the exception of the 1973-75.

How about the inflation rate that was predicted? What was it; 11.8? How would that compare with any year we have had in the past? Have we had worst years than that?

Mr. LAYNG. 1973-74 was worse.

Senator PROXMIRE. How high was the inflation rate in 1973-74?

Mr. LAYNG. It got up to 15 percent.

Senator PROXMIRE. I mean for any one year. I'm just talking about for the whole year. I don't mean the peak.

Mr. LAYNG. I think it was about the same.

Senator PROXMIRE. About 11.8?

Mr. LAYNG. It was 12.2 percent in December 1974.

Senator PROXMIRE. So on that basis, for a year this would be the worst inflation, the worst we've ever had, and the second worst unemployment level we've ever had, for 1979.

Now let me ask you about an ingredient of that figure, the mortgage interest rate. We have gotten a lot of criticism—in fact, I got it from the Chairman of the Council of Economic Advisers, from Mr. Kahn—saying that the Consumer Price Index is just very inaccurate and distorted badly by the fact that when the mortgage interest rate goes up, it is reflected as an increased cost for everybody who has a mortgage in the whole country, although, of course, only a tiny proportion of those people have to pay the high rate. Most people would, of course, pay the same mortgage rate they've paid for years.

In my case, I've had a mortgage on my house for a number of years, and most Americans have had.

So, what is the justification for that distortion, and why can't we do something about it?

Ms. NORWOOD. The issue is one of concept. And you will recall that I did discuss that in my statement. I know that you wrote me about that and Senator Bentsen also. We are replying to those letters. But the basic issue is the question of what it is we are measuring. The current approach to the measurement of house prices in the index assumes that a consumer buys a house and that that is what is represented, the price of that house and the mortgage interest that he contracts for at the time he enters into that purchase.

The issue that Mr. Kahn and Mr. Schultze have raised is an issue that the Bureau of Labor Statistics staff raised in 1972, and that is whether, rather than measuring the purchase price of a house, since the house is a durable good that is used over a very long period of time—it is not quite like buying oranges or apples, which are consumed very rapidly—it would be wiser to include in the index a concept which measures the cost of the shelter or the flow of the services provided to a consumer from the house.

The basic issue, I believe, is that consumers, particularly in a period of increasing rates of inflation, have two elements entering into the purchase of a house: One is that it is usually a good investment; and the other is that they want to live in their own home. The flow of services approach would be directed toward separating out the consumption aspect, which should be represented in the index, from the investment aspect, which should not, in our view, be reflected in the index.

The difficulty that we had was that there is some disagreement about the concept itself, but there is even more disagreement about the procedure for implementing such a concept in terms of the actual measurement of it. And we ourselves saw some problems with the estimation procedure.

Senator PROXMIRE. I hope you are still working on it.

I have to go, unfortunately, because that is the last 5 minutes of the buzzer.

I thank you once again for a fine job. Thank you very much.

The committee will stand adjourned.

[Whereupon, at 11:20 a.m., the committee adjourned, subject to the call of the Chair.]

EMPLOYMENT-UNEMPLOYMENT

FRIDAY, SEPTEMBER 7, 1979

CONGRESS OF THE UNITED STATES,
JOINT ECONOMIC COMMITTEE,
Washington, D.C.

The committee met, pursuant to notice, at 10 a.m., in room 1202, Dirksen Senate Office Building, Hon. Lloyd Bentsen (chairman of the committee) presiding.

Present: Senators Bentsen and Javits; and Representative Wylie.

Also present: John M. Albertine, executive director; William R. Buechner and M. Catherine Miller, professional staff members; Katie McArthur, press assistant; and Mark R. Policinski and Carol A. Corcoran, minority professional staff members.

OPENING STATEMENT OF SENATOR BENTSEN, CHAIRMAN

Senator BENTSEN. The committee will come to order. I have said it before and I will say it again, particularly with the unemployment figures that will be reported this morning, we need a tax cut and continued delay in facing up to that need will only throw more people out of work.

Unemployment in this country last month rose dramatically from 5.7 percent to 6 percent. The number of jobs decreased by 310,000. Over the past 2 months the unemployment rate shot up by four-tenths of a percent. We are starting to feel the effects of the recession and unfortunately it will get worse before it gets better.

Since June I have been calling for a tax cut of about \$20 billion, half of it going to individuals and half to the supply side to modernize the productive capacity of this country. The latter will keep from having our jobs exported overseas and help fight inflation.

I realize that many of my colleagues have been hesitant to support a tax cut because we face not only unemployment but inflation as well. And inflation indeed is a serious problem. The finished goods index of the Producer Price Index released today shows prices going up 15.4 percent annually.

But I am not calling for the traditional response to this recession. We shouldn't try to spend our way out of it. The solution is not more spending on new government programs. And I am not talking about the traditional tax cut but a new approach to help fight this recession. I am talking about a tax cut that not only will not add to inflation but will help curb inflation.

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I am talking about the supply side tax cuts that will help combat the current recession and also help moderate inflation by increasing productivity in this country. Sooner or later, as the unemployment increases of the past 2 months continue, sooner or later Congress is going to enact a tax cut. And it should be done sooner.

We must not repeat the mistake of the 1974 recession. In that case a tax cut was enacted later, after much foot-dragging and indecision. It didn't contribute to the solution. It just added to the problem. By the time that tax cut went into effect on May 1, 1975, the recession had already ended.

Late timing on that tax cut unnecessarily cost a lot of Americans their jobs. Late timing on that tax cut boosted the rate of inflation because it kicked in when the economy was already moving upward.

Today, as in 1974, we are confronted by a classic case of stagflation. Both unemployment and inflation are on the increase. And we cannot rely on the tired old solutions to fight this problem. We need a different approach, a fresh approach and supply side tax cuts are the key.

Commissioner Norwood, we are pleased to have you this morning and we certainly await with interest your report.

STATEMENT OF HON. JANET L. NORWOOD, COMMISSIONER, BUREAU OF LABOR STATISTICS, DEPARTMENT OF LABOR, ACCOMPANIED BY ROBERT L. STEIN, ASSISTANT COMMISSIONER, OFFICE OF CURRENT EMPLOYMENT ANALYSIS; AND W. JOHN LAYNG, ASSISTANT COMMISSIONER, OFFICE OF PRICES AND LIVING CONDITIONS

Ms. Norwood. Thank you, Mr. Chairman. I am glad to have this opportunity to offer the Joint Economic Committee a few brief comments to supplement our Employment Situation and the Producer Price Index press releases, issued this morning.

The employment situation showed signs of weakening between July and August as changes in the major labor market indicators were more clearcut than in previously months. Total employment as measured by the household survey fell by about 300,000 and the unemployment rate moved up from 5.7 percent in July to 6 percent in August.

The civilian labor force was unchanged over the month, confirming the prior evidence of the slowdown in labor force growth. Although the total number of employees on payrolls of nonfarm establishments remained at the July level, there was a further decline in factory employment and in the factory workweek.

Aggregate hours of manufacturing production workers have declined by nearly 4 percent since March. Small job cutbacks occurred in several manufacturing industries but the reductions were substantial in the automobile industry.

Because seasonal adjustment of data for the automobile industry is especially difficult in the summer months when model changeovers usually take place, the seasonally adjusted employment totals reported today for the transportation equipment industry may be somewhat overstated.

Payroll jobs in the automobile industry have declined by nearly 200,000 and on a not-seasonal adjusted basis since May, partly because of model changeovers but also because of weakening sales and schedule production cutbacks at some plants.

The jobless rate for auto workers rose from 4 percent in May to nearly 14 percent in August as the rate for workers in manufacturing rose from 5.4 to 6.2 percent over the same period. In addition to the decline in factory jobs, employment in construction fell in August following a 3-month uptrend from April to July.

The cutbacks in goods-producing industries were offset by gains of about 150,000 jobs in the service-producing industries. The August data showed that first statistically significant increase in overall unemployment since July 1978, when the rate recorded a 1-month rise of three-tenths of a point to 6.1 percent; during the entire following year the rate remained in a narrow range close to 5.8 percent.

Over the past 2 months, there has been an increase of nearly 400,000 in the number of unemployed persons, mostly adult men. Since these were primarily job losers rather than labor force entrants, the increase was reflected in the addition of more than 300,000 workers to the State unemployment rolls. Thus far the increase in unemployment has been essentially limited to white workers.

The civilian labor force remained steady in August. Its growth rate during recent months has been moderate, compared to rapid expansion which took place over the past several years.

Since March of this year, the labor force increased by only 335,000, compared with an unusually rapid 1.6 million growth in the previous 5 months. We don't yet have enough information to know to what extent this slowdown may reflect economic developments, a change in the secular growth patterns or merely a temporary pause.

When we look separately at adult men, adult women, and teenagers, the three major demographic groups, we see the participation rate for adult women continued to rise since March, reaching a record high of 51 percent in August. The labor force participation for adult men, which had risen six-tenths of a point in the 5-month period ending in March, dropped four-tenths of a point in the followup 5 months. Teenage participation, which had been slowing down over the past year, fell further in August.

PRICES

The Producer Price Index released today indicates that prices of finished goods at the producer level continued to increase sharply in August. The 1.2-percent rise was the second large rise following a brief slowdown in May and June.

Food prices at the producer level turned around in August, increasing 1.2 percent as fruit and vegetable prices increased sharply and prices accelerated in several other product areas.

Energy products continued to increase sharply with prices of gasoline and home heating oil each moving up about 6 percent. Prices of passenger cars, however, declined with larger than usual yearend discounting. Discounting was expanded into September and should lead to further reductions in prices of automobiles.

Prices of capital equipment also moved up more slowly in August. The one-tenth-percent rise was the smallest since January 1973. At the intermediate or semifinished stage of production, prices continued to increase, though at a more moderate pace, but prices of fuels continued to rise sharply.

Both residual fuel oil and commercial jet fuel increased more than 12 percent, and diesel fuel prices increased more than 8 percent. Prices for most other semifinished goods increased at a somewhat more moderate rate in August. Overall prices of intermediate materials other than food and energy increased nine-tenths percent in August, compared with a 1.3-percent rise in July.

The slowdown was in products such as steelmill products and other metals, industrial chemicals, plastic materials, and synthetic rubber. Construction material prices continued to increase moderately. Prices of crude materials also moderated in August. The increase of one-tenth percent was much less than July's rise of 1.8 percent.

The deceleration occurred both in crude foodstuffs and feedstuffs, and in other crude material. At the retail level, prices continued to increase sharply in July. Prices of energy and housing items led the rise.

August consumer pricing data will not be released until later this month. The producer price data released today suggests that no substantial improvement in prices of consumer goods occurred in August. Food prices increased at the producer level after recording no increase in July, and prices of energy goods continued to rise sharply.

Consumer prices of passenger cars should reflect the decline at the producer level. Most of the other improvements in producer prices occurred at earlier stages of production, which if sustained will take several months before they are reflected in the Consumer Price Index.

In summary, the labor market data released by BLS today reinforces the signals of weakening economic performance for many other statistical series.

Unemployment rose as the number of workers on layoff increased. Factory employment declined in August, and aggregate hours dropped in a large number of goods-producing industries.

Productivity performance has been poor. Recent data suggest that employers reduced working hours and are showing signs of paring employment.

Prices continue to escalate in the double-digit range, and real wages declined.

We will now be glad to answer any questions you may have. [The table attached to Ms. Norwood's statement, together with the Employment Situation and the Producer Price Index press releases referred to, follows:]

UNEMPLOYMENT RATES BY ALTERNATIVE SEASONAL ADJUSTED METHODS

Month and year	Unadjusted rate	Standard X-11 method				X-11 ARIMA method			Range (cols. 2-8)
		Official	Concurrent	Stable	Total	Residual	Extrapolated	Concurrent	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1978									
August.....	5.8	5.9	5.9	5.9	5.9	6.0	5.9	5.9	0.1
September.....	5.7	5.9	5.9	5.9	5.9	6.0	5.9	5.9	.1
October.....	5.4	5.8	5.8	5.8	5.8	5.9	5.8	5.8	.1
November.....	5.5	5.8	5.8	5.8	5.7	5.8	5.8	5.8	.1
December.....	5.6	5.9	5.9	6.0	5.8	6.0	5.9	5.9	.2
1979									
January.....	6.4	5.8	5.8	5.8	5.7	5.5	5.8	5.8	.2
February.....	6.4	5.7	5.7	5.7	5.7	5.5	5.7	5.8	.3
March.....	6.1	5.7	5.7	5.8	5.7	5.6	5.7	5.7	.3
April.....	5.5	5.8	5.8	5.7	5.7	5.8	5.8	5.8	.1
May.....	5.2	5.8	5.8	5.8	5.8	5.9	5.8	5.7	.2
June.....	6.0	5.6	5.7	5.5	5.7	5.6	5.6	5.7	.2
July.....	5.8	5.7	5.7	5.6	5.8	5.7	5.7	5.7	.2
August.....	5.9	6.0	5.9	5.9	6.0	6.1	6.0	5.9	.2

Source: U.S. Department of Labor, Bureau of Labor Statistics, August 1979.

NOTES TO TABLE COLUMN NUMBERS

(1) Unadjusted rate—Unemployment rate not seasonally adjusted.

(2) Official rate (standard X-11 method)—The published seasonally adjusted rate. Each of the 3 major labor force components—agricultural employment, nonagricultural employment and unemployment data—for 4 age-sex groups (males and females under and over 20 years of age) are separately adjusted then added to derive seasonally adjusted total figures. Teenage unemployment and nonagricultural employment are adjusted by the standard X-11 method's additive option, while all other series are adjusted by the multiplicative option. Adult male unemployment is adjusted multiplicatively using the prior trend adjustment feature of the X-11. The rate is computed by adding the 12 components to a civilian labor force total, and dividing and derived civilian labor force into the unemployment total. These series are revised at the end of each year. Factors for the current year are computed at the beginning of the year for the 12 succeeding months, and published in advance.

The current "implicit" factors for the overall unemployment rate, derived by dividing the original unemployment rate by the seasonally adjusted rate for the months of 1978, are: January (111.1), February 112.0, March 106.7, April 94.6, May 89.5, June (105.6), July (102.1), August 98.5, September 97.3, October 93.1, November 95.7, December 95.5.

(3) Concurrent (standard X-11 method)—The procedure for computation of the official rate is followed, except that the data are re-seasonally adjusted by the standard X-11 method each month as the most recent data become available, i.e., the rate for January 1979 is based on adjustment of data for the period January 1967–January 1979. The rates for the current year are shown as first computed, while data for 1978 are as revised to incorporate experience through December 1978.

(4) Stable (standard X-11 method)—The stable seasonal option of the standard X-11 method uses final seasonal factors computed as a unweighted average of all seasonal-irregular ratios for the entire span of the period, January 1967–December 1978. In essence, this procedure assumes that seasonal patterns are relatively constant from year-to-year. The unweighted average is updated and series revised at the end of each year.

(5) Total (standard X-11 method)—This is an alternative aggregation procedure, in which total unemployment and labor force levels are directly adjusted by the standard X-11 (multiplicative option) to derive the rate. The series are revised at the end of each year.

(6) Residual (standard X-11 method)—The labor force and employment levels are adjusted directly, with the level of unemployment derived as a residual. The rate is computed by dividing the residual unemployment level by the directly adjusted civilian labor force. The series are revised at the end of each year.

(7) Extrapolated (X-11 ARIMA method)—Data for the 12 component groups of the unemployment rate are estimated using ARIMA (autoregressive, integrated, moving average) models. The enlarged series is then seasonally adjusted with the X-11 program, and the rates are computed as in the official procedure. The series are revised at the end of each year. Factors for the current year are extrapolated at the beginning of the year for the 12 succeeding months.

(8) Concurrent (X-11 ARIMA)—The procedure for computation of the X-11 ARIMA rate is followed, except that the data are re-seasonally adjusted each month as the most recent data become available, i.e., the rate for January 1979 is based on adjustment of data for the period, January 1967–January 1979. The rates for the current year are shown as first computed, while data for 1978 are revised to reflect experience through December 1978.

Methods of Adjustment—The standard X-11 method was developed by Julius Shiskin at the Bureau of the Census. The method is described in X-11 Variant of the Census Method II seasonal Adjustment Program, by Julius Shiskin, Alan Young, and John Musgrave, (Technical Paper No. 15, Bureau of the Census, 1967).

The X-11 ARIMA method was developed at Statistic Canada by Estela Bee Dagum and is the official method for seasonally adjusting the Canadian labor force series. A general description of the method is contained in A Comparison and Assessment of Seasonal Adjustment Methods, for Employment and Unemployment Statistics, by Estela Bee Dagum (Background Paper No. 5, U.S. National Commission on Employment and Unemployment Statistics, February 1978).

News

United States
Department
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USDL 79-640

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EMBARGOED UNTIL 9:00 A.M. (EDT), FRIDAY,
SEPTEMBER 7, 1979

THE EMPLOYMENT SITUATION: AUGUST 1979

Unemployment rose in August and total employment declined, the Bureau of Labor Statistics of the U.S. Department of Labor reported today. The Nation's overall unemployment rate was 6.0 percent, up from 5.7 percent in July.

Total employment--as measured by the monthly survey of households--fell by 310,000 in August to 96.9 million. Employment has shown no growth over the March-August period, and the proportion of the population with jobs declined three-tenths of a percentage point to 59.1 percent over the same span.

Nonfarm payroll employment--as measured by the monthly survey of establishments--held at the July level of 88.8 million, as declines in the manufacturing and construction industries were offset by increases in the service-producing sector.

Unemployment

The unemployment rate rose from 5.7 to 6.0 percent in August; during the prior 12-month period, the rate had fluctuated narrowly around 5.8 percent. The number of persons unemployed also increased over the month, from 5.8 to 6.1 million. Much of this increase was due to a sharp jump in the number of persons on layoff. (See tables A-1 and A-5.)

July-August increases in joblessness among the major demographic groups were uneven. The unemployment rate for adult men (4.2 percent) was little changed over the month, though it was up three-tenths of a percentage point from June. The jobless rate for adult women rose from 5.5 percent in July to 5.9 percent in August, and the teenage rate increased from 15.3 to 16.5 percent. Whereas there was virtually no change in the rate for black and other workers (11.0 percent), the rate for white workers rose from 4.9 to 5.3 percent. (See table A-2.)

The median duration of unemployment fell by more than a full week to 4.9 weeks, reflecting a sizeable increase in the number of the newly unemployed (persons who have been seeking jobs for less than 5 weeks). There was also an increase in long-term joblessness (15 weeks and longer) over the month. (See table A-4.)

Total Employment and the Labor Force

Total employment declined by 310,000 in August to 96.9 million; this reduction was concentrated among teenagers. Despite substantial fluctuations in the 5 months since March, employment in August was at about the level prevailing in March. Because of the steady upward trend prior to March, employment showed strong growth over the past year (2.1 million), with all major demographic groups sharing in the advance.

The civilian labor force, at 103.0 million, was unchanged over the month, but it was 2.3 million higher than its year-ago level. While the overall labor force participation rate, at

Table A. Major indicators of labor market activity, seasonally adjusted

Selected categories	Quarterly averages					Monthly data		
	1978			1979		1979		
	II	III	IV	I	II	June	July	Aug.
HOUSEHOLD DATA								
	Thousands of persons							
Civilian labor force.....	100,127	100,753	101,524	102,475	102,295	102,528	103,059	103,049
Total employment.....	94,099	94,726	95,616	96,596	96,415	96,754	97,210	96,900
Unemployment.....	6,028	6,027	5,908	5,878	5,880	5,774	5,848	6,149
Not in labor force.....	58,478	58,482	58,398	58,095	58,886	58,865	58,545	58,752
Discouraged workers.....	851	853	760	724	826	N.A.	N.A.	N.A.
	Percent of labor force							
Unemployment rates:								
All workers.....	6.0	6.0	5.8	5.7	5.7	5.6	5.7	6.0
Adult men.....	4.2	4.1	4.0	4.0	3.9	3.9	4.1	4.2
Adult women.....	6.1	6.1	5.8	5.7	5.7	5.8	5.5	5.9
Teenagers.....	16.1	16.1	16.3	15.8	16.2	15.3	15.3	16.5
White.....	5.2	5.2	5.1	5.0	4.9	4.9	4.9	5.3
Black and other.....	12.1	11.7	11.5	11.4	11.6	11.3	10.8	11.0
Full-time workers.....	5.5	5.5	5.2	5.2	5.2	5.1	5.3	5.4
	ESTABLISHMENT DATA							
	Thousands of jobs							
Nonfarm payroll employment.....	85,677	86,115	86,963	87,868	88,517	88,764	88,813p	88,815p
Goods-producing industries.....	25,376	25,478	25,857	26,241	26,402	26,433	26,441p	26,286p
Service-producing industries.....	60,302	60,637	61,106	61,628	62,115	62,331	62,372p	62,529p
	Hours of work							
Average weekly hours:								
Total private nonfarm.....	36.0	35.8	35.9	35.8	35.6	35.7	35.6p	35.6p
Manufacturing.....	40.6	40.4	40.6	40.7	39.8	40.1	40.2p	40.0p
Manufacturing overtime.....	3.6	3.5	3.7	3.8	3.1	3.2	3.3p	3.3p
p=preliminary					N.A.=not available			

63.7 percent, was little changed from the July level, participation among adult men and teenagers declined, whereas the rate for adult women rose to 51.0 percent, a record high.

Industry Payroll Employment

Nonfarm payroll employment was unchanged in August at 88.8 million, marking the third straight month that the total has been at this level. Payroll employment had been on a relatively steady upward course prior to March, such that the over-the-year growth (August 1978-79) was a strong 2.6 million. Over-the-month job gains took place in 52 percent of the 172 industries comprising the BLS diffusion index of nonfarm payroll employment. (See tables B-1 and B-6.)

Employment in the goods-producing sector was down by 155,000 from July, as declines of 50,000 in construction and 125,000 in manufacturing overshadowed a gain in mining. Within the durable goods industries, employment reductions of 30,000 in electrical equipment and 10,000 in machinery both were principally the result of strikes; there were also declines of 15,000 in primary metals and 10,000 in the fabricated metals industry. There is also substantial evidence that employment dropped in the automobile industry; however, difficulties in the seasonal adjustment of the employment totals in the transportation equipment industry relating to model changeover make it hard to identify the extent of this drop at this time. Among the nondurable goods industries, decreases of about 20,000 each were registered in the food processing, apparel, and rubber and plastic products industries. Total factory employment has dropped by about 225,000 since March; this weakness in factory employment was also reflected in an increase in the unemployment rate for workers in this industry since March, from 5.2 to 6.2 percent.

Employment in the service-producing sector rose by 155,000 in August, led by a 75,000 increase in services. Job gains also took place in trade, State and local government, and finance, insurance, and real estate.

Hours

Hours of work remained below March levels. The average workweek of production or nonsupervisory workers on private nonagricultural payrolls was 35.6 hours in August, unchanged from July. The manufacturing workweek declined 0.2 hour over the month to a level of 40.0 hours, while factory overtime, at 3.3 hours, was unchanged from July. (See table B-2.)

The index of aggregate weekly hours declined by 0.3 percent in August. Although the index was up .2.7 percent from August 1978, it has dropped by 0.8 percent since March. (See table B-5.)

Hourly and Weekly Earnings

Average hourly earnings of production or nonsupervisory workers on private nonagricultural payrolls rose 0.2 percent in August and were 8.0 percent above the August 1978 level (seasonally adjusted). Average weekly earnings also rose 0.2 percent in August and were up 7.4 percent over the year.

Before adjustment for seasonality, average hourly earnings edged up 1 cent from July to \$6.16, 45 cents above August 1978; average weekly earnings were \$221.76 in August, up 36 cents from July and \$15.06 over the year. (See table B-3.)

The Hourly Earnings Index

The Hourly Earnings Index--earnings adjusted for overtime in manufacturing, seasonality, and the effects of changes in the proportion of workers in high-wage and low-wage industries--was 231.0 (1967=100) in August, 0.2 percent higher than in July. The index was 7.6 percent above August a year ago. During the 12-month period ended in July, the Hourly Earnings Index in dollars of constant purchasing power decreased 3.4 percent. (See table B-4.)

Explanatory Note

This release presents and analyzes statistics from two major surveys. Data on labor force, total employment, and unemployment (A tables) are derived from the Current Population Survey—a sample survey of households which is conducted by the Bureau of the Census for the Bureau of Labor Statistics. Beginning in September 1975, the sample was enlarged by 9,000 households in order to provide greater reliability for smaller States and thus permit the publication of annual statistics for all 50 States and the District of Columbia. These supplementary households were added to the 47,000 national household sample in January 1978; thus the sample now consists of about 56,000 households selected to represent the U.S. civilian noninstitutional population 16 years and over.

Statistics on nonagricultural payroll employment, hours, and earnings (B tables) are collected by the Bureau of Labor Statistics, in cooperation with State agencies, from payroll records of a sample of approximately 165,000 establishments. Unless otherwise indicated, data for both statistical series relate to the week containing the 12th day of the specified month.

Comparability of household and payroll employment statistics

Employment data from the household and payroll surveys differ in several basic respects. The household survey provides information on the labor force activity of the entire civilian noninstitutional population, 16 years of age and over, without duplication. Each person is classified as either employed, unemployed, or not in the labor force. The household survey counts employed persons in both agriculture and nonagricultural industries and, in addition to wage and salary workers (including private household workers), counts the self-employed, unpaid family workers, and persons "with a job but not at work" and not paid for the period absent.

The payroll survey relates only to paid wage and salary employees (regardless of age) on the payrolls of nonagricultural establishments. Persons who worked at more than one job during the survey week or otherwise appear on more than one payroll are counted more than once in the establishment survey. Such persons are counted only once in the household survey and are classified in the job at which they worked the greatest number of hours.

Unemployment

To be classified in the household survey as unemployed an individual must: (1) Have been without a

job during the survey week; (2) have made specific efforts to find employment sometime during the prior 4 weeks; and (3) be presently available for work. In addition, persons on layoff and those waiting to begin a new job (within 30 days), neither of whom must meet the jobseeking requirements, are also classified as unemployed. The unemployed total includes all persons who satisfactorily meet the above criteria, regardless of their eligibility for unemployment insurance benefits or any kind of public assistance. The unemployment rate represents the unemployed as a proportion of the civilian labor force (the employed and unemployed combined).

The Bureau regularly publishes a wide variety of labor market measures. See, for example, the demographic, occupational, and industry detail in tables A-2 and A-3 of this release and the comprehensive data package in Employment and Earnings each month. A special grouping of seven unemployment measures is set forth in table A-7. Identified by the symbols U-1 through U-7, these measures represent a range of possible definitions of unemployment and of the labor force—from the most restrictive (U-1) to the most comprehensive (U-7). The official rate of unemployment appears as U-5.

Seasonal adjustment

Nearly all economic phenomena are affected to some degree by seasonal variations. These are recurring, predictable events which are repeated more or less regularly each year—changes in weather, opening and closing of schools, major holidays, industry production schedules, etc. The cumulative effects of these events are often large. For example, on average over the year, they explain about 95 percent of the month-to-month variance in the unemployment figures. Since seasonal variations tend to be large relative to the underlying cyclical trends, it is necessary to use seasonally-adjusted data to interpret short-term economic developments. At the beginning of each year, seasonal adjustment factors for unemployment and other labor force series are calculated for use during the entire year, taking into account the prior year's experience.

All seasonally-adjusted civilian labor force and unemployment rate statistics, as well as the major employment and unemployment estimates, are computed by aggregating independently adjusted series. The official unemployment rate for all civilian workers is derived by dividing the estimate for total unem-

ployment (the sum of four seasonally-adjusted age-sex components) by the civilian labor force (the sum of 12 seasonally-adjusted age-sex components).

For establishment data, the seasonally-adjusted series for all employees, production workers, average weekly hours, and average hourly earnings are adjusted by aggregating the seasonally-adjusted data from the respective component series. These data are also revised annually, often in conjunction with benchmark (comprehensive counts of employment) adjustments. (The most recent revision of seasonally-adjusted data was based on data through May 1978.)

Sampling variability

Both the household and establishment survey statistics are subject to sampling error, which should be taken into account in evaluating the levels of a series as well as changes over time. Because the household survey is based upon a probability sample, the results may differ from the figures that would be obtained if it were possible to take a complete census using the same questionnaires and procedures. The standard error is the measure of sampling variability, that is, of the variation that occurs by chance because a sample rather than the entire population is surveyed. The chances are about 68 out of 100 that an estimate from the survey differs from a figure that would be obtained through a complete census by less than the standard error. Tables A through I in the "Explanatory Notes" of Employment and Earnings provide approximations of the standard errors for unemployment and other labor force categories. To obtain a 90-percent level of confidence, the confidence interval generally used by BLS, the errors should be multiplied by 1.6. The following examples provide an indication of the magnitude of sampling error: For a monthly change in total em-

ployment, the standard error is on the order of plus or minus 182,000. Similarly, the standard error on a change in total unemployment is approximately 115,000. The standard error on a change in the national unemployment rate is 0.12 percentage point.

Although the relatively large size of the monthly establishment survey assures a high degree of accuracy, the estimates derived from it also may differ from the figures obtained if a complete census using the same schedules and procedures were possible. However, since the estimating procedures utilize the previous month's level as the base in computing the current month's level of employment (link-relative technique), sampling and response errors may accumulate over several months. To remove this accumulated error, the employment estimates are adjusted to new benchmarks (comprehensive counts of employment), usually on an annual basis. In addition to taking account of sampling and response errors, the benchmark revision adjusts the estimates for changes in the industrial classification of individual establishments. Employment estimates are currently projected from March 1977 levels.

One measure of the reliability of the employment estimates for individual industries is the root-mean-square error (RMSE). The RMSE is the standard deviation adjusted for the bias in estimates. If the bias is small, the chances are about 68 out of 100 that an estimate from the sample would differ from its benchmark by less than the RMSE. For total nonagricultural employment, the RMSE is on the order of plus or minus 81,000. Measures of reliability (approximations of the RMSE) for establishment-survey data and actual amounts of revision due to benchmark adjustments are provided in tables K through P in the "Explanatory Notes" of Employment and Earnings.

Chart 1. Civilian labor force and employment
(Seasonally adjusted)

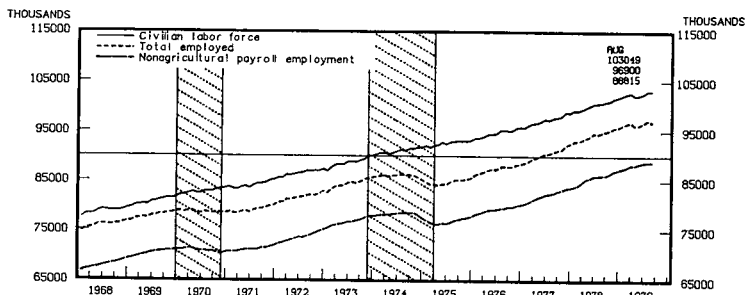


Chart 2. Unemployment rate--all civilian workers

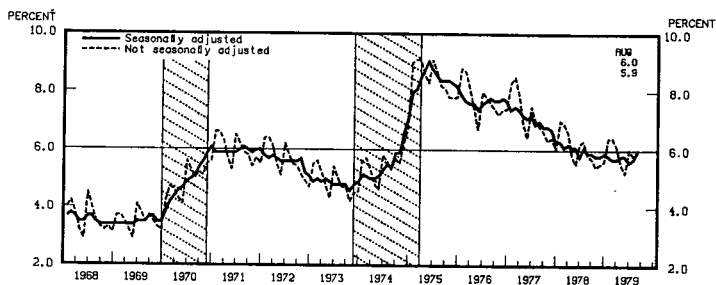
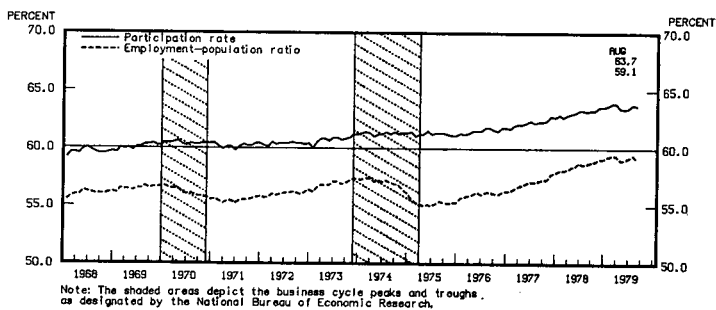


Chart 3. Civilian labor force participation rate
and total employment--population ratio
(Seasonally adjusted)



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Table A-1. Employment status of the noninstitutional population

(Dancers in thousands)

Employment status	Not seasonally adjusted			Seasonally adjusted					
	Aug. 1978	July 1979	Aug. 1979	Aug. 1978	Apr. 1979	May 1979	June 1979	July 1979	Aug. 1979
TOTAL									
Total noninstitutional population ¹	161,388	163,685	163,891	161,388	163,000	163,260	163,469	163,645	163,891
Armed Forces ²	2,122	2,082	2,070	2,122	2,082	2,070	2,076	2,082	2,090
Civilian noninstitutional population ¹	159,226	161,604	161,801	159,226	160,926	161,161	161,393	161,604	161,801
Civilian labor force	102,067	104,995	104,363	100,663	102,111	102,247	102,528	103,059	103,049
Participation rate	68.1	65.0	64.5	63.2	63.5	63.4	63.5	63.8	63.7
Employed	96,116	98,891	98,226	94,723	96,174	96,318	96,756	97,210	96,900
Employment-population ratio ³	59.6	60.4	59.9	58.7	59.0	59.0	59.2	59.4	59.1
Agriculture	3,856	3,857	3,795	3,351	3,186	3,188	3,240	3,262	3,322
Nonagricultural industries	92,261	95,034	94,431	91,372	92,987	93,130	93,498	93,949	93,578
Unemployed	5,931	6,108	6,137	5,940	5,937	5,929	5,774	5,848	6,149
Unemployment rate	5.8	5.8	5.9	5.9	5.8	5.8	5.6	5.7	6.0
Not in labor force	57,179	56,609	57,438	58,563	58,815	58,935	58,665	58,545	58,752
Men, 20 years and over									
Total noninstitutional population ¹	68,827	69,995	70,099	68,827	69,663	69,787	69,889	69,995	70,099
Civilian noninstitutional population ¹	67,127	68,319	68,417	67,127	67,997	68,123	68,227	68,319	68,417
Civilian labor force	53,903	55,101	55,020	53,396	54,243	54,261	54,395	54,627	54,527
Participation rate	80.3	80.7	80.4	79.5	79.7	79.7	79.7	79.7	79.7
Employed	51,887	52,966	52,895	51,215	52,056	52,157	52,299	52,319	52,227
Employment-population ratio ³	75.4	75.7	75.9	74.4	74.7	74.7	74.8	74.3	74.5
Agriculture	2,525	2,520	2,554	2,357	2,271	2,274	2,296	2,323	2,385
Nonagricultural industries	49,362	50,446	50,341	48,858	49,785	49,887	49,993	49,996	49,843
Unemployed	2,015	2,138	2,129	2,181	2,187	2,105	2,086	2,249	2,200
Unemployment rate	3.7	3.9	3.9	4.1	4.0	3.9	3.9	4.1	4.2
Not in labor force	13,225	13,218	13,397	13,731	13,754	13,662	13,632	13,752	13,890
Women, 20 years and over									
Total noninstitutional population ¹	75,751	77,014	77,127	75,753	76,645	74,782	76,966	77,014	77,127
Civilian noninstitutional population ¹	75,645	76,897	77,006	75,645	76,532	76,670	76,788	76,897	77,006
Civilian labor force	36,919	38,214	38,647	37,543	38,345	38,560	38,596	39,010	39,292
Participation rate	48.8	49.7	50.2	50.1	50.3	50.3	50.3	50.7	51.0
Employed	34,546	36,045	36,174	36,174	36,165	36,323	36,373	36,861	36,960
Employment-population ratio ³	45.6	46.8	46.9	46.6	47.2	47.3	47.3	47.9	47.9
Agriculture	648	749	712	581	580	543	592	584	596
Nonagricultural industries	33,898	35,297	35,462	35,731	35,588	35,780	35,781	36,276	36,371
Unemployed	2,373	2,169	2,473	2,231	2,180	2,237	2,223	2,150	2,324
Unemployment rate	6.4	5.7	6.4	5.9	5.7	5.8	5.8	5.5	5.9
Not in labor force	36,726	38,683	38,359	38,102	38,187	38,110	38,108	37,687	37,714
Both sexes, 16-19 years									
Total noninstitutional population ¹	16,768	16,677	16,665	16,768	16,700	16,692	16,688	16,677	16,665
Civilian noninstitutional population ¹	16,455	16,387	16,377	16,455	16,397	16,389	16,381	16,387	16,377
Civilian labor force	11,226	11,680	10,496	9,724	9,523	9,426	9,537	9,481	9,230
Participation rate	68.2	71.3	65.3	59.1	58.1	57.5	58.2	57.9	56.4
Employed	9,683	9,879	9,157	8,196	7,953	7,839	8,082	8,031	7,705
Employment-population ratio ³	57.7	59.2	54.9	48.9	47.6	47.0	48.4	48.2	46.2
Agriculture	637	589	529	413	335	369	382	355	381
Nonagricultural industries	9,046	9,290	8,628	7,783	7,618	7,471	7,720	7,676	7,324
Unemployed	1,542	1,801	1,539	1,528	1,570	1,587	1,495	1,450	1,525
Unemployment rate	13.7	15.8	16.4	15.7	16.5	16.8	15.3	15.3	16.5
Not in labor force	5,229	4,707	5,681	6,731	6,874	6,963	6,844	6,906	7,147
Whites									
Total noninstitutional population ¹	181,520	183,303	183,461	181,520	182,773	182,978	183,137	183,303	183,461
Civilian noninstitutional population ¹	139,817	141,661	141,322	139,817	141,123	141,331	141,492	141,661	141,822
Civilian labor force	89,773	92,105	91,742	88,655	89,923	90,018	90,279	90,554	90,662
Participation rate	64.2	65.1	64.7	63.4	63.7	63.7	63.8	63.9	63.9
Employed	85,256	87,407	86,995	84,060	85,479	85,515	85,871	86,093	85,829
Employment-population ratio ³	60.2	61.1	60.6	59.4	59.9	59.9	60.0	60.1	59.8
Unemployed	4,517	4,578	4,747	4,595	4,444	4,503	4,409	4,460	4,833
Unemployment rate	5.0	5.0	5.2	5.2	4.9	5.0	4.9	4.9	5.2
Not in labor force	50,044	49,475	50,080	51,162	51,200	51,313	51,213	51,107	51,161
Black and other									
Total noninstitutional population ¹	19,828	20,382	20,431	19,828	20,234	20,282	20,331	20,382	20,431
Civilian noninstitutional population ¹	19,409	19,943	19,979	19,409	19,802	19,850	19,901	19,943	19,979
Civilian labor force	12,275	12,810	12,621	11,994	12,175	12,176	12,272	12,364	12,340
Participation rate	63.2	64.2	63.2	61.8	61.5	61.3	61.7	62.0	61.8
Employed	10,860	11,284	11,231	10,616	10,738	10,767	10,883	11,025	10,987
Employment-population ratio ³	54.8	55.4	55.0	53.5	53.0	53.1	53.5	54.1	53.8
Unemployed	1,414	1,526	1,390	1,378	1,442	1,409	1,389	1,338	1,353
Unemployment rate	11.5	11.9	11.0	11.5	11.8	11.6	11.3	10.8	11.0
Not in labor force	7,135	7,133	7,358	7,415	7,627	7,674	7,629	7,579	7,639

¹ The population and Armed Forces figures are not adjusted for seasonal variations; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

³ Civilian employment as a percent of the total noninstitutional population (excluding Armed Forces).

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Table A-2. Major unemployment indicators, seasonally adjusted

Selected categories	Number of unemployed persons (In thousands)		Unemployment rates					
	Aug. 1970	Aug. 1979	Aug. 1970	Apr. 1979	May 1979	June 1979	July 1979	Aug. 1979
CHARACTERISTICS								
Total, 16 years and over	5,780	6,149	5.9	5.4	5.8	5.6	5.7	6.3
Men, 20 years and over	2,101	2,100	4.1	4.0	3.9	3.9	4.1	4.2
Women, 20 years and over	2,231	2,324	5.5	5.7	5.8	5.8	5.5	5.9
Both sexes, 16-19 years	1,528	1,525	15.7	16.5	16.8	15.3	15.3	16.5
White, total	4,545	4,832	5.2	4.9	5.0	4.9	4.9	5.3
Men, 20 years and over	1,711	1,837	3.6	3.4	3.1	3.4	3.6	3.8
Women, 20 years and over	1,631	1,769	5.2	4.9	5.1	5.0	4.7	5.2
Both sexes, 16-19 years	1,197	1,226	13.7	13.9	14.3	13.0	13.3	14.9
Black and other, total	1,378	1,153	11.5	11.8	11.6	11.3	10.8	11.0
Men, 20 years and over	492	492	8.7	8.6	8.3	7.9	8.3	8.7
Women, 20 years and over	544	560	10.3	10.8	9.9	10.3	9.8	10.3
Both sexes, 16-19 years	337	301	32.5	34.5	34.9	34.0	30.9	30.7
Married men, spouse present	1,797	1,209	2.0	2.7	2.5	2.6	2.9	3.0
Married women, spouse present	1,100	1,298	5.6	5.2	5.2	5.2	4.8	5.4
Women who head families	395	399	8.0	8.4	8.9	9.1	8.1	7.9
Full-time workers	3,641	4,774	5.4	5.1	5.3	5.1	5.3	5.4
Part-time workers	1,284	1,364	4.7	4.8	4.6	4.6	3.2	4.0
Unemployed 16 weeks and over ¹	1,234	1,171	1.2	1.2	1.2	1.1	1.0	1.2
Labor force time lost ²	--	--	6.5	6.5	6.3	6.3	6.4	6.5
OCCUPATION³								
White-collar workers	1,707	1,860	3.5	3.1	3.2	3.0	3.2	3.6
Professional and technical	107	405	2.6	2.2	2.0	2.5	2.5	2.6
Managers and administrators, except farm	196	254	1.9	2.3	2.2	2.0	1.9	2.3
Sales workers	355	267	4.1	4.0	4.0	4.5	3.5	4.2
Clerical workers	874	916	4.9	4.5	4.6	4.6	4.4	5.0
Blue-collar workers	2,381	2,613	6.9	6.9	6.7	6.5	6.8	7.6
Craft and kindred workers	585	650	4.5	4.2	4.0	4.2	4.2	4.9
Operatives, except transport	1,034	1,110	8.0	7.6	8.3	7.7	8.3	9.3
Transport equipment operatives	205	259	5.6	6.0	5.4	5.5	5.2	6.8
Nonfarm laborers	512	599	9.7	10.5	11.1	10.3	10.9	11.5
Service workers	989	955	7.1	7.4	7.2	7.2	7.2	7.0
Farm workers	104	106	3.6	3.4	3.5	3.1	4.5	3.8
INDUSTRY⁴								
Nonagricultural private wage and salary workers ⁵	4,279	4,504	5.8	5.7	5.7	5.4	5.7	6.1
Construction	863	877	9.4	10.3	9.6	9.6	9.5	9.5
Manufacturing	1,234	1,424	5.6	5.4	5.4	5.3	4.8	6.2
Durable goods	707	780	5.4	4.6	4.4	4.8	5.5	5.7
Non-durable goods	527	644	5.8	6.5	7.0	6.2	6.2	6.9
Transportation and public utilities	198	216	3.8	2.9	3.5	3.0	3.9	3.8
Wholesale and retail trade	1,212	1,224	6.5	6.6	6.4	6.8	6.2	6.6
Finance and services industries	1,139	1,194	5.2	4.8	5.0	4.7	4.9	5.4
Government workers	577	601	3.4	3.6	3.5	3.6	3.5	3.8
Agricultural wage and salary workers	116	150	8.7	8.6	9.3	7.7	10.4	9.9

¹ Unemployment rate calculated as a percent of civilian labor force.² Aggregate hours lost by the unemployed and persons on part time for economic reasons as a percent of potentially available labor force hours.³ Unemployment by occupation includes all experienced unemployed persons, whereas that by⁴ Industry covers only unemployed wage and salary workers.⁵ Includes mining, not shown separately.

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Table A-3. Selected employment indicators

[In thousands]	Not seasonally adjusted		Seasonally adjusted					
	Related categories		Aug.	Apr.	May	June	July	Aug.
	1978	1979	1978	1979	1979	1979	1979	1979
CHARACTERISTICS								
Total employed, 18 years and over	96,116	99,226	96,723	96,178	96,318	96,758	97,210	96,900
Men	57,191	57,991	55,580	56,267	56,352	56,638	56,595	56,116
Women	39,925	40,115	39,143	39,907	39,966	40,116	40,615	40,585
Married men, spouse present	39,813	39,820	16,516	18,917	18,988	39,055	39,163	39,146
Married women, spouse present	21,060	22,071	21,737	22,155	22,490	22,580	22,890	22,777
OCCUPATION								
White-collar workers	46,853	49,170	47,325	49,160	49,108	49,165	49,573	49,615
Professional and technical	13,756	14,876	14,286	15,226	15,220	15,051	15,063	14,983
Managers and administrators, except farm	10,266	10,990	10,180	10,609	10,378	10,565	10,675	10,772
Sales workers	5,960	6,152	5,892	6,079	6,091	6,065	6,161	6,085
Clerical workers	16,850	17,614	17,007	17,446	17,418	17,481	17,673	17,774
Blue-collar workers	32,081	31,122	31,506	31,582	31,826	31,458	31,949	31,767
Craft and kindred workers	12,999	13,201	12,557	12,697	12,790	13,203	12,832	12,755
Operatives, except transport	11,038	11,178	10,781	10,651	10,666	10,759	10,853	10,880
Transport equipment operatives	3,435	3,578	3,429	3,550	3,667	3,596	3,610	3,571
Nonfarm laborers	5,814	5,168	4,779	4,684	4,706	4,600	4,652	4,561
Service workers	11,155	12,472	12,066	12,909	12,758	12,946	12,697	12,591
Farm workers	1,725	1,111	2,794	2,624	2,600	2,683	2,657	2,703
MAJOR INDUSTRY AND CLASS OF WORKER								
Agriculture	1,728	1,655	1,423	1,362	1,439	1,445	1,403	1,363
Wage and salary workers	1,716	1,711	1,611	1,531	1,490	1,525	1,552	1,612
Self-employed workers	412	401	319	282	270	293	294	310
Upward family workers								
Nonagricultural industries:								
Wage and salary workers	85,518	87,262	88,508	86,195	86,129	86,309	86,277	86,227
Government	18,788	14,726	15,275	15,356	15,635	15,257	15,382	15,260
Private industries	70,771	72,536	69,233	70,839	70,494	71,051	70,895	70,967
Private households	1,406	1,239	1,368	1,160	1,177	1,236	1,217	1,205
Other industries	69,365	71,297	67,865	69,679	69,317	69,815	69,678	69,761
Self-employed workers	6,296	6,728	6,219	6,448	6,625	6,600	6,753	6,649
Upward family workers	446	440	449	471	466	482	529	443
PERSONS AT WORK¹								
Nonagricultural industries	81,391	83,930	86,350	86,345	87,727	87,843	89,074	89,154
Full-time schedules	69,055	71,025	71,205	71,554	72,476	72,230	73,138	73,222
Part-time for economic reasons	3,758	3,799	3,298	3,312	3,307	3,416	3,340	3,355
Usually work full time	1,198	1,530	1,350	1,265	1,266	1,416	1,398	1,478
Usually work part time	2,356	2,269	1,948	2,048	2,061	2,000	1,966	1,877
Part-time for non-economic reasons	8,582	9,106	11,887	11,479	11,983	12,199	12,597	12,577

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

Table A-4. Duration of unemployment

[Numbers in thousands]	Not seasonally adjusted		Seasonally adjusted					
	Weeks of unemployment		Aug.	Apr.	May	June	July	Aug.
	1978	1979	1978	1979	1979	1979	1979	1979
DURATION								
Less than 5 weeks	2,701	3,116	2,795	2,939	2,787	2,927	2,788	3,226
6 to 14 weeks	2,157	1,904	1,895	1,874	1,935	1,782	1,970	1,743
15 weeks and over	1,073	1,036	1,234	1,235	1,213	1,086	1,052	1,191
15 to 26 weeks	478	520	625	692	703	616	600	662
27 weeks and over	595	517	609	543	508	470	451	529
Average (mean) duration, in weeks	11.0	10.7	11.4	11.0	11.1	10.4	10.0	10.5
Median duration, in weeks	6.0	4.9	6.0	5.2	5.2	5.6	6.1	4.9
PERCENT DISTRIBUTION								
Total unemployed	100.0	100.0	103.0	100.0	100.0	100.0	100.0	100.0
Less than 5 weeks	45.5	50.8	47.2	48.6	47.0	50.5	48.0	52.4
6 to 14 weeks	36.4	12.3	32.0	31.0	32.6	30.8	33.9	28.3
15 weeks and over	19.1	16.0	20.8	20.4	20.4	18.7	18.1	19.3
15 to 26 weeks	8.1	8.4	10.6	11.4	11.9	10.6	10.3	10.7
27 weeks and over	10.0	9.4	10.3	9.0	8.6	8.1	7.8	8.6

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Table A-5. Reasons for unemployment

(Numbers in thousands)

Reason	Not seasonally adjusted		Seasonally adjusted					
	Aug.	Aug.	Aug.	Apr.	May	June	July	Aug.
	1978	1979	1978	1979	1979	1979	1979	1979
NUMBER OF UNEMPLOYED								
Last lost job	2,291	2,539	2,459	2,521	2,361	2,358	2,532	2,724
On layoff	681	879	700	846	710	796	793	860
Other job losses	1,652	1,660	1,759	1,675	1,652	1,562	1,739	1,765
Last left job	933	991	890	847	951	867	818	869
Reentered labor force	1,717	1,771	1,743	1,790	1,762	1,738	1,737	1,749
Seeking first job	986	813	875	811	881	787	694	720
PERCENT OF DISTRIBUTION								
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Job losers	38.7	41.4	41.6	42.2	34.9	41.0	43.7	48.4
On layoff	10.8	14.3	11.9	14.2	12.0	13.8	13.7	15.6
Other job losses	27.9	27.1	29.7	28.1	27.7	27.2	30.0	28.8
Job leavers	15.7	16.2	14.2	14.2	16.1	15.1	14.4	14.6
Reentrants	28.9	28.9	29.5	30.0	29.8	30.2	29.9	29.3
New entrants	16.7	13.6	14.8	13.6	14.2	13.7	12.0	11.7
UNEMPLOYED AS A PERCENT OF THE CIVILIAN LABOR FORCE								
Job losers	2.2	2.4	2.4	2.5	2.3	2.3	2.5	2.6
Job leavers .....	.8	1.0	.8	.8	.9	.8	.8	.9
Reentrants	1.7	1.7	1.7	1.8	1.7	1.7	1.7	1.7
New entrants	1.0	.8	.9	.8	.8	.8	.7	.7

Table A-6. Unemployment by sex and age, seasonally adjusted

Sex and age	Number of unemployed persons (In thousands)		Unemployment rate					
	Aug.	Aug.	Aug.	Apr.	May	June	July	Aug.
	1978	1979	1978	1979	1979	1979	1979	1979
Total, 18 years and over	5,940	6,149	5.9	5.8	5.8	5.6	5.7	6.0
18 to 19 years	1,528	1,525	15.7	16.5	16.8	15.3	15.3	16.5
18 to 17 years	772	670	18.6	19.1	19.2	16.7	17.1	18.1
20 to 24 years	751	849	13.5	14.1	15.2	14.1	14.4	15.5
25 years and over	3,088	3,220	4.1	4.0	4.1	4.0	4.0	4.1
25 to 34 years	2,660	2,756	3.3	3.2	3.2	3.0	3.0	3.1
35 years and over	416	460	3.0	3.1	3.2	2.9	3.2	3.2
Men, 18 years and over	2,927	3,081	5.0	5.1	4.9	4.7	5.0	5.2
18 to 19 years	756	781	16.8	16.2	16.1	14.1	14.1	16.0
18 to 17 years	389	340	17.7	18.0	19.0	15.8	15.2	17.3
20 to 24 years	367	441	12.5	14.2	14.1	13.5	14.9	15.3
25 years and over	708	727	8.8	7.8	8.0	8.0	8.8	8.9
25 to 34 years	1,506	1,407	3.1	3.1	3.1	3.1	3.1	3.5
35 years and over	1,256	1,326	1.5	1.4	1.4	1.4	1.4	1.6
35 years and over	257	291	2.9	3.0	2.9	3.1	3.4	3.2
Women, 18 years and over	3,003	3,068	7.1	6.9	7.0	6.9	6.6	7.0
18 to 19 years	772	744	16.8	16.8	17.7	16.6	16.8	17.1
18 to 17 years	383	330	19.7	20.2	19.3	17.7	19.2	18.9
20 to 24 years	384	408	14.6	14.4	16.4	14.8	13.8	15.8
25 years and over	635	695	9.2	9.4	9.9	9.9	9.3	9.9
25 to 34 years	1,582	1,613	5.2	4.9	5.0	4.8	4.7	5.0
35 years and over	1,404	1,427	5.6	5.2	5.2	5.3	5.0	5.4
35 years and over	179	183	3.2	3.1	3.7	2.7	2.9	3.3

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Table A-7. Range of unemployment measures based on varying definitions of unemployment and the labor force, seasonally adjusted

Measure	Quarterly averages					Monthly data		
	1978			1979		1979		
	II	III	IV	I	II	June	July	Aug.
U-1—Persons unemployed 15 weeks or longer as a percent of the civilian labor force	1.9	1.3	1.2	1.2	1.2	1.1	1.0	1.2
U-2—Job losers as a percent of the civilian labor force	2.5	2.4	2.4	2.4	2.4	2.3	2.5	2.6
U-3—Unemployed persons 25 years and over as a percent of the civilian labor force 25 years and over	4.1	4.1	3.9	3.9	3.9	3.8	3.9	4.1
U-4—Unemployed full-time jobseekers as a percent of the full-time labor force	5.5	5.5	5.2	5.2	5.2	5.1	5.3	5.4
U-8—Total unemployed as a percent of the civilian labor force (official measure)	6.3	6.0	5.8	5.7	5.7	5.6	5.7	6.0
U-9—Total full-time jobseekers plus ½ part-time jobseekers plus ¼ total on part-time for economic reasons as a percent of the civilian labor force less ¼ of the part-time labor force	7.6	7.5	7.2	7.2	7.1	7.2	7.3	7.5
U-7—Total full-time jobseekers plus ½ part-time jobseekers plus ¼ total on part-time for economic reasons plus discouraged workers as a percent of the civilian labor force plus discouraged workers less ¼ of the part-time labor force	8.4	8.4	8.0	7.9	8.1	N.A.	N.A.	N.A.

N.A.—not available.

Table A-8. Employment status of the noninstitutional population by race and Hispanic origin, not seasonally adjusted

Employment status	Total		White		Black ¹		Hispanic origin ²	
	Aug. 1978	Aug. 1979	Aug. 1978	Aug. 1979	Aug. 1978	Aug. 1979	Aug. 1978	Aug. 1979
TOTAL								
Civilian noninstitutional population	159,226	161,801	139,817	141,822	16,670	17,056	7,667	8,115
Civilian labor force	102,087	104,363	89,773	91,742	10,433	10,672	5,035	5,198
Percent of population	64.1	64.5	64.2	64.7	62.6	62.6	60.0	64.1
Employment	96,116	97,226	85,256	86,995	9,175	9,378	4,582	4,787
Agriculture	3,856	3,795	3,520	3,435	246	299	255	242
Nonagricultural industries	92,261	94,431	81,735	83,560	8,929	9,079	4,327	4,505
Unemployment	5,931	6,137	4,517	4,747	1,258	1,291	453	452
Unemployment rate	5.8	5.9	5.0	5.2	12.1	12.1	9.0	8.7
Not in labor force	57,179	57,438	50,044	50,080	6,238	6,385	2,632	2,917

¹ Data relate to black workers only. According to the 1970 Census, they comprised about 89 percent of the "black and other" population group.

² Data on persons of Hispanic origin are tabulated separately, without regard to race, which means that they are also included in the data for white and black workers. At the time of the 1970 Census, approximately 98 percent of their population was white.

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Table A-9. Employment status of male Vietnam-era veterans and nonveterans by age, not seasonally adjusted

(Numbers in thousands)

Veteran status and age	Civilian nonhard-optional population		Civilian labor force							
			Total		Employed		Unemployed			
							Number		Percent of labor force	
Aug. 1978	Aug. 1979	Aug. 1978	Aug. 1979	Aug. 1978	Aug. 1979	Aug. 1978	Aug. 1979	Aug. 1978	Aug. 1979	
VETERANS¹										
Total, 20 years and over	8,352	8,551	7,923	8,165	7,540	7,826	383	339	4.8	4.2
20 to 24 years	716	530	694	488	598	455	86	33	12.6	6.8
25 to 30 years	6,992	7,157	6,635	6,934	6,356	6,650	279	284	4.2	4.1
25 to 29 years	2,297	1,916	2,177	1,839	2,034	1,737	143	102	6.6	5.5
30 to 34 years	3,428	3,624	3,341	3,512	3,236	3,367	105	145	3.1	4.1
35 to 39 years	1,167	1,617	1,117	1,583	1,086	1,546	31	37	2.8	2.3
40 years and over	724	864	604	743	586	721	18	22	3.0	3.0
NONVETERANS²										
Total, 25 to 39 years	13,801	14,683	13,159	13,965	12,696	13,432	463	533	3.5	3.8
25 to 29 years	6,172	6,723	5,888	6,396	5,626	6,122	262	274	4.4	4.3
30 to 34 years	3,994	4,208	3,788	3,994	3,684	3,853	104	141	2.7	3.5
35 to 39 years	3,635	3,746	3,483	3,575	3,386	3,457	97	118	2.8	3.3

¹ Vietnam-era veterans are those who served between August 5, 1964 and May 7, 1975.² Nonveterans are males who have never served in the Armed Forces. Published data are limited to those 25-39 years of age, the group that most closely corresponds to the bulk of the Vietnam-era veteran population.

NOTE: Seasonally-adjusted data are no longer being provided because the changing age composition of the Vietnam-era veterans' population distorts the ability to identify seasonality in the series.

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Table A-10. Employment status of the noninstitutional population for the ten largest States

State and employment status	Not seasonally adjusted ¹			Seasonally adjusted					
	Aug.-1978	July-1979	Aug.-1979	Aug.-1978	Apr.-1979	May-1979	June-1979	July-1979	Aug.-1979
California									
Civilian noninstitutional population ²	16,390	16,704	16,731	16,390	16,593	16,648	16,676	16,704	16,731
Civilian labor force	10,762	11,076	11,119	10,698	10,755	10,761	10,883	10,919	11,051
Employed	10,012	10,385	10,418	9,928	10,071	10,093	10,191	10,290	10,330
Unemployed	750	691	705	769	684	668	692	629	721
Unemployment rate	7.0	6.2	6.3	7.2	6.4	6.2	6.0	5.8	6.5
Florida									
Civilian noninstitutional population ²	6,531	6,723	6,740	6,531	6,671	6,689	6,706	6,723	6,743
Civilian labor force	3,482	3,853	3,838	(2)	(2)	(2)	(2)	(2)	(2)
Employed	3,440	3,637	3,601	(2)	(2)	(2)	(2)	(2)	(2)
Unemployed	42	216	237	(2)	(2)	(2)	(2)	(2)	(2)
Unemployment rate	6.6	6.6	6.1	(2)	(2)	(2)	(2)	(2)	(2)
Illinois									
Civilian noninstitutional population ²	8,217	8,284	8,249	8,217	8,265	8,271	8,278	8,284	8,289
Civilian labor force	5,818	5,880	5,815	5,825	5,269	5,235	5,325	5,376	5,449
Employed	5,094	5,202	5,163	5,083	4,964	4,944	5,053	5,133	5,112
Unemployed	724	678	652	742	291	291	272	243	337
Unemployment rate	6.0	5.1	4.6	5.8	5.6	5.6	5.2	4.6	4.4
Massachusetts									
Civilian noninstitutional population ²	4,333	4,377	4,381	4,333	4,365	4,369	4,373	4,377	4,381
Civilian labor force	2,898	2,948	2,936	(2)	(2)	(2)	(2)	(2)	(2)
Employed	2,704	2,802	2,798	2,663	2,763	2,724	2,744	2,738	2,757
Unemployed	195	146	138	(2)	(2)	(2)	(2)	(2)	(2)
Unemployment rate	6.7	5.0	4.7	(2)	(2)	(2)	(2)	(2)	(2)
Michigan									
Civilian noninstitutional population ²	6,656	6,736	6,744	6,656	6,716	6,723	6,730	6,738	6,744
Civilian labor force	4,211	4,404	4,319	(2)	(2)	(2)	(2)	(2)	(2)
Employed	3,873	4,065	3,994	(2)	(2)	(2)	(2)	(2)	(2)
Unemployed	338	339	325	315	307	337	301	323	302
Unemployment rate	8.0	7.7	7.5	(2)	(2)	(2)	(2)	(2)	(2)
New Jersey									
Civilian noninstitutional population ²	5,461	5,517	5,522	5,461	5,502	5,506	5,512	5,517	5,522
Civilian labor force	3,455	3,610	3,598	3,427	3,477	3,482	3,545	3,530	3,528
Employed	3,259	3,343	3,337	3,188	3,271	3,215	3,301	3,266	3,262
Unemployed	436	267	259	243	206	267	244	264	266
Unemployment rate	6.7	7.9	7.2	7.1	5.9	7.7	6.9	7.5	7.5
New York									
Civilian noninstitutional population ²	13,255	13,298	13,300	13,255	13,287	13,289	13,294	13,298	13,300
Civilian labor force	7,974	8,214	8,143	7,823	7,936	7,896	7,931	8,001	7,971
Employed	7,399	7,604	7,528	7,213	7,380	7,394	7,364	7,400	7,347
Unemployed	580	611	595	610	556	502	567	601	624
Unemployment rate	7.3	7.4	7.3	7.8	7.0	6.4	7.1	7.5	7.8
Ohio									
Civilian noninstitutional population ²	7,880	7,949	7,955	7,880	7,931	7,936	7,983	7,989	7,955
Civilian labor force	5,034	5,107	5,155	4,923	5,026	5,025	4,984	4,995	4,985
Employed	4,769	4,769	4,800	4,656	4,746	4,740	4,706	4,650	4,687
Unemployed	262	336	354	267	280	285	278	345	358
Unemployment rate	5.2	6.6	6.9	5.4	5.6	5.7	5.6	6.9	7.1
Pennsylvania									
Civilian noninstitutional population ²	8,852	8,913	8,916	8,852	8,896	8,902	8,907	8,913	8,916
Civilian labor force	5,300	5,398	5,350	5,238	5,219	5,278	5,269	5,316	5,288
Employed	4,954	5,058	4,977	4,880	4,889	4,930	4,900	4,980	4,903
Unemployed	346	340	373	358	330	348	369	336	385
Unemployment rate	6.5	6.3	7.0	6.8	6.3	6.6	6.8	6.3	7.3
Texas									
Civilian noninstitutional population ²	9,216	9,416	9,433	9,216	9,383	9,380	9,398	9,416	9,433
Civilian labor force	6,031	6,267	6,180	5,987	6,136	6,081	6,100	6,183	6,136
Employed	5,725	5,990	5,895	5,697	5,855	5,798	5,834	5,907	5,886
Unemployed	305	277	285	290	281	283	266	276	270
Unemployment rate	5.1	4.7	4.6	4.8	4.6	4.7	4.6	4.5	4.4

¹ The population figures are not adjusted for seasonal variations; therefore, identical numbers appear in the unadjusted and the seasonally adjusted columns.
² These are the official Bureau of Labor Statistics' estimates used in the administration of Federal Food Stimulation programs.

³ Seasonally-adjusted data are not presented for this series, because the variations that are due to seasonal influences cannot be separated with sufficient precision from those which result from the trend-cycle and irregular components of the original time series.

ESTABLISHMENT DATA

ESTABLISHMENT DATA

Table B-1. Employees on nonagricultural payrolls by industry

(In thousands)

Industry	Not seasonally adjusted				Seasonally adjusted					
	AUG. 1978	JUNE 1979	JULY 1979	AUG. 1978	AUG. 1978	SEP. 1978	OCT. 1978	NOV. 1978	DEC. 1978	AUG. 1979
TOTAL	88,134	88,903	88,709	88,710	86,149	88,208	88,539	88,784	88,813	88,815
GOODS-PRODUCING	25,997	26,817	26,686	26,735	25,443	26,351	26,423	26,433	26,441	26,266
MINING	902	947	952	968	887	922	923	930	933	952
CONSTRUCTION	4,033	4,408	4,919	4,952	4,298	4,507	4,594	4,610	4,645	4,594
MANUFACTURING	20,462	21,062	20,775	20,815	20,278	20,922	20,906	20,893	20,843	20,700
Production workers	14,675	15,113	14,805	14,819	14,552	15,035	15,006	14,968	14,925	14,782
DURABLE GOODS	12,162	12,773	12,605	12,510	12,146	12,665	12,665	12,669	12,659	12,600
Production workers	8,404	8,149	8,957	8,831	8,893	9,090	9,043	9,032	9,032	8,949
Lumber and wood products	773.5	781.6	774.1	776.2	743	758	758	758	758	748
Furniture and fixtures	484.4	479.9	470.5	476.3	481	488	493	499	482	478
Stone, clay, and glass products	712.5	726.2	724.0	729.6	692	711	712	713	708	708
Primary metal industries	4,208.4	4,268.5	4,252.3	4,235.4	4,205	4,255	4,267	4,269	4,266	4,232
Fabricated metal products	1,651.2	1,723.6	1,691.4	1,696.1	1,646	1,712	1,711	1,710	1,700	1,691
Machinery, except electrical	2,331.6	2,520.5	2,511.2	2,495.6	2,351	2,494	2,498	2,513	2,526	2,516
Electric and electronic equipment	1,972.9	2,063.8	2,065.6	2,058.8	1,975	2,062	2,064	2,060	2,066	2,057
Transportation equipment	1,903.4	2,029.1	1,981.5	1,980.7	1,901	2,038	2,031	2,003	2,018	2,024
Instruments and related products	662.3	702.6	698.7	702.0	661	693	692	698	700	699
Miscellaneous manufacturing	401.4	455.1	435.2	440.0	451	454	468	450	445	449
NONDURABLE GOODS	8,300	8,289	8,170	8,305	8,132	8,257	8,261	8,268	8,264	8,140
Production workers	5,949	5,944	5,848	5,982	5,819	5,945	5,947	5,925	5,893	5,833
Food and kindred products	1,787.1	1,692.5	1,706.5	1,771.9	1,670	1,709	1,702	1,699	1,675	1,656
Tobacco manufacturers	76.9	86.2	86.1	71.6	69	73	74	74	71	69
Textile mill products	810.5	811.0	805.5	801.7	803	803	806	801	801	805
Apparel and other textile products	1,317.1	1,311.0	1,255.6	1,286.4	1,309	1,305	1,303	1,294	1,296	1,277
Paper and allied products	705.1	725.9	720.2	726.2	696	716	718	718	719	718
Printing and publishing	1,187.0	1,226.3	1,226.8	1,226.5	1,186	1,219	1,222	1,226	1,232	1,230
Chemicals and allied products	1,096.5	1,119.3	1,112.8	1,108.7	1,089	1,101	1,106	1,110	1,108	1,098
Petroleum and coal products	214.0	217.1	218.2	218.6	209	214	213	212	212	213
Rubber and misc. plastics products	750.2	775.0	760.8	754.4	746	776	779	769	770	756
Leather and leather products	254.2	246.0	215.9	235.6	251	238	230	219	220	233
SERVICE-PRODUCING	60,137	62,786	62,022	61,979	60,686	61,897	62,116	62,331	62,372	62,529
TRANSPORTATION AND PUBLIC UTILITIES	4,870	5,126	5,105	5,091	4,864	4,935	5,031	5,085	5,075	5,060
WHOLESALE AND RETAIL TRADE	19,519	20,071	19,960	19,991	19,523	19,939	19,985	19,980	19,959	19,996
WHOLESALE TRADE	4,930	5,128	5,119	5,125	4,905	5,062	5,080	5,097	5,088	5,100
RETAIL TRADE	14,589	14,943	14,841	14,866	14,618	14,897	14,905	14,883	14,871	14,896
FINANCE, INSURANCE, AND REAL ESTATE	4,754	4,936	4,966	4,988	4,707	4,853	4,867	4,892	4,907	4,939
SERVICES	16,235	16,890	16,964	16,972	16,074	16,575	16,622	16,706	16,730	16,804
GOVERNMENT	14,759	15,763	15,067	14,937	15,536	15,575	15,611	15,668	15,701	15,724
FEDERAL	2,793	2,424	2,838	2,813	2,765	2,756	2,770	2,793	2,788	2,795
STATE AND LOCAL	11,966	12,939	12,229	12,124	12,771	12,819	12,841	12,875	12,913	12,939

Preliminary.

ESTABLISHMENT DATA

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Table B-2. Average weekly hours of production or nonsupervisory workers, on private nonagricultural payrolls, by industry

Industry	Not seasonally adjusted				Seasonally adjusted					
	AUG. 1974	JUNE 1975	JULY 1975 ^p	AUG. 1975 ^p	AUG. 1974	APR. 1975	MAY 1975	JUNE 1975	JULY 1975 ^p	AUG. 1975 ^p
TOTAL PRIVATE	36.2	35.9	36.0	36.0	35.8	35.6	35.7	35.7	35.6	35.6
MINING	43.4	43.5	42.0	42.2	43.6	43.0	42.7	43.0	41.4	42.4
CONSTRUCTION	37.9	38.0	37.7	38.1	37.1	35.8	37.2	37.4	36.9	37.5
MANUFACTURING	40.4	40.4	40.0	40.0	40.3	39.2	40.2	40.1	40.2	40.0
Overtime hours	3.6	3.4	3.2	3.4	3.4	2.6	3.4	3.2	3.3	3.3
DURABLE GOODS	40.9	41.0	40.5	40.4	41.0	39.6	40.8	40.7	40.4	40.4
Overtime hours	3.7	3.6	3.4	3.5	3.4	2.8	3.6	3.5	3.5	3.5
Lumber and wood products	39.6	40.2	39.5	40.2	38.1	36.2	38.2	39.4	38.8	39.4
Furniture and fixtures	39.5	38.8	38.1	38.4	37.0	35.1	38.4	38.6	38.4	37.0
Stone, clay, and glass products	42.1	42.0	41.5	41.7	41.6	41.3	41.6	41.5	41.3	41.2
Primary metal industries	41.6	41.6	41.2	40.7	42.0	41.7	41.3	41.3	41.2	40.9
Fabricated metal products	40.9	41.0	40.3	40.1	40.9	39.1	40.7	40.7	40.8	40.1
Machinery, except electrical	41.8	42.0	41.3	41.2	41.8	40.5	42.0	42.0	42.0	41.4
Electric and electronic equipment	40.3	40.5	39.8	40.2	40.4	39.0	40.3	40.2	40.4	40.3
Transportation equipment	40.9	41.2	41.0	40.6	41.9	38.0	41.2	40.7	41.0	41.3
Instruments and related products	40.8	40.7	40.1	40.7	41.9	40.2	40.6	40.4	40.5	40.9
Miscellaneous manufacturing	38.0	39.0	38.7	38.6	38.0	37.7	38.5	38.6	39.1	38.7
NONDURABLE GOODS	39.6	39.4	39.3	39.4	39.3	38.7	39.2	39.2	39.3	39.2
Overtime hours	3.4	3.6	3.0	3.3	3.2	2.7	3.0	2.9	3.0	3.1
Food and kindred products	40.2	39.6	40.4	40.6	39.5	39.7	38.8	39.7	40.1	40.1
Tobacco manufacturers	37.5	36.1	35.8	37.4	37.7	37.9	36.9	38.2	39.1	37.4
Textile mill products	40.8	40.6	39.9	40.2	40.4	36.9	40.0	40.0	40.0	40.0
Apparel and other textile products	36.0	35.6	35.6	35.7	35.0	34.3	35.2	35.2	35.5	35.3
Paper and allied products	42.9	42.8	42.5	42.4	42.7	42.5	42.5	42.5	42.5	42.2
Printing and publishing	37.7	37.4	37.3	37.8	37.4	37.2	37.3	37.4	37.4	37.5
Chemicals and allied products	41.7	41.6	41.6	41.5	41.9	41.6	41.9	41.7	41.7	41.7
Petroleum and coal products	44.0	43.4	44.1	43.2	44.3	44.1	43.7	43.2	43.6	43.5
Rubber and misc. plastics products	40.9	40.7	40.1	39.8	40.9	39.8	40.0	40.7	40.4	39.8
Leather and leather products	37.3	37.1	36.9	36.5	37.1	35.8	36.2	36.3	36.6	36.3
TRANSPORTATION AND PUBLIC UTILITIES	40.3	40.1	40.1	40.2	39.9	39.3	39.9	39.9	39.7	39.6
WHOLESALE AND RETAIL TRADE	33.5	32.9	33.3	33.2	32.4	32.0	32.6	32.6	32.6	32.5
WHOLESALE TRADE	39.0	39.0	39.1	38.9	38.8	38.8	38.6	38.6	38.6	38.7
RETAIL TRADE	31.6	31.0	31.5	31.4	30.6	30.9	30.6	30.6	30.4	30.5
FINANCE, INSURANCE, AND REAL ESTATE	36.6	36.2	36.4	36.5	36.5	36.5	36.1	36.2	36.3	36.2
SERVICES	33.2	32.9	33.3	33.3	32.7	32.7	32.7	32.7	32.8	32.8

¹ Data relate to production workers in mining and manufacturing; to construction workers in construction; and to nonsupervisory workers in transportation and public utilities, wholesale and retail trade, finance, insurance, and real estate, and services. These groups account for approximately four-fifths of the total employment on private nonagricultural payrolls.

^p = preliminary.

ESTABLISHMENT DATA

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Table B-3. Average hourly and weekly earnings of production or nonsupervisory workers on private nonagricultural payrolls, by industry

Industry	Average hourly earnings				Average weekly earnings			
	AUG. 1978	JUNE 1979	JULY 1979 ^p	AUG. 1979 ^p	AUG. 1978	JUNE 1979	JULY 1979 ^p	AUG. 1979 ^p
TOTAL PRIVATE	85.71	86.11	86.15	86.16	\$206.70	\$219.35	\$221.00	\$221.76
<i>Seasonally adjusted</i>	5.73	6.13	6.16	6.19	205.13	218.64	220.01	220.34
MINING	7.79	8.47	8.55	8.54	338.09	366.75	359.10	360.39
CONSTRUCTION	8.72	9.12	9.23	9.20	330.49	346.56	347.97	353.95
MANUFACTURING	6.16	6.66	6.71	6.66	248.66	269.06	268.40	267.20
DURABLE GOODS	6.57	7.11	7.14	7.10	266.71	291.51	289.17	286.84
Lumber and wood products	5.68	6.16	6.22	6.26	226.63	247.63	245.69	252.46
Furniture and fixtures	4.72	5.05	5.06	5.12	186.46	195.98	192.79	194.61
Stone, clay, and glass products	6.40	6.86	6.89	6.87	269.44	287.28	285.94	288.40
Primary metal industries	6.31	6.90	6.91	6.99	307.36	370.24	371.21	369.96
Fabricated metal products	6.35	6.81	6.81	6.81	259.72	279.81	279.84	273.08
Machinery, except electrical	6.70	7.23	7.33	7.28	280.36	307.86	302.73	299.94
Electric and electronic equipment	5.87	6.27	6.29	6.34	236.56	253.94	250.34	250.87
Transportation equipment	7.78	8.42	8.55	8.60	318.20	351.02	350.55	339.36
Instruments and related products	5.73	6.11	6.15	6.18	233.76	246.64	246.62	251.53
Miscellaneous manufacturing	4.70	4.99	5.04	5.04	182.83	194.61	195.05	194.58
NONDURABLE GOODS	5.56	5.93	6.02	6.04	220.18	233.64	236.59	237.98
Food and kindred products	5.80	6.22	6.28	6.31	233.16	247.56	251.71	257.45
Tobacco manufacturers	6.30	6.90	6.92	6.88	236.25	269.79	267.74	268.34
Textile mill products	4.37	4.54	4.65	4.78	177.92	194.32	195.54	192.16
Apparel and other textile products	3.93	4.20	4.22	4.23	161.06	169.52	150.23	151.01
Paper and allied products	6.59	7.06	7.17	7.22	282.71	302.17	304.73	306.13
Printing and publishing	6.51	6.85	6.87	6.90	265.43	291.19	296.25	262.33
Chemicals and allied products	7.06	7.52	7.59	7.66	294.40	316.34	315.74	317.86
Petroleum and coal products	6.59	6.89	6.37	6.37	377.96	403.19	413.22	404.78
Rubber and misc. plastics products	5.56	5.86	5.93	5.81	226.59	239.72	237.79	231.24
Leather and leather products	3.87	4.19	4.19	4.22	164.35	155.95	156.61	154.03
TRANSPORTATION AND PUBLIC UTILITIES	7.63	8.01	8.11	8.16	307.40	321.20	325.21	328.03
WHOLESALE AND RETAIL TRADE	6.67	5.02	5.04	5.05	156.45	145.16	147.83	147.66
WHOLESALE TRADE	5.92	6.35	6.40	6.43	230.88	247.45	250.24	250.13
RETAIL TRADE	4.19	4.49	4.50	4.51	133.24	139.19	141.75	141.61
FINANCE, INSURANCE, AND REAL ESTATE	4.91	5.22	5.29	5.26	179.71	188.96	192.56	190.94
SERVICES	6.94	5.27	5.29	5.30	164.01	173.38	176.16	174.49

¹ See footnote 1, table B-2.

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Table B-4. Hourly earnings index for production or nonsupervisory workers¹ on private nonagricultural payrolls by industry division, seasonally adjusted

Industry	1967=100								Percent change from—	
	AUG. 1978	MAR. 1979	APR. 1979	MAY 1979	JUNE 1979	JULY P 1979	AUG. P 1979	AUG. 1978= AUG. 1979	JULY 1979= AUG. 1979	
TOTAL PRIVATE NONFARM:										
Current dollar	214.4	225.3	227.0	227.4	228.8	230.4	231.0	7.6	0.2	
Constant (1967) dollar	109.7	107.3	107.0	106.1	105.6	105.0	94.4	(2)	(3)	
MINING	244.5	256.0	244.2	242.6	244.7	246.8	249.0	10.0	.1	
CONSTRUCTION	209.2	216.5	218.0	220.7	220.7	221.7	222.8	8.3	.3	
MANUFACTURING	217.5	228.8	231.1	232.3	233.6	235.6	236.0	8.5	.2	
TRANSPORTATION AND PUBLIC UTILITIES	231.2	244.7	241.9	243.9	246.1	247.5	248.8	8.6	.3	
WHOLESALE AND RETAIL TRADE	208.3	215.4	221.0	220.9	222.3	225.4	228.9	8.0	.6	
FINANCE, INSURANCE, AND REAL ESTATE SERVICES	198.0	204.3	207.6	207.0	207.7	211.0	209.7	7.0	.6	
	212.9	223.5	225.3	226.0	225.5	226.9	227.7	7.9	.4	

¹ See footnote 1, table B-2.
² PERCENT CHANGE HAS =3.0 FROM JULY 1978 TO JULY 1979, THE LATEST MONTH AVAILABLE.
³ PERCENT CHANGE HAS =.2 FROM JUNE 1979 TO JULY 1979, THE LATEST MONTH AVAILABLE.

N.A. = not available

NOTE: All items are in current dollars except where indicated. The index excludes 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 in the proportion of workers in high-wage and low-wage industries.

Table B-5. Indexes of aggregate weekly hours of production or nonsupervisory workers¹ on private nonagricultural payrolls by industry, seasonally adjusted

Industry division and group	1978					1979					AUG. P		
	AUG.	SEPT.	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY		JUNE	JULY
TOTAL PRIVATE	120.4	120.8	121.6	122.4	122.9	122.6	123.2	124.7	122.6	123.9	124.1	124.1	123.7
GOODS-PRODUCING	105.4	105.5	106.5	108.0	109.1	108.7	109.1	111.0	109.3	109.3	109.2	109.9	107.7
MINING	145.7	144.6	145.2	148.0	149.1	148.2	149.5	150.6	149.1	148.3	149.5	145.8	150.8
CONSTRUCTION	122.6	122.6	123.6	124.3	124.5	124.6	122.6	131.5	124.6	132.3	133.6	133.2	132.4
MANUFACTURING	101.0	101.2	102.1	103.7	104.6	105.2	105.4	106.0	101.6	103.4	103.4	103.3	101.9
DURABLE GOODS	103.5	103.4	105.5	107.1	108.3	108.8	109.6	110.2	104.6	107.3	106.9	107.0	105.6
Lumber and wood products	110.7	111.9	113.9	113.3	116.2	116.6	115.5	116.9	112.8	115.2	112.6	112.6	111.7
Furniture and fixtures	108.4	108.2	107.9	108.4	109.6	110.0	108.6	109.7	105.3	108.1	106.9	106.9	101.9
Stone, clay, and glass products	109.8	110.1	110.8	112.0	113.3	111.5	112.2	115.1	111.0	112.6	112.6	113.6	110.3
Primary metal and alloys	95.3	95.5	96.9	99.0	99.2	99.7	100.3	99.6	98.0	97.3	97.5	97.6	98.7
Fabricated metal products	101.9	102.0	103.1	103.2	104.6	106.6	106.6	108.0	107.9	101.4	105.4	105.4	102.0
Machinery, except electrical	110.8	111.5	113.0	114.5	116.9	117.0	119.2	119.9	114.6	116.8	119.2	119.9	116.0
Electric and electronic equipment	101.1	100.1	101.4	102.8	103.4	105.1	106.4	107.8	102.6	105.9	106.0	106.0	104.0
Transportation equipment	96.1	97.7	101.6	102.8	103.8	106.7	105.0	104.8	92.3	99.9	96.3	97.9	96.9
Instruments and related products	123.9	123.9	124.5	125.7	126.9	128.0	130.0	131.3	127.8	129.9	129.5	129.6	130.3
Miscellaneous manufacturing industry	100.9	100.3	100.9	101.8	101.5	102.9	102.3	102.8	97.6	98.7	99.6	99.1	98.6
NONDURABLE GOODS	97.2	97.2	97.2	98.8	99.1	99.9	99.2	99.8	97.5	98.7	98.3	98.0	96.7
Food and kindred products	91.4	91.3	92.2	94.8	96.1	97.0	95.3	97.0	95.7	95.3	96.8	94.2	92.4
Tobacco manufacturers	71.5	74.5	73.5	73.5	77.6	74.6	73.5	78.4	77.2	82.0	79.1	74.3	68.6
Textile mill products	91.2	91.6	91.6	92.4	92.2	93.6	91.3	92.3	87.0	90.6	90.3	90.3	89.5
Apparel and other textile products	90.1	90.1	89.7	90.0	89.8	89.6	89.2	89.8	85.9	88.5	87.2	88.2	86.1
Paper and allied products	99.2	99.0	98.2	99.5	100.7	101.7	101.5	103.5	100.2	102.9	102.9	103.1	101.6
Printing and publishing	98.5	97.8	98.0	100.3	100.1	101.1	101.7	102.6	100.0	101.9	101.8	102.0	102.5
Chemicals and allied products	100.0	100.0	100.2	107.2	107.0	107.8	107.6	107.5	107.3	107.6	107.7	107.7	106.6
Petroleum and coal products	125.2	124.7	123.9	124.7	124.2	133.3	126.2	127.4	126.2	128.0	122.6	125.1	130.3
Rubber and misc. plastics products	145.4	145.0	147.0	149.6	152.3	153.9	154.0	154.5	147.6	152.0	149.2	149.1	143.0
Leather and leather products	89.1	89.6	88.8	87.3	86.5	86.7	86.2	83.7	82.4	83.7	85.9	84.1	82.3
SERVICE-PRODUCING	130.8	131.4	132.0	132.3	132.5	132.3	132.9	134.2	133.7	134.0	134.6	134.7	134.6
TRANSPORTATION AND PUBLIC UTILITIES	107.2	108.2	109.9	110.2	110.3	111.2	111.2	112.2	107.5	111.3	112.9	112.0	112.2
WHOLESALE AND RETAIL TRADE	127.2	127.5	128.2	128.4	128.7	127.6	128.4	129.5	129.8	129.2	129.1	128.9	128.7
WHOLESALE TRADE	126.1	127.1	127.4	127.6	128.5	128.4	128.9	129.4	129.4	130.4	130.6	130.4	130.1
RETAIL TRADE	127.7	127.7	128.5	128.9	128.6	127.3	128.2	129.0	129.6	128.6	128.6	128.3	129.2
FINANCE, INSURANCE, AND REAL ESTATE SERVICES	139.2	139.6	140.5	140.6	140.9	141.7	142.0	142.6	143.6	142.3	143.4	144.4	144.9
	144.1	145.1	145.0	145.6	145.4	145.6	146.4	148.0	148.2	148.7	149.5	150.3	150.7

¹ See footnote 1, table B-2.

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Table B-6. Indexes of diffusion: Percent of industries in which employment¹ increased

Year and month	Over 1-month span	Over 3-month span	Over 6-month span	Over 12-month span
1976				
January.....	78.2	85.8	87.2	85.2
February.....	72.4	84.9	85.8	84.0
March.....	69.5	81.4	82.0	85.2
April.....	70.1	72.4	75.6	78.8
May.....	58.1	67.2	66.3	82.6
June.....	57.8	55.1	71.2	79.9
July.....	58.4	57.8	63.1	78.5
August.....	49.1	64.0	65.1	77.6
September.....	64.8	53.8	66.3	80.2
October.....	47.1	65.1	73.3	80.8
November.....	67.8	64.2	78.8	80.8
December.....	66.6	81.4	81.4	82.6
1977				
January.....	76.2	83.1	88.1	78.8
February.....	66.0	86.3	87.8	80.5
March.....	74.7	81.1	85.2	80.2
April.....	68.0	79.4	79.4	84.6
May.....	64.8	76.2	75.9	84.0
June.....	71.2	68.0	72.1	83.1
July.....	59.3	63.4	69.8	82.6
August.....	51.7	58.7	74.1	83.7
September.....	60.8	62.5	72.1	82.6
October.....	60.5	73.8	77.9	81.1
November.....	73.8	75.3	82.0	81.1
December.....	72.1	79.7	83.1	80.8
1978				
January.....	69.8	80.2	85.5	80.5
February.....	70.3	80.2	79.9	79.1
March.....	70.1	75.9	77.9	77.6
April.....	62.8	67.4	68.9	78.5
May.....	56.4	63.7	67.7	80.5
June.....	67.2	62.5	59.6	82.6
July.....	54.9	57.0	61.3	82.0
August.....	51.7	49.7	74.4	77.6
September.....	57.6	58.7	77.9	75.3
October.....	70.6	73.6	83.1	72.4
November.....	80.2	85.5	84.6	75.0
December.....	79.7	87.2	86.0	71.8
1979				
January.....	74.1	82.3	82.7	70.1p
February.....	65.1	77.9	69.2	68.4p
March.....	62.5	58.4	65.4	
April.....	44.2	53.2	53.2p	
May.....	48.0	50.3	50.3p	
June.....	60.5	52.9p		
July.....	52.0p	52.0p		
August.....	51.7p			
September.....				
October.....				
November.....				
December.....				

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

News

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USDL 79-641

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PRODUCER PRICE INDEXES--AUGUST 1979

The Producer Price Index for Finished Goods moved up 1.2 percent from July to August on a seasonally adjusted basis, the Bureau of Labor Statistics of the U.S. Department of Labor reported today. The August advance was about the same as in July. Prices for intermediate (semifinished) goods also rose 1.2 percent, following an even larger increase in the preceding month. After increasing sharply in July, crude material prices edged up only slightly. (See table A.)

Among finished goods, prices for finished consumer goods advanced 1.6 percent following a 1.2 percent upward movement in July, but capital equipment prices rose much less in August (0.1 percent) than in the preceding month (0.8 percent). Much of the acceleration in consumer goods was caused by food prices, which rose 1.2 percent after showing no change in July. (See table B.) Prices for finished energy goods climbed

Table A: Percent changes from preceding month in selected stage-of-processing price indexes, seasonally adjusted*

Month	Finished goods			Intermediate goods			Crude goods		
	Total	Consumer foods	Other	Total	Foods and feeds ^{1/}	Other	Total	Foodstuffs and feedstuffs	Other
Aug. 1978	0.3	-0.4	0.5	0.6	-0.6	0.7	0	0	0.1
Sept. ....	.8	1.5	.6	.6	1.6	.6	1.7	1.8	1.6
Oct. ....	.8	1.6	.5	1.2	2.8	1.1	2.8	3.7	1.7
Nov. ....	.7	.8	.7	.8	-.9	.9	1.1	.9	1.7
Dec.	1.0	1.2	1.0	.7	1.6	.7	.7	.3	1.2
Jan. 1979	1.3	1.8	1.1	1.1	.2	1.2	2.3	2.8	1.6
Feb.	1.1	1.8	.9	1.1	3.0	1.0	3.3	3.8	2.7
Mar.	1.0	1.2	.9	1.1	-.1	1.1	1.0	.3	2.2
Apr. ....	.9r	-.4	1.3r	1.5r	-.5	1.6r	-.4	-.4	-.5
May ....	.3r	-1.4r	.9r	.8r	.7	.8r	.8	-.2r	2.3
June ....	.5	-1.2	1.1	.9	-.6	1.0	.7	-1.2	3.3
July	1.1	0	1.4	1.9	6.7	1.6	1.8	2.1	1.4
Aug.	1.2	1.2	1.2	1.2	-2.6	1.4	-.1	-.2	.5

^{1/} Intermediate materials for food manufacturing and manufactured animal feeds.

* Data for April 1979 have been revised to reflect the availability of late reports and corrections by respondents. For this reason, some of the figures shown above and elsewhere in this release may differ from those previously reported.

r= revised.

5.8 percent, only slightly less than the 6.2 percent advance in the previous month. Prices for finished consumer goods other than food and energy rose 0.9 percent, about the same as the 0.8 percent increase in July.

Before seasonal adjustment, the Producer Price Index for Finished Goods moved up 0.7 percent to 217.3 (1967=100). Over the year, the Finished Goods Price Index increased 11.1 percent. The finished energy goods index was up 47.4 percent from August 1978 to August 1979, the finished consumer foods index rose 8.4 percent, the index for finished consumer goods other than food and energy was 8.2 percent higher than a year ago, and capital equipment prices were up 8.6 percent. The Producer Price Index for intermediate goods increased 13.7 percent over the year, and prices for crude materials advanced 17.3 percent.

Finished Goods

Finished consumer goods. The Producer Price Index for finished consumer goods (those eventually sold to retailers) advanced 1.6 percent in August, more than in any other month since November 1974. The finished consumer goods index increased 1.2 percent, after registering no change in July and decreasing for 3 consecutive months before that. Price increases accelerated sharply for fresh and dried fruits and vegetables. Prices also rose for milled rice, whole black pepper, flour base mixes and doughs, roasted coffee, bakery products, dairy products, vegetable oil end products, and refined sugar in consumer size packages. Prices turned up for pork and poultry after declining for several

Table B. Percent changes in finished goods price indexes, selected periods*

Month	Changes from preceding month, seasonally adjusted						Change in finished goods from 12 months ago (unadj.)
	Finished goods	Capital equip-ment	Finished consumer goods	Finished consumer goods excluding foods			
				Total	Durables	Nondurables	
Aug. 1978	0.3	0.4	0.2	0.5	0.8	0.4	7.9
Sept. ....	.8	.5	.9	.5	.7	.5	8.4
Oct. ....	.8	.6	.8	.4	-.8	1.1	8.5
Nov. ....	.7	.8	.6	.6	.1	.9	8.5
Dec.	1.0	.6	1.2	1.2	1.4	1.0	9.2
Jan. 1979	1.3	1.0	1.4	1.2	1.1	1.2	9.8
Feb.	1.1	.9	1.2	.9	.9	.9	10.2
Mar.	1.0	.6	1.1	1.1	.5	1.4	10.6
Apr. ....	.9r	1.2r	.7	1.3	.9r	1.6	10.4r
May ....	.3r	.5r	.3	1.2r	.6r	1.6	10.0
June ....	.5	.5	.5	1.4	.4	2.0	9.7
July	1.1	.8	1.2	1.9	1.0	2.3	10.1
Aug.	1.2	.1	1.6	1.8	.5	2.6	11.1

* Data for April 1979 have been revised to reflect the availability of late reports and corrections by respondents. For this reason, some of the figures shown above and elsewhere in this release may differ from those previously reported.

r= revised.

months. Beef and veal prices, however, declined for the fourth consecutive month, and egg prices fell even more than in July.

The index for consumer nondurables other than foods rose 2.6 percent, after rising 2.0 percent and 2.3 percent in June and July, respectively. As in July, the largest increases were registered for energy items: Gasoline prices rose 6.1 percent, compared with 3.9 percent last month, while prices for home heating oil rose less (6.0 percent) than in July (9.0 percent). Prices for sanitary papers and health products, soaps and synthetic detergents, tobacco products, and tires and tubes increased considerably more than in the preceding month.

The index for consumer durables rose only half as much in August (0.5 percent) as in July (1.0 percent). The slowdown was mainly due to a 0.4 percent decline for passenger car prices, which had advanced 1.3 percent in July. Cutlery prices also decreased. On the other hand, large increases were registered for household flatware, lawnmowers, and jewelry.

Capital equipment. The index for capital equipment edged up 0.1 percent, the smallest rise in more than 6 years. Motor truck prices decreased even more than in July, and prices for office and store equipment and commercial furniture also moved down. Prices rose less than in the previous month for many other kinds of capital equipment, such as railroad equipment, machine tools, construction machinery, and special industry machinery.

Intermediate Materials

The Producer Price Index for intermediate materials, supplies, and components rose 1.2 percent in August on a seasonally adjusted basis, following a 1.9 percent increase in the previous month. Prices for processed fuels advanced even more than in recent months, but food and feed prices turned down and increases for most other intermediate goods slowed somewhat.

The index for processed fuels and lubricants moved up 5.2 percent, more than in any other month so far this year. Prices for both residual fuel and commercial jet fuel increased more than 12 percent, and diesel fuel prices also continued to rise sharply. On the other hand, prices for liquefied petroleum gas rose much less than in July, and electric power continued to move up moderately.

The intermediate foods and feeds index decreased 2.6 percent, after a 6.7 percent increase in July. Prices fell after rising in the previous month for manufactured animal feeds, flour, and refined vegetable oils. Prices for animal fats and oils dropped even more sharply than in the 3 preceding months. Confectionery materials prices continued to rise but considerably less than in July.

The index for intermediate materials less food and energy rose 0.9 percent, following a 1.3 percent increase in July. This slowdown was most noticeable in the durable manufacturing materials category, as prices declined for steel mill products, zinc, lead, and tin. Aluminum prices rose less than in July, but copper prices turned up markedly after falling for 3 consecutive months.

The nondurable manufacturing materials index moved up 1.2 percent, after advancing 2.0 percent in July. Prices continued to rise, although less than in the previous month, for synthetic rubber, industrial chemicals, and plastic resins and materials. Leather prices declined for the third consecutive month. Price increases accelerated, however, for paperboard and inedible fats and oils.

Construction material prices continued to advance moderately (0.5 percent). Prices rose more than in July for softwood lumber, plumbing fixtures and brass fittings, and heating equipment. Following 3 months of declines, prices increased for building paper and board. In contrast, asphalt roofing turned down.

Prices for components for manufacturing were up 0.8 percent, following a 1.1 percent rise in July. Higher prices were registered for electronic components and accessories, internal combustion engines, and switchgear and switchboards; however, prices for motor vehicle parts declined. Other intermediate nonfood nonenergy items which rose in price included paper boxes and containers, mixed fertilizers, farm machinery parts, plastic packaging and shipping products, electric lamps and bulbs, and cutting tools and accessories.

Crude Materials

The Producer Price Index for crude materials for further processing edged up 0.1 percent on a seasonally adjusted basis, following a 1.8 percent advance in the previous month. Much of the deceleration was due to a 0.2 percent decrease in prices for crude foodstuffs and feedstuffs, which had climbed 2.1 percent in July. Corn and green coffee prices turned down in August after increasing substantially for several months. Cattle prices declined for the fourth consecutive month, and cocoa beans fell almost as sharply as in July. On the other hand, hog and live poultry prices increased after several months of decreases, and prices for wheat, soybeans, and raw cane sugar advanced more than in the preceding month.

Prices for crude energy materials moved up 2.7 percent over the month, about the same as in July, as crude petroleum and natural gas prices continued to rise rapidly. Prices for crude materials other than food and energy, however, decreased 2.6 percent, even more than the 1.9 percent drop in July. Nonferrous scrap prices declined sharply after rising in most other months so far this year, and hide and skins decreased more than 9 percent for the second consecutive month. Prices for iron and steel scrap also fell, although not as much as in the previous month. Higher prices were registered for potash and sand, gravel, and crushed stone.

Brief Explanation of Producer Price Indexes

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. These data were previously presented as the Wholesale Price Index. The name "Producer Price Indexes" is now being used to reflect more accurately the coverage of the data. The sample used for calculating these indexes continues to contain nearly 2,800 commodities and about 10,000 quotations 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.

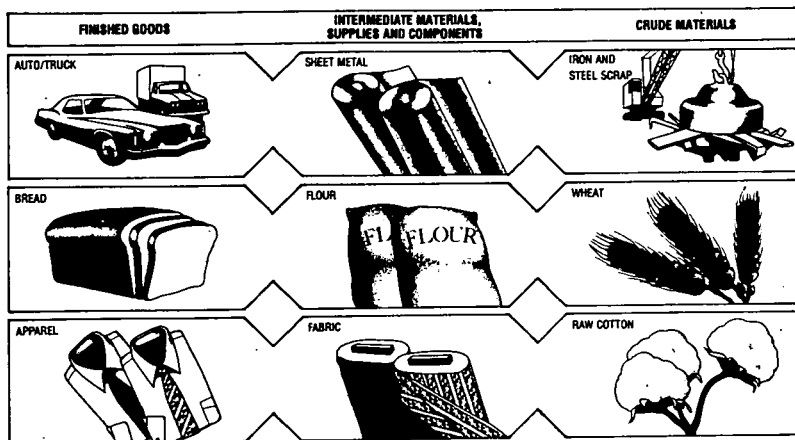
Producer Price Indexes can be organized by stage of processing or by commodity. The stage of processing structure organizes products by degree of fabrication (i.e., finished goods, intermediate or semifinished goods, and crude materials). The commodity structure organizes products by similarity of end-use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

Finished goods are commodities that will not undergo further processing and are ready for sale to the ultimate user, either an individual consumer or a business firm. Capital equipment (formerly called producer finished

goods) includes commodities such as motor trucks, farm equipment, and machine tools. Finished consumer goods include foods and other types of goods eventually purchased by retailers and used by consumers. Consumer foods include unprocessed foods such as eggs and fresh vegetables, as well as processed foods such as bakery products and meats. Other finished consumer goods include durables such as automobiles, household furniture, and jewelry, and nondurables such as apparel and gasoline.

Intermediate materials, supplies, and components are commodities that have been processed but require further processing before they become finished goods. Examples of such semifinished goods include flour, cotton yarns, steel mill products, belts and belting, lumber, liquefied petroleum gas, paper boxes, and motor vehicle parts.

Crude materials for further processing include products entering the market for the first time which have not been manufactured or fabricated but will be processed before becoming finished goods. Scrap materials are also included. Crude foodstuffs and feedstuffs include items such as grains and livestock. Examples of crude nonfood materials include raw cotton, crude petroleum, natural gas, hides and skins, and iron and steel scrap.



For analysis of general price trends, stage of processing indexes are more useful than commodity grouping indexes. This is because commodity grouping indexes sometimes produce exaggerated or misleading signals of price changes by reflecting the same price movement through various stages of processing. For example, suppose that a price rise for steel scrap results in an increase in the price of steel sheet and then an advance in prices of automobiles produced from that steel. The All Commodities Price Index and the Industrial Commodities Price Index would reflect the same price movement three times—once for the steel scrap, once for the steel sheet, and once for the automobiles. This multiple counting occurs because the weighting structure for the All Commodities Index uses the total shipment values for all commodities at all stages of processing. On the other hand, the Finished Goods Price Index would reflect the change in automobile prices, the Intermediate Materials Price Index would reflect the steel sheet price change, and the Crude Materials Price Index would reflect the rise in the price of steel scrap. (See illustration.)

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. Re-

spondents are asked to provide net prices or to provide all applicable discounts. BLS attempts to base Producer Price Indexes on actual transaction prices; however, list or book prices are used if transaction prices are not available. Most prices are obtained directly from producing companies on a voluntary and confidential basis, but some prices are taken from trade publications or from other Government agencies. 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 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. Each index measures price changes from a reference period which equals 100.0 (usually 1967, as designated by the Office of Management and Budget). An increase of 85 percent from the reference period in the Finished Goods Price Index, for example, is shown as 185.0. This change can also be expressed in dollars, as follows: "The price of a representative sample of finished goods sold in primary markets in the United States has risen from \$100 in 1967 to \$185."

A Note about Calculating Index Changes

Movements of price indexes from one month to another are usually expressed as percent changes rather than changes in index points because index point changes are affected by the level of the index in relation to its base period, while percent changes are not. The box below shows the computation of index point and percent changes.

Percent changes for 3-month and 6-month periods are expressed as annual rates that are computed according to the standard formula for compound growth rates. These data indicate what the percent change would be if the current rate were maintained for a 12-month period.

<i>Index Point Change</i>	
Finished Goods Price Index	185.5
less previous index	184.5
equals index point change	1.0
<i>Index Percent Change</i>	
Index point change	1.0
divided by the previous index	184.5
equals	0.005
result multiplied by 100	0.005 x 100
equals index percent change	0.5

A Note on Seasonally Adjusted Data

Because price data are used for different purposes by different groups, the Bureau of Labor Statistics publishes seasonally adjusted as well as unadjusted changes each month.

For analyzing general price trends in the economy, seasonally adjusted data usually are preferred because they eliminate the effect of changes that normally occur at about the same time and in about the same magnitude every year—such as price movements resulting from normal weather patterns, regular production and marketing cycles, model changeovers, seasonal discounts, and holidays. For this reason, seasonally adjusted data more clearly reveal the underlying cyclical trends. Seasonally adjusted data are subject to revision when seasonal factors are revised each year.

The unadjusted data are of primary interest to users who need information which can be related to the actual dollar values of transactions. Individuals requiring this information include marketing specialists, purchasing agents, budget and cost analysts, contract specialists, and commodity traders. Unadjusted data generally are used in escalating contracts such as purchase agreements or real estate leases.

Table 1. Producer price indexes and percent changes by stage of processing
 (1967=100)

grouping	Relative importance	Unadjusted index				Unadjusted percent change to Aug. 1979 from--		Seasonally adjusted percent change to Aug. 1979 from--	
		Dec. 1978 1/	April 1979 2/	July 1979 2/	Aug. 1979 2/	Aug. 1978	July 1979	May 1979	July 1979
Finished goods.....	100.000	211.4	215.0	217.3	11.1	6.7	2.8	1.2	
Finished consumer goods.....	78.445	219.2	215.2	217.2	12.2	-1.9	5.3	-1.6	
Finished consumer foods.....	25.485	227.8	224.4	223.2	8.4	-6.0	0	1.2	
Crude.....	2.805	241.8	224.9	231.4	8.8	1.0	5.9	3.8	
Processed.....	23.440	224.4	222.5	226.5	8.4	-9.9	-5.5	1.8	
Other nondurable goods.....	28.110	213.1	226.9	233.0	18.3	2.7	7.0	2.6	
Durable goods.....	17.129	172.4	180.9	181.2	7.6	-2.2	2.0	5	
Capital equipment.....	29.359	214.0	216.9	217.1	8.6	1	1.4	1	
Intermediate materials, supplies, and components.....	100.000	235.8	244.2	247.1	13.7	1.2	4.0	1.2	
Materials and components for manufacturing.....	94.351	229.0	235.5	237.4	13.0	.8	2.9	-1.6	
Materials for food manufacturing 3/.....	3.566	222.2	226.4	225.1	10.7	-6.1	1.2	1/	
Materials for nondurable manufacturing.....	18.587	213.7	222.1	224.3	14.3	1.1	4.3	1.2	
Materials for durable manufacturing.....	28.388	268.0	272.9	274.8	14.1	-7.7	2.9	-7.7	
Components for manufacturing.....	11.816	203.1	207.0	208.8	9.7	.9	2.4	.8	
Materials and components for construction.....	17.419	244.5	247.4	249.0	8.1	6	1.8	-5	
Processed fuels and lubricants.....	10.416	323.9	364.2	384.1	29.4	5.5	13.5	5.2	
Manufacturing industries.....	4.911	280.7	393.5	310.4	14.5	2.3	7.4	1.9	
Nonmanufacturing industries.....	3.208	365.9	424.8	458.6	43.3	8.8	18.7	7.8	
Containers.....	3.086	231.8	235.2	237.2	16.5	-9	1.7	-1.2	
Supplies 3/.....	14.726	212.8	219.3	219.1	11.3	-1	2.8	-1	
Manufacturing industries 3/.....	4.711	199.4	203.9	208.3	13.3	2.2	3.4	-2.2	
Nonmanufacturing industries 3/.....	10.017	219.9	227.5	224.9	10.4	-1.1	2.4	-1.1	
Manufactured animal feeds.....	1.856	219.5	241.6	221.1	15.3	-8.5	7.5	-6.4	
Other supplies 3/.....	8.162	216.8	221.0	222.5	9.4	1.7	2.3	-1.7	
Crude materials for further processing.....	100.000	279.9	287.3	281.7	17.5	-1.9	2.6	-1	
Foodstuffs and feedstuffs.....	58.561	251.5	256.1	243.4	14.3	-4.1	1.6	-2	
Nonfood materials.....	41.439	333.3	350.0	355.5	21.4	1.0	5.3	1.0	
Nonfood materials except fuel.....	26.209	276.5	285.1	284.1	19.7	4	5.2	-3.5	
Manufacturing.....	43.873	284.8	294.0	294.9	20.5	.3	5.4	-1.6	
Construction.....	2.336	203.6	207.0	208.5	11.4	-7	3.1	1.1	
Crude fuel 3/.....	15.210	529.2	573.9	586.0	24.5	2.1	8.4	1.4	
Manufacturing industries 3/.....	7.233	580.0	614.4	628.9	28.9	2.4	6.2	2.4	
Nonmanufacturing industries 3/.....	7.995	515.8	553.4	563.5	20.5	1.8	4.7	1.8	
Special groupings1/									
Finished goods, excluding foods.....	3/ 74.595	204.2	211.0	213.4	12.1	1.1	3.7	1.2	
Finished consumer goods, excluding foods.....	3/ 45.239	199.3	208.4	212.1	14.2	1.8	5.1	1.8	
Intermediate materials, supplies, and components, excluding intermediate materials for food manufacturing and manufactured animal feeds.....	3/ 94.578	236.7	245.0	248.6	13.6	1.5	4.0	1.4	
Intermediate foods and feeds.....	3/ 5.422	226.7	230.9	233.2	12.3	-1.3	3.3	-2.4	
Crude materials for further processing, excluding crude foodstuffs and feedstuffs, plant and animal fibers, oilseeds, and leaf tobacco.....	1/ 36.032	372.4	392.6	396.8	23.4	1.1	5.3	1.6	

1/ Comprehensive Relative Importance figures are computed once each year in December.
 2/ Data for April 1979 have been revised to reflect the availability of late reports and corrections by respondents. All data are subject to revision four months after original publication.

3/ Not seasonally adjusted.
 1/ Percent of total finished goods.
 2/ Percent of total intermediate materials.
 3/ Percent of total crude materials.

Table 2. Producer price indexes and percent changes for selected commodity groupings stage of processing
 1947=100 UNLESS OTHERWISE INDICATED

COMMODITY CODE	GROUPING	RELATIVE IMPORTANCE	UNADJUSTED INDEX		UNADJUSTED PERCENT CHANGE TO AUG. 1978	SEASONALLY ADJUSTED PERCENT CHANGE FROM			
			DEC. 1978 1/	JULY 1979 2/		AUG. 1978	AUG. 1979	MAY 1979	JULY 1979
	FINISHED GOODS.....	100.000	215.8	217.3	11.1	2.8	1.2		
	FINISHED CONSUMER GOODS.....	70.445	215.2	217.2	12.2	3.2	1.6		
	FINISHED CONSUMER GOODS.....	25.405	224.6	223.2	8.4	0	1.2		
01-11	FRESH FRUITS.....	.492	236.6	252.6	8.4	15.9	8.8		
01-13	FRESH AND DRIED VEGETABLES.....	.565	195.2	197.3	12.7	23.1	24.5		
01-7	EGGS.....	.546	167.6	166.8	5.5	-11.2	-8.3		
02-11	BAKERY PRODUCTS.....	2.169	218.4	224.3	9.6	4.5	3.2		
02-12-02	FLOUR BASE MIXES AND DOUGHS.....	.207	202.3	210.6	10.1	5.5	4.3		
02-13	MILLED RICE.....	.124	204.8	218.7	9.5	14.7	14.5		
02-14	OTHER CEREALS.....	.475	216.2	219.5	9.6	4.8	1.9		
02-01-01	BEEF AND VEAL.....	3.317	248.1	233.3	18.5	-4.3	-1.3		
02-01-04	PORK.....	2.317	191.9	185.7	-16.2	-11.1	1.5		
02-22	PROCESSED POULTRY.....	.923	179.7	170.9	-14.2	-19.2	2.9		
02-23	FISH.....	.866	399.5	388.5	22.7	4.5	.6		
02-3	DAIRY PRODUCTS.....	3.795	209.0	215.2	12.4	3.7	2.6		
02-4	PROCESSED FRUITS AND VEGETABLES.....	1.751	223.1	224.4	10.4	.6	.1		
02-55-01	REFINED SUGAR, CONSUMER SIZE PACKAGES (DEC. 1977 = 100) 3/.....	.129	113.7	115.1	7.8 3/	.8 3/	1.2		
02-55	CONFECTIONERY END PRODUCTS (DEC. 1977=100) 3/.....	.922	108.5	108.5	6.4 3/	1.2 3/	0		
02-63-01	ROASTED COFFEE.....	.973	375.8	383.7	13.1	24.2	3.3		
02-74	VEGETABLE OIL END PRODUCTS.....	.446	225.5	229.8	10.2	3.6	2.3		
02-8	MISCELLANEOUS PROCESSED FOODS 3/.....	2.493	212.7	217.6	10.5 3/	-1.0 3/	2.3		
	FINISHED CONSUMER GOODS EXCLUDING FOODS.....	45.239	228.4	212.1	14.2	5.1	1.8		
02-61	ALCOHOLIC BEVERAGES 3/.....	1.742	161.1	162.8	9.4 3/	1.8 3/	1.1		
02-62	NONALCOHOLIC BEVERAGES 3/.....	1.444	228.0	229.4	9.0 3/	1.4 3/	.6		
03-41	APPAREL 3/.....	5.522	161.0	161.1	5.0 3/	1.1 3/	.4		
03-82	TEXTILE, HOUSEFURNISHINGS 3/.....	.822	199.9	190.5	6.3 3/	1.3 3/	.3		
04-3	FOOTWEAR.....	1.057	222.3	225.6	22.6	4.7	1.5		
04-01	LUGGAGE AND SMALL LEATHER GOODS.....	.313	162.2	162.2	8.6	1.6	.1		
05-71	GASOLINE.....	4.632	405.2	433.2	45.7	14.3	6.1		
05-72-02-01	KEROSENE (FEB. 1973=100).....	.227	468.7	485.2	58.5	25.0	3.5		
05-73-02-01	FUEL OIL NO. 2 (FEB. 1973=100).....	1.640	484.0	513.0	60.8	25.3	6.0		
05-75	FINISHED LUBRICANTS 3/.....	.270	250.0	247.4	20.8 3/	8.1 3/	3.1		
06-35	PHARMACEUTICAL PREPARATIONS, ETHICAL (PRESCRIPTION) 3/.....	1.188	140.9	141.0	6.7 3/	1.1 3/	.1		
06-36	PHARMACEUTICAL PREPARATIONS, PROPRIETARY (OVER-THE-COUNTER).....	.498	181.1	182.3	9.7	1.4	.8		
06-71	SOAPS AND SYNTHETIC DETERGENTS 3/.....	.638	190.3	196.1	10.3 3/	3.4 3/	3.0		
06-75	COSMETICS AND OTHER TOILET PREPARATIONS 3/.....	.899	160.5	160.6	7.4 3/	.8 3/	.1		
07-12	TIRES AND TUBES.....	.468	205.4	210.1	16.7	4.7	1.8		
07-13-01	RUBBER FOOTWEAR.....	.214	204.3	207.0	10.4	2.8	.9		
07-27	DISPOSABLE PLASTIC DINNERWARE AND TABLEWARE (JUNE 1978=100) 3/.....	.173	118.2	119.8	19.2 3/	6.1 3/	1.4		
07-28	CONSUMER AND COMMERCIAL PLASTICS, NET ELSEWHERE CLASSIFIED (JUNE 1978=100) 3/.....	.364	109.2	109.6	9.7 3/	1.4 3/	.4		
09-15-01	SANITARY PAPERS AND HEALTH PRODUCTS 3/.....	1.042	275.9	285.9	12.0 3/	4.3 3/	3.6		
12-1	HOUSEHOLD FURNITURE 3/.....	1.664	185.8	186.2	6.0 3/	.9 3/	.2		
12-3	FLOOR COVERINGS.....	.721	148.9	149.9	5.2	2.8	.6		
12-6	HOUSEHOLD APPLIANCES.....	1.722	161.0	161.9	5.1	1.3	.4		
12-5	HOME ELECTRONIC EQUIPMENT 3/.....	.920	87.7	87.7	-3.4 3/	-2.3 3/	0		
12-6	OTHER HOUSEHOLD DURABLE GOODS.....	.828	222.8	224.8	10.0	3.2	1.1		
14-11-01	PASSENGER CARS.....	5.983	174.9	173.4	8.6	1.3	-.4		
15-1	TOYS, SPORTING GOODS, SMALL ARMS, ETC.....	1.175	176.9	177.5	8.5	2.6	.8		
15-2	TOBACCO PRODUCTS 3/.....	1.480	214.6	221.1	7.6 3/	3.4 3/	3.0		
15-51	MOBILE HOMES.....	.945	136.5	137.7	8.4	1.3	.9		
15-61-01	ELECTRONIC HEARING AIDS (JUNE 1978=100) 3/.....	.015	103.8	104.3	3.9 3/	1.3 3/	.5		
15-94-02	JEWELRY, PLATINUM & MARAT GOLD (DEC. 1978=100) 3/.....	.720	120.3	122.4	4/	10.8 3/	1.7		
15-94-74	COSTUME JEWELRY (DEC. 1978=100) 3/.....	.412	102.1	103.8	4/	1.5 3/	1.7		
	CAPITAL EQUIPMENT.....	29.355	216.9	217.1	6.6	1.6	.1		
19-42	HAND TOOLS.....	.315	247.1	248.6	9.8	2.4	.7		
11-1	AGRICULTURAL MACHINERY AND EQUIPMENT.....	1.226	230.0	232.4	8.5	2.8	1.0		
11-2	CONSTRUCTION MACHINERY AND EQUIPMENT 3/.....	1.756	256.5	258.0	10.0 3/	2.1 3/	.6		
11-02	POWER DRIVEN HAND TOOLS 3/.....	.204	172.8	174.0	7.3 3/	1.6 3/	.7		
11-34	INDUSTRIAL PROCESS FURNACES AND Ovens.....	.146	200.5	201.1	9.3	1.9	.4		
11-37	METAL CUTTING MACHINE TOOLS 3/.....	.494	267.9	270.1	14.8 3/	3.8 3/	.8		

SEE FOOTNOTES AT END OF TABLE.

Table 2. Producer price indexes and percent changes for selected commodity groupings by stage of processing
—Continued (1967=100 UNLESS OTHERWISE INDICATED)

COMMODITY CODE	GROUPING	RELATIVE IMPORTANCE	UNADJUSTED INDEX			UNADJUSTED PERCENT CHANGE		SEASONALLY ADJUSTED PERCENT CHANGE		
			AUG. 1978			AUG. 1978		AUG. 1978		
			DEC. 1976	JULY 1978	AUG. 1978	1978	1978	MAY 1978	JULY 1978	JULY 1978
CAPITAL EQUIPMENT - CONTINUED.....										
11-30	METAL FORMING MACHINE TOOLS.....	251	331.4	332.4	15.1		2.4		0.5	
11-31	PUMPS, COMPRESSORS, AND EQUIPMENT.....	418	264.4	253.6	6.4		1.0		1.5	
11-44	INDUSTRIAL MATERIAL HANDLING EQUIPMENT 2/.....	870	231.3	232.5	5.3	3/	1.0	3/	.5	
11-66	SCALES AND BALANCES 2/.....	353	192.5	195.4	6.3		1.5	3/	.3	
11-67	FANS AND BLOWERS EXCEPT PORTABLE.....	442	270.2	275.2	16.7		4.6		.3	
11-69-12	UNITARY AIR CONDITIONERS (DEC. 1977=100) 2/.....	352	111.2	111.9	7.7	3/	1.6	3/	.6	
11-6	SPECIAL INDUSTRY MACHINERY AND EQUIPMENT 3/.....	2,778	249.5	257.8	11.4	3/	2.4	2/	.5	
11-72	INTEGRATING AND MEASURING INSTRUMENTS.....	413	170.5	171.2	5.7		1.7		.4	
11-72-52	GENERATORS AND GENERATOR SETS 3/.....	457	241.6	243.4	5.4	3/	1.2	3/	.7	
11-74	TRANSFORMERS AND POWER REGULATORS 2/.....	571	193.7	193.5	6.7	3/	-.2	2/	-.1	
11-75	ELECTRIC MACHINERY AND TOOLS 2/.....	476	256.6	251.7	10.6	3/	1.7	1/	.4	
11-72	MINING MACHINERY AND EQUIPMENT.....	150	274.8	279.1	8.1		1.1		-.3	
11-91	OFFICE AND STORE MACHINES AND EQUIPMENT 2/.....	1,577	195.7	194.1	4.0	3/	1.3	2/	-.7	
12-2	COMMERCIAL FURNITURE.....	1,152	222.7	222.7	6.2		-.3		-.4	
14-11-11	PASSENGER CARS.....	3,025	174.9	173.4	8.1		1.3		-.4	
14-11-7	M-T 9 TRUCKS.....	2,565	228.0	226.0	6.2		-1.5		-1.7	
14-11-11	FIXED WING UTILITY AIRCRAFT (DEC. 1968=100).....	1,772	213.7	216.9	11.6		4.0		2.2	
14-11-11	ROTARY WING UTILITY AIRCRAFT (DEC. 1968=100).....	346	47	47	47		47		47	
14-4	RAILROAD EQUIPMENT.....	448	290.4	282.5	13.5		4.9		.4	
15-41	PHOTOGRAPHIC EQUIPMENT 3/.....	561	116.0	116.0	3.9	3/	1.2	2/	-.1	
15-71-34	GUARDS, MECHANICAL POWER PRESS (JUNE 1978=100) 2/.....	177	177.3	177.3	7.3	3/	27	2/	27	
INTERMEDIATE MATERIALS, SUPPLIES, AND COMPONENTS.....										
12-12-31	FLOUR.....	777	187.3	183.6	27.8*		11.5		-1.1	
12-73-73	REFINED SUGAR, PER HSE IN FLUID MANUFACTURING (DEC. 1978=100) 2/.....	164	118.5	115.3	8.7	3/	2.7	2/	.8	
12-66	CONFECTIONARY MATERIALS (DEC. 1977=100) 2/.....	281	131.5	134.2	15.9	3/	11.7	2/	2.1	
12-71	ANIMAL FEEDS AND OILS.....	114	782.8	785.5	11.2		-15.5		-8.5	
12-72	CRUDE VEGETABLE OILS.....	955	284.4	288.2	18.7		3.7		-.2	
12-73	REFINED VEGETABLE OILS 2/.....	107	243.7	238.8	5.0	3/	C	2/	-1.8*	
12-6	MANUFACTURED ANIMAL FEEDS.....	1,858	795.2	716.5	13.9		3.7		-3.0	
13-1	SYNTHETIC FIBERS (DEC. 1978=100).....	724	116.4	121.5	13.0		2.4		.7	
13-7	PROCESSED YARNS AND THREADS (DEC. 1978=100).....	956	104.5	111.3	7.7		2.5		1.1	
13-9	WEAVE FABRICS (DEC. 1975=100) 2/.....	1,158	129.1	126.5	6.4	3/	2.8	2/	.6	
13-4	FINISHED FABRICS (DEC. 1975=100) 2/.....	1,494	137.6	138.5	5.3	3/	2.2	2/	.9	
14-2	LEATHER.....	318	385.7	361.5	45.3		-12.5		-.5	
15-2	CONCRETE.....	174	433.6	431.6	2.8		.6		.7	
16-3	LIQUEFIED PETROLEUM GAS 2/.....	674	477.1	451.4	32.2	3/	20.5	2/	5.7	
16-4	ELECTRIC POWER.....	4,920	274.7	276.0	11.0		3.8		1.1	
15-72-1-71	COMMERCIAL 3RD FUEL (FEB. 1973=100).....	742	474.7	482.9	46.7		26.4		12.2	
15-73-10-11	DIESEL FUEL (FEB. 1975=100).....	679	402.9	375.8	41.0		27.3		8.2	
16-74	RESIDUAL FUEL.....	1,417	680.5	753.7	76.8		24.3		12.1	
16-75	LUBRICATING OIL MATERIALS 2/.....	347	469.8	489.6	77.8	2/	18.2	2/	4.2	
16-1	INDUSTRIAL CHEMICALS 2/.....	4,314	269.4	275.6	21.7	3/	7.9	3/	2.1	
16-21	PREPARED PAINT 2/.....	739	208.3	205.3	6.0	3/	2.0	3/	C	
16-22	PAINT MATERIALS.....	772	245.3	245.3	18.4		6.5		.1	
16-31	DRUGS AND PHARMACEUTICAL MATERIALS 2/.....	1,217	197.7	193.9	5.9	3/	1.4	2/	.0	
16-4	FLUO-RID FILLS, INDUSTRIAL.....	365	981.6	976.4	20.3		-7.4		2.6	
16-5	MIXED REFRIGERANTS.....	1,268	189.1	222.6	13.3		5.8		-.4	
16-52-1	NITROGEN 2/.....	107	155.0	155.7	2.5	3/	.1	2/	.5	
16-52-2	PHOSPHATES 2/.....	240	194.6	203.7	11.8	3/	2.6	2/	2.1	
16-53	PESTICIDES 2/.....	448	348.7	345.3	5.4	3/	-.2	2/	-.1	
16-6	PLASTIC RESINS AND MATERIALS.....	1,708	241.7	240.2	23.0		7.9		2.1	
16-66	MISCELLANEOUS CHEMICAL PRODUCTS 2/.....	1,263	214.4	211.7	4.9	3/	3.7	2/	.1	
17-11-2	SYNTHETIC RUBBER.....	765	212.0	220.5	22.6		12.1		4.2	
17-12	TIRES AND TUBES.....	766	255.4	232.1	16.7		6.7		1.8	
17-13-74	OTHER MISCELLANEOUS RUBBER PRODUCTS.....	1,76	201.8	222.6	6.4		2.7		.4	
17-21	PLASTIC CONSTRUCTION PRODUCTS (DEC. 1965=100).....	712	151.8	153.2	10.5		3.0		.5	
17-22	UNREINFORCED PLASTIC FILM AND SHEETING (DEC. 1973=100).....	596	176.7	176.4	7.8		4.6		.7	
17-23	LAMINATED PLASTIC SHEETS, HIGH PRESSURE (DEC. 1973=100).....	150	150.4	147.1	47		-1.1		-.3	
17-24	FOAMED PLASTIC PRODUCTS (JUNE 1978=100) 2/.....	120	120.7	120.4	9.8	3/	.4	3/	-.3	
17-24	PLASTIC PACKAGING AND SHIPPING PRODUCTS (JUNE 1978=100) 2/.....	274	112.4	114.8	14.7	3/	4.6	2/	2.1	

SEE FOOTNOTES AT END OF TABLE.

Table 2. Producer price indexes and percent changes for selected commodity groupings by stage of processing
 -Continued (1967=100 UNLESS OTHERWISE INDICATED)

COMMODITY CODE	GROUPING	RELATIVE IMPORTANCE	UNADJUSTED INDEX			UNADJUSTED SEASONALLY ADJUSTED PERCENT PERCENT CHANGE TO AUG. 1979 FROM-				
			DEC. 1978 1/	JULY 1979 2/	AUG. 1978 2/	AUG. 1978 FROM-				
						AUG. 1978	MAY 1979	JULY 1979		
07-26	INTERMEDIATE MATERIALS, ETC - CONTINUED.....									
	PLASTIC PARTS AND COMPONENTS FOR MANUFACTURING (JUNE 1978=100) 3/.....	.721	113.9	114.9	14.2	3/	-3	3/	0.9	
08-1	LUMBER.....	3,221	355.2	365.2	11.8		3.6		2.0	
08-2	MILWOKS.....	1,540	252.3	249.2	3.1		-2.8		.6	
08-3	PLYWOOD.....	1,058	245.9	252.9	4.7		3.0		-2.2	
08-4	OTHER WOOD PRODUCTS.....	217	237.6	237.4	9.2		0		.3	
09-11	WOODPULP.....	.772	321.2	322.5	23.5		9.1		.8	
09-13	PAPER.....	2,380	225.4	228.6	10.4		.9		.6	
09-14	PAPERBOARD.....	1,011	201.5	205.0	14.3		2.9		2.3	
09-15-23	PAPER BOXES AND CONTAINERS 3/.....	2,968	195.1	202.0	16.0	3/	3.9	3/	3.5	
09-2	BUILDING PAPER AND BOARD.....	495	175.7	182.9	9.7		-1.2		1.3	
10-13-21	SEMFINISHED STEEL PRODUCTS.....	.411	301.2	302.0	8.7		1.5		-1.5	
10-14-22	PRIMARY NONFERROUS METAL REFINERY SHAPES.....	6,501	203.1	201.5	9.3		1.7		.0	
10-19	FOUNDRY AND FORGE SMDP PRODUCTS.....	1,904	274.6	276.0	9.5		2.0		1.0	
10-16	PIG IRON AND FERROALLOYS 3/.....	.316	305.8	305.7	15.6	3/	3.2		0	
10-22	PRIMARY NONFERROUS METAL REFINERY SHAPES.....	2,107	245.8	243.0	10.3		6.2		0	
10-24	SECONDARY NONFERROUS METAL AND ALLOY BASIC SHAPES.....	.454	285.7	281.9	32.9		1.4		-1.1	
10-25	NONFERROUS MILL SHAPES.....	1,869	271.2	272.6	17.5		1.5		.3	
10-26	NONFERROUS WIRE AND CABLE.....	.787	183.5	184.9	21.0		-9		-1.7	
10-28-31	ZINC CASTINGS (JUNE 1977=100) 3/.....	.152	108.1	109.7	7.8	3/	2.4	2/	1.5	
10-3	METAL CONTAINERS.....	1,148	267.5	267.7	6.7		-1		.2	
10-41	HARDWARE, N.E.C. 3/.....	1,755	206.0	210.1	9.2	3/	1.3	3/	.6	
10-5	PUMPING FITTINGS AND BRASS FITTINGS.....	.351	219.2	222.2	10.4	3/	3.4		1.6	
10-6	HEATING EQUIPMENT.....	1,390	186.1	187.9	6.6	3/	4.3	3/	1.0	
10-9	FABRICATED STRUCTURAL METAL PRODUCTS.....	3,167	250.6	252.3	9.6		1.5		.3	
10-8	MISCELLANEOUS METAL PRODUCTS.....	3,747	232.6	236.3	9.6		2.0		1.3	
11-11-51	TRACTOR PARTS 3/.....	.143	167.6	169.4	6.1	3/	1.1	3/	1.1	
11-12-51	PARTS FOR FARM MACHINERY EX. TRACTORS.....	.176	189.4	190.6	7.3		6.2		1.0	
11-28-51	PARTS FOR NONFARM TRACTORS.....	.307	215.9	215.9	9.4		3.0		.8	
11-53-53	ARC WELDING ELECTRODES.....	.170	270.2	270.4	6.5		-1		.1	
11-35	CUTTING TOOLS AND ACCESSORIES 3/.....	.423	204.0	209.9	11.2	3/	3.2	3/	2.6	
11-36	ABRASIVE PRODUCTS 3/.....	.287	223.4	224.3	9.5	3/	1.6	3/	.4	
11-37-51	PARTS FOR METAL CUTTING MACHINE TOOLS 3/.....	.135	253.0	254.8	20.5	3/	4.6	3/	.7	
11-38-51	PARTS FOR METAL FORMING MACHINE TOOLS.....	.096	245.7	246.4	19.4		3.8		1.0	
11-42	ELEVATORS AND ESCALATORS 3/.....	.121	215.1	214.6	3.4		.8		-2.2	
11-43	FLUID POWER EQUIPMENT.....	.330	174.2	174.6	6.3		1.7		.3	
11-45	MECHANICAL POWER TRANSMISSION EQUIPMENT.....	.468	236.1	239.7	10.6		4.0		1.3	
11-47	PUMPS AND BLOWERS EXCEPT PORTABLE.....	.113	270.2	270.2	10.7		4.6		.3	
11-48-24	REFRIGERANT COMPRESSORS AND COMPRESSOR UNITS (DEC. 1977=100) 3/.....	.377	110.8	110.8	7.5	3/	.3	3/	0	
11-49-01	VALVES AND FITTINGS.....	.604	256.6	258.0	10.3		.9		.7	
11-49-05	BALL AND ROLLER BEARINGS.....	.267	229.2	232.0	10.0		2.1		.8	
11-49-09	PLAIN BEARINGS 3/.....	.091	245.2	245.2	11.1	3/	-2	3/	0	
11-71	WIRING DEVICES.....	.553	245.1	246.5	10.3		1.2		.4	
11-73-01	ELECTRIC MOTORS.....	.628	230.6	231.6	11.1		3.4		.5	
11-75	SWITCHGEAR, SWITCHBOARD, ETC., EQUIPMENT.....	.628	195.8	199.2	6.8		1.5		1.9	
11-77	ELECTRIC LAMPS/BULBS 3/.....	.295	235.3	239.3	14.4	3/	4.8	3/	1.7	
11-78	ELECTRONIC COMPONENTS AND ACCESSORIES 3/.....	1,790	135.8	137.5	8.3	3/	3.6	3/	1.3	
11-92-52-01	PARTS FOR MINING MACHINERY AND EQUIPMENT.....	.102	274.9	274.9	8.7		0		-1.1	
11-94	INTERNAL COMBUSTION ENGINES.....	.935	234.6	238.2	9.1		1.8		1.2	
13-11	FLAT GLASS 3/.....	.628	184.0	184.1	6.0	3/	.5	3/	.1	
13-22-31-311	PORTLAND CEMENT.....	.588	282.8	282.9	11.0		2.0		.6	
13-3	CONCRETE PRODUCTS.....	1,831	245.2	246.4	12.2		2.4		.8	
13-4	STRUCTURAL CLAY PRODUCTS, EXCLUDING REFRACTORIES.....	.248	220.3	222.4	12.5		2.9		.9	
13-5	REFRACTORIES.....	.217	241.6	242.4	9.0		6.1		0	
13-6	ASPHALT ECOPIING.....	.350	324.2	322.2	8.2		-2		-1.9	
13-7	GYPSSUM PRODUCTS.....	.712	251.8	252.3	7.0		1.7		.2	
13-8	GLASS CONTAINERS.....	.684	265.5	265.5	5.9		1.2		.2	
13-9	OTHER NONMETALLIC MINERALS.....	1,091	310.1	309.9	9.9		2.5		.1	
14-12	MOTOR VEHICLE PARTS.....	3,981	225.9	226.6	8.2		1.0		-1.0	
15-3	NOTIONS 3/.....	.186	192.2	192.1	5.7	3/	1.0	3/	-1	
15-32	PHOTODUPLICATION SUPPLIES 3/.....	.603	172.1	172.1	3.7	3/	.7	3/	0	
15-71-21	RESPIRATORY PROTECTIVE EQUIPMENT (JUNE 1978=100) 1/.....	.015	107.0	107.3	7.3	3/	1.0	3/	.3	
15-71-32	EYE AND FACE PROTECTIVE EQUIPMENT (JUNE 1978=100) 3/.....	.025	105.3	105.6	5.3	3/	.8	3/	.3	
15-71-39	PROTECTIVE CLOTHING (JUNE 1978=100) 3/.....	.014	121.5	122.0	21.0	3/	2.6	3/	.4	
15-94-79	JEWELRY MATERIALS AND FINDINGS (DEC. 1978=100) 3/.....	.207	118.8	118.6	4/	3/	9.4	3/	-2	

SEE FOOTNOTES AT END OF TABLE.

Table 2. Producer price indexes and percent changes for selected commodity groupings by stage of processing
 -Continued
 (1967=100 UNLESS OTHERWISE INDICATED)

COMMODITY CODE	GROUPING	RELATIVE IMPORTANCE	UNADJUSTED INDEX			UNADJUSTED PERCENT CHANGE TO			SEASONALLY ADJUSTED PERCENT CHANGE TO				
			DEC. 1974 1/	JULY 1975 2/	AUG. 1979 2/	AUG. 1974		AUG. 1975		MAY 1979		JULY 1979	
						1974	1975	1975	1979	1979	1979		
	CRUDE MATERIALS FOR FURTHER PROCESSING	100.000	287.3	281.7		17.3		2.6				0.1	
31-1	FRESH AND DRIED FRUITS AND VEGETABLES.....	2,545	226.6	241.6		12.2		26.8				18.3	
31-2	GRAINS 3/.....	9,590	267.4	225.1		28.1	2/	8.9	2/			-7.4	
31-3	LIVESTOCK.....	24,769	256.0	246.2		17.5		-12.5				-3.6	
31-4	LIVE POULTRY.....	2,740	183.8	171.9		-16.1		-23.2				2.1	
31-5	PLANT AND ANIMAL FIBERS 3/.....	2,096	207.6	207.9		5.3	3/		2/			-1	
31-6	FLUID MILK.....	9,220	247.6	256.0		13.4		4.0				-5	
31-8	MAY, MAYSEEDS, CILICIOUS 3/.....	6,164	260.1	251.9		16.9	3/	4.7	3/			-3.2	
31-91-31	GREEN COFFEE 2/.....	2,376	494.7	486.0		45.3	2/	38.3	2/			-2.5	
31-91-32	COFFEE BEANS.....	1,178	885.7	533.4		-16.7		-8.5				-8.4	
31-92-31-31	LEAF TOBACCO.....	1,734	156.8	208.8		7.1		.6				-2.1	
22-52-31-01	CANE SUGAR, RAW 3/.....	1,524	276.4	216.2		11.6	3/	10.8	3/			3.7	
24-1	HIDES AND SKINS.....	.783	566.4	511.9		27.7		-20.6				-9.8	
25-1	COAL.....	5,763	452.8	494.5		2.5		1.0				.5	
25-31	NATURAL GAS 3/.....	10,579	845.3	662.7		34.4	3/	7.1	2/			2.7	
25-61	CRUDE PETROLEUM 3/.....	6,422	375.2	385.7		27.4	3/	14.9	2/			4.1	
26-32-33	POTASH.....	.185	190.0	189.5		29.2		4.0				1.0	
27-11-31	CRUDE NATURAL RUBBER.....	.347	313.3	313.5		24.4		4.2				.4	
28-12	WASTEPAPER.....	.739	207.0	266.6		13.6		-4				-7	
10-11	IRON ORE 3/.....	.117	216.1	223.2		13.5	3/	5.4	3/			1.9	
10-12	IRON AND STEEL SCRAP.....	3,183	346.1	332.7		23.1		5.7				-1.3	
13-23	NONFERROUS SCRAP.....	2,347	267.3	258.5		32.6		-4.5				-5.5	
13-23	SAND, GRAVEL, AND CRUSHED STONE.....	2,514	207.1	208.6		11.4		3.1				1.1	

1/ COMPREHENSIVE RELATIVE IMPORTANCE FIGURES ARE COMPUTED ONCE EACH YEAR IN DECEMBER. DATA SHOWN ARE EXPRESSED AS A PERCENT OF TOTAL FINISHED GOODS, TOTAL INTERMEDIATE MATERIALS, OR TOTAL CRUDE MATERIALS. DATA SHOWN WILL NOT ADD UP TO 100% BECAUSE NOT ALL COMMODITY COMPONENTS OF EACH STAGE-OF-PROCESSING (SOP) INDEX ARE SHOWN. RELATIVE IMPORTANCE FIGURES SHOW ACCOUNT FOR ABOUT 87 PERCENT OF TOTAL FINISHED GOODS, ABOUT 82 PERCENT OF TOTAL INTERMEDIATE MATERIALS, AND ABOUT 97 PERCENT OF TOTAL CRUDE MATERIALS. FOR EACH COMMODITY COMPONENT OF THE FINISHED GOODS INDEX WHICH IS ALLOCATED TO BOTH CAPITAL EQUIPMENT AND FINISHED CONSUMER GOODS EXCLUDING FOODS, THE RELATIVE IMPORTANCE FIGURE SHOWN REFLECTS ONLY THE SHARE ALLOCATED TO THE SOP GROUPING UNDER WHICH IT IS LISTED. FOR EXAMPLE, THE RELATIVE IMPORTANCE FIGURE

SHOWN FOR HOUSEHOLD FURNITURE UNDER THE SOP GROUPING FOR FINISHED CONSUMER GOODS EXCLUDING FOODS INCLUDES THE SHARE ALLOCATED TO THAT SOP GROUPING BUT NOT THE SHARE ALLOCATED TO CAPITAL EQUIPMENT.

2/ ALL DATA ARE SUBJECT TO REVISION FOUR MONTHS AFTER ORIGINAL PUBLICATION.

3/ NOT SEASONALLY ADJUSTED.

4/ NOT AVAILABLE.

Table 3. Producer price indexes for selected commodity groupings¹
(1967=100)

GROUPING	UNADJUSTED INDEX	
	APRIL 1979 2/	AUG. 1979 2/
ALL COMMODITIES.....	230.0	238.1
ALL COMMODITIES (1957-59=100).....	244.0	252.6
MAJOR COMMODITY GROUPS		
FARM PRODUCTS AND PROCESSED FOODS AND FEEDS.....	231.2	227.3
FARM PRODUCTS.....	246.0	238.5
PROCESSED FOODS AND FEEDS.....	222.3	220.3
INDUSTRIAL COMMODITIES.....	229.0	240.3
TEXTILE PRODUCTS AND APPAREL.....	166.4	170.4
HIDES, SKINS, LEATHER, AND RELATED PRODUCTS.....	256.9	258.0
FUELS AND RELATED PRODUCTS AND POWER 3/.....	361.5	432.5
CHEMICALS AND ALLIED PRODUCTS 3/.....	215.1	227.3
RUBBER AND PLASTIC PRODUCTS.....	188.8	197.9
LUMBER AND WOOD PRODUCTS.....	304.9	304.4
PULP, PAPER, AND ALLIED PRODUCTS.....	215.0	221.9
METALS AND METAL PRODUCTS.....	256.0	261.6
MACHINERY AND EQUIPMENT.....	209.8	215.7
FURNITURE AND HOUSEHOLD DURABLES.....	168.7	170.7
NONMETALLIC MINERAL PRODUCTS.....	243.4	246.6
TRANSPORTATION EQUIPMENT (DEC. 1968=100).....	186.8	187.2
MISCELLANEOUS PRODUCTS.....	201.4	208.2
INDUSTRIAL COMMODITIES LESS FUELS AND RELATED PRODUCTS AND POWER.....	214.7	220.1
OTHER COMMODITY GROUPINGS		
01-9 OTHER FARM PRODUCTS.....	255.1	310.9
07-1 CEREAL AND BAKERY PRODUCTS.....	203.0	215.1
02-2 MEATS, POULTRY, AND FISH.....	253.0	225.5
02-5 SUGAR AND CONFECTIONERY.....	208.7	218.3
02-6 BEVERAGES AND BEVERAGE MATERIALS.....	201.5	215.9
02-63 PACKAGED BEVERAGED MATERIALS.....	251.9	355.0
02-7 FATS AND OILS.....	246.2	251.9
04-4 OTHER LEATHER AND RELATED PRODUCTS.....	200.9	211.0
05-3 GAS FUELS 3/.....	477.4	569.0
05-7 REFINED PETROLEUM PRODUCTS 3/.....	378.6	482.8
06-3 DRUGS AND PHARMACEUTICALS.....	157.5	159.6
06-5 AGRICULTURAL CHEMICALS AND PRODUCTS.....	209.8	213.5
06-7 OTHER CHEMICALS AND ALLIED PRODUCTS.....	186.9	193.9
07-1 RUBBER AND RUBBER PRODUCTS.....	201.2	212.4
07-11 CRUDE RUBBER.....	211.6	232.2
07-13 MISCELLANEOUS RUBBER PRODUCTS.....	201.3	206.1
10-2 NONFERROUS METALS.....	259.6	262.3
10-4 HARDWARE.....	215.8	220.3
11-3 METALWORKING MACHINERY AND EQUIPMENT.....	235.3	243.2
11-4 GENERAL PURPOSE MACHINERY AND EQUIPMENT.....	232.6	237.8
11-7 ELECTRICAL MACHINERY AND EQUIPMENT.....	175.0	181.0
11-9 MISCELLANEOUS MACHINERY AND EQUIPMENT.....	205.4	209.8
13-2 CONCRETE INGREDIENTS.....	242.0	244.7
14-1 MOTOR VEHICLES AND EQUIPMENT.....	189.4	189.2
15-4 PHOTOGRAPHIC EQUIPMENT AND SUPPLIES.....	150.1	152.0
15-0 OTHER MISCELLANEOUS PRODUCTS.....	246.1	260.1

1/ INDEXES FOR THESE COMMODITY GROUPINGS ARE NOT INCLUDED IN TABLE 2 BECAUSE THEIR COMPONENTS ARE DIVIDED AMONG DIFFERENT STAGES OF PROCESSING.

2/ DATA FOR APRIL 1979 HAVE BEEN REVISED TO REFLECT THE AVAILABILITY OF LATE REPORTS AND CORRECTIONS BY RESPONDENTS. ALL DATA ARE SUBJECT TO REVISION FOUR MONTHS AFTER ORIGINAL PUBLICATION.

3/ PRICES OF SOME ITEMS IN THIS GROUPING ARE LAGGED 1 MONTH.

Chart 1
 Finished Goods Price Index and its components
 1969 - 79
 3-month annual rates of change
 (Seasonally adjusted)

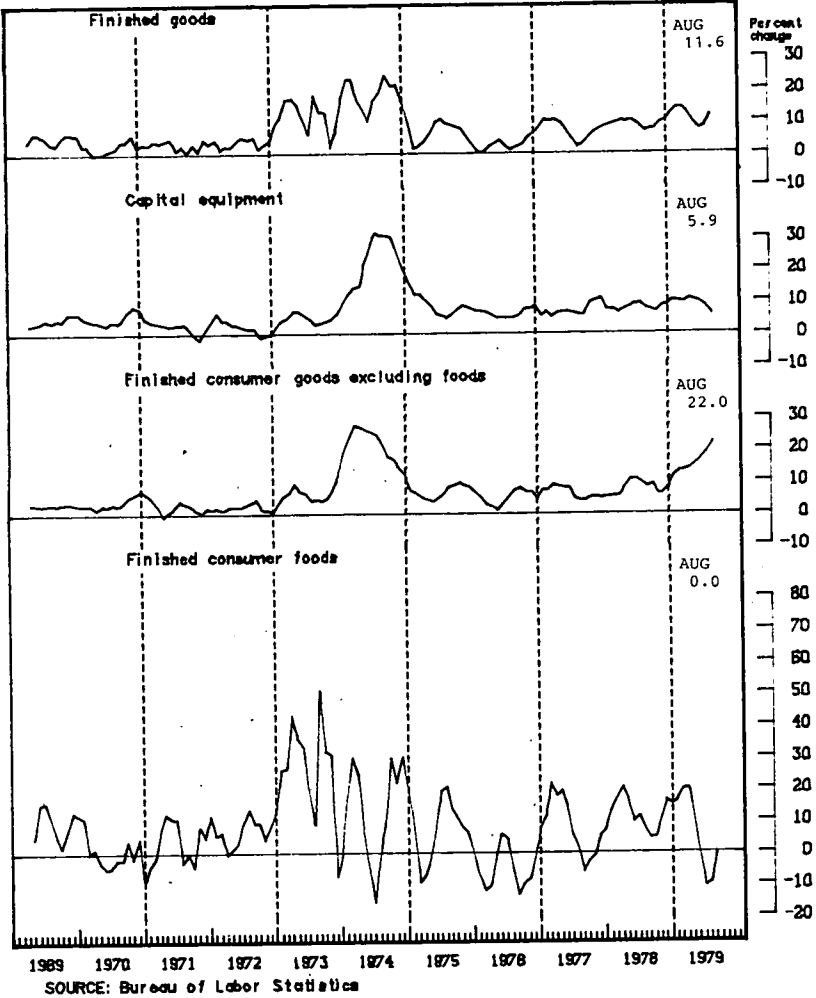
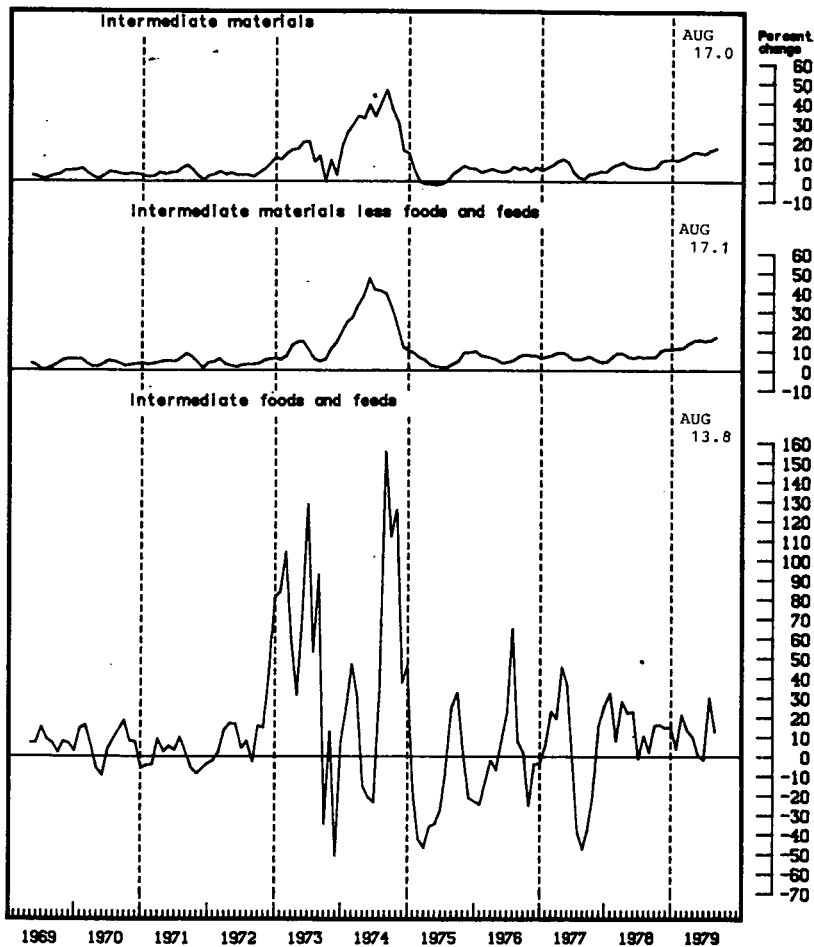
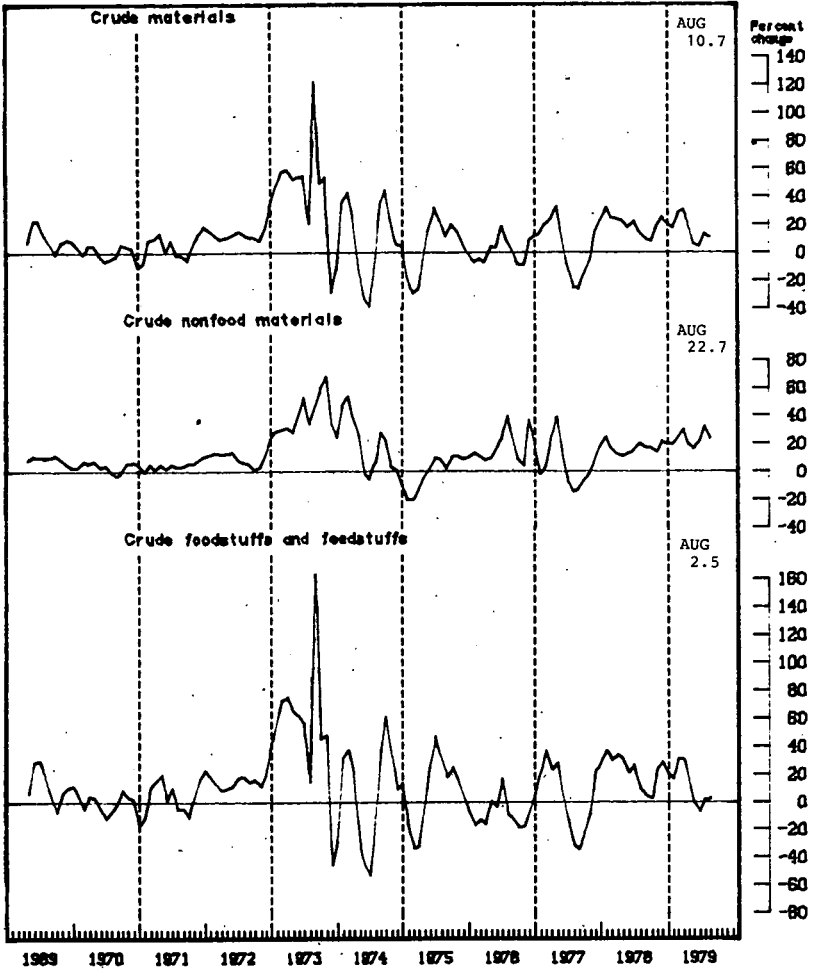


Chart 2
Intermediate Materials Price Index and its components
1969 - 79
3-month annual rates of change
(Seasonally adjusted)



SOURCE: Bureau of Labor Statistics

Chart 3
Crude Materials Price Index and Its components
1969 - 79
3-month annual rates of change
(Seasonally adjusted)



SOURCE: Bureau of Labor Statistics

Senator BENTSEN. When you talk about real wages declining, prices continuing to escalate, unemployment increasing, in 1974 they coined a new word for that and called it stagflation. Isn't that what we have now?

Ms. NORWOOD. I think it is too early to characterize in technical terms what we have now, Senator Bentsen, but a downturn in the economy has been reported by many of the indicators and now we have the first month of labor market change. We don't know what the following months will show.

Senator BENTSEN. What concerns me, in the numbers for 1974 and for this month, is the fact that one of the great dissimilarities with 1974 was this time business learned to control and hold down inventory. But now I am seeing new numbers that make it appear that the early estimates that inventories were being held down were wrong, and that inventories are moving up, and this situation gives us a great deal of concern as sales are dropping.

That is what we went through in 1974-75.

Ms. NORWOOD. There has been a good deal of discussion in the last couple of months, particularly, as I recall, by Alan Greenspan, about the problems of measurement of inventories. There have always been difficulties in deflating inventory information, and it may be that we will find that they have been underestimated, but I don't think there is any evidence in the data as yet to show that inventory buildups are at anywhere near the rate that they were in the 1973 time period.

Senator BENTSEN. Isn't it correct that the early estimates, the last reports we had, were underestimating the inventory buildup and are being corrected now in the other direction with their estimate?

Ms. NORWOOD. Yes; that is right.

Senator BENTSEN. Let me understand this. In your statement you say thus far the increase in unemployment has been essentially limited to white workers. What has happened to women and teenagers? Typically they are the last hired and first fired, and we had some recent progress in unemployment in those two groups.

Are you saying we have held back that progress?

Ms. NORWOOD. I think it is important to remember, Senator Bentsen, that any kind of unemployment, of course, is a serious problem. Blacks, teenagers, and women traditionally have higher unemployment rates than white males in good times as well as bad. When the economy begins to turn down, whether it be slightly, or more fully, the question is where that reduction in employment is coming about.

The establishment survey has been showing a reduction for some time in the manufacturing industries. So then we have to look at what the labor force of those industries is. This was certainly shown in the 1973-75 recession which tended to hit the durable goods manufacturing industries. If, for example, we had a big downturn—if we were to have a big downturn in, say, the apparel manufacturing industry, where we know there are a large number of women employed, we would expect to see an increase in unemployment for women.

So I think we have to take all of these factors into account, and you have to separate the structural from the cyclical as well.

Senator BENTSEN. I know you said that car prices were down four-tenths of 1 percent. Does that reflect these large rebates to the dealers that supposedly go on to the consumer that Chrysler has announced?

Have those been factored in yet or not?

Ms. NORWOOD. It reflects some of the rebates to dealers from the other companies, but the——

Senator BENTSEN. Ford said they are making the biggest rebates in history. I assume Chrysler is trying to top that.

Ms. NORWOOD. The Chrysler rebate is directly to the consumer and would show up in the Consumer Price Index and the Producer Price Index.

Senator BENTSEN. How closely did they relate?

Ms. NORWOOD. It will show up in the Producer Price Index, but later.

Mr. LAYNG. It was announced in the press August 20 to be effective after that time. It will show up in September.

Senator BENTSEN. That is what I wanted to know. And domestic car sales are down, but aren't foreign car sales substantially up?

Ms. NORWOOD. They are up some. We can supply that information for the record if you wish.

Senator BENTSEN. If wholesale gasoline prices went up 6.1 percent in July, how much will that affect the price at the pump, the price I have to pay when I drive up there?

I went up to the pump the other day and—they couldn't go over a dollar so they put it—they doubled the price for me at the end. Instead of thinking I had bought \$10 worth of gas, as it showed on the meter, they told me I bought \$20 worth of gas.

The pump couldn't reflect more than \$10. It took me a while to accept that. Will you tell me what I will have to accept next time I drive up if wholesale prices of gas had gone up 6.1 percent in July? What will happen to the pump price?

Ms. NORWOOD. I had the same experience, except I realized that the gas station attendant forgot to double the price and I had to point that out to him. [Laughter.]

Senator BENTSEN. You are exceptional. [Laughter.]

Ms. NORWOOD. I think it is clear that there will be an effect but I think there will be some lag in that effect passing through retail. Mr. Layng can give you a rough calculation of what that might be if it were passed through.

Mr. LAYNG. At a dollar a gallon, you are talking essentially 6 cents or a nickel. Roughly a nickel a gallon.

Senator BENTSEN. Six-tenths of 1 percent.

Mr. LAYNG. The Producer Price Index data reported for August for gasoline reflects July data. In a sense we have already seen what happened at the retail level. This data comes directly from refiners with a 1-month lag. You have to look at the July Consumer Price Index and the August Producer Price Index to line them up; 6 percent is roughly 6 cents a gallon at the retail level.

Senator BENTSEN. Senator Javits.

Senator JAVITS. Thank you. First, it occurred to me as I looked over your statement to ask you whether any effort will be made to chart the course of productivity and its relation to inflation. I noticed at the very end of your statement you obviously had figures you are working with. You say productivity performance has been poor, and then you say prices continue to escalate in the double-digit range.

Now, has any effort been made to correlate the decline in productivity which seems to me catastrophic with the increase in inflation?

Ms. NORWOOD. There are a number of studies. We are continually looking at these relationships. One would, of course, expect that a downturn in productivity performance would be associated with an increase in prices.

Senator JAVITS. The reason I asked that is because there is a great renewed interest in productivity and something that I and Senator Bentsen and others have been beating the drum for for a long time. I think it would be very interesting if we had anything authoritative on the subject.

We all feel, of course, there is a very relevant effect, but to have it verified by the correlation of the figures I think would be very helpful.

Ms. NORWOOD. We can certainly supply a statement for the record. Of course, the issue gets at the relationship of productivity to increases in unit labor costs and the passthrough of that through the producer and retail level prices.

Senator JAVITS. If you would be kind enough to do that I would ask unanimous consent it be incorporated in the record.

Senator BENTSEN. By all means.

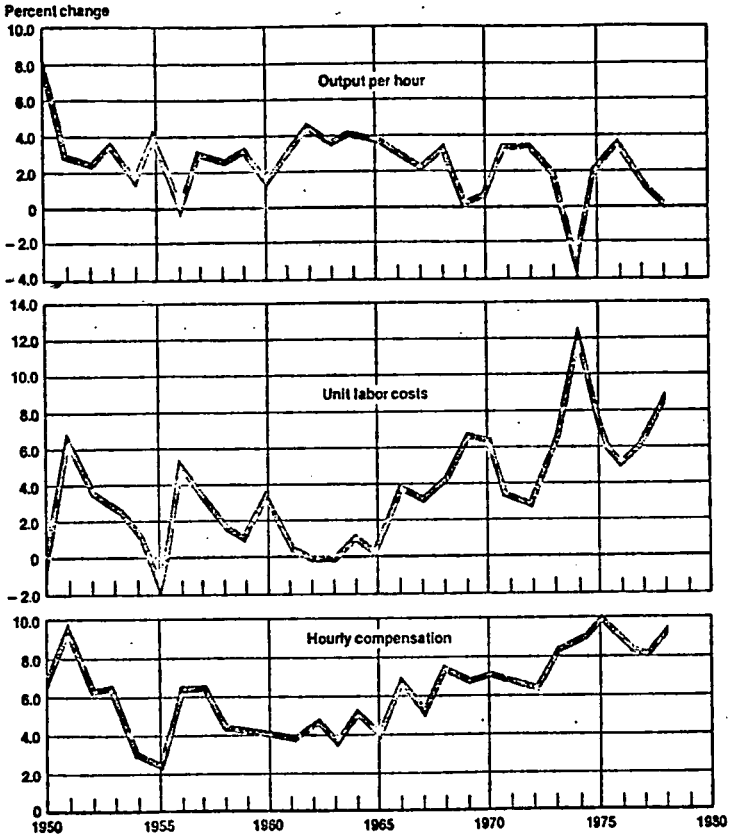
Senator JAVITS. Thank you.

[The following information was subsequently supplied for the record:]

Productivity changes are an important factor in cost and price changes. This stems from the fact that productivity growth directly offsets wage gains in determining increases in unit labor costs. Trends in unit labor costs are usually associated with price changes. The accompanying chart 1 for the entire private business sector shows that in years when productivity growth fell, such as 1974, unit labor costs rose. The relationship between unit labor cost and prices can also be seen in chart 2.

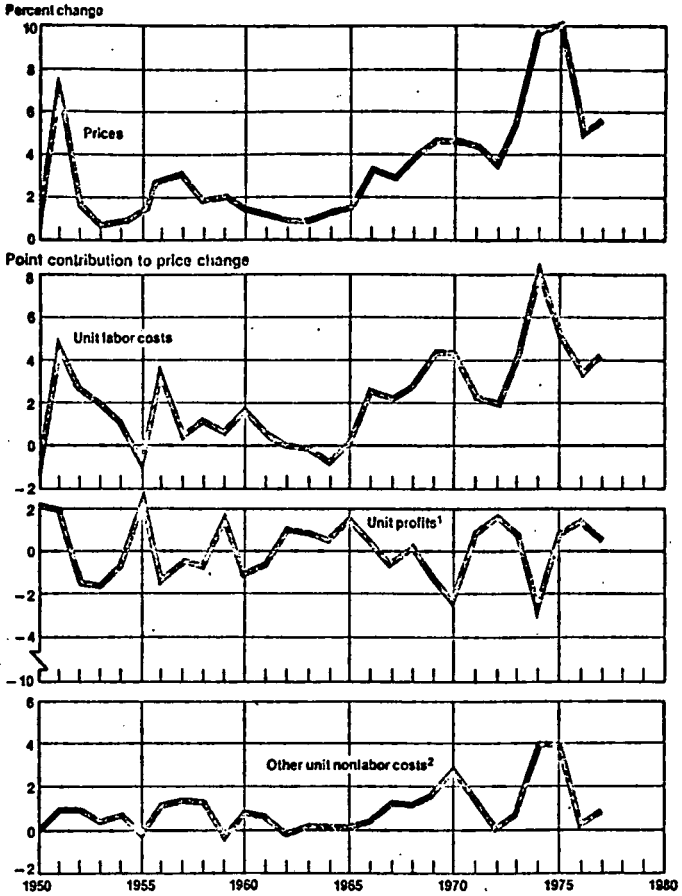
Chart 3 shows the relationship between productivity and prices by individual industries.

Chart 1. Productivity and Unit Labor Costs in the Private Business Sector, 1950-78



Source: U.S. Department of Labor, Bureau of Labor Statistics.

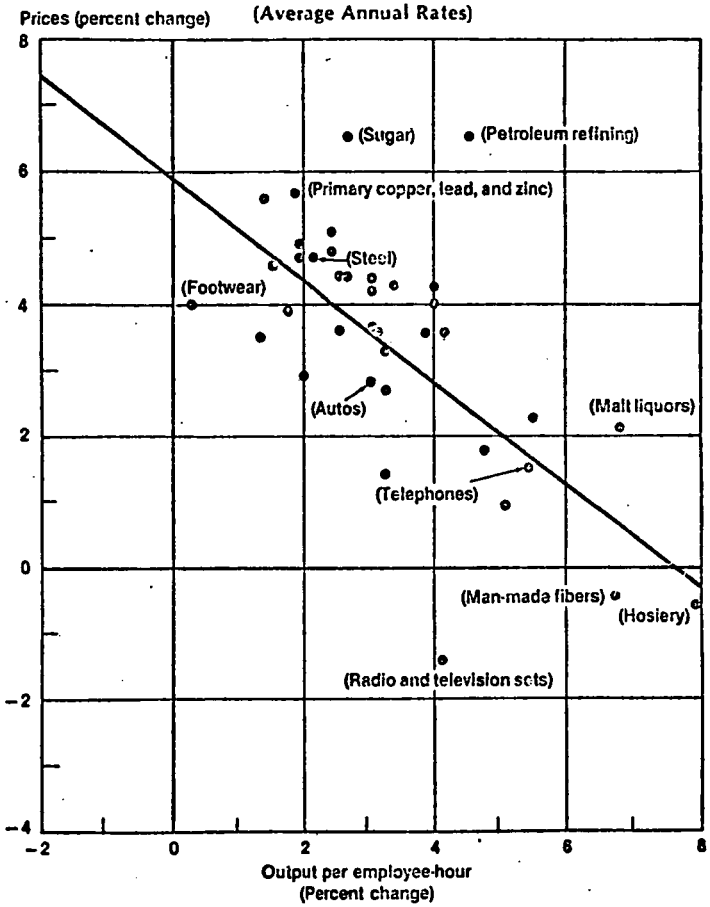
Chart 2. Composition of Price Changes, Private Business Sector, 1950-77



¹Unit profits includes corporate profit and the estimated profits of unincorporated enterprises.
²Other unit nonlabor costs include depreciation, interest, and indirect taxes.

Source: U.S. Department of Labor, Bureau of Labor Statistics.

Chart 3. **Output per Employee-Hour and Price Changes for Selected Industries, 1960-76**



Source: Bureau of Labor Statistics, U.S. Department of Labor.

Senator JAVITS. The other thing I wanted to ask about is this: Obviously, the pattern of this recession is almost as clear as Hurricane David. You can see it coming on at a certain speed. Like they tell you on the radio, this storm is traveling at x miles per hour. Here we are. We are in it. There are estimates as to shallow or deep. Mr. Volcker is of one school. Others are of another school. Is there any way in your judgment that you could help us with that? Perhaps its relationship to previous recessions. Perhaps some other standards.

I think it would be very helpful to the country, standing on the edge of what we know is coming, to wit, tax cuts, even if they may be very unwise, and other remedial measures, to have some indication, if we can, from the statistical side, as to what we are looking toward in the way of a span of a recession.

Is it 1973-74? Is it some other variable? If you could. I would not be a bit insistent on that, because you are very honest, and you know for what your figures can help us with and what they can't. We know the caveats you would have to insert. But I think it might be helpful if there is, in your judgment, anything to be gleaned from the juxtaposition of the figures.

Ms. NORWOOD. I am afraid I can't provide much help in that area, Senator Javits. Many of the economic indicators have showed a downturn, including, as you know, a downturn in building permits, housing starts, industrial production, capacity utilization, and new orders. Now we have some increase in unemployment, and we have had for some months some decreases in employment in manufacturing. Nevertheless, I do think it is important to emphasize that 1 month's labor market data doesn't really tell us enough and that we do need to look at several months before we can be sure.

The statistics we now have tell us nothing about the duration of this trend, if there is one, and they don't tell us anything about the depth.

Senator JAVITS. So you would not even say this signals the recession is on.

Ms. NORWOOD. I would suggest that these data are in line with the other statistical data which show that parts of the economy have been turning down, but we have had downturns before. That does not mean we are going way down.

We really just have no information on that at this point, and if there is any point that I would like to emphasize, it is that you can't take 1 month's unemployment figures and decide what is going to happen.

Senator JAVITS. Would you say the third quarter would be an adequate indicator?

Ms. NORWOOD. We would know a lot more, yes. We also have a problem because the second quarter was a very unusual one. We had particular difficulties in the months of April and May when we had the teamster strike, which had a big effect on the economy. In May we had a recovery from that. So we have to look at the data before that. That is one of the reasons we think there is evidence of a slow-down since March. There is no question about that. There is a downturn since March. The question really is: How long will that endure, and how steep will it become?

Senator JAVITS. Thank you.

Senator BENTSEN. Congressman Wylie.

Representative WYLIE. Thank you, Mr. Chairman.

Ms. Norwood, the GAO recently released a study that says that unemployment compensation benefits are so high that they reduce the incentive for the unemployed to take work.

Are you familiar with that report?

Ms. NORWOOD. I have heard about it. but I have not actually seen it.

Representative WYLIE. What is your view of that thesis?

Ms. NORWOOD. First, let me say that I understand that others in the Department of Labor who have looked at that study are in the process of reviewing it, and have found some considerable fault with it. I, myself, have no direct knowledge of it, so I can't speak to that.

I think that there has been a great deal of discussion, as you know, about the definition of the unemployment rate; and about whether many of the transfer payments and social benefits affect the unemployment rate by making it go up or go down. That is a very big issue, and I don't think we really know the extent to which these programs may have any effect.

Representative WYLIE. You are studying it, though, and will have some statement forthcoming on this?

Ms. NORWOOD. I believe the Department of Labor will be replying to the GAO study.

Representative WYLIE. I think your view of it as a statistician, and the view of the Secretary of Labor, might be very important in the overall employment situation; don't you?

Ms. NORWOOD. We certainly all think our view is important. We would like other people to think that, too.

Representative WYLIE. Well, I would say, Commissioner, that I am not a statistician and I know that you are a very good one—at least, your reputation precedes you as being a very good one—and it's my understanding the Bureau of Labor Statistics uses computer programs to seasonally adjust the unemployment rates which you reported Monday.

It's also my understanding that unusual occurrences can result in changes in a computer seasonally adjusted factor.

How likely is it that the gas lines of last month, and the resulting consumer avoidance of large cars in the automobile industry, contributed to seasonal unemployment in ways which could distort estimates of the seasonally adjusted unemployment rate?

In short, what are the chances that the seasonally adjusted unemployment rate reported for next month might fall back below the 6 percent level, since we don't have the gas lines and since there apparently is more activity as far as the sale of cars is concerned and more employment, therefore, in the automobile industry?

Ms. NORWOOD. As I indicated in my statement, I think that the seasonal adjustment process in the automobile industry, in particular for employment in the manufacturing of automobiles, is particularly difficult and there may be problems there.

In terms of the service industries that supply gasoline, we don't have any specific information but certainly that may be true. That is why I emphasize the fact that 1 month does not really tell us what will happen in the future.

I would also like to point out that there is a table attached to my statement at the end, on seasonal adjustment. That table has several alternative methods.

If you look at it, you will note that unemployment went up according to every method that is listed there. However, in the two columns, Nos. 3 and 8, which are labeled "concurrent," which means essentially that you use all of the data that you have currently available, there is a smaller increase in August—5.7 to 5.9 percent—than the official figures which are based on factors announced a year in advance.

Representative WYLIE. OK.

This is a question that I asked of business groups from my district during the August recess.

Would you favor a tax cut of \$20 billion now, this year, or would you prefer the Republican position which calls for a tax cut of \$36 billion?

I might add that I am not, at the present time, a cosponsor of that \$36 billion tax-cut bill. I am searching for answers. I would like your opinion on it.

Ms. NORWOOD. As Commissioner of Labor Statistics, Congressman, I really feel it is inappropriate for me to comment on a policy issue; except to say that I think that whatever policy responses are taken to deal with the economy at any time, should be carefully responsive to the overall situation that the data present.

And, as I indicated, a rise in unemployment in a single month does not permit a conclusion about any change in the state of the economy. That has nothing to do with whether we should or should not have a tax cut. It's a question you gentlemen have to decide.

Senator JAVITS. Would the Congressman yield?

Just to refer him to the fact that the Senate Republicans unambiguously have authorized an economic program which includes their view as to the tax cut, and it differs from that of the House and from that of—

Representative WYLIE. I will look at that third package, too.

What you are saying is that you are not going to answer that question this morning?

Ms. NORWOOD. That's right. [Laughter.]

Representative WYLIE. Do you expect food prices to continue to increase from now until the end of the year?

Ms. NORWOOD. I try not to expect or to forecast what is going to happen.

Representative WYLIE. You are in the business of forecasting, aren't you?

Ms. NORWOOD. We don't engage in forecasting. Sometimes there are factual developments which lead us to expect that something will happen, but we don't have any special information on food prices in the coming months.

Representative WYLIE. So you would like to duck on that one, too?

Ms. NORWOOD. I would like to be as responsive as I can to the questions you ask, and I think I can be most useful if I provide factual responses and tell you what I don't know. That is one that I just don't know.

Representative WYLIE. I didn't mean to seem like I was being critical of your answer. I was trying to make a fair statement as to what I felt I got from the question I asked.

The reason I asked that is that I really wanted to know, if I am asked, whether food prices were supposed to be a moderating influence on inflation and for the Producer Price Index. During August, they have been.

But do you expect the Producer Price Index to rise rapidly now that food has ceased to be a moderating factor, apparently? Is that referred to in the projections you make?

Ms. NORWOOD. I think we have to look a little bit beyond the data. Certainly food prices turned around last month. That was largely because of fruits and vegetable prices.

Now, when you remember that food prices are highly volatile, and that the reference date for prices in the Producer Price Index is a single day in the month. I think that we have to be a bit careful about making too many assumptions about what that might mean in terms of fruits and vegetable prices, for example, for the future.

We now have underway in the Bureau of Labor Statistics a program for revision of the Producer Price Index, which will permit us to collect prices covering the entire period of the month. And the Consumer Price Index—we now do that in all areas, including food; so I would just urge a little bit of caution in such things as fruits and vegetables, which are highly affected by weather and other problems.

Representative WYLIE. So you don't think food prices are necessarily a moderating factor in inflation?

Ms. NORWOOD. Food prices are really very difficult to predict. Sometimes you know about shortages. You recall, there was discussion about grain, for a while, being in short supply because the Soviet Union was in short supply, and so on. But I don't think we have any information that could tell us what is going to be happening in the next couple of months.

Representative WYLIE. As far as inflation is concerned.

Thank you very much.

Thank you, Mr. Chairman.

Senator BENTSEN. Congressman Wylie, on the point you made about the tax cut, obviously I think we ought to have one starting January 1, 1980. The problem is that those that fail to learn from the mistakes of the past are condemned to repeat the mistakes of the past. That is true.

Our problem is that it takes a while for Congress to react. It takes months for that to be done. We have to do some anticipating. I don't go along with the \$36 billion tax cut but I think a \$20 billion tax cut is a moderate one that will help ease inflation's impact on people. It certainly can't contribute to it.

You had over \$50 billion taken out of the pockets of the American consumers by the increase in the price of oil and by people being bumped up into another tax bracket. Let me show you traditionally what happens.

Here is what happened in 1974. Here went the recession 1973-74. Here was the tax cut just as the economy was turning around. It takes a while for a tax cut to take effect. There is the tax cut, May 1975, when we had the worst recession this country has seen since the Great Depression. That is how late it was.

When you had a tax cut at that time, the thing was turning around and all the cut did was contribute to the problem. That is why I think we ought to be working on one this fall to take effect in January 1980. I think the down side risk is minimal when you talk about a \$20 billion

tax cut and you have taken \$50 billion out of the economy. To talk about it being inflationary makes no sense.

There ought to be a tax cut. It is not the crisis to crisis type thing but but the cut deals with productivity and tries to increase it on a long-term basis.

Representative WYLIE. I understand your position and respect it. The problem I have is that we have a \$23 billion deficit this year which may go up to \$29 or \$30 billion and are we adding another \$20 billion deficit on top of that in the short term. Will we have problems managing that additional public debt in the short term? That is what I have to sort out in my own mind. I would like to be able to say to everybody, sure, we will give you all a tax cut this year. But I have to feel personally that may not be a responsible position to take.

Senator BENTSEN. You know, I read over and over in the press that a tax cut is really to get a big political return. I don't believe that. When I go home, I don't have a lot of people coming to me saying, I want a tax cut. I really don't. When I vote one, I sure don't have anybody thanking me for it. But I am concerned about what will happen to the economy overall and what will happen to our Nation. I am concerned about this—no one can tell me it won't be a serious recession. All of us think and hope it won't but I think one of the the considerations to insure against that is a moderate tax cut taking effect, starting next year.

Senator JAVITS. May I make one observation? That is that a lot of people now seem to believe that the downturn is a good thing and that it is the only way to head off inflation and the only way to bring us back to some better attitude toward productivity and that, therefore, the consideration respecting the continuance of a large deficit is a sound one.

For myself, I am committed to a tax cut provided that the great bulk of it—and I think your figure of around \$20 billion is right—goes into increasing productivity in the country, more than icing the American industrial machine. But that is not the way it gets done on the floor, and that is not the way it is generally defined.

Increasing consumption is what we need least in my judgment.

Senator BENTSEN. That's right.

Senator JAVITS. That is, the consumer consumption. Well, thank you. It was a very useful area to be viewed.

Senator BENTSEN. Is there anything further? If not, we will proceed to close.

Commissioner, we were very pleased to have you here this morning. Thank you.

The committee stands adjourned.

[Whereupon, at 10:45 a.m., the committee adjourned, subject to the call of the Chair.]

EMPLOYMENT-UNEMPLOYMENT

FRIDAY, OCTOBER 5, 1979

CONGRESS OF THE UNITED STATES,
JOINT ECONOMIC COMMITTEE,
Washington, D.C.

The committee met, pursuant to notice, at 10 a.m., in room 1318, Dirksen Senate Office Building, Hon. Lloyd Bentsen (chairman of the committee) presiding.

Present: Senators Bentsen, Proxmire, and Javits.

Also present: John M. Albertine, executive director; M. Catherine Miller, professional staff member; Mark Borchelt, administrative assistant; and Carol A. Corcoran, minority professional staff member.

OPENING STATEMENT OF SENATOR BENTSEN, CHAIRMAN

Senator BENTSEN. Good morning. Commissioner, I said that I hope next time you come before us you would have some pleasant news and obviously you have it. We all like surprises, especially when they are pleasant, and that's what awaits us at this hearing on the employment situation for September.

I might add, though, that while today's news is pleasant, its unpredictability must be giving some of the economic forecasters heartburn.

In August, unemployment rose to 6 percent. It was the second consecutive monthly increase and it looked as though we were about to plunge to recession levels of unemployment. The number of jobs fell sharply, by 310,000.

In September, though, all bets were off. The number of jobs rose twice as sharply as they had fallen the previous month, 610,000, and the unemployment rate fell to 5.8 percent.

So the news on the jobs front is unquestionably good.

When you look at the figures over the past year you have to say that our economy has shown incredible strength in the field of job creation; 2.5 million jobs have been created during that period. When you compare that to the other economic numbers, it is nothing short of amazing.

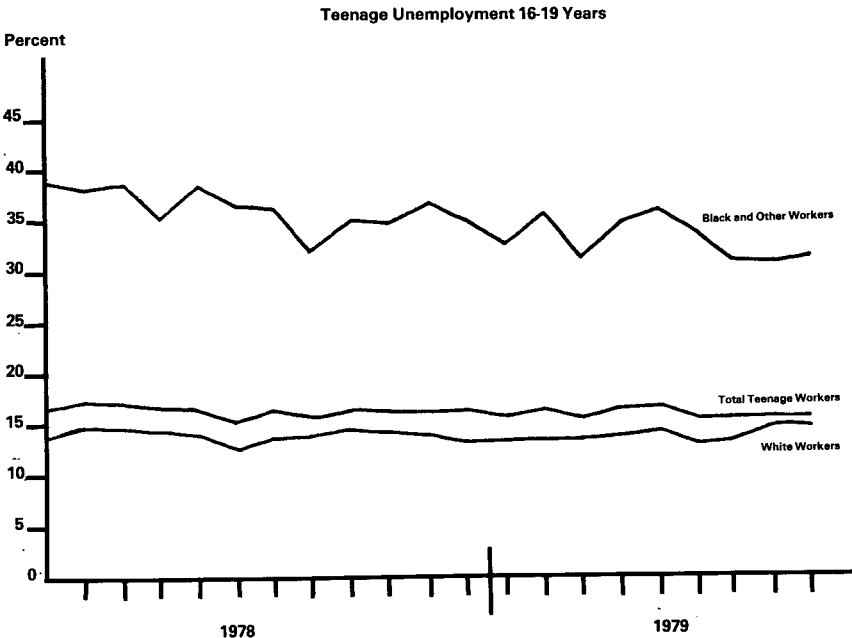
The job situation in this country, in fact, has been good for the last 2 years. I really don't know of any other nation in the world that has added that many people to the job rolls in that period of time. But as the chart this morning shows, the prospects have remained bleak for teenagers looking for work, and that's especially true for black teenagers. In September, the unemployment rate among black teenagers was 31.5 percent and that's a disgrace. Jobs appear to be plentiful for everybody else, but for almost a third of this group of people, people just starting out in life, the doors to productive work have been closed in their face.

Another cause for concern this morning is the rate of inflation. Prices keep going up faster than before.

The Producer Price Index, released yesterday, showed wholesale prices in September rose 1.4 percent, for an annual rate of 18.5 percent.

Commissioner Norwood, we are happy to see you this morning. Let me show you this chart just a moment and what it means. To me, if you can see these things graphically sometimes they're a little more understandable than all of the percentages and figures you look at. But in watching what's happened here in 1978 and 1979, we show black teenagers and this figure includes Hispanics, at 31.5 percent, and that's really pretty terrible. If you compare that to total teenage workers the ratio remains fairly constant. Then we show the white teenage worker. This line—total teenage unemployment—is the average of these two, but you can see the rate remains very high and unacceptably so and one that we just have to find better answers for than we have found in the past.

[The chart referred to in Senator Bentsen's opening statement follows:]



Senator BENTSEN. I'd like now to yield to my distinguished colleague, Senator PROXMIRE.

OPENING STATEMENT OF SENATOR PROXMIRE

Senator PROXMIRE. Thank you, Mr. Chairman.

Madam Commissioner, what I'm about to say in no way is a reflection on you. You're a professional and a very good one and I'm very proud, as I think other members of this committee who know of your skill, of the fine work you have done in the Government. Nevertheless,

the employment figures this month epitomize more than almost any recent event the present low state of the economic profession.

The chairman has just referred to the heartburn the forecasters must be getting. Well, they deserve more than a heartburn. For months we have been fed a mass array of computer projections, predictions, forecasts, and just plain guesswork. We have been told repeatedly that we are in a recession. Furthermore, and more alarming, many economists have been proposing policy actions based on mere prediction or forecast which just don't fit the facts.

At the height of a roaring inflation, the worst inflation perhaps ever in our history—there may have been a few months during World War I or right after World War I when they were almost as bad, but setting all records as far as inflation is concerned—we have been urged not to cut spending, not to be alarmed at a massive deficit, and not to tighten our belts because of a recession which has no basis in fact but merely in fiction—forecasts, predictions, and projections. It may happen. It has not happened yet.

Senator Paul Douglas, who was formerly chairman of this committee and formerly president of the American Economic Association and a brilliant economist and a trail blazer in economic thought, cautioned time and again against making policy on the basis of predictions and projections. His rule was to wait for the facts and to act on the facts.

A recession is two quarters of decline in the real GNP, not 1 month's projections based on the leading indicators. A recession involves a rise in unemployment over a number of months, not an unemployment rate which is either steady or gradually falling, interrupted only by an occasional monthly aberration.

Policies to fight unemployment and inflation and to keep the economy going should be based on fact, not on some computer projection of the inflation rate projected a year into the future which in almost every year in recent times has turned out to be wrong—in some cases stupidly wrong.

The time is now long overdue for the Council of Economic Advisers, the Congressional Budget Office, the Office of Management and Budget, and the professional economic community to base proposed policies on the actual facts and not some future projections which at best have some mechanistic basis.

Economics is not engineering or science. Economics is a social science, an art, and an imperfect discipline. The economy is made up of impetuous and not merely mechanistic forces.

When we face double-digit inflation we should act to correct it. When we have sustained rising unemployment, we should move to correct it. When we are in a recession we should put into play those countercyclical measures which can reduce its severity and limit its harshness.

But we should not promote or condone a massive deficit or vastly increased spending at a time of double-digit inflation based on some computer projection that inflation will be down in the third quarter of next year.

We should not pull out the stops and promote tax cuts, public works, or business bailouts on the basis of projected rising unemployment at a time when unemployment is stable or falling.

It's time to base policy on facts and not projections. It's long overdue for the economics profession to forgo proposing policies

based on computer projections and base them on the facts of the real world when those facts have been shown and sustained.

Thank you, Mr. Chairman.

Senator BENTSEN. I may not be able to stay the full time because at the present time we have a Senate Finance Committee meeting. I just left a meeting there to come here.

One of the things that we are trying to determine is how to send the money out to people who are paying more for energy and particularly the poor, and trying to use some statistics to determine just who they are and if there's any basis on which we can adjust with some assurance for regional differences.

Now we have arrived at some numbers as to the use of energy for a residence or household, but we are having difficulty in accepting BLS's numbers insofar as levels of poverty. I know that HEW made a massive study, about 2 years ago, trying to measure poverty levels and arrive at regional differences, and I think they finally backed away from trying to make a regional determination on which to base formulas.

So, since I do have to leave, that's one of the questions that we are trying to determine. Although I know that I didn't forewarn you on this, but if you have any numbers that you can give me some comfort on or tell me that you don't think that the numbers are sufficiently definitive or reliable, I'd like to know. As Senator Proxmire said, we are getting so many contradictory numbers and such changes in a period of time that it's difficult for us to feel that sometimes we're exercising the proper judgment on these numbers.

Ms. NORWOOD. Senator Bentsen, let me just say very rapidly, in response to your question, first of all, poverty numbers are not BLS numbers. They are not put out by the Bureau. The family budget numbers, which you may be referring to, are BLS numbers.

Senator BENTSEN. That's right.

Ms. NORWOOD. We are in the process of trying to get some of the best help we can. We have a committee now made up of some of the best experts in the country, headed by Harold Watts, of Columbia, to try to assist us on that, but there are many judgments that involve values about what adequacy actually is that get involved in it, and that's one of the basic problems. I'd be glad at some later time to perhaps come back and talk to you informally about some of these issues.

Senator BENTSEN. Well, I'd like that. I think we'll probably do more than that. I think we'll probably have you over at the Senate Finance Committee testifying on the family budget. I appreciate you correcting my term of the family budgets. I knew that about the poverty level, but I did not know the term. But I was told that you were having difficulties in the regional determination on those numbers and apparently you are. You're saying you're trying to get them buttressed by some additional counsel. Thank you.

STATEMENT OF HON. JANET L. NORWOOD, COMMISSIONER, BUREAU OF LABOR STATISTICS, DEPARTMENT OF LABOR, ACCOMPANIED BY W. JOHN LAYNG, ASSISTANT COMMISSIONER, OFFICE OF PRICES AND LIVING CONDITIONS; AND ROBERT L. STEIN, ASSISTANT COMMISSIONER, OFFICE OF CURRENT EMPLOYMENT ANALYSIS

Ms. NORWOOD. Thank you.

Mr. Chairman and Senator Proxmire, I am glad to have this opportunity to offer the Joint Economic Committee a few brief comments to supplement our Employment Situation press release, issued this morning at 9 a.m., and our Producer Price Index press release, issued yesterday morning.

The employment situation strengthened in September. Total employment, as measured by the household survey, more than rebounded from its decline in August. The 610,000 employment increase was accompanied by a sizable expansion in the civilian labor force and a modest reduction in unemployment. The unemployment rate was 5.8 percent in September, down from the 6 percent of August, and back to the rate near which it had remained for the last 12 months.

The number of employees on nonfarm payrolls advanced by about 135,000 over the month, with virtually all of the gain recorded in the service-producing industries. Both the household and the establishment surveys have shown increasing employment over the past 6 months, but at a much slower rate than previously. The household survey's employment increase of 670,000 since March contrasts with a gain of 3.6 million in the previous year, from March 1978 to 1979. Similarly, the payroll survey rose by 815,000 from March to September, whereas it had grown by 3.8 million during the preceding 12-month period—March 1978 to March 1979.

All of the growth in payroll employment since March has occurred in the service-producing industries. In the goods-producing industries, employment has been on a virtual plateau since March, as small gains in mining and construction were about offset by cutbacks in factory jobs. The factory workweek, at 40 hours in September, remained well below its first quarter level. The index of aggregate weekly hours for factory production workers—which reflects trends both in employment and the workweek—was 103.3 in September, down 2.5 percent from March. For the total private nonfarm economy, on the other hand, September was at about the same level as March.

Labor force growth has also slowed considerably in recent months. Although the labor force did increase in September, nearly two-thirds of the change came from teenagers whose participation had declined considerably in August. The overall participation rate of 63.9 percent in September was equal to the previous highs in February and March, but it should be noted that the participation rate had risen a full percentage point between early 1978 and 1979.

After a 1-month rise, the unemployment rate returned to 5.8 percent. There have been no pronounced trends in unemployment during the past year among major demographic groups, although in September 1979, the adult male rate was slightly higher than in the earlier part of the year. The jobless rate for black workers averaged just under 11 percent in the third quarter, still more than twice that of white workers, but at its lowest level in 5 years.

The BLS released today, as is usual practice each year, revised establishment survey data to reflect a new benchmark and updated seasonal factors. These changes resulted in an upward revision for total nonfarm employment of more than 900,000 in August. During 1979, however, the revised series confirms the marked slowdown in employment growth, and downtrend in factory employment and hours of work since March.

PRODUCER PRICES

Yesterday, the Bureau also released the Producer Price Index for September. The index for finished goods rose 1.4 percent on a seasonally adjusted basis. For the third quarter ending in September, this index increased at an annual rate of 15.7 percent. This followed a rate of only 6.8 percent in the previous 3 months and a 14.3 percent rate in the first quarter of the year. The price increases during the first and third quarters of this year are the largest since 1974.

Food prices have been a major factor in these developments. During 1977, producer prices for consumer food were up 6.6 percent; they increased nearly twice as fast in 1978—11.9 percent. By the first quarter of 1979, food prices were rising at an annual rate of 21 percent. Although prices for most food items rose rapidly during this period, beef and pork rises were especially significant. During the second quarter, however, meat prices turned down quite sharply and were the largest contributors to the 11.1 percent annual rate of decline in food prices. It was this decline in food prices which brought the sharp reduction in the increase of the overall finished goods price index for the second quarter.

In September, food prices rose 1.4 percent, bringing the third quarter annual rate of change to 12.9 percent. Renewed rises in beef and pork prices were a major factor in returning the food price increases to the general levels that prevailed last year.

To say that energy prices have been a major cause of our current level of inflation is to state the obvious. But the fact is that the effects are quite substantial. During the first half of 1978 finished energy goods prices rose at an annual rate of only 1.1 percent. Since then, there has been a steady and dramatic acceleration. During the last five calendar quarters, the price index for finished energy goods has risen at annual rates of 8 percent, 22.7 percent, 31.4 percent, 76.8 percent, and in the third quarter of this year at an annual rate of 107.5 percent. During September alone, the finished energy price index rose by 6.8 percent. Beyond these direct energy price increases, we can, of course, expect that prices for almost every other product are being affected to some extent as the energy costs associated with their production and distribution rise.

For finished goods other than food and energy, the story has been somewhat different. During 1977 prices for these items rose 6.3 percent; they rose 8.2 percent during 1978 and then accelerated to an

annual rate of 10.3 percent in the first quarter of this year. Since then, however, price increases for finished nonfood, nonenergy goods have returned to their 1978 levels. They rose at annual rates of 8 percent in the second quarter and 7.7 percent in the third quarter. A number of product areas have contributed to this slowdown. During the last 2 months passenger car prices have declined, and light truck prices have declined for 3 consecutive months. Capital equipment prices in general have slowed to their lowest rate of increase for any calendar quarter since 1973. On the other hand, rapid increases occurred in September for such diverse products as jewelry, household flatware, tires, and plastic dinnerware.

At the earlier stages of processing, there is only slim evidence that cost pressures may be abating. Both intermediate and crude energy prices have accelerated rapidly since the fourth quarter of last year. Prices for intermediate fuels slowed somewhat in September, rising 4.4 percent. A sharp 9.4 percent rise in domestic crude petroleum prices contributed heavily to the 4.7 percent rise in crude energy goods for September.

Prices for intermediate goods other than food and energy have been rising at annual rates in the general range of 9 to 14 percent since the fall of last year, and the September increase continued that trend. This month major increases occurred for such items as precious metals, copper, tin, aluminum, construction materials, synthetic fibers, and rubber products.

Finally, prices for crude materials other than agricultural products and energy have generally been falling in recent months. This could relieve some cost pressures in the future. Prices for these materials fell at an annual rate of 15.8 percent during the third quarter, although a sharp rise in copper scrap prices was largely responsible for the small 0.3-percent rise in this index in September.

For some time now, the economic indicators signaling the health of the economy have been difficult to read and, in fact, in many cases, have put out mixed signals. The consumer and producer price measures have clearly indicated continuing high rates of inflation, especially in energy, food, and housing. But the labor market data have not been so clear cut. The September unemployment rate was lower than in August, and the business survey continues to show that growth in employment and hours have slowed considerably from the phenomenally high increases of last year. But both the household and the business surveys registered increased employment from August to September, and neither survey yet shows any unmistakable signs of labor market recession.

Over the past few months, I have, as Commissioner of Labor Statistics, discussed with this committee the meaning and importance of changes in the BLS indicators. I would like this morning to take a few moments to review a few longer range factual developments which I believe should be kept in mind in evaluating current economic data.

For many years now, the industrial composition of employment in this country has shifted away from the goods-producing sectors toward the service sector. In September, for example, only 23 percent of the total nonfarm employed were working in manufacturing. This is several percentage points below 1974 and considerably less than the 31 percent prevailing in 1959. As you know, traditionally, in a period of cyclical downturn, manufacturing and other goods-producing industries have been affected earlier and more severely than the service industries.

Second, the labor force in this country today is very different from the work force of a decade ago. The phenomenal increase in labor force participation of women, especially in the 25-34-year age group has resulted in social developments which cannot be overlooked. Today a majority of the 48 million husband-wife families in this country are two—or more—earner families. Although, on average, working wives contribute only about one-quarter of the total family income, the fact that the two-earner family is so prevalent may well affect the way in which some families react to the temporary unemployment of a particular family member. This situation may also have an important effect on the manner in which families plan their expenditures and savings habits.

Senator PROXMIRE. Let me interrupt and go back to that. That's a startling statistic, that on average, working wives contribute only about one-quarter of the total family income. I have seen statistics comparing the income of women with men which indicate that women make substantially less, maybe 20 percent less, but that statistic would suggest that women make about half as much as men or less than half as much as men. You're talking about the wives that work, not the average contribution of wives working and nonworking; is that right?

Ms. NORWOOD. This is just the working wives.

Senator PROXMIRE. What's the explanation for that? Of course, this wouldn't include the income by other members other than the husband perhaps. Maybe there are children working too. Is that part of the estimation?

Ms. NORWOOD. This figure is a figure of working wives. I think the other figure you may have in mind is the one which says that the median earnings of women are roughly 60 percent the earnings of men, but that's a median.

Senator PROXMIRE. Is this because many working wives will work part time, work maybe 20 hours a week or 25 hours a week so they can spend more time with their families?

Ms. NORWOOD. Some of them do work part time and part year, of course, but three out of four of all women who work are either working full time or looking for full-time work.

Senator PROXMIRE. Thank you.

Ms. NORWOOD. To continue, third, as we all know, inflation is in the double-digit range, and real earnings have declined. Methods used to control inflation are now far more difficult than they were in the past because so many social and economic changes, both domestic and international, have taken place. As a result, our economy may no longer respond in the same way as it previously did to traditional policy approaches. Food prices, of course, are affected by weather changes, by shifts in demand by other countries for grains and other products, as well as by many other factors. Even more important, our experiences this year with OPEC decisions emphasize that policies affecting the price of oil may well be effected by steps taken outside the

United States as well as by decisions made within the scope of our national economic policy.

And finally, I would like to emphasize a development that I believe is becoming increasingly important in the United States: a widespread psychology of inflationary expectations that is more and more becoming a part of consumer behavior today. While a number of steps have been taken by the Federal Reserve Board, the administration, and the Congress to reduce these expectations, they persist. Their continued existence is, perhaps, best illustrated by the relatively strong performance of the private housing sector in spite of unprecedented mortgage interest rates.

Although none of these issues is new, I believe that they should be kept in mind in interpreting economic data.

The labor market data released this morning do not provide evidence of any sharp declines in labor market activity. The price indexes continue the upward spiral that has been with us since early in the year. Some of the social, economic, and international developments which have occurred during this decade have made the economy more difficult to understand than ever before. This is certainly confirmed by the changing signals emitted from the country's major economic indicators over the past few months.

My colleagues and I will now be glad to answer any question you may have.

[The table attached to Ms. Norwood's statement, together with the Employment Situation press release referred to, follows:]

UNEMPLOYMENT RATES BY ALTERNATIVE SEASONAL ADJUSTED METHODS

Month and year	Unad-justed rate	Standard X-11 method				X-11 ARIMA method		Range (cols. 2-8)	
		Official	Con-current	Stable	Total	Residual	Extrap-olated		Con-current
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1978									
September.....	5.7	5.9	5.9	5.9	5.9	6.0	5.9	5.9	0.1
October.....	5.4	5.8	5.8	5.8	5.8	5.9	5.8	5.8	.1
November.....	5.5	5.8	5.8	5.8	5.7	5.8	5.8	5.8	.1
December.....	5.6	5.9	5.9	6.0	5.8	6.0	5.9	5.9	.2
1979									
January.....	6.4	5.8	5.8	5.8	5.7	5.5	5.8	5.8	.3
February.....	6.4	5.7	5.7	5.7	5.7	5.5	5.7	5.8	.2
March.....	6.1	5.7	5.7	5.8	5.7	5.6	5.7	5.7	.2
April.....	5.5	5.8	5.8	5.7	5.7	5.8	5.8	5.8	.1
May.....	5.2	5.8	5.8	5.8	5.8	5.9	5.8	5.7	.2
June.....	6.0	5.6	5.7	5.5	5.7	5.6	5.6	5.7	.2
July.....	5.8	5.7	5.7	5.6	5.8	5.7	5.7	5.7	.2
August.....	5.9	6.0	5.9	5.9	6.0	6.1	6.0	5.9	.2
September.....	5.6	5.8	5.8	5.8	5.8	5.9	5.8	5.8	.1

Source: U.S. Department of Labor, Bureau of Labor Statistics, October 1979.

NOTES TO TABLE COLUMN NUMBERS

- (1) Unadjusted rate—Unemployment rate not seasonally adjusted.
- (2) Official rate (standard X-11 method)—The published seasonally adjusted rate. Each of the 3 major labor force components—agricultural employment, nonagricultural employment, and unemployment data—for 4 age-sex groups (males and females under and over 20 years of age) are separately adjusted then added to derive seasonally adjusted total figures. Teenage unemployment and nonagricultural employment are adjusted by the standard X-11 method's additive option, while all other series are adjusted by the multiplicative option. Adult male unemployment is adjusted multiplicatively using the prior trend adjustment feature of the X-11. The rate is computed by adding the 12 components to a civilian labor force total, and dividing and derived civilian labor force into the unemployment total. These series are revised at the end of each year. Factors for the current year are computed at the beginning of the year for the 12 succeeding months, and published in advance.
- The current "implicit" factors for the overall unemployment rate, derived by dividing the original unemployment rate by the seasonally adjusted rate for the months of 1978, are: January (111.1), February 112.0, March 106.7, April 94.6, May 89.5, June 105.6, July (102.1), August 98.5, September 97.3, October 93.1, November 95.7, December 95.5.
- (3) Concurrent (standard X-11 method)—The procedure for computation of the official rate is followed, except that the data are re-seasonally adjusted by the standard X-11 method each month as the most recent data become available, i.e., the rate for January 1979 is based on adjustment of data for the period, January 1967–January 1979. The rates for the current year are shown as first computed, while data for 1978 are as revised to incorporate experience through December 1978.
- (4) Stable (standard X-11 method)—The stable seasonal option of the standard X-11 method uses final seasonal factors computed as an unweighted average of all seasonal-irregular ratios for the entire span of the period, January 1967–December 1978. In essence, this procedure assumes that seasonal patterns are relatively constant from year to year. The unweighted average is updated and series revised at the end of each year.
- (5) Total (standard X-11 method)—This is an alternative aggregation procedure, in which total unemployment and labor force levels are directly adjusted by the standard X-11 (multiplicative option) to derive the rate. The series are revised at the end of each year.
- (6) Residual (standard X-11 method)—The labor force and employment levels are adjusted directly, with the level of unemployment derived as a residual. The rate is computed by dividing the residual unemployment level by the directly adjusted civilian labor force. The series are revised at the end of each year.
- (7) Extrapolated (X-11 ARIMA method)—Data for the 12 component groups of the unemployment rate are estimated using ARIMA (autoregressive, integrated, moving average) models. The enlarged series is then seasonally adjusted with the X-11 program, and the rates are computed as in the official procedure. The series are revised at the end of each year. Factors for the current year are extrapolated at the beginning of the year for the 12 succeeding months.
- (8) Concurrent (X-11 ARIMA)—The procedure for computation of the X-11 ARIMA rate is followed, except that the data are re-seasonally adjusted each month as the most recent data become available, i.e., the rate for January 1979 is based on adjustment of data for the period, January 1967–January 1979. The rates for the current year are shown as first computed while data for 1978 are revised to reflect experience through December 1978.
- Methods of Adjustment—The standard X-11 method was developed by Julius Shiskin at the Bureau of the Census. The method is described in "X-11 Variant of the Census Method II Seasonal Adjustment Program," by Julius Shiskin, Alan Young, and John Musgrave, (Technical Paper No. 15, Bureau of the Census, 1967).
- The X-11 ARIMA method was developed at Statistics Canada by Estela Bee Dagum and is the official method for seasonally adjusting the Canadian labor force series. A general description of the method is contained in "A Comparison and Assessment of Seasonal Adjustment Methods for Employment and Unemployment Statistics," by Estela Bee Dagum (Background Paper No. 5, U.S. National Commission on Employment and Unemployment Statistics, February 1978).

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THE EMPLOYMENT SITUATION: SEPTEMBER 1979

Employment rose in September and unemployment declined, the Bureau of Labor Statistics of the U.S. Department of Labor reported today. The Nation's overall unemployment rate was 5.8 percent, down slightly from 6.0 percent in August but little different from the rates which have prevailed over the past year.

Total employment--as measured by the monthly survey of households--advanced by 610,000 in September to 97.5 million. Over the past year, total employment grew by 2.5 million, with nearly three-fourths of the increase occurring in the 6 months from September to March.

Nonfarm payroll employment--as measured by the monthly survey of establishments--rose by 135,000 in September to 89.9 million. Payroll employment has advanced by 2.8 million over the year; 2 million of that increase occurred prior to April.

Unemployment

The September unemployment rate, 5.8 percent, and the number of unemployed persons, 6.0 million, edged down from the levels of the previous month. Since August 1978, the jobless rate has fluctuated within the range of 5.6 to 6.0 percent.

Virtually all of the over-the-month reduction in unemployment took place among adult women and, more specifically, married women, reversing the increases of the prior month. The rate for adult women was 5.5 percent in September, compared with 5.9 percent in August. The unemployment rate for part-time workers also dropped slightly. Little or no change occurred in September for

*
* In accordance with usual practice, BLS has revised establishment survey data to reflect a *
* new benchmark and updated seasonal adjustment factors. Because of these revisions, data in *
* this release are not comparable to data published earlier. For example, the revised data in- *
* crease the level of total nonagricultural employment by more than 900,000 for August 1979. *
* See page 5 for additional information. *
*

most other worker categories including adult men, teenagers, and full-time workers. (See tables A-1 and A-2.)

The median duration of unemployment was up 1 week to 5.9 weeks in September, returning to about the July level. This movement reflected an over-the-month drop in short-term joblessness and an increase in those seeking jobs from 1 to 3 months. (See table A-4.)

Total Employment and the Labor Force

Total employment rose by 610,000 in September, after registering a decline of about half that amount in August. The advance took place primarily among teenagers and adult women. Teenage employment returned to the July level, following a dip of comparable magnitude in August; employment of adult women rose in both months.

Table A. Major indicators of labor market activity, seasonally adjusted

Selected categories	Quarterly averages					Monthly data		
	1978		1979			1979		
	III	IV	I	II	III	July	Aug.	Sept.
HOUSEHOLD DATA								
Thousands of persons								
Civilian labor force.....	100,753	101,524	102,475	102,295	103,202	103,059	103,049	103,498
Total employment.....	94,726	95,616	96,596	96,415	97,208	97,210	96,900	97,513
Unemployment.....	6,027	5,908	5,878	5,880	5,994	5,848	6,149	5,985
Not in labor force.....	58,482	58,398	58,095	58,886	58,604	58,545	58,752	58,515
Discouraged workers.....	853	760	724	826	739	N.A.	N.A.	N.A.
Percent of labor force								
Unemployment rates:								
All workers.....	6.0	5.8	5.7	5.7	5.8	5.7	6.0	5.8
Adult men.....	4.1	4.0	4.0	3.9	4.2	4.1	4.2	4.2
Adult women.....	6.1	5.8	5.7	5.7	5.6	5.5	5.9	5.5
Teenagers.....	16.1	16.3	15.8	16.2	16.1	15.3	16.5	16.4
White.....	5.2	5.1	5.0	4.9	5.1	4.9	5.3	5.1
Black and other.....	11.7	11.5	11.4	11.6	10.8	10.8	11.0	10.6
Full-time workers.....	5.5	5.2	5.2	5.2	5.4	5.3	5.4	5.4
ESTABLISHMENT DATA								
Thousands of jobs								
Nonfarm payroll employment.....	86,866	87,799	88,724	89,353	89,761p	89,713	89,718p	89,853p
Goods-producing industries.....	25,731	26,111	26,486	26,630	26,644p	26,723	26,595p	26,615p
Service-producing industries...	61,135	61,688	62,238	62,723	63,117p	62,990	63,123p	63,238p
Hours of work								
Average weekly hours:								
Total private nonfarm.....	35.8	35.8	35.8	35.5	35.6p	35.6	35.6p	35.6p
Manufacturing.....	40.5	40.6	40.6	39.8	40.1p	40.2	40.1p	40.0p
Manufacturing overtime.....	3.5	3.7	3.7	3.2	3.2p	3.3	3.2p	3.2p

p=preliminary

N.A.=not available

Over the past year, employment has risen by 2.5 million. The bulk of this increase occurred during the first half of the 12-month period as employment has risen by 670,000 since March. Adult women accounted for most of the gains throughout the year.

The civilian labor force was 103.5 million in September, up 450,000 from August and 2.5 million higher than September a year ago. The overall civilian labor force participation rate was 63.9 percent in September, the same as the all-time high attained in February and March.

Discouraged Workers

Discouraged workers are persons who report that they want work but are not looking for jobs because they believe they cannot find any. Because they do not meet the labor market test--that is, they are not engaged in active job search--they are classified as not in the labor force rather than unemployed. These data are published on a quarterly basis.

The number of discouraged workers declined by 90,000 in the third quarter to 740,000, returning to the first quarter level. Close to three-fourths of this number cited job-market factors as the reason for their discouragement. (See table A-10.)

Industry Payroll Employment

Nonfarm payroll employment rose 135,000 in September to 89.9 million, as job gains took place in 56 percent of the 172 industries comprising the BLS diffusion index. Payroll employment increased 2.8 million over the past year; 225,000 of these jobs were added during the third quarter of 1979 and 815,000 since March. (See tables B-1 and B-6.)

Most of the September employment gain occurred in the service-producing industries. The service industry accounted for most of the increase, adding almost 100,000 jobs. While employment in wholesale and retail trade rose 50,000, transportation and public utilities and State and local government had reductions of 20,000 and 25,000, respectively.

In the goods-producing sector, employment in mining continued its long-term advance, while construction edged down for the second straight month. Most of the specific industries in manufacturing showed little or no change.

Hours

The average workweek of production or nonsupervisory workers on private nonagricultural payrolls was 35.6 hours in September, unchanged from the levels of the previous 3 months. Manufacturing hours edged down a tenth of an hour to 40.0, while factory overtime was unchanged

at 3.2 hours. In contrast, the construction workweek rose 0.4 hour for the second straight month to 37.6 hours. (See table B-2.)

The index of aggregate weekly hours rose 0.3 percent in September as a result of the rise in payroll employment. The index was up 2.9 percent over the year, also due entirely to employment gains. (See table B-5.)

Hourly and Weekly Earnings

Average hourly earnings of production or nonsupervisory workers on private nonfarm payrolls rose 0.5 percent in September (seasonally adjusted) to a level 8.1 percent higher than that of September 1978. Average weekly earnings also rose half a percent over the month and were up 7.5 percent from September 1978.

Before adjustment for seasonality, average hourly earnings rose 10 cents from August to \$6.29, 47 cents higher than September 1978. Average weekly earnings were \$222.50 in September, up \$1.07 from August and \$15.61 over the year. (See table B-3.)

The Hourly Earnings Index

The Hourly Earnings Index--earnings adjusted for overtime in manufacturing, seasonality, and the effects of changes in the proportion of workers in high-wage and low-wage industries--was 233.7 (1967=100) in September, 0.7 percent higher than in August. The index was 7.9 percent above September a year ago. During the 12-month period ended in August, the Hourly Earnings Index in dollars of constant purchasing power decreased 3.5 percent. (See table B-4.)

**Benchmark and Seasonal Adjustment Revisions in the
Establishment Survey Data**

The establishment survey data have been revised to March 1978 benchmark levels. The following table compares the employment estimates for June 1979 (the last final estimate projected from the previous--March 1977--benchmark) on the new and old benchmark.

For a discussion of the effect of the benchmark revision, see "BLS Establishment Estimates Revised to March 1978 Benchmark Levels" which will appear in the October issue of Employment and Earnings. New seasonal adjustment factors for use in current seasonal adjustment also will be included in this report. The revised seasonally adjusted series from January 1974 through June 1979 will be published in a special supplement to Employment and Earnings in early November. Revised detailed industry series from April 1977 forward, not seasonally adjusted, also will be included in the supplement. This supplement, when combined with the recently published historical volume, Employment and Earnings, United States, 1909-78, BLS Bulletin 1312-10, will comprise the full historical series on the establishment survey.

Table B. Comparison of June 1979 establishment survey employment estimates, before and after revision to March 1978 benchmark levels

(In thousands)

Industry	June 1979 employment projected from:		Difference
	March 1977 benchmarks	March 1978 benchmarks	
Total nonfarm.....	89,603	90,541	938
Private nonfarm.....	73,840	74,778	938
Mining.....	947	968	21
Construction.....	4,808	4,881	73
Manufacturing.....	21,062	21,234	172
Transportation and public utilities.....	5,126	5,231	105
Trade.....	20,071	20,222	151
Finance, insurance, and real estate.....	4,936	5,003	67
Services.....	16,890	17,239	349
Government.....	15,763	15,763 ¹	--

¹ Adequate source data were not available to adjust the government series.

Explanatory Note

This release presents and analyzes statistics from two major surveys. Data on labor force, total employment, and unemployment (A tables) are derived from the Current Population Survey—a sample survey of households which is conducted by the Bureau of the Census for the Bureau of Labor Statistics. Beginning in September 1975, the sample was enlarged by 9,000 households in order to provide greater reliability for smaller States and thus permit the publication of annual statistics for all 50 States and the District of Columbia. These supplementary households were added to the 47,000 national household sample in January 1978; thus the sample now consists of about 56,000 households selected to represent the U.S. civilian noninstitutional population 16 years and over.

Statistics on nonagricultural payroll employment, hours, and earnings (B tables) are collected by the Bureau of Labor Statistics, in cooperation with State agencies, from payroll records of a sample of approximately 162,000 establishments. Unless otherwise indicated, data for both statistical series relate to the week containing the 12th day of the specified month.

Comparability of household and payroll employment statistics

Employment data from the household and payroll surveys differ in several basic respects. The household survey provides information on the labor force activity of the entire civilian noninstitutional population, 16 years of age and over, without duplication. Each person is classified as either employed, unemployed, or not in the labor force. The household survey counts employed persons in both agriculture and nonagricultural industries and, in addition to wage and salary workers (including private household workers), counts the self-employed, unpaid family workers, and persons "with a job but not at work" and not paid for the period absent.

The payroll survey relates only to paid wage and salary employees (regardless of age) on the payrolls of nonagricultural establishments. Persons who worked at more than one job during the survey week or otherwise appear on more than one payroll are counted more than once in the establishment survey. Such persons are counted only once in the household survey and are classified in the job at which they worked the greatest number of hours.

Unemployment

To be classified in the household survey as unemployed an individual must: (1) Have been without a

job during the survey week; (2) have made specific efforts to find employment sometime during the prior 4 weeks; and (3) be presently available for work. In addition, persons on layoff and those waiting to begin a new job (within 30 days), neither of whom must meet the jobseeking requirements, are also classified as unemployed. The unemployed total includes all persons who satisfactorily meet the above criteria, regardless of their eligibility for unemployment insurance benefits or any kind of public assistance. The unemployment rate represents the unemployed as a proportion of the civilian labor force (the employed and unemployed combined).

The Bureau regularly publishes a wide variety of labor market measures. See, for example, the demographic, occupational, and industry detail in tables A-2 and A-3 of this release and the comprehensive data package in *Employment and Earnings* each month. A special grouping of seven unemployment measures is set forth in table A-7. Identified by the symbols U-1 through U-7, these measures represent a range of possible definitions of unemployment and of the labor force—from the most restrictive (U-1) to the most comprehensive (U-7). The official rate of unemployment appears as U-5.

Seasonal adjustment

Nearly all economic phenomena are affected to some degree by seasonal variations. These are recurring, predictable events which are repeated more or less regularly each year—changes in weather, opening and closing of schools, major holidays, industry production schedules, etc. The cumulative effects of these events are often large. For example, on average over the year, they explain about 95 percent of the month-to-month variance in the unemployment figures. Since seasonal variations tend to be large relative to the underlying cyclical trends, it is necessary to use seasonally-adjusted data to interpret short-term economic developments. At the beginning of each year, seasonal adjustment factors for unemployment and other labor force series are calculated for use during the entire year, taking into account the prior year's experience.

All seasonally-adjusted civilian labor force and unemployment rate statistics, as well as the major employment and unemployment estimates, are computed by aggregating independently adjusted series. The official unemployment rate for all civilian workers is derived by dividing the estimate for total unem-

ployment (the sum of four seasonally-adjusted age-sex components) by the civilian labor force (the sum of 12 seasonally-adjusted age-sex components).

For establishment data, the seasonally-adjusted series for all employees, production workers, average weekly hours, and average hourly earnings are adjusted by aggregating the seasonally-adjusted data from the respective component series. These data are also revised annually, often in conjunction with benchmark (comprehensive counts of employment) adjustments. (The most recent revision of seasonally-adjusted data was based on data through June 1979.)

Sampling variability

Both the household and establishment survey statistics are subject to sampling error, which should be taken into account in evaluating the levels of a series as well as changes over time. Because the household survey is based upon a probability sample, the results may differ from the figures that would be obtained if it were possible to take a complete census using the same questionnaires and procedures. The standard error is the measure of sampling variability, that is, of the variation that occurs by chance because a sample rather than the entire population is surveyed. The chances are about 68 out of 100 that an estimate from the survey differs from a figure that would be obtained through a complete census by less than the standard error. Tables A through I in the "Explanatory Notes" of Employment and Earnings provide approximations of the standard errors for unemployment and other labor force categories. To obtain a 90-percent level of confidence, the confidence interval generally used by BLS, the errors should be multiplied by 1.6. The following examples provide an indication of the magnitude of sampling error: For a monthly change in total em-

ployment, the standard error is on the order of plus or minus 182,000. Similarly, the standard error on a change in total unemployment is approximately 115,000. The standard error on a change in the national unemployment rate is 0.12 percentage point.

Although the relatively large size of the monthly establishment survey assures a high degree of accuracy, the estimates derived from it also may differ from the figures obtained if a complete census using the same schedules and procedures were possible. However, since the estimating procedures utilize the previous month's level as the base in computing the current month's level of employment (link-relative technique), sampling and response errors may accumulate over several months. To remove this accumulated error, the employment estimates are adjusted to new benchmarks (comprehensive counts of employment), usually on an annual basis. In addition to taking account of sampling and response errors, the benchmark revision adjusts the estimates for changes in the industrial classification of individual establishments. Employment estimates are currently projected from March 1978 levels.

One measure of the reliability of the employment estimates for individual industries is the root-mean-square error (RMSE). The RMSE is the standard deviation adjusted for the bias in estimates. If the bias is small, the chances are about 68 out of 100 that an estimate from the sample would differ from its benchmark by less than the RMSE. For total nonagricultural employment, the RMSE is on the order of plus or minus 83,000. Measures of reliability (approximations of the RMSE) for establishment-survey data and actual amounts of revision due to benchmark adjustments are provided in tables K through P in the "Explanatory Notes" of Employment and Earnings.

Chart 1. Civilian labor force and employment
(Seasonally adjusted)

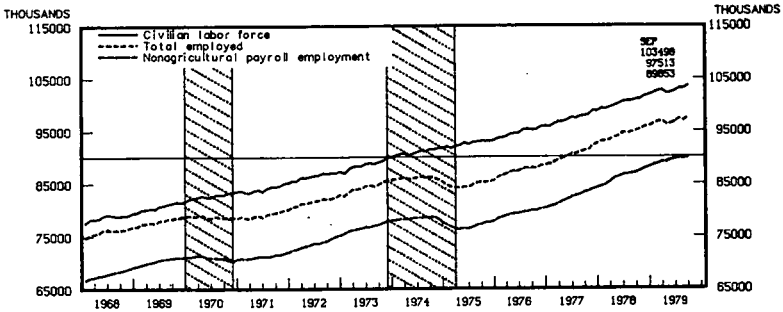


Chart 2. Unemployment rate—all civilian workers

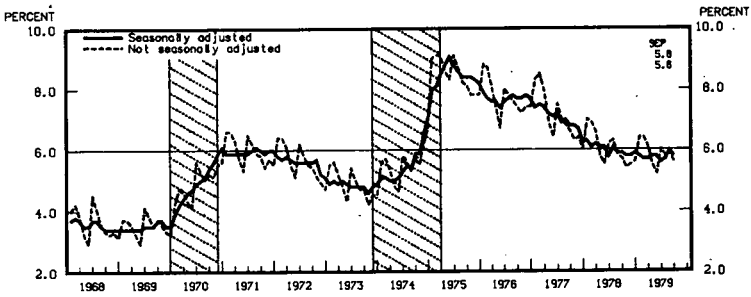
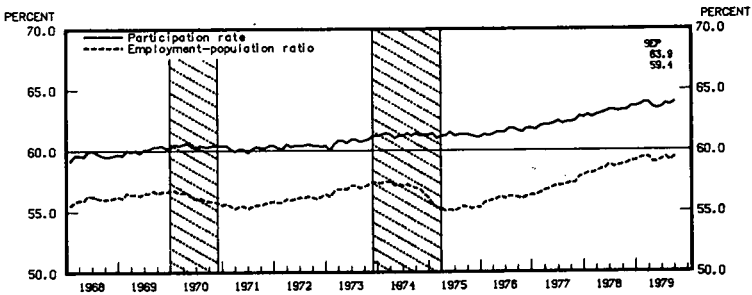


Chart 3. Civilian labor force participation rate
and total employment-population ratio
(Seasonally adjusted)



Note: The shaded areas depict the business cycle peaks and troughs as designated by the National Bureau of Economic Research.

HOUSEHOLD DATA

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Table A-1. Employment status of the noninstitutional population

(Numbers in thousands)

Employment status	Not seasonally adjusted					Seasonally adjusted				
	Sept.	Aug.	Sept.	Sept.	June	July	Aug.	Sept.		
	1978	1979	1979	1978	1975	1975	1979	1979		
TOTAL										
Total noninstitutional population ¹	161,570	163,691	164,106	161,570	163,266	163,669	163,665	163,691	164,106	
Armed Forces ²	2,123	2,050	2,056	2,123	2,078	2,076	2,082	2,050	2,052	
Civilian noninstitutional population ¹	159,447	161,801	162,013	159,447	161,182	161,593	161,604	161,601	162,013	
Civilian labor force	100,430	104,363	103,373	100,378	102,277	102,528	103,059	103,049	103,498	
Participation rate	63.2	64.5	63.0	63.3	63.4	63.5	63.8	63.7	63.9	
Employed	95,481	98,226	97,579	95,010	96,318	96,754	97,210	96,900	97,513	
Employment-population ratio ³	59.4	59.9	59.5	59.0	59.0	59.4	59.4	59.4	59.4	
Agriculture	3,549	3,795	3,545	3,406	3,164	3,260	3,262	3,262	3,400	
Nonagricultural industries	91,932	94,431	94,034	91,604	93,154	93,464	93,949	93,638	94,113	
Unemployed	5,797	6,137	5,729	5,564	5,329	5,774	5,648	6,149	5,985	
Unemployment rate	5.7	5.9	5.6	5.9	5.8	5.6	5.7	6.0	5.8	
Not in labor force	58,609	57,438	58,640	58,473	58,935	58,665	58,545	58,752	58,515	
Men, 20 years and over										
Total noninstitutional population ¹	68,937	70,499	70,445	68,937	69,787	69,889	69,995	70,099	70,445	
Civilian noninstitutional population ¹	67,236	68,817	68,522	67,236	68,143	68,247	68,119	68,417	68,522	
Civilian labor force	53,580	55,020	54,793	53,459	54,261	54,395	54,567	54,527	54,653	
Participation rate	79.7	80.4	80.4	79.5	79.7	79.7	79.9	79.7	79.8	
Employed	51,709	52,855	52,845	51,877	52,157	52,259	52,315	52,227	52,386	
Employment-population ratio ³	75.0	75.5	75.3	74.4	74.7	74.8	74.7	74.5	74.6	
Agriculture	2,512	2,554	2,494	2,409	2,274	2,306	2,323	2,385	2,395	
Nonagricultural industries	49,197	50,301	50,351	49,068	49,883	49,953	49,992	49,843	49,991	
Unemployed	1,975	2,165	1,960	2,172	2,105	2,096	2,249	2,300	2,271	
Unemployment rate	3.5	3.9	3.6	4.1	3.9	3.9	4.1	4.2	4.2	
Not in labor force	13,652	13,397	13,727	13,777	13,862	13,832	13,752	13,890	13,865	
Women, 20 years and over										
Total noninstitutional population ¹	75,673	77,127	77,245	75,673	76,762	76,896	77,014	77,127	77,245	
Civilian noninstitutional population ¹	75,764	77,006	77,124	75,764	76,670	76,786	77,097	77,006	77,124	
Civilian labor force	38,138	38,647	39,343	37,911	38,500	38,596	39,101	39,292	39,331	
Participation rate	50.3	50.2	51.3	50.1	50.3	50.3	50.7	51.0	51.0	
Employed	35,724	36,174	37,217	35,651	36,323	36,373	36,861	36,968	37,176	
Employment-population ratio ³	47.1	46.9	48.2	47.0	47.3	47.3	47.9	47.9	48.1	
Agriculture	632	712	678	597	583	592	584	596	640	
Nonagricultural industries	35,092	35,462	36,539	35,054	35,740	35,781	36,276	36,372	36,536	
Unemployed	2,410	2,473	2,127	2,260	2,237	2,223	2,240	2,324	2,155	
Unemployment rate	6.3	6.4	5.9	5.9	5.8	5.8	5.5	5.9	5.5	
Not in labor force	37,626	38,359	37,561	37,843	38,110	38,188	37,887	37,714	37,793	
Both sexes, 18-19 years										
Total noninstitutional population ¹	16,760	16,665	16,655	16,760	16,692	16,684	16,677	16,665	16,655	
Civilian noninstitutional population ¹	16,446	16,377	16,367	16,446	16,389	16,381	16,387	16,377	16,367	
Civilian labor force	9,115	10,496	9,335	9,594	9,426	9,537	9,481	9,430	9,514	
Participation rate	55.4	63.3	56.4	57.5	56.9	57.9	57.9	58.1	58.1	
Employed	7,604	9,157	7,524	7,632	7,839	7,882	8,031	7,705	7,952	
Employment-population ratio ³	45.4	54.9	45.2	45.9	47.0	46.8	48.2	46.2	47.7	
Agriculture	405	529	369	400	368	362	355	341	365	
Nonagricultural industries	7,199	8,628	7,155	7,232	7,471	7,720	7,676	7,364	7,588	
Unemployed	1,512	1,339	1,511	1,562	1,587	1,655	1,450	1,525	1,561	
Unemployment rate	16.6	14.4	16.3	16.3	16.8	15.3	15.3	16.5	16.4	
Not in labor force	7,331	5,681	7,332	6,852	6,963	6,884	6,906	7,187	6,853	
White										
Total noninstitutional population ¹	141,693	143,461	143,621	141,693	142,978	143,137	143,203	143,461	143,621	
Civilian noninstitutional population ¹	139,990	141,822	141,901	139,990	141,311	141,492	141,644	141,822	141,901	
Civilian labor force	88,803	91,742	91,012	88,862	90,018	90,279	90,554	90,662	91,081	
Participation rate	63.4	64.7	64.1	63.5	63.7	63.8	63.9	63.9	64.2	
Employed	84,325	86,995	86,481	84,250	85,515	85,871	86,093	86,295	86,395	
Employment-population ratio ³	59.5	60.6	60.2	59.5	59.8	60.0	60.1	59.8	60.2	
Unemployed	4,478	4,747	4,531	4,612	4,503	4,409	4,460	4,632	4,687	
Unemployment rate	5.0	5.2	5.0	5.2	5.0	4.9	4.9	5.3	5.1	
Not in labor force	51,187	50,080	50,969	51,128	51,313	51,213	51,107	51,161	50,900	
Black and other										
Total noninstitutional population ¹	19,876	20,431	20,484	19,876	20,262	20,331	20,382	20,431	20,484	
Civilian noninstitutional population ¹	19,457	19,979	20,032	19,457	19,850	19,901	19,943	19,979	20,032	
Civilian labor force	12,035	12,621	12,362	12,084	12,176	12,272	12,364	12,340	12,408	
Participation rate	61.9	63.2	61.7	62.1	61.3	61.7	62.0	61.8	61.9	
Employed	10,716	11,231	11,094	10,721	10,767	10,883	11,025	10,987	11,095	
Employment-population ratio ³	53.9	55.0	54.2	53.9	53.1	53.5	54.1	53.8	54.2	
Unemployed	1,318	1,390	1,267	1,363	1,409	1,389	1,338	1,353	1,313	
Unemployment rate	11.0	11.0	10.3	11.3	11.6	11.3	10.8	11.0	10.6	
Not in labor force	7,422	7,358	7,871	7,373	7,674	7,629	7,579	7,639	7,624	

¹ The population and Armed Forces figures are not adjusted for seasonal variations; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

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

HOUSEHOLD DATA

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Table A-2. Major unemployment indicators, seasonally adjusted

Selected categories	Number of unemployed persons (in thousands)		Unemployment rate						
	Sept.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Sept.	
	1978	1979	1978	1979	1979	1979	1979	1979	
CHARACTERISTICS									
Total, 16 years and over	5,964	5,985	5.9	5.8	5.6	5.7	6.0	5.8	
Men, 20 years and over	2,172	2,271	4.1	3.9	3.9	4.1	4.2	4.2	
Women, 20 years and over	2,230	2,155	5.9	5.8	5.6	5.5	5.9	5.5	
Both sexes, 16-19 years	1,562	1,561	10.2	10.2	15.5	15.3	16.5	16.4	
White, total	4,612	4,667	5.2	5.0	4.9	4.9	5.3	5.1	
Men, 20 years and over	1,716	1,816	3.6	3.3	3.4	3.6	3.8	3.7	
Women, 20 years and over	1,650	1,656	5.2	5.1	5.0	4.7	5.2	4.8	
Both sexes, 16-19 years	1,200	1,245	14.1	14.3	13.0	13.3	14.9	14.0	
Black and other, total	1,263	1,318	11.3	11.6	11.1	10.8	11.0	10.6	
Men, 20 years and over	473	475	8.4	6.4	7.9	8.3	8.1	7.9	
Women, 20 years and over	528	517	10.0	9.9	10.8	9.6	10.3	9.6	
Both sexes, 16-19 years	262	322	24.5	26.9	24.0	20.9	20.7	21.5	
Married men, spouse present	1,055	1,147	2.6	2.5	2.6	2.9	3.0	2.8	
Married women, spouse present	1,269	1,141	5.5	5.2	5.2	4.8	5.4	4.7	
Women who head families	389	362	6.0	6.9	9.1	8.1	7.9	7.6	
Full-time workers	4,652	4,731	5.4	5.2	5.1	5.3	5.4	5.4	
Part-time workers	1,317	1,259	8.0	9.6	8.6	8.2	8.8	8.3	
Unemployed 15 weeks and over ¹	1,260	1,134	13.3	11.2	11.1	11.0	11.2	11.1	
Labor force time lost ²	--	--	6.4	6.2	6.3	6.4	6.5	6.2	
OCCUPATION³									
White-collar workers	1,724	1,710	2.5	2.2	2.4	3.2	3.6	3.3	
Professional and technical	386	390	2.6	2.0	2.5	2.5	2.6	2.5	
Managers and administrators, except farm	223	244	4.2	2.2	2.0	1.9	2.3	2.2	
Sales workers	262	245	4.3	4.0	4.5	3.5	4.2	3.9	
Clerical workers	853	839	4.7	4.6	4.6	4.4	5.0	4.5	
Blue-collar workers	2,231	2,469	6.6	6.7	6.5	6.6	7.6	7.1	
Craft and kindred workers	617	596	6.7	4.0	4.2	4.2	4.9	6.1	
Operatives, except transport	967	1,134	6.1	8.3	7.7	8.3	9.3	9.2	
Transport equipment operatives	195	240	3.2	5.4	5.5	5.2	6.8	6.2	
Nonfarm laborers	552	558	10.5	11.1	10.3	10.9	11.5	10.8	
Service workers	1,013	934	7.4	7.2	7.2	7.2	7.0	6.7	
Farm workers	117	121	3.9	3.5	3.1	4.5	3.8	4.2	
INDUSTRY⁴									
Nonagricultural private wage and salary workers ⁵	4,308	4,412	5.8	5.7	5.6	5.7	6.1	5.8	
Construction	527	444	10.6	9.6	9.6	9.5	9.5	8.8	
Manufacturing	1,185	1,412	5.4	5.4	5.3	5.8	6.2	6.1	
Durable goods	630	736	4.8	4.4	4.8	5.5	5.7	5.3	
Non-durable goods	555	676	6.1	7.0	6.2	6.2	6.9	7.3	
Transportation and public utilities	191	227	3.6	3.5	3.0	3.9	3.8	4.1	
Wholesale and retail trade	1,233	1,201	6.7	6.4	6.8	6.2	6.6	6.4	
Finance and service industries	1,123	1,065	5.1	5.0	4.7	4.9	5.4	4.7	
Government workers	624	521	3.9	3.5	3.6	3.5	3.8	3.3	
Agricultural wage and salary workers	136	159	6.7	9.3	7.7	10.4	9.9	10.2	

¹ Unemployment rate calculated as a percent of civilian labor force.² Assigns hours lost by the unemployed and persons on part time for economic reasons as a percent of potentially available labor force hours.³ Unemployment by occupation includes all experienced unemployed persons, whereas that by

by industry covers only unemployed wage and salary workers.

⁴ Includes mining, not shown separately.

HOUSEHOLD DATA

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Table A-3. Selected employment indicators

Selected categories	Not seasonally adjusted		Seasonally adjusted					
	Sept.	Sept.	Sept.	May	June	July	Aug.	Sept.
	1978	1979	1978	1979	1979	1979	1979	1979
CHARACTERISTICS								
Total employed, 18 years and over	95,041	97,576	93,610	96,316	96,754	97,410	96,900	97,513
Men	55,788	56,678	55,594	56,374	56,630	56,990	56,316	56,653
Women	39,253	40,897	38,016	39,942	40,124	40,420	40,584	40,860
Married men, spouse present	39,191	39,606	38,702	39,308	39,555	39,163	39,106	39,175
Married women, spouse present	22,419	23,484	22,133	22,970	22,560	22,670	22,777	22,965
OCCUPATION								
White-collar workers	47,459	49,529	47,550	49,104	49,160	49,573	48,615	49,779
Professional and technical	18,444	19,108	18,182	19,224	19,052	19,403	18,983	19,018
Managers and administrators, except farm	10,177	10,757	10,062	10,374	10,265	10,475	10,772	10,640
Sales workers	5,643	6,059	5,698	6,091	6,065	6,101	6,085	6,114
Clerical workers	17,076	17,606	17,408	17,410	17,461	17,673	17,774	17,947
Blue-collar workers	32,089	34,486	31,691	31,820	31,566	31,945	31,767	32,287
Craft and kindred workers	12,703	13,135	12,628	12,750	13,003	12,832	12,755	13,057
Operators, except transport	11,007	11,309	10,901	11,004	11,059	11,063	11,080	11,087
Transport equipment operators	3,006	3,655	3,573	3,667	3,556	3,610	3,571	3,622
Nonfarm laborers	4,773	6,886	4,709	4,700	4,600	4,652	4,561	4,621
Service workers	12,608	12,704	12,754	12,754	12,946	12,697	12,591	12,796
Farm workers	2,985	2,856	2,655	2,606	2,683	2,670	2,703	2,736
MAJOR INDUSTRY AND CLASS OF WORKER								
Agriculture:								
Wage and salary workers	1,555	1,501	1,442	1,435	1,445	1,443	1,363	1,391
Self-employed workers	1,80	1,710	1,648	1,690	1,525	1,552	1,632	1,678
Unpaid family workers	315	335	307	270	293	293	310	320
Nonagricultural industries:								
Government	84,454	86,955	84,786	86,129	86,259	86,277	86,227	86,991
Private industries	15,259	15,373	15,330	15,435	15,257	15,382	15,240	15,450
Private households	69,595	71,583	69,450	70,434	71,051	70,895	70,567	71,441
Other industries	1,773	1,394	1,361	1,177	1,236	1,217	1,265	1,132
Self-employed workers	68,222	70,239	68,089	69,117	69,616	69,678	69,761	70,109
Unpaid family workers	6,175	6,629	6,242	6,625	6,600	6,753	6,649	6,882
	63	446	470	466	482	525	443	453
PERSONS AT WORK¹								
Nonagricultural industries	87,028	89,563	86,329	87,727	87,849	89,074	89,154	89,824
Full-time schedules	72,003	74,204	71,645	72,476	72,230	74,138	73,222	73,252
Part-time for economic reasons	2,958	2,873	3,203	3,307	3,416	3,340	3,355	3,111
Usually work full time	1,217	1,193	1,283	1,246	1,416	1,394	1,478	1,255
Usually work part time	1,741	1,683	1,920	2,061	2,000	1,946	1,877	1,856
Part-time for noneconomic reasons	12,067	12,486	12,081	11,943	12,198	12,297	12,577	12,661

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

Table A-4. Duration of unemployment

Weeks of unemployment	Not seasonally adjusted		Seasonally adjusted					
	Sept.	Sept.	Sept.	May	June	July	Aug.	Sept.
	1978	1979	1978	1979	1979	1979	1979	1979
DURATION								
Less than 5 weeks	3,104	3,058	2,783	2,787	2,927	2,784	3,256	2,743
5 to 14 weeks	1,606	1,769	1,861	1,935	1,782	1,970	1,743	2,050
15 to 26 weeks	1,087	971	1,268	1,213	1,086	1,052	1,191	1,133
27 weeks and over	528	508	663	705	616	600	662	627
	558	467	605	538	470	451	529	507
Average (mean) duration, in weeks	10.8	10.0	11.5	11.1	10.4	10.0	10.5	10.6
Median duration, in weeks	6.7	4.7	5.9	5.2	5.6	6.1	4.9	5.9
PERCENT DISTRIBUTION								
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than 5 weeks	53.5	52.7	47.1	47.0	50.5	48.0	52.4	46.3
5 to 14 weeks	27.7	30.5	31.5	32.6	30.8	33.9	28.3	30.6
15 to 26 weeks	18.7	16.8	21.4	20.4	18.7	18.1	19.3	19.1
27 weeks and over	9.1	8.7	11.2	11.9	10.6	10.3	10.7	10.6
	9.6	8.1	10.2	8.6	8.1	7.8	8.6	8.5

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Table A-5. Reasons for unemployment

(Numbers in thousands)

Reasons	Not seasonally adjusted		Seasonally adjusted					
	Sept.	Sept.	Sept.	July	June	July	Aug.	Sept.
	1976	1979	1976	1979	1979	1979	1979	1979
NUMBER OF UNEMPLOYED								
Left last job	1,575	2,160	2,362	2,361	2,358	2,532	2,724	2,808
On layoff	505	19	603	710	796	799	560	836
Other job leavers	1,470	1,361	1,475	1,452	1,562	1,739	1,765	1,771
Left last job	982	946	649	951	607	636	894	818
Reentered labor force	2,062	1,908	1,530	1,702	1,738	1,747	1,798	1,785
Seeking first job	778	765	810	661	737	694	720	803
PERCENT DISTRIBUTION								
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Job leavers	34.1	37.0	35.7	39.9	41.0	43.7	44.4	43.9
On layoff	6.7	10.7	11.5	12.0	12.8	13.7	15.6	13.9
Other job leavers	25.4	26.9	26.2	27.5	27.2	30.0	28.8	29.5
Job leavers	10.9	16.3	16.4	16.1	15.1	16.4	16.0	13.6
Reentrants	35.0	32.9	32.4	29.6	30.2	29.9	29.3	29.7
New entrants	13.4	13.2	15.7	14.2	13.7	12.0	11.7	13.5
UNEMPLOYED AS A PERCENT OF THE CIVILIAN LABOR FORCE								
Job leavers	2.0	2.1	2.3	2.3	2.3	2.5	2.6	2.5
Job leavers	1.0	.9	.8	.9	.8	.8	.9	.8
Reentrants	2.0	1.8	1.9	1.7	1.7	1.7	1.7	1.7
New entrants .....	.8	.7	.8	.6	.8	.7	.7	.8

Table A-6. Unemployment by sex and age, seasonally adjusted

Sex and age	Number of unemployed persons (In thousands)		Unemployment rate					
	Sept.	Sept.	Sept.	July	June	July	Aug.	Sept.
	1978	1979	1976	1979	1979	1979	1979	1979
Total, 16 years and over	5,964	5,985	5.9	5.6	5.6	5.7	6.0	5.8
16 to 16 years	1,562	1,561	16.3	16.0	15.3	15.3	16.5	16.4
16 to 17 years	763	671	19.2	19.2	16.7	17.1	18.1	16.6
18 to 18 years	773	865	14.0	15.2	14.1	14.4	15.5	16.0
20 to 24 years	1,399	1,420	9.3	8.9	8.9	9.0	9.3	9.2
25 years and over	3,025	3,025	4.0	3.8	3.6	3.9	4.1	3.8
25 to 64 years	2,553	2,600	4.1	4.0	4.0	4.0	4.3	4.1
65 years and over	478	423	3.3	3.2	2.9	3.2	3.2	2.9
Men, 16 years and over	2,965	3,056	5.1	4.9	4.7	5.0	5.2	5.2
16 to 16 years	793	825	15.5	14.1	14.1	14.9	16.0	16.2
16 to 17 years	418	366	19.1	19.0	15.8	15.2	17.3	16.6
18 to 18 years	367	452	12.6	14.1	13.5	14.9	15.3	15.6
20 to 24 years	896	732	8.0	8.0	6.0	6.8	6.9	6.8
25 years and over	1,495	1,557	3.3	3.1	3.1	3.3	3.5	3.4
25 to 64 years	1,228	1,298	3.4	3.1	3.1	3.3	3.6	3.5
65 years and over	265	263	3.0	2.9	3.1	3.4	3.2	2.9
Women, 16 years and over	2,999	2,889	7.1	7.0	6.9	6.6	7.0	6.6
16 to 16 years	769	736	17.1	17.7	16.6	15.8	17.1	16.7
16 to 17 years	365	305	19.4	19.3	17.7	19.2	18.9	17.0
18 to 18 years	406	433	15.6	16.4	14.8	13.6	15.8	16.5
20 to 24 years	703	688	10.1	9.9	9.9	9.3	9.9	9.7
25 years and over	1,530	1,467	4.9	5.0	4.8	4.7	5.0	4.6
25 to 64 years	1,325	1,302	5.2	5.2	5.3	5.0	5.4	4.9
65 years and over	213	169	3.6	3.7	2.7	2.9	3.3	3.0

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Table A-7. Range of unemployment measures based on varying definitions of unemployment and the labor force, seasonally adjusted

Measures	Quarterly averages					Monthly data		
	1976		1979			1979		
	III	IV	I	II	III	Jul.	Aug.	Sept.
U-1—Persons unemployed 15 weeks or longer as a percent of the civilian labor force	1.3	1.2	1.2	1.2	1.1	1.0	1.2	1.1
U-2—Job losers as a percent of the civilian labor force	2.4	2.4	2.4	2.4	2.5	2.5	2.6	2.5
U-3—Unemployed persons 25 years and over as a percent of the civilian labor force 25 years and over	4.1	3.5	3.9	3.9	3.9	3.5	4.1	3.8
U-4—Unemployed full-time jobseekers as a percent of the full-time labor force	5.5	5.4	5.2	5.2	5.4	5.3	5.4	5.4
U-5—Total unemployed as a percent of the civilian labor force (official measure)	6.0	5.8	5.7	5.7	5.8	5.7	6.0	5.8
U-6—Total full-time jobseekers plus 1/2 part-time jobseekers plus 1/4 total on part time for economic reasons as a percent of the civilian labor force less 1/2 of the part-time labor force	7.5	7.2	7.2	7.3	7.3	7.3	7.5	7.2
U-7—Total full-time jobseekers plus 1/2 part-time jobseekers plus 1/4 total on part time for economic reasons plus discouraged workers less 1/2 of the part-time labor force	8.4	8.0	7.9	8.1	8.0	N.A.	N.A.	N.A.

N.A.—not available

Table A-8. Employment status of the noninstitutional population by race and Hispanic origin, not seasonally adjusted

Employment status	Total		White		Black ¹		Hispanic origin ²	
	Sept.-1978	Sept.-1979	Sept.-1978	Sept.-1979	Sept.-1978	Sept.-1979	Sept.-1978	Sept.-1979
TOTAL								
Civilian noninstitutional population	159,447	162,013	139,550	141,981	16,710	17,093	7,753	7,975
Civilian labor force	100,838	103,373	86,803	91,012	10,231	10,437	4,867	5,029
Percent of population	63.2	63.4	62.4	64.1	61.2	61.1	62.8	63.1
Employment	95,041	97,576	84,325	86,481	9,060	9,272	4,460	4,669
Agriculture	3,549	3,545	3,163	3,223	288	268	223	223
Nonagricultural industries	91,492	94,031	81,162	83,258	8,772	9,004	4,237	4,446
Unemployment	5,797	5,798	4,476	4,531	1,170	1,166	407	360
Unemployment rate	5.7	5.6	5.3	5.0	11.4	11.2	8.4	7.2
Not in labor force	58,609	58,640	51,187	50,969	6,479	6,655	2,885	2,946

¹ Data relate to black workers only. According to the 1970 Census, they comprised about 88 percent of the "black and other" population group.

² Data on persons of Hispanic origin are tabulated separately, without regard to race, which means that they are also included in the data for white and black workers. At the time of the 1970 Census, approximately 88 percent of their population was white.

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Table A-9. Employment status of male Vietnam-era veterans and nonveterans by age, not seasonally adjusted

(Numbers in thousands)

Veteran status and age	Civilian noninstitutional population		Civilian labor force							
			Total		Employed		Unemployed			
							Number		Percent of labor force	
Sept. 1976	Sept. 1979	Sept. 1976	Sept. 1979	Sept. 1976	Sept. 1979	Sept. 1976	Sept. 1979	Sept. 1976	Sept. 1979	
VETERANS¹										
Total, 20 years and over	8,374	8,559	7,879	8,139	7,577	7,480	302	259	3.8	3.2
20 to 24 years	722	512	623	852	566	411	57	41	9.1	9.1
25 to 30 years	6,917	7,473	6,635	6,924	6,412	6,739	223	185	3.4	2.7
25 to 29 years	2,250	1,886	2,134	1,796	1,010	1,737	124	61	5.8	3.4
30 to 34 years	3,462	3,635	3,388	3,536	3,280	3,855	64	79	1.9	2.2
35 to 39 years	1,199	1,052	1,157	1,594	1,122	1,567	35	45	3.0	2.8
40 years and over	735	874	621	763	599	730	22	33	3.5	4.3
NONVETERANS²										
Total, 20 to 39 years	13,873	14,760	13,264	14,089	12,070	13,599	394	490	3.0	3.5
20 to 29 years	6,227	6,777	5,938	6,458	5,725	6,202	213	256	3.6	4.0
30 to 34 years	4,001	4,229	3,838	4,020	3,725	3,892	113	128	2.9	3.2
35 to 39 years	3,645	3,754	3,488	3,611	3,620	3,505	68	106	1.9	2.9

¹ Vietnam-era veterans are those who served between August 5, 1964 and May 7, 1975. NOTE: Seasonally-adjusted data are no longer being provided because the changing age composition of the Vietnam-era veterans' population obscures the ability to identify seasonality in the series.
² Nonveterans are males who have never served in the Armed Forces. Published data are limited to those 25-39 years of age, the group that most closely corresponds to the bulk of the Vietnam-era veteran population.

Table A-10. Persons not in the labor force by selected characteristics, quarterly averages

(In thousands)

Characteristic	Not seasonally adjusted		Seasonally adjusted					
	III	III	1978			1979		
	1978	1979	II	III	IV	I	II	III
Total not in labor force	57,398	57,562	58,478	58,482	58,398	58,095	58,886	58,604
Do not want a job now	52,276	52,368	53,252	52,745	53,110	53,692	53,753	52,711
Went a job now	5,118	5,199	5,226	5,486	5,239	5,262	5,168	5,468
Discouraged workers	906	781	851	853	760	728	826	739
Job-market factors ¹	628	584	541	620	485	483	517	540
Personal factors ²	278	237	310	232	275	241	309	199
Men	319	312	305	291	275	294	264	298
Women	587	469	546	561	485	430	562	445
White	599	546	584	591	531	513	585	546
Black and other	307	233	253	277	232	210	220	206

¹ Job market factors include "could not find job" and "thinks no job available." 2 Personal factors include "employers think too young or old," "lack education or training," and "other personal handicap."

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Table A-11. Employment status of the noninstitutional population for the ten largest States

State and employment status	Not seasonally adjusted ¹			Seasonally adjusted						
	Sept. 1976	Aug. 1979	Sept. 1979	Sept. 1976	May 1979	June 1979	July 1979	Aug. 1979	Sept. 1979	
California										
Civilian noninstitutional population ²	16,419	16,731	16,760	16,419	16,648	16,676	16,708	16,731	16,760	
Civilian labor force	10,702	11,119	10,995	10,745	10,761	10,883	10,919	11,051	11,019	
Employed	10,019	10,414	10,324	10,020	10,093	10,191	10,290	10,330	10,225	
Unemployed	683	705	671	725	668	692	629	721	714	
Unemployment rate	6.4	6.3	6.1	6.7	6.2	6.0	5.8	6.5	6.5	
Florida										
Civilian noninstitutional population ²	6,549	6,740	6,758	6,549	6,689	6,706	6,723	6,740	6,758	
Civilian labor force	3,775	3,834	3,813	(2)	(2)	(2)	(2)	(2)	(4)	
Employed	3,489	3,601	3,567	(2)	(2)	(2)	(2)	(2)	(4)	
Unemployed	287	233	246	(2)	(2)	(2)	(2)	(2)	(4)	
Unemployment rate	7.6	6.1	6.5	(2)	(2)	(2)	(2)	(2)	(2)	
Illinois										
Civilian noninstitutional population ²	8,223	8,289	8,295	8,223	8,271	8,278	8,288	8,289	8,295	
Civilian labor force	5,327	5,415	5,372	5,355	5,235	5,329	5,376	5,349	5,400	
Employed	5,055	5,163	5,068	5,054	4,984	5,053	5,131	5,112	5,069	
Unemployed	272	252	304	299	291	276	245	237	331	
Unemployment rate	5.1	4.6	5.7	5.6	5.6	5.2	4.6	4.4	6.1	
Massachusetts										
Civilian noninstitutional population ²	4,337	4,381	4,385	4,337	4,369	4,373	4,377	4,381	4,385	
Civilian labor force	2,807	2,936	2,912	(2)	(2)	(2)	(2)	(2)	(2)	
Employed	2,645	2,789	2,725	2,670	2,744	2,744	2,738	2,757	2,750	
Unemployed	162	138	187	(2)	(2)	(2)	(2)	(2)	(4)	
Unemployment rate	5.8	4.7	6.4	(2)	(2)	(2)	(2)	(2)	(2)	
Michigan										
Civilian noninstitutional population ²	6,664	6,744	6,752	6,664	6,723	6,730	6,738	6,744	6,752	
Civilian labor force	4,195	4,319	4,327	(2)	(2)	(2)	(2)	(2)	(2)	
Employed	3,952	3,994	4,017	(2)	(2)	(2)	(2)	(2)	(2)	
Unemployed	243	325	310	281	337	301	323	302	348	
Unemployment rate	5.8	7.5	7.2	(2)	(2)	(2)	(2)	(2)	(4)	
New Jersey										
Civilian noninstitutional population ²	5,466	5,522	5,527	5,466	5,506	5,512	5,517	5,522	5,527	
Civilian labor force	3,519	3,596	3,589	3,498	3,482	3,585	3,530	3,528	3,564	
Employed	3,268	3,337	3,365	3,252	3,215	3,301	3,266	3,262	3,349	
Unemployed	251	259	224	246	267	284	264	266	215	
Unemployment rate	7.1	7.2	6.2	7.0	7.7	6.9	7.5	7.5	6.1	
New York										
Civilian noninstitutional population ²	13,259	13,300	13,304	13,259	13,289	13,294	13,299	13,300	13,304	
Civilian labor force	7,798	8,123	7,937	7,851	7,896	7,931	8,001	7,971	7,989	
Employed	7,199	7,528	7,343	7,249	7,394	7,364	7,600	7,347	7,394	
Unemployed	599	595	594	602	502	567	401	624	596	
Unemployment rate	7.7	7.3	7.5	7.7	6.4	7.1	7.5	7.8	7.5	
Ohio										
Civilian noninstitutional population ²	7,886	7,955	7,961	7,886	7,936	7,983	7,989	7,955	7,961	
Civilian labor force	5,051	5,155	5,092	5,043	5,025	4,984	4,995	5,045	5,084	
Employed	4,777	4,800	4,818	4,756	4,740	4,706	4,850	4,687	4,793	
Unemployed	274	354	278	287	285	278	145	358	291	
Unemployment rate	5.4	6.9	5.5	5.7	5.7	5.6	6.9	7.1	5.7	
Pennsylvania										
Civilian noninstitutional population ²	8,858	8,916	8,923	8,858	8,902	8,907	8,913	8,916	8,923	
Civilian labor force	5,257	5,350	5,301	5,283	5,278	5,289	5,316	5,288	5,327	
Employed	4,885	4,977	4,944	4,891	4,930	4,900	4,960	4,903	4,951	
Unemployed	372	373	357	392	348	389	336	385	376	
Unemployment rate	7.1	7.0	6.7	7.4	6.6	6.6	6.3	7.3	7.1	
Texas										
Civilian noninstitutional population ²	9,235	9,433	9,451	9,235	9,380	9,398	9,416	9,433	9,451	
Civilian labor force	5,925	6,180	6,231	5,935	6,081	6,100	6,183	6,136	6,241	
Employed	5,441	5,895	5,984	5,453	5,798	5,834	5,907	5,866	5,996	
Unemployed	284	285	247	282	283	266	276	270	245	
Unemployment rate	6.8	4.6	6.0	4.8	4.7	4.4	4.5	4.4	3.9	

¹ The population figures are not adjusted for seasonal variations; therefore, identical numbers appear in the unadjusted and the seasonally adjusted columns.

² Seasonally-adjusted data are not presented for this state, because the variations that are due to seasonal influences cannot be separated with sufficient precision from those which stem from the transitory and irregular components of the original time series.

³ These are the official Bureau of Labor Statistics' estimates used in the administration of Federal fund allocation programs.

ESTABLISHMENT DATA

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Table B-1. Employees on nonagricultural payrolls by industry

Industry	Not seasonally adjusted						Seasonally adjusted				
	SEPT. 1978	JULY 1979	AUG. 6 1979	SEPT. 6 1979	SEPT. 1978	MAY 1979	JUNE 1979	JULY 1979	AUG. 6 1979	SEPT. 1979	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
TOTAL	87,483	89,618	89,833	90,266	87,032	89,396	89,626	89,713	89,718	89,443	
GOODS-PRODUCING	26,375	26,938	27,030	27,179	25,767	26,651	26,674	26,743	26,505	26,415	
MINING	910	976	983	981	906	966	949	956	965	974	
CONSTRUCTION	4,644	4,903	5,081	4,967	4,352	4,668	4,662	4,688	4,668	4,655	
MANUFACTURING	20,821	20,965	21,006	21,231	20,511	21,059	21,063	21,079	20,962	20,966	
Production workers	15,004	14,968	14,971	15,222	14,719	15,112	15,096	15,090	14,965	14,966	
DURABLE GOODS	12,661	12,712	12,809	12,822	12,508	12,739	12,760	12,766	12,721	12,753	
Production workers	8,938	9,031	9,021	9,147	8,819	9,119	9,123	9,124	9,050	9,090	
Lumber and wood products	766.4	776.8	776.7	776.7	746	762	757	753	751	760	
Furniture and fixtures	489.5	479.5	485.8	480.1	488	487	495	488	496	495	
Stone, clay, and glass products	715.8	727.1	727.9	726.5	698	715	715	711	704	711	
Primary metal industries	1,230.8	1,260.7	1,262.1	1,251.1	1,222	1,254	1,257	1,256	1,262	1,262	
Fabricated metal products	1,066.8	1,115.7	1,117.9	1,136.8	1,078	1,130	1,137	1,130	1,118	1,118	
Machinery, except electrical	2,346.4	2,405.1	2,408.1	2,408.8	2,366	2,471	2,468	2,500	2,495	2,494	
Electric and electronic equipment	2,028.3	2,111.7	2,091.9	2,124.4	2,011	2,106	2,126	2,131	2,094	2,105	
Transportation equipment	2,034.8	2,027.7	1,936.8	2,048.7	2,004	2,077	2,097	2,073	2,062	2,065	
Instruments and related products	662.0	662.9	695.5	680.1	661	688	693	694	695	697	
Miscellaneous manufacturing	870.6	438.6	480.9	467.0	450	469	451	450	451	451	
NONDURABLE GOODS	8,380	8,293	8,307	8,409	8,203	8,320	8,353	8,293	8,261	8,233	
Production workers	6,066	5,915	6,050	6,075	5,900	5,993	5,973	5,966	5,909	5,908	
Food and kindred products	1,625.5	1,737.8	1,814.9	1,831.5	1,701	1,725	1,720	1,707	1,701	1,707	
Tobacco manufacturers	75.7	82.1	87.6	89.7	88	70	69	68	62	63	
Textile mill products	603.1	675.5	686.7	689.9	688	693	692	692	685	685	
Apparel and other textile products	1,346.1	1,276.7	1,306.9	1,311.6	1,332	1,324	1,312	1,324	1,300	1,296	
Paper and allied products	701.9	719.6	723.8	721.8	698	714	715	716	717	717	
Printing and publishing	1,192.3	1,245.8	1,245.4	1,247.1	1,191	1,236	1,242	1,250	1,247	1,246	
Chemicals and allied products	1,102.7	1,123.0	1,120.2	1,114.8	1,096	1,116	1,119	1,116	1,110	1,110	
Petroleum and coal products	211.6	219.0	219.0	216.6	209	213	212	212	214	214	
Rubber and plastic products	761.6	747.4	765.3	764.7	750	764	775	777	763	753	
Leather and leather products	257.6	226.7	244.1	241.9	256	267	267	229	242	242	
SERVICE-PRODUCING	61,108	62,684	62,803	63,085	61,265	62,747	62,952	62,960	63,123	63,028	
TRANSPORTATION AND PUBLIC UTILITIES	5,000	5,200	5,206	5,231	4,991	5,130	5,190	5,169	5,194	5,169	
WHOLESALE AND RETAIL TRADE	19,741	20,118	20,123	20,255	19,653	20,129	20,110	20,122	20,112	20,104	
Wholesale trade	5,018	5,208	5,211	5,210	4,999	5,156	5,180	5,182	5,185	5,188	
Retail trade	14,723	14,910	14,912	15,045	14,654	14,973	14,930	14,940	14,927	14,916	
FINANCE, INSURANCE, AND REAL ESTATE	4,779	5,032	5,055	5,023	4,774	4,936	4,950	4,972	5,005	5,016	
SERVICES	16,496	17,314	17,318	17,276	16,423	16,956	17,051	17,092	17,147	17,245	
GOVERNMENT	15,132	15,020	14,901	15,297	15,476	15,598	15,637	15,635	15,669	15,662	
FEDERAL	2,764	2,438	2,813	2,770	2,755	2,770	2,768	2,765	2,762	2,761	
STATE AND LOCAL	12,368	12,582	12,088	12,527	12,719	12,828	12,869	12,870	12,867	12,861	

(1) Preliminary

NOTE: Establishment data shown in tables B-1 through B-6 have been revised based on March 1978 benchmark levels and updated seasonal adjustment factors; consequently, they are not comparable with previously published data. For a discussion of the effect of these revisions, see "BLS Establishment Estimates Revised to March 1978 Benchmark Levels," *Employment and Earnings*, October, 1979, Vol. 26, No. 10.

ESTABLISHMENT DATA

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Table B-2. Average weekly hours of production or nonsupervisory workers, on private nonagricultural payrolls by industry

Industry	Not seasonally adjusted			Seasonally adjusted						
	SEPT. 1978	JULY 1979	AUG. 1979 ^p	SEPT. 1978 ^p	SEPT. 1978	MAY 1979	JUNE 1979	JULY 1979	AUG. 1979	SEPT. 1979 ^p
TOTAL PRIVATE	35.9	36.0	36.0	35.7	35.8	35.7	35.8	35.8	35.8	35.8
MINING	43.5	41.7	43.1	43.7	43.1	42.6	43.0	41.8	43.2	43.4
CONSTRUCTION	37.4	37.7	38.0	38.0	37.0	37.1	37.2	36.8	37.2	37.5
MANUFACTURING	40.7	39.9	40.0	40.2	40.5	40.2	40.1	40.2	40.1	40.2
Overtime hours	3.9	3.2	3.3	3.6	3.6	3.5	3.6	3.3	3.2	3.7
DURABLE GOODS	41.4	40.4	40.4	40.6	41.2	40.9	40.7	40.7	40.6	40.7
Overtime hours	4.2	3.4	3.0	3.4	3.0	3.0	3.0	3.5	3.3	3.3
Lumber and wood products	39.0	39.4	40.0	40.3	39.4	39.4	39.4	39.3	39.8	39.1
Furniture and fixtures	39.5	38.0	38.4	38.3	39.1	38.5	38.5	38.4	38.1	37.9
Stone, clay, and glass products	42.1	41.5	41.8	41.3	41.8	41.7	41.9	41.4	41.6	41.1
Primary metal industries	42.3	41.3	40.8	40.9	42.0	41.8	41.2	41.3	41.0	40.8
Fabricated metal products	41.2	40.3	40.5	40.7	41.1	40.7	40.7	40.6	40.6	40.6
Machinery, except electrical	42.1	41.2	41.2	41.7	42.1	42.0	42.0	41.9	41.5	41.7
Electric and electronic equipment	40.5	39.6	39.8	40.1	40.3	40.4	40.3	40.2	39.7	39.9
Transportation equipment	42.7	40.9	40.4	40.4	42.6	41.5	40.8	40.4	41.6	40.3
Instruments and related products	41.1	40.3	40.2	40.7	41.0	40.8	40.6	40.7	40.4	40.6
Miscellaneous manufacturing	39.2	38.7	38.8	39.1	39.0	38.6	38.9	39.3	39.0	38.9
NONDURABLE GOODS	39.7	39.2	39.4	39.5	39.5	39.2	39.2	39.2	39.2	39.2
Overtime hours	3.6	3.0	3.2	3.5	3.2	3.0	3.0	3.0	3.0	3.1
Food and kindred products	40.3	40.1	40.2	40.3	39.7	39.8	39.8	39.8	39.6	39.7
Tobacco manufacturers	38.5	38.1	37.2	38.5	38.0	38.9	37.6	38.5	37.8	38.0
Textile mill products	40.7	39.9	40.3	40.7	40.5	40.0	40.1	40.1	40.1	40.5
Apparel and other textile products	35.0	35.4	35.0	35.1	35.8	35.2	35.2	35.3	35.1	35.0
Paper and allied products	43.1	42.5	42.0	42.7	42.8	42.8	42.5	42.5	42.6	42.4
Printing and publishing	38.1	37.4	37.9	38.0	37.7	37.8	37.4	37.5	37.7	37.8
Chemicals and allied products	44.4	44.1	43.8	44.4	43.6	43.7	43.3	43.6	43.7	43.9
Petroleum and coal products	42.0	41.7	41.8	41.9	41.9	41.9	41.7	41.9	42.0	41.8
Rubber and mac. plastic products	41.4	40.2	39.9	40.3	41.2	40.9	40.7	40.8	40.1	40.1
Leather and leather products	37.0	36.9	36.5	36.8	37.2	36.1	36.4	36.6	36.4	37.0
TRANSPORTATION AND PUBLIC UTILITIES	39.7	40.0	40.2	39.9	39.7	39.8	39.8	39.7	39.8	39.9
WHOLESALE AND RETAIL TRADE	32.8	33.3	33.2	32.6	32.8	32.8	32.6	32.8	32.5	32.6
WHOLESALE TRADE	39.0	39.0	38.9	38.8	38.9	39.0	38.8	38.8	38.7	38.7
RETAIL TRADE	30.9	31.5	31.4	30.6	30.9	30.6	30.6	30.6	30.5	30.8
FINANCE, INSURANCE, AND REAL ESTATE	36.8	36.8	36.2	36.2	36.5	36.1	36.2	36.3	36.1	36.5
SERVICES	32.7	33.3	33.2	32.7	32.7	32.7	32.7	32.8	32.7	32.7

¹ Data relate to production workers in mining and manufacturing, to construction workers in construction, and to nonsupervisory workers in transportation and public utilities, wholesale and retail trade, finance, insurance, and real estate, and services. These groups account for approximately four-fifths of the total employment on private nonagricultural payrolls.

^p preliminary

ESTABLISHMENT DATA

ESTABLISHMENT DATA

Table B.3. Average hourly and weekly earnings of production or nonsupervisory workers on private nonagricultural payrolls by industry.

Industry	Average hourly earnings				Average weekly earnings			
	SEPT. 1978	JULY 1979	AUG. 1979 ^p	SEPT. 1979 ^p	SEPT. 1978	JULY 1979	AUG. 1979 ^p	SEPT. 1979 ^p
TOTAL PRIVATE	55.82	56.16	56.19	56.29	8208.94	8221.76	8222.88	8226.55
Seasonally adjusted	5.78	6.16	6.22	6.25	206.92	220.01	221.43	222.50
MINING	7.95	8.52	8.48	8.59	345.83	355.28	365.40	375.34
CONSTRUCTION	6.88	9.24	9.32	9.48	332.11	348.35	354.16	360.24
MANUFACTURING	6.28	6.71	6.69	6.79	255.80	267.73	267.60	272.44
DURABLE GOODS	6.71	7.15	7.12	7.23	277.79	288.84	287.85	293.56
Lumber and wood products	5.74	6.23	6.23	6.33	229.80	245.66	249.20	255.16
Furniture and fixtures	6.74	5.04	5.10	5.17	188.02	181.52	185.84	186.01
Stone, clay, and glass products	6.88	6.60	6.40	6.98	272.81	285.94	286.42	286.27
Primary metal industries	6.62	9.04	9.09	9.13	356.17	373.35	370.87	373.42
Fabricated metal products	6.95	6.60	6.82	6.92	265.78	276.04	276.21	283.84
Machinery, except electrical	6.89	7.35	7.38	7.48	290.07	302.82	302.82	311.92
Electric and electronic equipment	5.93	6.27	6.34	6.43	240.17	248.29	251.86	257.84
Transportation equipment	6.04	6.55	6.45	6.61	343.31	349.70	341.34	349.57
Instruments and related products	5.77	6.16	6.16	6.22	235.15	248.25	248.83	253.15
Miscellaneous manufacturing	6.73	5.03	5.04	5.06	185.42	194.86	195.55	197.85
NONDURABLE GOODS	5.83	6.03	6.04	6.10	223.51	234.38	237.94	240.95
Food and kindred products	5.88	6.28	6.28	6.29	236.96	251.83	252.46	253.89
Tobacco manufacturers	5.95	6.83	6.70	6.78	226.31	246.54	249.24	261.03
Textile mill products	4.42	4.65	4.77	4.81	179.69	185.54	192.23	195.77
Apparel and other textile products	6.00	4.23	4.21	4.26	183.60	149.74	149.88	149.53
Paper and allied products	6.88	7.17	7.21	7.27	287.91	304.73	307.15	310.43
Printing and publishing	6.60	6.90	6.95	7.05	251.44	258.08	263.81	267.90
Chemicals and allied products	7.13	7.40	7.65	7.69	298.84	316.92	319.77	322.21
Petroleum and coal products	6.70	9.39	9.36	9.51	384.28	416.10	408.10	422.24
Rubber and misc. plastics products	5.60	5.95	5.90	6.01	231.84	239.19	237.01	242.20
Leather and leather products	3.92	4.19	4.22	4.28	145.04	154.61	154.03	157.50
TRANSPORTATION AND PUBLIC UTILITIES	7.75	8.23	8.37	8.45	307.68	324.20	336.47	337.14
WHOLESALE AND RETAIL TRADE	4.75	5.05	5.05	5.12	195.80	168.17	167.66	166.91
WHOLESALE TRADE	6.01	6.39	6.40	6.47	236.39	249.21	248.94	251.04
RETAIL TRADE	4.25	4.51	4.52	4.58	131.33	142.07	141.93	146.15
FINANCE, INSURANCE, AND REAL ESTATE	4.97	5.29	5.29	5.37	186.91	192.56	191.50	194.36
SERVICES	5.05	5.29	5.30	5.43	165.10	176.16	175.94	177.56

¹ See footnote 1, table B.2.^p preliminary

ESTABLISHMENT DATA

ESTABLISHMENT DATA

Table B-4. Hourly earnings index for production or nonsupervisory workers on private nonagricultural payrolls by industry division, seasonally adjusted

Industry	1967-100							Percent change from—	
	SEPT. 1970	APR. 1970	MAY 1970	JUNE 1970	JULY 1970	AUG. 1970	SEPT. 1970	SEPT. 1970-SEPT. 1970	AUG. 1970-SEPT. 1970
TOTAL PRIVATE NONFARM									
Current dollars	216.3	226.6	227.5	229.0	230.9	232.2	233.7	7.9	0.7
Constant (1967) dollars	106.9	106.9	106.1	105.7	105.6	105.1	104.8	(2)	(3)
MINING	246.7	244.1	242.7	240.9	240.9	245.4	245.6	7.7	+1
CONSTRUCTION	210.0	216.1	220.4	220.4	222.1	222.9	223.0	9.6	+4
MANUFACTURING	219.2	231.0	232.3	233.9	235.4	236.3	237.9	8.5	+6
TRANSPORTATION AND PUBLIC UTILITIES	236.4	241.7	243.7	240.4	251.3	254.3	255.4	9.0	+8
WHOLESALE AND RETAIL TRADE	210.1	220.9	221.0	222.6	223.0	225.3	226.5	7.0	+5
FINANCE, INSURANCE, AND REAL ESTATE	196.2	207.5	207.0	206.0	210.8	211.5	214.1	8.0	+1.2
SERVICES	215.2	225.0	224.3	225.7	227.0	228.2	230.7	7.2	+1.1

1 See footnote 1, Table B-2.

2 PERCENT CHANGE HAS +3.5 FROM AUGUST 1970 TO AUGUST 1979, THE LATEST MONTH AVAILABLE.

3 PERCENT CHANGE HAS +.8 FROM JULY 1970 TO AUGUST 1979, THE LATEST MONTH AVAILABLE.

N.A. - Not available
provisionary

NOTE: All series are in current dollars except where indicated. The index excludes effects of two types of changes that are unrelated to underlying wage developments: Fluctuations in overtime premiums in manufacturing (the only sector for which overtime data are available) and the effects of changes in the proportion of workers in high-wage and low-wage industries.

Table B-5. Indexes of aggregate weekly hours of production or nonsupervisory workers, on private nonagricultural payrolls by industry, seasonally adjusted

Industry division and group	1978					1979					AUG. 1979	SEPT. 1979	
	SEPT.	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE			JULY
TOTAL PRIVATE	122.2	123.0	123.7	124.2	124.4	124.7	125.7	123.6	125.4	125.7	125.7	125.4	125.6
GOODS-PRODUCING	107.2	107.9	108.9	109.6	110.3	110.2	111.3	106.8	110.3	110.1	109.9	109.3	109.5
MINING	147.3	148.4	150.6	151.3	152.0	152.5	152.5	152.0	151.6	152.5	148.4	150.3	157.9
CONSTRUCTION	124.3	125.5	126.0	127.9	126.9	126.7	132.7	124.9	133.7	138.6	133.9	134.6	135.1
MANUFACTURING	102.8	103.6	104.4	105.1	105.9	105.8	106.0	102.0	104.7	104.3	104.4	103.3	103.3
DURABLE GOODS	105.6	106.8	107.9	108.8	109.2	109.9	110.1	105.0	108.3	107.9	107.9	106.8	106.8
Lumber and wood products	112.1	113.9	115.0	115.6	115.9	116.9	116.4	112.4	113.3	112.7	111.9	112.3	114.3
Furniture and fixtures	108.6	109.2	109.4	110.2	109.8	109.1	109.4	105.8	105.9	105.3	105.9	104.3	103.4
Stone, clay, and glass products	111.2	111.8	112.6	113.0	113.0	112.8	114.9	111.5	113.1	113.0	111.9	110.9	110.3
Primary metal industries	98.6	97.9	99.1	99.6	100.1	100.3	100.2	99.7	97.9	97.9	97.6	95.6	95.0
Fabricated metal products	104.6	105.1	104.5	107.6	107.6	108.7	108.6	102.7	104.6	107.1	106.7	104.9	105.2
Machinery, except electrical	111.6	112.6	113.5	115.3	115.6	117.4	117.5	113.0	117.4	117.6	118.0	116.2	117.5
Electric and electronic equipment	102.7	103.7	104.6	105.5	106.6	107.8	108.5	104.4	105.2	108.6	108.5	104.7	105.5
Transportation equipment	101.4	103.6	104.9	105.8	105.9	106.6	105.9	98.3	102.8	99.4	100.3	102.9	107.7
Instruments and related products	124.2	124.6	125.7	126.3	126.2	129.4	124.7	127.2	126.1	130.4	128.1	127.2	127.6
Miscellaneous manufacturing industry	100.9	101.8	102.1	101.8	102.3	101.7	101.7	97.5	98.7	100.3	100.7	100.0	100.3
NONDURABLE GOODS	98.6	98.5	99.5	98.8	100.3	98.8	100.1	97.8	99.5	99.1	99.1	98.1	98.0
Food and kindred products	94.5	95.2	96.4	97.7	98.1	97.0	98.1	96.8	97.0	96.8	95.9	96.6	95.3
Tobacco manufacturers	73.4	71.7	72.4	73.6	71.8	70.0	73.4	73.9	76.5	72.6	73.0	64.7	66.7
Textile mill products	91.0	90.8	91.0	91.0	91.9	90.3	90.4	86.7	89.5	89.6	89.0	88.8	89.8
Apparel and other textile products	82.1	80.6	81.3	81.0	81.0	80.3	80.9	86.8	89.5	88.7	89.5	87.8	86.7
Paper and allied products	99.6	98.6	100.4	100.7	101.1	101.8	103.0	100.6	102.3	102.1	103.2	103.1	103.0
Printing and publishing	98.6	99.8	101.4	101.5	102.5	103.1	103.4	101.7	103.1	103.3	104.4	104.7	104.1
Chemicals and allied products	107.1	107.3	108.1	107.8	108.7	108.5	108.1	107.7	108.3	110.4	108.6	108.2	107.8
Petroleum and coal products	121.8	123.0	124.4	123.6	122.7	123.9	125.0	125.7	124.2	123.1	123.0	124.2	125.4
Rubber and plastic products	142.7	147.6	149.9	152.0	153.5	154.0	150.4	148.4	153.4	150.4	150.5	145.0	143.3
Leather and leather products	71.3	70.2	69.8	68.0	67.9	68.6	66.1	63.9	65.6	66.0	61.3	64.4	65.0
SERVICE-PRODUCING	132.7	133.5	134.0	134.2	134.2	134.8	135.8	135.3	135.9	136.5	136.7	136.6	137.1
TRANSPORTATION AND PUBLIC UTILITIES	109.2	111.7	112.0	112.5	112.8	113.3	113.7	109.2	113.4	115.0	114.2	114.8	114.8
WHOLESALE AND RETAIL TRADE	128.2	129.0	129.2	129.5	129.0	129.3	130.2	130.6	130.2	130.0	129.9	129.5	130.0
WHOLESALE TRADE	129.1	129.4	129.6	130.5	130.5	130.8	132.3	131.3	132.4	132.6	132.7	132.4	132.7
RETAIL TRADE	129.0	128.6	128.9	129.0	128.5	128.7	129.3	130.3	129.1	128.9	128.9	128.4	129.0
FINANCE, INSURANCE, AND REAL ESTATE	141.3	141.6	142.8	142.7	143.3	144.1	144.6	145.5	144.9	145.7	146.3	146.5	147.3
SERVICES	147.2	147.3	148.3	148.4	148.6	149.5	151.1	151.0	151.7	152.6	153.5	153.5	154.3

1 See footnote 1, Table B-2.

provisionary

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Table B-6. Indexes of diffusion: Percent of industries in which employment¹ increased

Year and month	Over 1-month span	Over 3-month span	Over 6-month span	Over 12-month span
1976				
January.....	77.0	85.8	86.9	84.0
February.....	70.3	84.3	85.8	83.7
March.....	69.2	82.3	79.4	85.2
April.....	70.6	73.8	72.4	77.6
May.....	59.6	64.8	67.7	82.6
June.....	51.7	62.5	71.5	80.2
July.....	59.0	56.4	60.8	78.2
August.....	54.4	68.3	66.9	77.3
September.....	68.9	55.8	68.6	78.8
October.....	47.4	66.9	73.8	79.4
November.....	65.1	62.2	77.9	80.8
December.....	66.0	78.8	78.2	82.6
1977				
January.....	73.0	80.2	86.3	80.5
February.....	67.2	84.3	84.6	81.4
March.....	72.4	82.6	84.0	82.8
April.....	71.5	81.7	82.3	84.6
May.....	70.3	78.5	79.1	85.2
June.....	65.1	72.7	77.6	86.6
July.....	70.3	70.3	75.3	84.9
August.....	57.8	70.9	76.7	83.1
September.....	67.2	67.7	79.7	83.1
October.....	64.2	76.2	80.5	82.8
November.....	73.3	79.7	84.0	81.1
December.....	75.3	79.4	82.3	82.0
1978				
January.....	68.3	80.2	83.1	81.4
February.....	69.2	75.6	79.1	83.1
March.....	69.5	77.3	77.6	81.1
April.....	68.0	69.8	73.5	82.0
May.....	57.8	67.2	72.7	81.7
June.....	66.6	66.6	71.2	82.3
July.....	64.5	69.5	73.0	81.4
August.....	60.5	67.2	77.3	78.2
September.....	62.5	71.2	79.7	77.9
October.....	73.0	78.2	82.3	73.5
November.....	75.9	81.1	82.3	76.2
December.....	74.4	82.3	80.5	71.8
1979				
January.....	70.3	76.5	74.1	71.8
February.....	65.1	72.1	67.4	69.5p
March.....	60.5	57.8	61.9	67.7p
April.....	44.8	55.2	58.1	
May.....	54.7	51.5	50.9p	
June.....	57.0	58.4	50.0p	
July.....	61.6	55.2p		
August.....	48.3p	54.7p		
September.....	55.5p			
October.....				
November.....				
December.....				

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

Senator PROXMIRE [presiding]. Well, thank you, Ms. Norwood. You end on a proper note, that we are puzzled as to what happened, but maybe you can tell us now on the basis of what we have before us what did happen in September. Here in August we had a reduction in employment as well as an increase in inflation. We had an increase, according to the household survey data, of reduction in jobs and a general feeling on the part of economists that we were definitely moving into a recession. Now we have what seems to be a reversal of that and it may be that August was simply a reflection of an unusual time because of gasoline lines that had people slowing down on travel and so forth.

Can you give us any professional opinion on what did happen on the basis of our hindsight now?

Ms. NORWOOD. Well, when we look at the data in the household survey. I think we can see clearly that in the month of August a number of teenagers were not there. They were out of the labor force and they were back in the labor force in September. That has a lot to do with the difference between August and September household survey figures.

But I think the important thing to note—

Senator PROXMIRE. Now on that particular note, why were the teenagers out in August? Was there a drop in Federal summer jobs that were made available, for example? Could that have been a factor?

Ms. NORWOOD. I really don't know. That's just something that one can speculate on. There has been a lot of speculation all over about it, whether it was affected by gasoline shortages, tourist industries, or something else. I really have nothing that I can give you in a factual way, but I can tell you that there is a difference in the teenage component in August and September and I think that had something to do with the difference in the numbers.

But I think the important thing to point out is the fact that both the establishment survey and the household survey clearly show over a period now of many months—we go back to March, primarily because of the problems of special circumstances that occurred during the spring when we had the Teamsters strike and ups and downs resulting from that. Since then, clearly employment has increased but at far slower rates. So there has been a clear slowdown.

Senator PROXMIRE. Well, I think you make that point clear, that this doesn't mean we're in a period of vigorous expansion and prosperity. We slowed down and there's no question about that and this data confirms that.

On the other hand, it does seem to indicate, as I think you said, that none of the statistics show any mark of labor force recession; is that right?

Ms. NORWOOD. That's right.

Senator PROXMIRE. Now the discouraged workers data indicate that that figure also has dropped by 90,000.

Ms. NORWOOD. That's right.

Senator PROXMIRE. Is that statistically significant? Is that a big enough drop to really mean something?

Ms. NORWOOD. Yes; it is.

Senator PROXMIRE. And then I notice that under unemployment there's a general improvement, as you say, but there's a particular improvement in black and other unemployment. It's still shamefully high, but it's dropped from 11 percent to 10.6 percent and it's the lowest level—a lower level than it was in July, a lower level than it was in any quarter here. Is that figure statistically significant? I realize that's a smaller sample.

Mr. STEIN. Yes; on a quarterly basis, Senator Proxmire, it is.

Senator PROXMIRE. And then I notice at the very end of the release from your Department it says during the 12-month period ending in August the hourly earnings index in dollars of constant purchasing power decreased 3.5 percent. Now that really is a shocking figure—real income, real earnings, real hourly earnings dropped 3.5 percent. Is that the largest drop? It seems to me it may be the largest drop I have ever heard. Maybe not, but I tried to find a period when we had a larger drop. Of course, this is almost entirely because of inflation. Inflation is so seriously surpassing money income.

Ms. NORWOOD. I really don't know whether it is a record, but I certainly can check that and put it in the record.

Senator PROXMIRE. None of you can recall off the top of your head any period when it was as severe as this during a 12-month period. All right.

[The following information was subsequently supplied for the record:]

The 3.5 percent decline in the Hourly Earnings Index (in dollars of constant purchasing power) between August 1978 and August 1979 was the largest 12-month decline since the series began in 1964.

Senator PROXMIRE. Your August press release stated that the payroll employment in the goods-producing sector was down by 55,000 from July. Because of seasonal adjustment problems due to model changeovers in the automobile industry it was difficult to identify the extent of the drop in employment. With another month's data, can you give a clearer idea of how many auto workers have been laid off due to output declines and how many were seasonal?

Ms. NORWOOD. The model changeover certainly has some effect on this and I think we'll have a better fix on that in October, Senator.

Senator PROXMIRE. Can you give me any notion now? In August you said you couldn't and in September you couldn't, and here it's October, and on the basis of September data, can you give me any clearer picture for the drop in employment in the automobile industry?

Ms. NORWOOD. Well, employment is still below last year in the automobile industry. We know that. All that I was trying to suggest was that we have some seasonal adjustment problems during the model changeover period. This year we have perhaps stronger reasons for model changeovers and it is very hard for us to separate these out, so that I think we have to wait until we are through that period, through October, in order to make any definitive judgments.

Senator PROXMIRE. Have you been called on to make any study of the effect of a Chrysler bankruptcy on general employment and the economy as a whole?

Ms. NORWOOD. No, sir, we have not. As I'm sure you're probably aware, Chase Econometrics and Data, Inc., have made estimates. They seem to range in the 200,000 to 300,000 range, depending upon the assumptions, and also depending upon the question of the indirect effect.

Senator PROXMIRE. Well, my question was different. They made their studies based on assumptions that were handed to them. They said what happens if Chrysler shuts down. Now, in my judgment, there's no way Chrysler is going to shut down and any bankruptcy judge would be out of his head if he shut down a profitable operation for Chrysler. It's a huge conglomerate. He's not going to shut down the Omni or the Horizon operations. He's probably not going to shut down a great deal of their operations.

I just wondered if you had made any study of this, and the assumptions it seems to me would vary all over the place, including an assumption that I would make that if we have a bailout we are going to have to provide tough conditions that means they are going to shut down their losers anyway, and it wouldn't make much difference whether we have a bankruptcy or have a government guarantee with tough conditions. At any rate, you haven't made a study on that?

Ms. NORWOOD. No, sir.

Senator PROXMIRE. Is there any evidence that increases in employment are taking place in those sectors which are accumulating inventories very rapidly?

Ms. NORWOOD. I think I have to say no to that because we really find it rather difficult to look at some of the inventory data. As you know, there have been some questions raised about the inventory data, in particular, the way in which they are valued; hence, there are some economists who argue that they have been understated. I'm not sure whether that is so or not, but we have no way really of looking at that.

Senator PROXMIRE. This big spurt we have in employment of 610,000 increase in jobs is a very large increase even in a period of strong economic growth in a month. When was the last time we had an increase that big? March?

Ms. NORWOOD. Well, we can supply that for the record.

[The following information was subsequently supplied for the record:]

The last time employment had an over-the-month increase of at least this magnitude was in June 1978, when employment advanced by 687,000.

Senator PROXMIRE. Can you tell me where the increases took place?

Ms. NORWOOD. Women and teenagers. The increase in the labor force was largely in the—

Senator PROXMIRE. I'm talking about the increase in employment.

Ms. NORWOOD. Women and teenagers.

Senator PROXMIRE. And in what sectors of the economy? Apparently not in manufacturing.

Ms. NORWOOD. The services producing sector.

Senator PROXMIRE. Because of that, did you consider a correction in last month's data? It was suggested to me by the staff that there's been a change in many schools in the beginning of the school year. They moved the school year up. That might have had an effect, more children going back to school in August.

Ms. NORWOOD. If that were true, it would suggest that there would perhaps be a problem in the seasonal adjustment of those data and for that reason we did look back some 7, 8, or 9 years at the last 4 months or so of data for teenagers, and we found nothing to support

the fact that there was anything different except the month of August. August for teenagers did seem different than any of the others. So we do not believe that it was a seasonal adjustment problem.

Senator PROXMIRE. My time is up. I will be back. Senator Javits.

Senator JAVITS. Thank you, Senator Proxmire. I will just be a few minutes.

Ms. Norwood, first let me thank you for myself, my constituents, and I think for the country. You have been appearing before us for a little while now in lieu of others and I'm very impressed with your professionalism, expertise, and the appropriateness with which you testify to what you know about. That's very refreshing.

Ms. NORWOOD. Thank you, Senator.

Senator JAVITS. It occurred to me as I looked over the chart on unemployment for the last 10 years that we may have to revise our base as to what we consider full employment. I notice that the 4-percent figure was generally considered full employment, but that the chart shows the range now consistently higher than that, and that even at 6 million unemployed, we can take comfort from it instead of viewing it with dismay. Six million is a lot of people even in a 100-odd million working force.

Do you believe that we have as yet come to the point where some new standard should be a base rather than simply carrying over the fact that because for years we thought that 3 or 4 percent was a reasonable float that that figure still is true today?

Ms. NORWOOD. That's a question, Senator Javits, that is extremely complex and I think it depends upon one's judgments about where one wants the economy to be heading as well as to the particular policy issue involved. We certainly know that we have a lot more teenagers now and that teenagers are in and out of the labor force in a different way than people who are prime age workers. We know that the number of teenagers is going to be leveling off in the future. We know that we've got more than half of the women in the labor force and in my view they are going to stay there, and we know that we need jobs for them and I think that one has to look at this in terms of the particular issue on which you as a policymaker are making that judgment. There are some who have said that—I note that Otto Eckstein has said we are near full employment. The Council of Economic Advisers has changed its view. As you know, Secretary Marshall has a different view. I think that that is a way of perhaps analyzing where we are.

The big question is about these people who want jobs. We have to provide jobs for them in some way.

Senator JAVITS. Well, I don't think that's an adequate answer and I'll tell you why. We have a law called the Humphrey-Hawkins which is on the books that strives through indicative planning and other methods to arrive at a state of "full employment." We have to have a reasonable idea of what we're talking about. Not straining at the niceties of a one-tenth of 1 percent or something like that, but some approximation.

One of the worst things that you can do in business or Government is to be straining after a goal already attained, and so I believe, if you would, I would like you to consider it in your shop. I'd like to put it up to the Secretary of Labor, to the Council of Economic Advisers, and

to the Secretary of Commerce. I think we ought to have a consensus in Government as to what is our objective; what is full employment; can it be determined in percentages at all. If not, is there any other standard? If there's no way of determining it, why are we playing with the idea and misleading people?

Ms. NORWOOD. I think, though, Senator Javits, that is really what we are getting at—it's in a way fairly close to the kinds of questions that Senator Bentsen asked before he left—that these are in a sense value judgments that relate to how well off people are, how well off the economy is, that can only be made by the policymakers.

Senator JAVITS. Well, you and I don't agree on that point because unemployment is a component of our policymaking and we have to have some judgment as to what is a proper figure, whether it should go down or whether we should not be too worried if it goes up a bit. That has a lot to do with the antirecession actions we are taking too, which may very well increase unemployment. This is a matter of great public alarm, unless the unemployment rate is actually really low right now, which you can't tell me. But I'm going to make the request of you formally and of the others. I think we have to begin to think about it.

Ms. NORWOOD. Fine.

Senator JAVITS. The other thing I wanted to ask you is this: It's significant to me that the credit for what's kept unemployment, at least based on the previous month's low—in the areas of teenagers, women, and blacks—is that in each of these, there's a major program going. For women, in terms of business equality and pay equality—for blacks, to wit, the issue of minority employment—there is affirmative action and so on, and this has now been on the whole pretty well sustained, even by the courts. For teenagers, there's the work-education connection for which we have put up considerable money. There's the \$400 million in CETA private enterprise jobs and training.

Now, how can you tell us whether these figures reflect that these programs are beginning to have an effect and if that's the reason why you show a better employment record now than before?

Ms. NORWOOD. Well, I really can't tell you because our data do not separate out those people who are in these programs and those people who are not. I would certainly think the programs have helped. I don't think it's quite true that these are the only groups who have shown any change. We certainly, in the last few months, have had some difference in the male unemployment rate. Do you have anything further you want to respond to?

Mr. STEIN. Senator Javits, the figures for the white adult males show a slight increase only in the last quarter, the third quarter, but prior to that they had been quite low for some time.

Senator JAVITS. Well, that would tend to bear out—all I'm trying to do is get information, because I'm a party to not only the advocacy but to the design of a number of these programs. I'd like to know whether we have any indication here that they are working. The answer is that you can't tell me, except that the end figures are better than they are for the other groups; is that correct?

Ms. NORWOOD. Well, I can tell you that as I understand it—and this is not our figure but it's a Department of Labor figure—that in fiscal 1979 the average number of CETA public service employment jobs was about 550,000.

Senator JAVITS. The last question I have, if I may just have 1 more minute, is this: It is my belief and that of many others that the U.S. industrial machine is tending to become obsolescent because of the failure to adequately maintain it, and that we are losing out in international competition for very valid reasons; that the Germans and Japanese and even the French, and to some extent the British and the Italians, have more modern plants than ours.

To what extent are more people being hired because of the inadequacy of modern technology being introduced into the American industrial system?

Ms. NORWOOD. Senator Javits, you always come up with questions that are quite fascinating but somewhat difficult to answer. Let me just say in that case that the big question and the big issue is, where is this country headed regarding the improvement that is needed in productivity? And that involves, of course, our use of technology, of new approaches to the way in which we do many things. That is something which I know many people in this country, both inside and outside of Government, are giving a great deal of attention to. You're quite right that it is important.

Senator JAVITS. I'm sorry. I didn't mean to interrupt. But looked at statistically, these would be matters which should be of great importance to you, are they not, in terms of your analyses of where we stand?

Ms. NORWOOD. Yes, sir.

Senator JAVITS. Thank you, Commissioner. Thank you very much, Senator Proxmire.

Senator PROXMIRE. Thank you, Senator Javits.

Commissioner Norwood, September marked the biggest increase, I understand, in finished good producer prices since 1974 in any one month; is that right?

Ms. NORWOOD. Yes.

Senator PROXMIRE. We also had a very, very sharp increase in the third quarter; that is, in July, August, and September in producer prices. Do you know when the last quarter was when we had that kind of increase? I think it was over 15 percent in the third quarter of this year.

Ms. NORWOOD. Well, sometime during 1974.

Senator PROXMIRE. And the first three quarters of this year the increase in producer prices is at a 12.8 percent annual rate. How does that compare to 1974? Was 1974 worse or was it about the same?

Mr. LAYNG. I think in terms of producer prices, 1974 was worse. We exceeded or we reached rates of increase on a 3-month basis in 1974 in excess of 20 percent.

Senator PROXMIRE. And how long did that 1974-75 inflation, that sharp pace, endure?

Mr. LAYNG. About 4 or 5 months.

Senator PROXMIRE. I'm not talking about 20 percent. I'm talking about the rate in the area of, say, 15 percent.

Mr. LAYNG. Most of 1973 and 1974.

Senator PROXMIRE. If we take 1978 and 1979 to date, is that comparable roughly with the degree of inflation we suffered in 1973-74, or not quite as bad?

Mr. LAYNG. I've looked at the Consumer Price Index in that regard. I have not looked comprehensively at the Producer Price Index. In consumer prices, I think it's similar. For example, in the 1972-75 period, prices started to rise in 1972 and accelerated through the first quarter of 1974 to a 14-percent rate on a 3-month basis. It stayed at that rate through most of 1974. So we reached a rate of 14 and we held at about that rate through most of 1974 and then we started to drop, and by the first quarter of 1976 we had reached a rate of 2.9.

Senator PROXMIRE. Now that drop at the start of 1974 was accompanied by a tremendous drop in employment and a big increase in unemployment. As I recall, you testified to that last time, how the rate of unemployment increased from less than 6—I think it was a little over 5 percent—up to 9 percent in 14 months and it was that coincidence of a sharply rising unemployment with a drop in inflation; is that right? So in the event the employment figures you gave us this morning persisted for some time now, sluggish growth but nevertheless some continuation in growth and jobs, it would appear unlikely that we'd get much surcease from the present level of inflation. Is there any other element that would be inclined to suggest easing of inflation other than this grim and painful remedy of unemployment?

Mr. LAYNG. I think I said before the oil situation improved considerably.

Senator PROXMIRE. The oil situation improved in 1974?

Ms. NORWOOD. In 1974; yes.

Senator PROXMIRE. Let me skip to that. You gave us some startling statistics about the increase in the price of gasoline and oil generally, and energy. This is obviously one of the elements that's making this inflation as serious as it was in 1974. How does that particular part of the inflation situation compare between 1974 and 1979?

Ms. NORWOOD. It's worse now than it was in 1974.

Senator PROXMIRE. It's worse now?

Ms. NORWOOD. Yes.

Senator PROXMIRE. How much worse?

Ms. NORWOOD. We can give that for the record, but it is somewhat worse.

Mr. LAYNG. For example, in the transportation component of the Consumer Price Index in which the gasoline price increase would be recorded, during the 1974-75 period, the highest rate of increase in transportation overall was 19 to 20 percent. We have already exceeded that and we're hitting 24 at retail level now in transportation overall. I think gasoline in particular is already up to a higher rate of increase than it was in 1974 and I'm sure that's true with respect to heating oil as well.

Senator PROXMIRE. But now we have a situation where we are scheduling a gradual increase in the price of old oil, which means the price of gasoline is almost certain to continue to escalate as time goes on. Was there a stabilizing of the price of energy in the 1974-75 period or did that continue to go up?

Mr. LAYNG. It stabilized.

Senator PROXMIRE. And that was a big element in bringing down the inflation level?

Mr. LAYNG. In 1974, 1975, and 1976.

Senator PROXMIRE. All right. Would you give us your—

Ms. NORWOOD. Prices of energy and gasoline declined at that time relative to the changes in other prices in the Consumer Price Index.

Senator PROXMIRE. Would you give us your experience as to the effect of producer prices on consumer prices? I realize that there tends to be a lag. If we have an increase in the producer prices, as you pointed out so well, we have had now for 9 months a very severe rate, particularly in the last 3 months; there's not a one-for-one correlation obviously, but what is the connection? What can we expect in consumer prices, in other words, in the next 6 months, on the basis of these producer prices we now have in front of us?

Ms. NORWOOD. If the changes in food prices we see this month in the Producer Price Index continue, we certainly could expect that they would eventually find their way into the supermarkets. The crude and intermediates are not as directly related, but certainly we could expect to find them there.

Senator PROXMIRE. But right along the line we have sharp increases. In other words, in finished goods, I think you have a 1.4-percent increase; in intermediate goods you have 1.5, in crude, something like 2.1—all very, very high increases. So it looks as if it's hard to find any relief in the producer price area; is that correct?

Ms. NORWOOD. Well, I think that's true. Of course, a lot of that is energy and we don't know quite what's going to happen there.

Senator PROXMIRE. Of course we don't. We can't predict that. There's one thing we can't predict the rate of price increases, but on the other hand, it would not suggest that we're going to get a moderation in energy prices. If anything, we're going to get a continued escalation, maybe not at the same rate of increase, but nevertheless, they hardly can be expected to go down.

Ms. NORWOOD. We don't know really, of course, as you said, although some of the large increases in energy may have come through. As you know, and as I didn't read in my statement but is there, the energy prices in the Producer Price Index really have already had some effect on the CPI we have already released because there is a lag. But I think one issue is that we really don't know yet, in terms of things like gasoline, what effect the high prices will have on consumption; if there is much of an effect on consumption we could expect some reduction in prices.

Senator PROXMIRE. Reduction?

Ms. NORWOOD. Well, if there is a reduction in consumption that is large enough, we could expect that to have some effect on prices.

Senator PROXMIRE. But it's hard to expect that, short of a recession; isn't that right? I mean, a really serious recession. All our pattern has been that people use more and more as long as they can get it, even with higher prices. It doesn't seem to be a very elastic demand for—let me ask you—has the Bureau of Labor Statistics calculated the effect of the compensation per hour on the recent Federal pay raise?

Ms. NORWOOD. No, sir.

Senator PROXMIRE. I'm wondering about whether you have ever noticed a correlation between salary increases in the annual Federal pay raise and increases in the prices of consumer goods and services in areas where a large number of Government workers are located.

It's a common complaint made by workers that whenever their pay increases, rents and other services seem to rise. Have you ever tried to verify that?

Ms. NORWOOD. No, sir, we have not.

Senator PROXMIRE. How costly would it be to do that if I should ask you to make a study, to do that to see if there has been any correlation between the increase in the price level here in Washington and in other areas where you have Government workers with pay raises?

Ms. NORWOOD. We could certainly, if you would like us to, look into the Washington index and the time period at which Federal pay raises took place, but I don't think that would tell us very much because we wouldn't be able to do it at a very detailed level and I think that's what would be needed.

Senator PROXMIRE. Supposing you did this: Supposing you simply tried to get a correlation between the increase in salaries for any particular quarter and the increase in the price level in that major city in the following period.

Ms. NORWOOD. We certainly could provide a correlation, but I'm not sure that it would mean very much because there are a lot of other factors that are also taking place during that period and I don't think that we could ascribe a causal relationship to it.

Senator PROXMIRE. Now you said that both the inflation of 1973-74 and the present inflation are to some extent energy inflation but not entirely by any means. I notice, for instance, this time goods other than energy increased at a rate of about 8.4 percent. That's a very, very sharp inflation rate on the basis of any experience in this country.

Can you tell us what components of the Producer Price Index, with the exception of energy, have contributed significantly to the sharp rise in prices? What other elements have been up over 10 percent?

Ms. NORWOOD. Food.

Senator PROXMIRE. What else?

Ms. NORWOOD. Food, and then in a number of things that—

Senator PROXMIRE. How about housing?

Ms. NORWOOD. Well, the Producer Price Index doesn't have housing in it. Some of the nonferrous metals. If you looked at over the year change—September 1978 to September 1979—wood pulp for example, went up 23 percent. Many of the nonferrous metals were up in the 30-percent range and then we have a number of 10-percent ranges in cutting tools and fans, mechanical power transmission equipment and so on.

Senator PROXMIRE. Now in the hearing on August consumer prices you were able to show the direct effects of energy by calculating the index without crude oil, natural gas, electricity, and gasoline. Can you calculate the direct effect of energy on the Producer Price Index by using the same method?

Ms. NORWOOD. Yes.

Senator PROXMIRE. Can you do that and give us that?

Ms. NORWOOD. This month, Mr. Layng tells me it was nine-tenths of 1 percent without energy.

Senator PROXMIRE. Let me see if we can get some notion—

Ms. NORWOOD. The Producer Price Index on finished goods without energy is nine-tenths of 1 percent.

Senator PROXMIRE. That's an annual rate of 10.8.

Ms. NORWOOD. If you analyze 1 month on an annual rate.

Senator PROXMIRE. Now I said that—let me see if I can get some notion of the effectiveness or ineffectiveness of the administration's anti-inflation program, such as it is. You said the price of consumer items which were covered by the guidelines have risen much less than overall consumer prices. Can you tell us the performance of producer prices which are covered by the guidelines versus the price of items which are excluded?

Ms. NORWOOD. Well, first of all, Senator Proxmire, I was extremely careful at that hearing to say that we had calculated an index which excluded food, energy, and housing, which tended to be among those things that are not covered by the guidelines, but we were not interpreting what the guidelines were. I'd like that to be clearly understood because it's a very complex situation.

Now we do have an index for the Producer Price Index excluding food and energy, and that went up five-tenths of a percent this month and that would be comparable to what we were talking about in the Consumer Price Index.

Senator PROXMIRE. Six percent annual rate?

Ms. NORWOOD. It's 7.7 percent at an annual rate and it compares, if you go back—

Senator PROXMIRE. How much did it go up during this year, since the beginning of the year?

Ms. NORWOOD. Well, for example, if you take the 3-month rate which is now 7.7 percent, in June the 3-month rate was 8 percent, in March it was 10.3 percent. So it has gone down. On the other hand, if you go back to 1978 it was in the 7.5 range in December of 1978, and in the ninth month, September, we were at 7.8 percent.

Senator PROXMIRE. Can you give me the average rise since the beginning of the year or the annual rate rise since the beginning of the year in the producer prices covered by the guidelines?

Ms. NORWOOD. We could calculate for you a producer price finished goods index without food and energy since the beginning of the year, but it is close to 8 percent.

Senator PROXMIRE. Well, looked at another way, it shows the important inflationary areas are not covered by the guidelines. One way to make the guidelines work is to pick the things that are not likely to go up, the items that are pretty stable. If you look at it it looks pretty good, but if you exclude food and energy and some of the other things—

Ms. NORWOOD. Of course, these are the items that are affected very much by things that are hard for the Government to control.

Senator PROXMIRE. That's true. Now although the spot market price indexes are independent of the monthly Producer Price Index, the spot index often indicates the direction of several components of producer prices in the near future. Since last March there has been a steadily widening gap between the index for foodstuffs and the raw industrials index. Usually those two components move in tandem. Do you have any explanation for this difference in price behavior or am I wrong that there is a big gap?

Mr. LAYNG. It was before March. It was between December and the end of April that that gap was created. For example, from December 1978 to the end of March, the all commodities spot market index increased 10.9 percent. The major components of that being foodstuffs and raw industrials. Foodstuffs increased 3.3, whereas raw industrials increased 16.6. Since that time all three have increased at substantially lower rates.

Senator PROXMIRE. Maybe I framed my question improperly. What I'd like to ask is why that gap has persisted, a gap developed in the first 3 months of the year, when the raw industrials went up very sharply over foodstuffs. Since then they have paralleled but the gap has persisted. In the past they have been right together.

Mr. LAYNG. I think there are essentially three factors, two involving raw industrials, one being lead scrap and the other being copper scrap which increased dramatically between the December and March period. Since that time lead scrap has held up whereas copper has tailed off. The other factor is cocoa beans which declined 32 percent during that period and held down the foodstuff index from December to March.

The other factor which I think is a technical factor you should keep in mind is that this index is a weighted geometric mean of the price changes. That means the size of the price changes the weight of an item in the index. Something very small in importance just because it has a very large price change can influence the overall behavior of the index substantially. That's what happened with things like cocoa beans going down 32 percent or things like lead scrap going up 40 percent. The size of those percent changes influence the weight of that component, that item in the index. That's very different from the way the Producer Price Index is constructed, which is a fixed weight price index where each item has a specific fixed weight from month to month and the behavior of that index is quite a bit different from the behavior of the spot market index during that period.

Ms. NORWOOD. It explains, Senator Proxmire, one of the reasons that the BLS in general prefers to use our other indexes for analysis.

Senator PROXMIRE. Now, have you seen or do you know of any direct impact on food prices from the transportation problem of grain carriers; for example, the strike of the Rock Island Railroad and the grain carriers up in Duluth? It's a big thing up in that part of the country and it seems to me it could have a big effect on food prices.

Ms. NORWOOD. No, and we would have no way of knowing what the effect may have been.

Senator PROXMIRE. Well, if there's a big increase in the price of bread and other food that's produced by grain, it might give some indication. That hasn't been out of line?

Ms. NORWOOD. We do have a system in which we ask our price data collectors to provide us with any information that they pick up and this might give us some indication, but we wouldn't have it yet because it's too early.

Senator PROXMIRE. Now, all the major car companies have announced fairly hefty price increases for the new models and those price increases are difficult because they don't come in with one big annual increase; they do it about every month or two or three. They will hike the price up 4 or 5 percent and it adds up to a lot over the year.

Based on previous experience, has the BLS calculated the impact of the automobile index of the new prices?

Ms. NORWOOD. Pardon me.

Senator PROXMIRE. Calculated the impact on the automotive index of the price increases that we have just had?

Ms. NORWOOD. Are you referring to the new automobiles?

Senator PROXMIRE. I'm going to ask the staff to ask the question.

Ms. NORWOOD. The change in the new automobile prices?

STAFF. The big three have just announced major price increases. Do you know how much?

Ms. NORWOOD. I see. No, we won't know that until next month's index.

Senator PROXMIRE. I'm sorry. That shorthand missed me. Do you know how much what? How much will it affect the index. All right. The press is almost all gone so I can be stupid and get away with it.

You commented before that the household survey is not as accurate as the establishment survey in depicting turning points in the Employment Situation. If you look at both surveys over the third quarter, which survey gives a better indication of the turning point in the Employment Situation, the household or the establishment survey?

Ms. NORWOOD. Over the third quarter we are quite lucky in being able to answer that question; they are fairly close.

Senator PROXMIRE. They were quite far apart last month.

Ms. NORWOOD. Yes, but you must remember that they may look far apart and then when you begin to take out of the household survey those things that are not in the payroll—that are nonpayroll, like the self-employed and others—and you come down to the same conceptual group, you come up with a different figure and we never expect these surveys to be exactly the same. But over the last few months it seems to me they have been fairly close.

Senator PROXMIRE. Which one gives a better indication of the trend—that was my question—over the years which one has been more accurate, the household survey or the establishment survey?

Ms. NORWOOD. The household survey is a sample survey and any sample survey tends basically, because of its size, to be more erratic. The establishment survey includes a much, much larger number of establishments. It's a much larger survey and would tend therefore I think probably to be smoother. Now we have, as I announced today, just completed a new benchmark of the establishment survey and though it has not affected the trend in any way, it certainly has affected the size of the increases considerably—800,000 or slightly more than 800,000 is quite a big jump in a benchmark. It's one of the largest ones that we have had and we are taking a much more careful look at that. As I indicated incidentally when I took over as Commissioner one of the things that I would like to see that we do within the next few years is to have a comprehensive revision of the establishment survey because I think it is long overdue.

Senator PROXMIRE. Now does the survey reflect any additional layoffs in the industries in September? Were workers laid off last month and rehired in September?

Ms. NORWOOD. Perhaps some of the auto workers are back. There was no real difference in the—

Senator PROXMIRE. One of the clues there seems to be the drop in the number of persons who were unemployed less than 5 weeks, as well as the layoff figures themselves—they seem to indicate they were rehired.

Ms. NORWOOD. Well, we do know from the newspapers as well as from our surveys that some of the auto workers are back.

Senator PROXMIRE. Finally, with this increase in employment and the work force relatively unchanged in the third quarter, what does this mean for productivity in the third quarter?

Ms. NORWOOD. It certainly doesn't look good.

Senator PROXMIRE. Do you think the productivity is at best stationary rather than—

Ms. NORWOOD. I think the real question when we look at productivity is not just the labor side but also the production side, and I think it will depend to a large extent on what kind of revisions we get in the output figures.

Senator PROXMIRE. I want to thank you very much for your testimony, you and your colleagues. It's been very helpful.

Ms. NORWOOD. Thank you, sir.

Senator PROXMIRE. The committee will stand adjourned.

[Whereupon, at 11:25 a.m., the committee adjourned, subject to the call of the Chair.]

EMPLOYMENT-UNEMPLOYMENT

FRIDAY, NOVEMBER 2, 1979

CONGRESS OF THE UNITED STATES,
JOINT ECONOMIC COMMITTEE,
Washington, D.C.

The committee met, pursuant to notice, at 10 a.m., in room 6226, Dirksen Senate Office Building, Hon. Lloyd Bentsen (chairman of the committee) presiding.

Present: Senators Bentsen, Sarbanes, and Javits; and Representative Wylie.

Also present: John M. Albertine, executive director; M. Catherine Miller, professional staff member; Katie MacArthur, press assistant; Mark Borchelt, administrative assistant; and Peter Turza, minority professional staff member.

OPENING STATEMENT OF SENATOR BENTSEN, CHAIRMAN

Senator BENTSEN. This hearing will come to order.

Well, the numbers that seem to be coming out of this economy continue to be puzzling and I think that's an understatement, frankly.

In August, unemployment increased sharply from 5.7 to 6 percent. However, in September, I guess to the surprise of virtually everyone, the unemployment rate fell. Then in October we find the rate has increased from 5.8 percent to 6 percent.

To make matters even more baffling, total employment measured by the household survey declined by 220,000 in October, but measured by the establishment survey, total employment increased by 300,000.

If you look at the chart behind me, you will see that employment growth measured by the establishment survey has declined fairly consistently from midyear. So the pattern is a difficult one to understand and I'm sure we're looking forward to your shedding some light on that this morning, Commissioner. Last month you told us that there was no sign of a recession in the labor market. Is that still the case?

While your monthly employment releases are giving some problems of interpretation for the economic policymakers, I am sure that the Nation's economic forecasters look forward to the return of the day when economic trends are decipherable. Can you hasten that day by explaining this month's statistics?

Senator JAVITS. Mr. Chairman, I just want to apologize to Commissioner Norwood. I will be leaving in a few minutes because I've got to go to the Foreign Relations Committee markup, but I came this morning to get the latest unemployment figures.

Thank you, Senator Bentsen.

STATEMENT OF HON. JANET L. NORWOOD, COMMISSIONER, BUREAU OF LABOR STATISTICS, DEPARTMENT OF LABOR, ACCOMPANIED BY W. JOHN LAYNG, ASSISTANT COMMISSIONER, OFFICE OF PRICES AND LIVING CONDITIONS; AND ROBERT L. STEIN, ASSISTANT COMMISSIONER, OFFICE OF CURRENT EMPLOYMENT ANALYSIS

Ms. Norwood. Mr. Chairman and members of the committee, I am glad to have this opportunity to offer the Joint Economic Committee a few brief comments to supplement our Employment Situation press release, issued this morning at 9 a.m., and our Producer Price Index press release, issued yesterday morning.

The unemployment rate edged up from 5.8 to 6 percent in October, returning to its August level. Total employment, as measured by the household survey, dipped slightly in October, whereas nonfarm payroll employment rose by 300,000. The gain in payroll jobs, however, was concentrated in the service-producing industries, especially in wholesale and retail trade. The index of aggregate weekly hours of production or nonsupervisory workers in the private nonfarm economy was unchanged over the month.

Although month-to-month changes since March have been somewhat erratic in both the household and the establishment surveys, both series reflect a clear slowdown in the rate of employment growth.

In the manufacturing sector, both employment and weekly hours have declined since March. Although precise seasonal adjustment of employment for the automobile industry during the summer months is always difficult, by October employment in transportation equipment had been reduced by about 60,000.

The unemployment rate was 6 percent in October. The rate has ranged between 5.6 and 6 percent for the past 14 months. The jobless rate for adult men, now at 4.3 percent, has been edging up in recent months, but the rates for women and teenagers have shown no consistent trend. The unemployment rate for black male workers rose between September and October, while that for white workers was virtually unchanged.

PRODUCER PRICES

The Bureau released the producer price indexes for October yesterday. Prices for finished goods rose 1 percent, somewhat slower than the increases of the previous 2 months—1.4 and 1.2 percent, respectively. This deceleration was, in large part, the result of a decline in consumer food prices, following 2 months of large advances. After rising at an annual rate of 21 percent during the first quarter of this year, prices for consumer foods at the producer level have risen at an annual rate of less than 1 percent over the last 6 months.

Prices for finished energy goods, although continuing to rise rapidly, rose at a somewhat slower pace in October than in the previous 5 months and, therefore, also contributed to the overall slowdown.

In October, capital equipment prices rose 1.2 percent following an increase of only 1.1 percent during the entire third quarter. Much of this acceleration can be traced to a 4-percent rise in prices for motor trucks, which had dropped about 3 percent during the third quarter. Continued strong demand also contributed to substantial price increases in a large number of other capital goods.

Among intermediate or semifinished materials, energy prices continued to advance rapidly, but not so much as in recent months. On the other hand, widespread price increases for other materials, particularly those used in nonfood manufacturing and construction, caused the intermediate materials index to rise more rapidly than in any other month during the past 5 years.

A similar story prevails among crude materials. Prices of crude energy goods rose more slowly than last month. Prices for crude nonagricultural materials other than energy, however, jumped sharply after generally declining during the previous 6 months.

While the picture of producer price changes is somewhat complex, there are a number of major factors that can be summarized.

One, food prices have moderated as the combined result of consumer resistance to high prices for some products and improved supplies for others.

Two, the bulge in energy prices as the result of general OPEC price increases has begun to subside. Energy prices continue to rise rapidly, however, as the result of (a) the remnants of the general OPEC increases, (b) the actions of individual oil producing nations, and (c) price increases in domestic energy sources.

Three, the second-stage effects of the petroleum price rises are becoming quite prominent.

Four, international commodity markets are experiencing very active buying, with consequent price jumps for a variety of intermediate and crude materials.

The BLS also issued releases this week concerning productivity and major collective bargaining settlements, which I'd like very rapidly to review with you.

PRODUCTIVITY

Productivity in the third quarter was essentially unchanged, rising 0.1 percent in the private business sector and 0.2 percent in the non-farm business sector at compound annual rates. These results follow two consecutive quarters of decline.

Unit labor costs in the third quarter increased 8.3 percent at an annual rate in the private business sector, as hourly compensation rose 8.5 percent. This follows a rise of almost 13 percent in unit labor costs during the first half of 1979. Because the rise in consumer prices outstripped compensation gains, real compensation per hour decreased about 4 percent at an annual rate in all major sectors.

There is little that can be inferred on a quarterly basis about the causes of productivity movements. Sluggish capital formation since

1973 and the absolute decline in the ratio of capital to labor undoubtedly have contributed to the low trend rate of productivity growth. The primary determinant of productivity performance in the coming months, however, is likely to be the level of business activity. Productivity typically falls rapidly in the contraction phase of the business cycle and grows rapidly during the recovery phase.

COLLECTIVE BARGAINING SETTLEMENTS

First-year wage adjustments negotiated in the first 9 months of 1979 averaged 7.5 percent, and the annual rate of wage adjustment over the life of the contract averaged 6.1 percent.

In the larger bargaining units, where data include supplementary benefits as well as wages, settlements in the first 9 months of 1979 averaged 9.1 percent in the first contract year and 6.7 percent annually over the life of the agreement.

These averages do not include estimates of potential wage increases under cost-of-living escalator [COLA] clauses. As would be expected, the increases in agreements with COLA clauses were smaller than those without them. COLA clauses cover about 59 percent of the 9.4 million workers in major bargaining units. In the first 9 months of 1979, wage increases resulting from COLA clauses in major agreements returned workers an average of 56 percent of the rise in the CPI during this same period.

Mr. Chairman, at a hearing that was held at this committee on the Consumer Price Index, there were some comments made on the mortgage interest component of the CPI and I think it would be useful if you would allow me to take a moment to clarify some of the issues.

CPI MORTGAGE INTEREST

In light of the recent interest in mortgage interest rates, it is natural that there be renewed interest in how they affect the CPI. The current definition of homeownership in the CPI is based on a purchase-price concept. The weights for the major elements of homeownership costs refer only to those consumers who actually purchased homes in the base period. Expenditures of those persons who lived in homes purchased in previous years are not included. For mortgage interest, the weight in the CPI is the total amount of interest estimated to be paid over the life of the mortgage—assumed to be one-half the term—by persons buying homes in the base period.

The CPI represents the cost, at prices prevailing in the current month, of the basket of good and services consumed during the base period. Therefore, the mortgage interest component measures the change in the interest required each month to buy houses of the same

quality, at the same ratio of downpayment—or mortgage loan—to sales price, and the same term of mortgage as in the base period. The change in these mortgage interest costs is measured by multiplying the change in current interest rates by the change in house prices.

During the last 12 months, mortgage interest rates have increased 12.4 percent and have accounted for about 0.85 of the 12.1 percent rise in the CPI all items. From a more abstract point of view, a 10-percent rise in mortgage interest rates would raise the CPI 0.8 percent. Both of these calculations assume that house prices—an integral part of the mortgage interest component—remained unchanged.

Some have argued that the mortgage component of the CPI should contain the mortgage rates actually paid by the entire index population. Under this proposal, if you, for example, bought your house 10 years ago with a mortgage rate of perhaps 7 percent and I bought one 3 years ago with a mortgage rate of 9 percent, those rates, they argue, should in some way be used in the current index.

Introduction of a hybrid system of weighted past mortgage interest rates into the CPI would represent a basic change in the CPI—it would no longer be a measure of current price change.

In addition, there is a very important pragmatic point. It is true that in the present situation, when interest rates are rising, use of a weighted average would make the CPI go up more slowly. However, when interest rates begin to fall, use of such a weighted treatment would result in a rising mortgage interest rate measure in the CPI. This anomaly would be difficult to explain to the public. Furthermore, the CPI would be higher than it would be under the current treatment.

Finally, in evaluating the treatment of mortgage interest, I believe that it is extremely important to emphasize that it is an integral part of the general issue concerning the measurement of owner-occupied housing costs. As I have earlier testified before this committee, home-ownership costs present some of the most complex conceptual and operational problems encountered in compiling the CPI. The BLS addressed these problems during the course of the CPI revision program and suggested that there be a change in the treatment of owner-occupied housing costs. While some of those consulted on these questions agreed that a change in approach was desirable, few were convinced at that time that the proposed alternatives could be successfully implemented in the CPI. Further research in this area is sorely needed and I can assure you that the Bureau of Labor Statistics will do all that it can to continue its own work, stimulate research by others and to engage in frank and open discussion of the issue.

My colleagues and I will now be glad to answer any questions you may have.

[The table attached to Ms. Norwood's statement, together with the Employment Situation press release referred to, follows:]

UNEMPLOYMENT RATES BY ALTERNATIVE SEASONAL ADJUSTED METHODS

Month and year	Unad-justed rate	Standard X-11 method				Resid-ual	X-11 ARIMA method		Range (cols. 2-8)
		Official	Con-current	Stable	Total		Extrapo-lated	Con-current	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1978									
October.....	5.4	5.8	5.8	5.8	5.8	5.9	5.8	5.8	0.1
November.....	5.5	5.8	5.8	5.8	5.7	5.8	5.8	5.8	.1
December.....	5.6	5.9	5.9	6.0	5.8	6.0	5.9	5.9	.2
1979									
January.....	6.4	5.8	5.8	5.8	5.7	5.5	5.8	5.8	.2
February.....	6.4	5.7	5.7	5.7	5.7	5.5	5.7	5.8	.1
March.....	6.1	5.7	5.7	5.8	5.7	5.6	5.7	5.7	.2
April.....	5.5	5.8	5.8	5.7	5.7	5.8	5.8	5.8	.2
May.....	5.2	5.8	5.8	5.8	5.8	5.9	5.8	5.7	.2
June.....	6.0	5.6	5.7	5.5	5.7	5.6	5.6	5.7	.2
July.....	5.8	5.7	5.7	5.6	5.8	5.7	5.7	5.7	.1
August.....	5.9	6.0	5.9	5.9	6.0	6.1	6.0	5.9	.2
September.....	5.6	5.8	5.8	5.8	5.8	5.9	5.8	5.8	.3
October.....	5.6	6.0	5.9	6.0	6.0	6.1	6.0	6.0	.3

Source: U.S. Department of Labor, Bureau of Labor Statistics, November 1979.

NOTES TO TABLE COLUMN NUMBERS

(1) Unadjusted rate—Unemployment rate not seasonally adjusted.

(2) Official rate (standard X-11 method)—The published seasonally adjusted rate. Each of the 3 major labor force components—agricultural employment, nonagricultural employment and unemployment data—for 4 age-sex groups (males and females under and over 20 years of age) are separately adjusted then added to derive seasonally adjusted total figures. Teenage unemployment and nonagricultural employment are adjusted by the standard X-11 method's additive option, while all other series are adjusted by the multiplicative option. Adult male unemployment is adjusted multiplicatively using the prior trend adjustment feature of the X-11. The rate is computed by adding the 12 components to a civilian labor force total, and dividing and derived civilian labor force into the unemployment total. These series are revised at the end of each year. Factors for the current year are computed at the beginning of the year for the 12 succeeding months, and published in advance.

The current "implicit" factors for the overall unemployment rate, derived by dividing the original unemployment rate by the seasonally adjusted rate for the months of 1978, are: January (111.1), February (112.0), March (106.7), April (94.6), May (89.5), June (105.6), July (102.1), August (98.5), September (97.3), October (93.1), November (95.7), December (95.5).

(3) Concurrent (standard X-11 method)—The procedure for computation of the official rate is followed, except that the data are re-seasonally adjusted by the standard X-11 method each month as the most recent data become available, i.e., the rate for January 1979 is based on adjustment of data for the period, January 1967–January 1979. The rates for the current year are shown as first computed, while data for 1978 are as revised to incorporate experience through December 1978.

(4) Stable (standard X-11 method)—The stable seasonal option of the standard X-11 method uses final seasonal factors computed as an unweighted average of all seasonal-irregular ratios for the entire span of the period, January 1967–December 1978. In essence, this procedure assumes that seasonal patterns are relatively constant from year-to-year. The unweighted average is updated and series revised at the end of each year.

(5) Total (standard X-11 method)—This is alternative aggregation procedure, in which total unemployment and labor force levels are directly adjusted by the standard X-11 (multiplicative option) to derive the rate. The series are revised at the end of each year.

(6) Residual (standard X-11 method)—The labor force and employment levels are adjusted directly, with the level of unemployment derived as a residual. The rate is computed by dividing the residual unemployment level by the directly adjusted civilian labor force. The series are revised at the end of each year.

(7) Extrapolated (X-11 ARIMA method)—Data for the 12 component groups of the unemployment rate are estimated using ARIMA (autoregressive, integrated, moving average) models. The enlarged series is then seasonally adjusted with the X-11 program, and the rates are computed as in the official procedure. The series are revised at the end of each year. Factors for the current year are extrapolated at the beginning of the year for the 12 succeeding months.

(8) Concurrent (X-11 ARIMA)—The procedure for computation of the X-11 ARIMA rate is followed, except that the data are re-seasonally adjusted each month as the most recent data become available, i.e., the rate for January 1979 is based on adjustment of data for the period, January 1967–January 1979. The rates for the current year are shown as first computed, while data for 1978 are revised to reflect experience through December 1978.

Methods of Adjustment—The standard X-11 method was developed by Julius Shiskin at the Bureau of the Census. The method is described in "X-11 Variant of the Census Method II Seasonal Adjustment Program," by Julius Shiskin, Alan Young, and John Musgrave, (Technical Paper No. 15, Bureau of the Census, 1967).

The X-11 ARIMA method was developed at Statistics Canada by Estela Bee Dagum and is the official method for seasonally adjusting the Canadian labor force series. A general description of the method is contained in "A Comparison and Assessment of Seasonal Adjustment Methods for Employment and Unemployment Statistics," by Estela Bee Dagum (Background Paper No. 5, U.S. National Commission on Employment and Unemployment Statistics, February 1978).

News

United States
Department
of Labor



Bureau of Labor Statistics

Washington, D.C. 20212

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THE EMPLOYMENT SITUATION: OCTOBER 1979

The overall employment situation was characterized by mixed developments in October, the Bureau of Labor Statistics of the U. S. Department of Labor reported today. Unemployment rose, and the two sample surveys showed different movements in employment. The Nation's unemployment rate increased from 5.8 percent in September to 6.0 percent in October, the same as it was in August. The rate thus remained at the top of the 5.6 to 6.0 range that has prevailed for the past 14 months.

Total employment--as measured by the monthly survey of households--edged down by 220,000 in October to 97.3 million. Employment had expanded substantially in September and was up by 2.1 million over the year. In contrast, nonfarm payroll employment--as measured by the monthly survey of establishments--rose by about 300,000 to 90.2 million in October, following 2 months of little growth. The number of payroll jobs has advanced by 2.8 million since October 1978.

Unemployment

The number of unemployed persons rose by nearly 200,000 in October to 6.2 million, with most of the increase occurring among persons who had lost their jobs. The overall unemployment rate moved up from 5.8 percent in September to 6.0 percent, the same as the August rate and close to the rates prevailing since August of 1978. (See tables A-1 and A-5.)

Over-the-month increases in unemployment occurred among adult women and blacks, as their jobless rates rose to 5.8 and 11.7 percent, respectively. The increase among women reversed a decline of comparable magnitude in September. In contrast, the unemployment rate for adult men, at 4.3 percent, was little changed from September, though it was up four-tenths of a percentage point from the May-June level. Likewise, jobless rates for most other major worker categories, including teenagers, whites, and full-time workers, were about the same as in the previous month. (See table A-2.)

Total Employment and the Labor Force

Total employment edged down by 220,000 in October to 97.3 million. Movements in employment have been somewhat erratic in recent months; the October level was not much different than July.

The employment-population ratio was 59.2 percent in October, down 0.2 percentage point from September. Over the past year, total employment has advanced by 2.1 million; all of this increase took place among adults.

The civilian labor force held at 103.5 million in October, as the over-the-month increase in unemployment was offset by the decline of about equal magnitude in employment. Since October 1978, the civilian labor force has risen by 2.4 million, but growth has slowed considerably since March, totaling only 760,000.

The civilian labor force participation rate, at 63.7 percent, returned to its August level after hitting an all-time high of 63.9 percent in September. Over the year, labor force

Table A. Major indicators of labor market activity, seasonally adjusted

Selected categories	Quarterly averages					Monthly data		
	1978		1979			1979		
	III	IV	I	II	III	Aug.	Sept.	Oct.
HOUSEHOLD DATA								
Thousands of persons								
Civilian labor force.....	100,753	101,524	102,475	102,295	103,202	103,049	103,498	103,474
Total employment.....	94,726	95,616	96,596	96,415	97,208	96,900	97,513	97,293
Unemployment.....	6,027	5,908	5,878	5,880	5,994	6,149	5,985	6,182
Not in labor force.....	58,482	58,398	58,095	58,886	58,604	58,752	58,515	58,901
Discouraged workers.....	853	760	724	826	739	N.A.	N.A.	N.A.
Percent of labor force								
Unemployment rates:								
All workers.....	6.0	5.8	5.7	5.7	5.8	6.0	5.8	6.0
Adult men.....	4.1	4.0	4.0	3.9	4.2	4.2	4.2	4.3
Adult women.....	6.1	5.8	5.7	5.7	5.6	5.9	5.5	5.8
Teenagers.....	16.1	16.3	15.8	16.2	16.1	16.5	16.4	16.6
White.....	5.2	5.1	5.0	4.9	5.1	5.3	5.1	5.2
Black and other.....	11.7	11.5	11.4	11.6	10.8	11.0	10.6	11.7
Full-time workers.....	5.5	5.2	5.2	5.2	5.4	5.4	5.4	5.5
ESTABLISHMENT DATA								
Thousands of jobs								
Nonfarm payroll employment.....	86,866	87,799	88,724	89,353	89,773p	89,762	89,845p	90,151p
Goods-producing industries.....	25,731	26,111	26,486	26,630	26,638p	26,599	26,591p	26,623p
Service-producing industries...	61,135	61,688	62,238	62,723	63,136p	63,163	63,254p	63,528p
Hours of work								
Average weekly hours:								
Total private nonfarm.....	35.8	35.8	35.8	35.5	35.6p	35.6	35.7p	35.5p
Manufacturing.....	40.5	40.6	40.6	39.8	40.1p	40.1	40.1p	40.1p
Manufacturing overtime.....	3.5	3.7	3.7	3.2	3.2p	3.2	3.2p	3.2p

p=preliminary

N.A.=not available

participation has increased by 0.4 percentage point, due entirely to continued gains in adult female participation.

Industry Payroll Employment

Nonfarm payroll employment rose by 305,000 in October to 90.2 million, following negligible increases in each of the prior 2 months. Payroll employment has advanced by 2.8 million over the past year. (See table B-1.)

Service-producing industries accounted for virtually all of the employment gain, with wholesale and retail trade and services registering the largest absolute increases. Transportation and public utilities and finance, insurance, and real estate also posted gains, while government employment was about unchanged.

Employment in the goods-producing sector was little changed from September. Jobs in construction increased 30,000, while employment in mining was unchanged. Overall manufacturing employment was essentially the same as in September, as declines in durable goods about offset gains in nondurable goods. Within the durable goods industries, transportation equipment jobs fell by 55,000 in October. Most of this decline probably occurred in the summer months but was not apparent at that time because of problems of seasonally adjusting auto model changeover. Strike activity was responsible for a drop of 40,000 in machinery. Among the nondurable goods industries, job gains were scattered, with the largest taking place in food processing and printing and publishing.

Hours

The average workweek of production or nonsupervisory workers on private nonagricultural payrolls was 35.5 hours in October, down 0.2 hour from September. Declines took place in every industry division except manufacturing. Manufacturing hours, at 40.1, have shown little change since May but were down 0.4 hour over the past year. Factory overtime, at 3.2 hours, was also unchanged from September. (See table B-2.)

The index of aggregate weekly hours was unchanged in October at 125.9 (1967=100). The index was up 2.4 percent over the year, due entirely to employment gains. The manufacturing index was little changed both over the month and from a year earlier. (See table B-5.)

Hourly and Weekly Earnings

Average hourly earnings of production or nonsupervisory workers on private nonfarm payrolls edged up .0.3 percent in October (seasonally adjusted) and were 7.5 percent above October 1978. Average weekly earnings declined 0.2 percent over the month but were up 6.6 percent from October 1978.

Before adjustment for seasonality, average hourly earnings rose 1 cent from September to \$6.31, 44 cents above October 1978. Average weekly earnings were \$224.64 in October, down 90 cents from September but up \$13.91 over the year. (See table B-3.)

The Hourly Earnings Index

The Hourly Earnings Index--earnings adjusted for overtime in manufacturing, seasonality, and the effects of changes in the proportion of workers in high-wage and low-wage industries--was 234.9 (1967=100) in October, 0.3 percent higher than in September. The index was 7.7 percent above October a year ago. During the 12-month period ended in September, the Hourly Earnings Index in dollars of constant purchasing power decreased 3.7 percent. (See table B-4.)

Explanatory Note

This release presents and analyzes statistics from two major surveys. Data on labor force, total employment, and unemployment (A tables) are derived from the Current Population Survey—a sample survey of households which is conducted by the Bureau of the Census for the Bureau of Labor Statistics. Beginning in September 1975, the sample was enlarged by 9,000 households in order to provide greater reliability for smaller States and thus permit the publication of annual statistics for all 50 States and the District of Columbia. These supplementary households were added to the 47,000 national household sample in January 1978; thus the sample now consists of about 56,000 households selected to represent the U.S. civilian noninstitutional population 16 years and over.

Statistics on nonagricultural payroll employment, hours, and earnings (B tables) are collected by the Bureau of Labor Statistics, in cooperation with State agencies, from payroll records of a sample of approximately 162,000 establishments. Unless otherwise indicated, data for both statistical series relate to the week containing the 12th day of the specified month.

Comparability of household and payroll employment statistics

Employment data from the household and payroll surveys differ in several basic respects. The household survey provides information on the labor force activity of the entire civilian noninstitutional population, 16 years of age and over, without duplication. Each person is classified as either employed, unemployed, or not in the labor force. The household survey counts employed persons in both agriculture and nonagricultural industries and, in addition to wage and salary workers (including private household workers), counts the self-employed, unpaid family workers, and persons "with a job but not at work" and not paid for the period absent.

The payroll survey relates only to paid wage and salary employees (regardless of age) on the payrolls of nonagricultural establishments. Persons who worked at more than one job during the survey week or otherwise appear on more than one payroll are counted more than once in the establishment survey. Such persons are counted only once in the household survey and are classified in the job at which they worked the greatest number of hours.

Unemployment

To be classified in the household survey as unemployed an individual must: (1) Have been without a

job during the survey week; (2) have made specific efforts to find employment sometime during the prior 4 weeks; and (3) be presently available for work. In addition, persons on layoff and those waiting to begin a new job (within 30 days), neither of whom must meet the jobseeking requirements, are also classified as unemployed. The unemployed total includes all persons who satisfactorily meet the above criteria, regardless of their eligibility for unemployment insurance benefits or any kind of public assistance. The unemployment rate represents the unemployed as a proportion of the civilian labor force (the employed and unemployed combined).

The Bureau regularly publishes a wide variety of labor market measures. See, for example, the demographic, occupational, and industry detail in tables A-2 and A-3 of this release and the comprehensive data package in Employment and Earnings, each month. A special grouping of seven unemployment measures is set forth in table A-7. Identified by the symbols U-1 through U-7, these measures represent a range of possible definitions of unemployment and of the labor force—from the most restrictive (U-1) to the most comprehensive (U-7). The official rate of unemployment appears as U-5.

Seasonal adjustment

Nearly all economic phenomena are affected to some degree by seasonal variations. These are recurring, predictable events which are repeated more or less regularly each year—changes in weather, opening and closing of schools, major holidays, industry production schedules, etc. The cumulative effects of these events are often large. For example, on average over the year, they explain about 95 percent of the month-to-month variance in the unemployment figures. Since seasonal variations tend to be large relative to the underlying cyclical trends, it is necessary to use seasonally-adjusted data to interpret short-term economic developments. At the beginning of each year, seasonal adjustment factors for unemployment and other labor force series are calculated for use during the entire year, taking into account the prior year's experience.

All seasonally-adjusted civilian labor force and unemployment rate statistics, as well as the major employment and unemployment estimates, are computed by aggregating independently adjusted series. The official unemployment rate for all civilian workers is derived by dividing the estimate for total unem-

ployment (the sum of four seasonally-adjusted age-sex components) by the civilian labor force (the sum of 12 seasonally-adjusted age-sex components).

For establishment data, the seasonally-adjusted series for all employees, production workers, average weekly hours, and average hourly earnings are adjusted by aggregating the seasonally-adjusted data from the respective component series. These data are also revised annually, often in conjunction with benchmark (comprehensive counts of employment) adjustments. (The most recent revision of seasonally-adjusted data was based on data through June 1979.)

Sampling variability

Both the household and establishment survey statistics are subject to sampling error, which should be taken into account in evaluating the levels of a series as well as changes over time. Because the household survey is based upon a probability sample, the results may differ from the figures that would be obtained if it were possible to take a complete census using the same questionnaires and procedures. The standard error is the measure of sampling variability, that is, of the variation that occurs by chance because a sample rather than the entire population is surveyed. The chances are about 68 out of 100 that an estimate from the survey differs from a figure that would be obtained through a complete census by less than the standard error. Tables A through I in the "Explanatory Notes" of Employment and Earnings provide approximations of the standard errors for unemployment and other labor force categories. To obtain a 90-percent level of confidence, the confidence interval generally used by BLS, the errors should be multiplied by 1.6. The following examples provide an indication of the magnitude of sampling error: For a monthly change in total em-

ployment, the standard error is on the order of plus or minus 182,000. Similarly, the standard error on a change in total unemployment is approximately 115,000. The standard error on a change in the national unemployment rate is 0.12 percentage point.

Although the relatively large size of the monthly establishment survey assures a high degree of accuracy, the estimates derived from it also may differ from the figures obtained if a complete census using the same schedules and procedures were possible. However, since the estimating procedures utilize the previous month's level as the base in computing the current month's level of employment (link-relative technique), sampling and response errors may accumulate over several months. To remove this accumulated error, the employment estimates are adjusted to new benchmarks (comprehensive counts of employment), usually on an annual basis. In addition to taking account of sampling and response errors, the benchmark revision adjusts the estimates for changes in the industrial classification of individual establishments. Employment estimates are currently projected from March 1978 levels.

One measure of the reliability of the employment estimates for individual industries is the root-mean-square error (RMSE). The RMSE is the standard deviation adjusted for the bias in estimates. If the bias is small, the chances are about 68 out of 100 that an estimate from the sample would differ from its benchmark by less than the RMSE. For total nonagricultural employment, the RMSE is on the order of plus or minus 83,000. Measures of reliability (approximations of the RMSE) for establishment-survey data and actual amounts of revision due to benchmark adjustments are provided in tables K through P in the "Explanatory Notes" of Employment and Earnings.

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Table A-1. Employment status of the noninstitutional population

(Numbers in thousands)

Employment status	Not seasonally adjusted			Seasonally adjusted						
	Oct.	Sept.	Oct.	Oct.	June	July	Aug.	Sept.	Oct.	
	1978	1979	1979	1978	1979	1979	1979	1979	1979	
TOTAL										
Total noninstitutional population ¹	161,829	164,106	164,468	161,829	163,469	163,685	163,891	164,106	164,468	
Armed Forces ²	2,122	2,092	2,093	2,122	2,076	2,082	2,090	2,092	2,093	
Civilian noninstitutional population ¹	159,707	162,013	162,375	159,707	161,393	161,603	161,801	162,013	162,375	
Civilian labor force	101,555	103,373	103,939	101,077	102,528	103,059	103,049	103,498	103,474	
Participation rate	63.6	63.0	64.0	63.3	63.5	63.8	63.7	63.9	63.7	
Employed	96,895	97,576	98,158	95,243	96,754	97,210	96,500	97,513	97,293	
Employment-population ratio ³	59.4	59.5	59.7	58.9	59.2	59.4	59.1	59.4	59.2	
Agriculture	3,553	3,545	3,467	3,374	3,260	3,262	3,322	3,400	3,288	
Manufacturing industries	92,541	94,030	94,691	91,667	93,494	93,359	93,578	94,113	94,005	
Nonagricultural industries	5,460	5,798	5,761	5,836	5,774	5,868	5,149	5,985	6,182	
Unemployed	5.4	5.6	5.6	5.8	5.6	5.7	6.0	5.8	6.0	
Not in labor force	58,152	58,640	58,436	58,630	58,865	58,545	58,752	58,915	58,901	
Min. 20 years and over										
Total noninstitutional population ¹	69,081	70,205	70,380	69,081	69,889	69,995	70,099	70,205	70,380	
Civilian noninstitutional population ¹	67,182	68,522	68,697	67,182	67,827	68,319	68,417	68,522	68,697	
Civilian labor force	53,789	54,799	54,878	53,593	54,395	54,567	54,527	54,653	54,696	
Participation rate	78.3	80.0	79.9	78.5	79.7	79.9	79.9	79.8	79.6	
Employed	51,889	52,635	52,816	51,448	52,299	52,319	52,227	52,382	52,366	
Employment-population ratio ³	75.1	75.3	75.0	74.5	74.8	74.7	74.5	74.6	74.4	
Agriculture	2,462	2,498	2,472	2,363	2,308	2,323	2,385	2,335	2,272	
Manufacturing industries	49,428	50,337	50,348	49,085	49,993	49,996	49,883	49,987	49,994	
Nonagricultural industries	1,899	1,960	2,062	2,145	2,096	2,249	2,300	2,271	2,330	
Unemployed	1.5	1.6	1.8	1.6	1.6	1.6	1.6	1.6	1.6	
Not in labor force	13,553	13,727	13,019	13,789	13,832	13,752	13,890	13,869	14,001	
Women, 20 years and over										
Total noninstitutional population ¹	75,998	77,245	77,429	75,998	76,896	77,014	77,127	77,245	77,429	
Civilian noninstitutional population ¹	75,889	77,124	77,308	75,889	76,784	76,897	77,006	77,124	77,308	
Civilian labor force	38,583	39,583	39,958	37,860	38,592	39,010	39,292	39,531	39,717	
Participation rate	50.7	51.3	51.7	49.9	50.3	50.7	51.0	51.0	50.9	
Employed	36,372	37,217	37,684	35,726	36,373	36,851	36,968	37,178	37,309	
Employment-population ratio ³	47.9	48.2	48.7	47.0	47.3	47.9	47.9	48.1	47.8	
Agriculture	650	678	658	587	592	588	596	600	556	
Manufacturing industries	35,682	36,538	37,030	35,139	35,781	36,276	36,371	36,538	36,483	
Nonagricultural industries	2,131	2,327	2,274	2,134	2,223	2,150	2,324	2,153	2,279	
Unemployed	1.5	1.5	1.7	1.6	1.6	1.6	1.6	1.6	1.6	
Not in labor force	37,387	37,581	37,350	38,029	38,188	37,887	37,714	37,793	37,991	
Both sexes, 16-19 years										
Total noninstitutional population ¹	16,750	16,655	16,659	16,750	16,684	16,677	16,665	16,655	16,659	
Civilian noninstitutional population ¹	16,436	16,367	16,370	16,436	16,381	16,387	16,377	16,367	16,370	
Civilian labor force	9,294	9,035	9,103	9,628	9,537	9,481	9,230	9,574	9,461	
Participation rate	56.4	55.2	55.6	58.6	58.2	57.9	56.4	58.1	57.8	
Employed	7,834	7,524	7,658	8,067	8,082	8,031	7,705	7,953	7,888	
Employment-population ratio ³	46.8	45.2	45.9	48.2	48.4	48.2	46.2	47.7	47.3	
Agriculture	402	369	341	424	362	355	341	365	360	
Manufacturing industries	7,432	7,155	7,316	7,643	7,720	7,676	7,364	7,588	7,528	
Nonagricultural industries	1,931	1,911	1,445	1,557	1,455	1,450	1,525	1,561	1,573	
Unemployed	15.4	16.7	15.9	16.2	15.3	15.3	16.5	16.4	16.6	
Not in labor force	7,172	7,332	7,267	6,812	6,884	6,906	7,147	6,853	6,909	
White										
Total noninstitutional population ¹	141,873	143,621	143,937	141,873	143,137	143,303	143,461	143,621	143,937	
Civilian noninstitutional population ¹	140,170	141,981	142,296	140,170	141,492	141,661	141,822	141,981	142,296	
Civilian labor force	89,475	91,012	91,435	89,067	90,279	90,554	90,662	91,081	90,997	
Participation rate	63.8	64.1	64.3	63.5	63.8	63.9	63.9	64.2	63.9	
Employed	85,297	86,481	87,020	84,865	85,871	86,093	85,826	86,395	86,283	
Employment-population ratio ³	60.1	60.2	60.5	59.6	60.0	60.1	59.8	60.2	59.9	
Unemployed	4,178	4,531	4,415	4,502	4,409	4,460	4,832	4,687	4,755	
Unemployment rate	4.7	5.0	4.8	5.1	4.9	4.9	5.3	5.1	5.2	
Not in labor force	50,696	50,969	50,861	51,103	51,213	51,107	51,161	50,900	51,299	
Black and other										
Total noninstitutional population ¹	19,955	20,488	20,531	19,955	20,331	20,382	20,431	20,488	20,531	
Civilian noninstitutional population ¹	19,536	20,032	20,079	19,536	19,901	19,943	19,979	20,032	20,079	
Civilian labor force	12,080	12,362	12,504	12,122	12,272	12,364	12,340	12,408	12,546	
Participation rate	61.8	61.7	62.3	62.0	61.7	62.0	61.8	61.9	62.5	
Employed	10,798	11,098	11,137	10,749	10,883	11,025	10,987	11,095	11,083	
Employment-population ratio ³	54.1	54.2	54.2	53.9	53.5	54.1	53.8	54.2	54.0	
Unemployed	1,283	1,267	1,366	1,373	1,389	1,338	1,351	1,313	1,463	
Unemployment rate	10.6	10.3	10.9	11.3	11.3	10.8	11.0	10.6	11.7	
Not in labor force	7,456	7,671	7,575	7,414	7,629	7,579	7,639	7,624	7,533	

¹ The population and Armed Forces figures are not adjusted for seasonal variations; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

³ Civilian employment as a percent of the total noninstitutional population (including Armed Forces).

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Table A-2. Major unemployment indicators, seasonally adjusted

Selected categories	Number of unemployed persons (in thousands)		Unemployment rates					
	Oct.	Oct.	Oct.	June	July	Aug.	Sept.	Oct.
	1978	1979	1978	1979	1979	1979	1979	1979
CHARACTERISTICS								
Total, 18 years and over	5,836	6,192	5.8	5.6	5.7	6.0	5.8	6.0
Men, 20 years and over	2,185	2,310	4.0	3.9	4.1	4.2	4.2	4.3
Women, 20 years and over	2,134	2,279	5.6	5.8	5.5	5.9	5.5	5.8
Both sexes, 18-19 years	1,557	1,573	16.2	15.3	15.3	16.5	16.4	16.6
White, total	4,502	4,750	5.1	4.9	4.9	5.3	5.1	5.2
Men, 20 years and over	1,693	1,819	3.5	3.4	3.6	3.8	3.7	3.7
Women, 20 years and over	1,603	1,721	4.9	5.0	4.7	5.2	4.8	5.1
Both sexes, 18-19 years	1,206	1,214	14.0	13.0	13.3	14.9	14.6	14.4
Black and other, total	1,373	1,463	11.3	11.3	10.8	11.0	10.6	11.7
Men, 20 years and over	681	544	8.4	7.9	8.3	8.3	7.9	9.0
Women, 20 years and over	534	558	10.1	10.8	9.8	10.3	9.6	10.1
Both sexes, 18-19 years	358	365	34.5	34.0	30.9	30.7	31.5	35.7
Married men, spouse present	1,033	1,166	2.6	2.6	2.9	3.0	2.8	2.9
Married women, spouse present	1,243	1,284	5.3	5.2	4.8	5.4	4.7	5.3
Women who head families	365	423	7.5	9.1	8.1	7.9	7.6	8.4
Full-time workers	4,505	4,839	5.2	5.1	5.3	5.4	5.4	5.5
Part-time workers	1,354	1,371	9.0	8.6	8.2	8.8	8.3	9.0
Unemployed 15 weeks and over ¹	1,317	1,223	1.3	1.1	1.0	1.2	1.1	1.2
Labor force time lost ²	--	--	6.2	6.3	6.4	6.5	6.2	6.4
OCCUPATION³								
White-collar workers	1,621	1,810	3.3	3.4	3.2	3.6	3.3	3.5
Professional and technical	412	437	2.8	2.5	2.5	2.6	2.5	2.8
Managers and administrators, except farm	181	248	1.8	2.0	1.9	2.3	2.2	2.3
Sales workers	257	247	4.1	4.5	3.5	4.2	3.9	3.8
Clerical workers	771	878	4.2	4.6	4.4	5.0	4.5	4.7
Blue-collar workers	2,329	2,562	6.8	6.5	6.8	7.6	7.1	7.3
Craft and kindred workers	651	661	4.9	4.2	4.2	4.9	4.1	4.8
Operative, except transport	917	1,115	7.6	7.7	8.3	9.3	9.2	9.2
Transport equipment operatives	181	212	4.8	5.5	5.2	6.8	6.2	5.6
Nonfarm laborers	580	554	11.0	10.3	10.9	11.5	10.8	10.6
Service workers	985	974	7.1	7.2	7.2	7.0	6.7	7.0
Farm workers	136	123	4.6	3.1	4.5	3.8	4.2	4.3
INDUSTRY⁴								
Nonagricultural private wage and salary workers ⁵	4,186	4,547	5.6	5.6	5.7	6.1	5.8	6.0
Construction	553	527	11.2	9.6	9.5	9.5	8.8	10.1
Manufacturing	1,158	1,421	5.1	5.3	5.8	6.2	6.1	6.2
Durable goods	610	772	4.6	4.8	5.5	5.7	5.3	5.6
Non-durable goods	548	649	6.0	6.2	6.2	6.9	7.3	7.0
Transportation and public utilities	183	211	3.4	3.0	3.9	3.8	4.1	3.8
Wholesale and retail trade	1,238	1,218	6.7	6.8	6.2	6.6	6.4	6.5
Finance and service industries	1,019	1,103	4.6	4.7	4.9	5.4	4.7	4.9
Government workers	625	659	3.9	3.6	3.5	3.8	3.3	4.1
Agricultural wage and salary workers	150	149	9.5	7.7	10.4	9.9	10.3	9.8

¹ Unemployment rate calculated as a percent of civilian labor force.² Aggregate hours lost by the unemployed and persons on part time for economic reasons as a percent of potentially available labor force hours.³ Unemployment by occupation includes all experienced unemployed persons, whereas that by

by industry covers only unemployed wage and salary workers.

⁴ Includes mining, not shown separately.

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Table A-3. Selected employment indicators

Selected categories	Not seasonally adjusted		Seasonally adjusted					
	Oct.	Oct.	Oct.	June	July	Aug.	Sept.	Oct.
	1978	1979	1978	1979	1979	1979	1979	1979
CHARACTERISTICS								
Total employed, 18 years and over	96,395	99,150	95,461	96,754	97,410	96,900	97,513	97,293
Men	56,045	56,880	55,754	56,638	56,595	56,316	56,653	56,539
Women	40,039	41,318	39,447	40,116	40,615	40,585	40,860	40,754
Married men, spouse present	39,135	39,448	38,306	39,055	39,163	39,146	39,175	39,135
Married women, spouse present	22,774	23,516	22,194	22,580	22,690	22,777	22,965	22,922
OCCUPATION								
White-collar workers	48,038	49,991	47,713	49,165	49,573	49,615	49,779	49,648
Professional and technical	18,548	19,183	18,307	19,053	19,063	18,993	19,078	18,929
Managers and administrators, except farm	10,318	10,701	9,966	10,565	10,675	10,772	10,600	10,648
Sales workers	5,971	6,228	5,366	5,866	6,161	6,065	6,114	6,287
Clerical workers	17,591	17,878	17,452	17,481	17,673	17,774	17,947	17,825
Blue-collar workers	32,165	32,376	31,946	31,958	31,989	31,767	32,267	32,191
Manufacturing workers	12,615	13,039	12,556	13,003	12,632	12,755	13,057	12,974
Craft and kindred workers	11,265	11,077	11,178	10,759	10,853	10,880	10,987	10,989
Operative, except transport	3,626	3,607	3,591	3,596	3,610	3,571	3,622	3,561
Transport equipment operators	4,958	4,653	4,471	4,600	4,652	4,561	4,621	4,667
Nonfarm laborers	12,334	12,957	12,951	12,946	12,697	12,591	12,796	12,977
Service workers	2,559	2,833	2,821	2,683	2,657	2,703	2,736	2,702
Farm workers								
MAJOR INDUSTRY AND CLASS OF WORKER								
Agriculture								
Wage and salary workers	1,501	1,448	1,423	1,445	1,403	1,363	1,391	1,373
Self-employed workers	1,499	1,677	1,638	1,525	1,552	1,632	1,678	1,617
Unpaid family workers	353	341	323	293	294	310	327	312
Nonagricultural industries	85,855	87,542	85,363	86,309	86,277	86,227	86,891	87,032
Wage and salary workers	15,514	15,673	15,387	15,257	15,382	15,260	15,450	15,549
Private households	70,381	71,869	69,976	71,051	70,895	70,967	71,481	71,483
Government	1,335	1,290	1,315	1,236	1,217	1,205	1,332	1,270
Other industries	69,006	70,579	68,661	69,816	69,678	69,761	70,109	70,213
Self-employed workers	6,258	6,753	6,314	6,600	6,753	6,649	6,662	6,814
Unpaid family workers	426	396	453	482	529	443	453	421
PERSONS AT WORK¹								
Nonagricultural industries	88,479	90,472	86,511	87,843	89,074	89,154	88,824	88,487
Wage and salary workers	72,545	74,408	71,318	72,230	73,138	73,222	73,252	73,164
Part-time for economic reasons	2,917	2,979	3,164	3,416	3,340	3,355	3,111	3,230
Usually work full-time	1,087	1,205	1,167	1,816	1,398	1,878	1,255	1,293
Usually work part-time	1,830	1,774	1,997	2,000	1,946	1,877	1,856	1,937
Part-time for noneconomic reasons	13,017	13,085	12,029	12,198	12,597	12,577	12,461	12,093

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

Table A-4. Duration of unemployment

Weeks of unemployment	Not seasonally adjusted		Seasonally adjusted					
	Oct.	Oct.	Oct.	June	July	Aug.	Sept.	Oct.
	1978	1979	1978	1979	1979	1979	1979	1979
DURATION								
Less than 5 weeks	2,684	2,883	2,719	2,927	2,784	3,226	2,743	2,963
5 to 14 weeks	1,669	1,833	1,789	1,782	1,970	1,743	2,050	1,965
15 weeks and over	1,147	1,065	1,317	1,086	1,052	1,191	1,133	1,223
15 to 26 weeks	612	591	732	616	600	662	627	703
27 weeks and over	535	475	585	470	451	529	507	520
Average (mean) duration, in weeks	11.4	10.2	11.8	10.4	10.0	10.5	10.6	10.5
Median duration, in weeks	5.3	5.0	5.9	5.6	6.1	4.9	5.9	5.6
PERCENT DISTRIBUTION								
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than 5 weeks	48.4	49.9	46.7	50.5	48.0	52.4	46.3	48.2
5 to 14 weeks	30.6	31.7	30.7	30.8	33.9	28.3	34.6	31.9
15 weeks and over	21.0	18.4	22.6	18.7	18.1	19.3	19.1	19.9
15 to 26 weeks	11.2	10.2	12.6	10.6	10.3	10.7	10.6	11.4
27 weeks and over	9.8	9.2	10.0	8.1	7.8	8.6	8.5	8.4

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Table A-8. Reasons for unemployment

(Numbers in thousands)

Reasons	Not seasonally adjusted		Seasonally adjusted					
	Oct.	Oct.	Oct.	June	July	Aug.	Sept.	Oct.
	1978	1979	1978	1979	1979	1979	1979	1979
NUMBER OF UNEMPLOYED								
Lost last job	2,199	2,380	2,056	2,358	2,532	2,728	2,608	2,771
On layoff	460	655	644	796	793	960	836	916
Other job losses	1,649	1,725	1,612	1,562	1,739	1,765	1,771	1,855
Left last job	860	882	612	667	833	894	818	825
Reentered labor force	1,741	1,808	1,721	1,736	1,737	1,798	1,785	1,788
Seeking first job	742	711	625	787	696	720	803	793
PERCENT DISTRIBUTION								
Total unemployed	103.3	100.0	103.0	100.0	100.0	100.0	100.0	100.0
Job losses	38.0	41.1	42.2	41.0	43.7	46.4	43.4	44.9
On layoff	6.4	11.3	11.1	13.8	13.7	15.6	13.9	14.8
Other job losses	30.2	29.8	31.2	27.2	30.0	28.8	29.5	30.0
Job leavers	15.9	15.3	14.0	15.1	14.6	14.6	13.6	13.4
Reentrants	31.9	31.3	29.6	30.2	29.9	29.3	29.7	29.0
New entrants	13.6	12.3	14.2	13.7	12.0	11.7	13.4	12.6
UNEMPLOYED AS A PERCENT OF THE CIVILIAN LABOR FORCE								
Job losses	2.1	2.3	2.4	2.3	2.5	2.6	2.5	2.7
Job leavers	0.9	1.8	1.8	1.8	1.9	2.1	1.9	2.0
Reentrants	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
New entrants	0.7	0.7	0.8	0.8	0.7	0.7	0.8	0.8

Table A-8. Unemployment by sex and age, seasonally adjusted

Sex and age	Number of unemployed persons (in thousands)		Unemployment rate					
	Oct.	Oct.	Oct.	June	July	Aug.	Sept.	Oct.
	1978	1979	1978	1979	1979	1979	1979	1979
Total, 16 years and over	5,836	6,182	5.8	5.6	5.7	6.0	5.8	6.0
16 to 19 years	1,557	1,573	16.2	15.3	15.3	16.5	16.8	16.6
16 to 17 years	786	734	19.2	16.7	17.1	18.1	16.8	18.5
18 to 19 years	775	841	14.0	14.1	14.4	15.5	16.0	15.3
20 to 24 years	1,298	1,460	8.6	8.9	9.0	9.3	9.2	9.5
25 years and over	3,015	3,184	3.9	3.8	3.9	4.1	3.8	4.0
25 to 54 years	2,569	2,701	4.2	4.0	4.0	4.3	4.1	4.3
55 years and over	438	438	3.0	2.9	3.2	3.2	2.9	2.9
Men, 16 years and over	2,971	3,109	5.1	4.7	5.0	5.2	5.2	5.2
16 to 19 years	826	779	16.1	14.1	14.9	16.0	16.2	15.7
16 to 17 years	436	362	19.9	15.8	15.2	17.3	16.6	17.1
18 to 19 years	390	416	13.2	13.5	14.9	15.3	15.6	14.6
20 to 24 years	693	791	8.5	8.0	8.8	8.9	8.8	9.5
25 years and over	1,505	1,597	3.3	3.1	3.3	3.5	3.4	3.4
25 to 54 years	1,237	1,343	3.4	3.1	3.3	3.6	3.5	3.6
55 years and over	253	241	2.8	3.1	3.4	3.2	2.9	2.7
Women, 16 years and over	2,865	3,073	6.8	6.9	6.6	7.0	6.6	7.0
16 to 19 years	731	794	16.3	16.6	15.8	17.1	16.7	17.6
16 to 17 years	350	372	18.4	17.7	19.2	18.9	17.0	20.0
18 to 19 years	345	425	14.8	14.8	13.8	15.8	14.5	16.0
20 to 24 years	605	669	8.7	9.9	9.3	9.9	9.7	9.6
25 years and over	1,510	1,588	4.9	4.8	4.7	5.0	4.6	4.9
25 to 54 years	1,332	1,398	5.2	5.3	5.0	5.4	4.9	5.3
55 years and over	185	197	3.3	2.7	2.9	3.3	3.0	3.4

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Table A-7. Range of unemployment measures based on varying definitions of unemployment and the labor force, seasonally adjusted

Measure	Quarterly average					Monthly data		
	1978		1979			1979		
	III	IV	I	II	III	Aug.	Sept.	Oct.
U-1—Persons unemployed 15 weeks or longer as a percent of the civilian labor force	1.3	1.2	1.2	1.2	1.1	1.2	1.1	1.2
U-2—Job losers as a percent of the civilian labor force	2.4	2.4	2.4	2.4	2.5	2.6	2.5	2.7
U-3—Unemployed persons 25 years and over as a percent of the civilian labor force 25 years and over	4.1	3.9	3.9	3.9	3.9	4.1	3.8	4.0
U-4—Unemployed full-time jobseekers as a percent of the full-time labor force	5.5	5.2	5.2	5.2	5.4	5.4	5.4	5.5
U-5—Total unemployed as a percent of the civilian labor force (initial measure)	6.0	5.8	5.7	5.7	5.8	6.0	5.8	6.0
U-6—Total full-time jobseekers plus % part-time jobseekers plus % total on part time for economic reasons as a percent of the civilian labor force less % of the part-time labor force	7.5	7.2	7.2	7.3	7.3	7.5	7.2	7.4
U-7—Total full-time jobseekers plus % part-time jobseekers plus % total on part time for economic reasons plus discouraged workers as a percent of the civilian labor force plus discouraged workers less % of the part-time labor force	8.4	8.0	7.9	8.1	8.0	8.4	8.1	8.4

N.A.—not available.

Table A-8. Employment status of the noninstitutional population by race and Hispanic origin, not seasonally adjusted

Employment status	Total		White		Black ¹		Hispanic origin ²	
	Oct. 1978	Oct. 1979	Oct. 1978	Oct. 1979	Oct. 1978	Oct. 1979	Oct. 1978	Oct. 1979
TOTAL								
Civilian noninstitutional population	159,707	162,375	140,170	142,296	16,768	17,150	7,626	7,983
Civilian labor force	101,555	103,939	89,475	91,435	10,302	10,596	4,954	5,092
Percent of population	63.6	64.0	63.8	64.3	61.4	61.8	65.0	63.8
Employment	95,095	98,158	85,297	87,020	9,148	9,349	4,580	4,695
Agriculture	3,553	3,467	3,196	3,156	294	285	203	236
Nonagricultural industries	92,541	94,691	82,101	83,864	8,854	9,104	4,377	4,459
Unemployment	5,460	5,781	4,178	4,415	1,154	1,247	375	397
Unemployment rate	5.4	5.6	4.7	4.8	11.2	11.8	7.6	7.8
Not in labor force	58,152	58,436	50,696	50,861	6,466	6,554	2,672	2,891

¹ Data relate to black workers only. According to the 1970 Census, they comprised about 89 percent of the "black and other" population group.

² Data on persons of Hispanic origin are tabulated separately, without regard to race, which means that they are also included in the data for white and black workers. At the time of the 1970 Census, approximately 98 percent of their population was white.

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Table A-9. Employment status of male Vietnam-era veterans and nonveterans by age, not seasonally adjusted

(Numbers in thousands)

Veteran status and age	Civilian noninstitutional population		Civilian labor force							
			Total		Employed		Unemployed			
							Number		Percent of labor force	
Oct. 1978	Oct. 1979	Oct. 1978	Oct. 1979	Oct. 1978	Oct. 1979	Oct. 1978	Oct. 1979	Oct. 1978	Oct. 1979	
VETERANS¹										
Total, 20 years and over	8,405	8,565	7,952	8,162	7,645	7,878	307	284	3.9	3.5
20 to 24 years	676	493	596	450	506	399	50	51	8.4	11.3
25 to 29 years	6,978	7,188	6,711	6,945	6,468	6,739	243	206	3.6	3.0
25 to 29 years	2,203	1,855	2,089	1,761	1,976	1,699	113	62	5.4	3.5
30 to 34 years	3,512	3,647	3,392	3,552	3,301	3,458	91	98	2.7	2.6
35 to 39 years	1,263	1,606	1,230	1,632	1,191	1,582	39	50	3.2	3.1
40 years and over	751	884	645	767	631	740	14	27	2.2	3.5
NONVETERANS²										
Total, 25 to 39 years	13,937	14,855	13,292	14,209	12,844	13,690	448	519	3.4	3.7
25 to 29 years	6,295	6,821	5,980	6,495	5,737	6,215	243	280	4.1	4.3
30 to 34 years	3,997	4,261	3,808	4,089	3,693	3,957	111	132	2.9	3.2
35 to 39 years	3,645	3,773	3,508	3,625	3,414	3,518	94	107	2.7	3.0

¹ Vietnam-era veterans are those who served between August 5, 1964 and May 7, 1975.² Nonveterans are males who have never served in the Armed Forces. Published data are limited, to those 25-39 years of age, the group that most closely corresponds to the bulk of the Vietnam-era veteran population.

NOTE: Seasonally-adjusted data are no longer being provided because the changing age composition of the Vietnam-era veterans' population distorts the ability to identify seasonality in the series.

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Table A-10. Employment status of the noninstitutional population for the ten largest States

State and employment status	Not seasonally adjusted ¹			Seasonally adjusted					
	Oct.	Sept.	Oct.	Oct.	June	July	Aug.	Sept.	Oct.
	1978	1979	1979	1978	1979	1979	1979	1979	1979
California									
Civilian noninstitutional population ²	16,888	16,760	16,808	16,888	16,676	16,794	16,731	16,760	16,808
Civilian labor force	10,707	10,995	11,067	10,722	10,843	10,919	11,051	11,018	11,083
Employed	10,070	10,324	10,431	10,084	10,191	10,230	10,330	10,325	10,395
Unemployed	637	671	636	638	652	629	721	713	688
Unemployment rate	5.9	6.1	5.8	6.4	6.0	5.8	6.5	6.5	6.2
Florida									
Civilian noninstitutional population ²	6,567	6,758	6,781	6,567	6,706	6,723	6,780	6,758	6,781
Civilian labor force	3,731	3,813	3,820	(2)	(2)	(2)	(2)	(2)	(2)
Employed	3,469	3,567	3,580	(2)	(2)	(2)	(2)	(2)	(2)
Unemployed	262	246	241	(2)	(2)	(2)	(2)	(2)	(2)
Unemployment rate	7.0	6.5	6.3	(2)	(2)	(2)	(2)	(2)	(2)
Illinois									
Civilian noninstitutional population ²	8,230	8,295	8,309	8,230	8,278	8,284	8,289	8,295	8,309
Civilian labor force	5,407	5,372	5,416	5,402	5,329	5,376	5,389	5,400	5,411
Employed	5,118	5,068	5,118	5,100	5,053	5,131	5,112	5,069	5,100
Unemployed	288	304	298	302	276	245	237	331	311
Unemployment rate	5.3	5.7	5.5	5.6	5.2	4.6	4.4	6.1	5.7
Massachusetts									
Civilian noninstitutional population ²	4,381	4,385	4,393	4,381	4,373	4,377	4,381	4,385	4,393
Civilian labor force	2,798	2,912	2,951	(2)	(2)	(2)	(2)	(2)	(2)
Employed	2,678	2,725	2,727	2,657	2,784	2,738	2,757	2,750	2,706
Unemployed	120	187	124	(2)	(2)	(2)	(2)	(2)	(2)
Unemployment rate	4.3	6.4	4.4	(2)	(2)	(2)	(2)	(2)	(2)
Michigan									
Civilian noninstitutional population ²	6,672	6,752	6,765	6,672	6,730	6,738	6,744	6,752	6,765
Civilian labor force	4,193	4,327	4,383	(2)	(2)	(2)	(2)	(2)	(2)
Employed	3,963	4,017	4,028	(2)	(2)	(2)	(2)	(2)	(2)
Unemployed	230	310	315	293	301	323	302	388	378
Unemployment rate	5.5	7.2	7.2	(2)	(2)	(2)	(2)	(2)	(2)
New Jersey									
Civilian noninstitutional population ²	5,472	5,527	5,537	5,472	5,512	5,517	5,522	5,527	5,537
Civilian labor force	3,530	3,589	3,563	3,536	3,585	3,530	3,528	3,568	3,570
Employed	3,310	3,365	3,339	3,293	3,301	3,266	3,262	3,389	3,322
Unemployed	219	224	226	243	284	264	266	219	248
Unemployment rate	6.2	6.2	6.3	6.9	6.9	7.5	7.5	6.1	6.9
New York									
Civilian noninstitutional population ²	13,264	13,304	13,320	13,264	13,294	13,298	13,300	13,304	13,320
Civilian labor force	7,883	7,937	7,952	7,949	7,931	8,001	7,971	7,989	8,018
Employed	7,263	7,383	7,391	7,298	7,368	7,400	7,387	7,393	7,425
Unemployed	619	594	561	651	567	601	624	596	593
Unemployment rate	7.9	7.5	7.1	8.2	7.1	7.5	7.8	7.5	7.4
Ohio									
Civilian noninstitutional population ²	7,893	7,961	7,975	7,893	7,983	7,949	7,955	7,961	7,975
Civilian labor force	5,105	5,092	5,122	5,084	4,988	4,995	5,045	5,088	5,100
Employed	4,864	4,918	4,919	4,823	4,706	4,650	4,687	4,793	4,778
Unemployed	241	278	302	261	278	345	358	291	322
Unemployment rate	4.7	5.5	5.9	5.1	5.6	6.9	7.1	5.7	6.3
Pennsylvania									
Civilian noninstitutional population ²	8,864	8,923	8,937	8,864	8,907	8,913	8,916	8,923	8,937
Civilian labor force	5,325	5,301	5,364	5,300	5,289	5,316	5,288	5,327	5,339
Employed	4,955	4,988	4,938	4,911	4,900	4,980	4,903	4,951	4,894
Unemployed	369	357	426	389	389	336	385	376	445
Unemployment rate	6.9	6.7	7.9	7.3	6.6	6.3	7.3	7.1	8.3
Texas									
Civilian noninstitutional population ²	9,258	9,451	9,478	9,258	9,398	9,416	9,433	9,451	9,478
Civilian labor force	6,067	6,231	6,264	6,088	6,100	6,183	6,136	6,291	6,285
Employed	5,808	5,984	6,028	5,788	5,834	5,907	5,866	5,996	5,989
Unemployed	260	247	236	280	266	276	270	295	296
Unemployment rate	4.3	4.0	3.8	4.6	4.4	4.5	4.4	3.9	4.1

¹ The population figures are not adjusted for seasonal variations; therefore, identical numbers appear in the unadjusted and the seasonally adjusted columns.

² Seasonally-adjusted data are not presented for this series, because the variations that are due to seasonal influences cannot be separated with sufficient precision from those which stem from the trend-cycle and irregular components of the original time series.

³ These are the official Bureau of Labor Statistics estimates used in the administration of Federal fund allocation programs.

ESTABLISHMENT DATA

ESTABLISHMENT DATA

Table B-1. Employees on nonagricultural payrolls by industry

Industry	Not seasonally adjusted				Seasonally adjusted					
	OCT. 1978	NOV. 1979	SEP. 1979 P	OCT. 1979 P	OCT. 1978	JUNE 1979	JULY 1979	AUG. 1979	SEPT. 1979	OCT. 1979 P
TOTAL	88,100	89,673	90,255	90,851	87,426	89,626	89,713	89,762	89,865	90,151
GOODS-PRODUCING	26,407	27,030	27,156	27,107	25,991	26,674	26,723	26,599	26,591	26,623
MINING	913	966	979	975	910	949	956	968	972	972
CONSTRUCTION	4,662	5,048	4,978	4,975	4,398	4,662	4,688	4,674	4,665	4,693
MANUFACTURING	20,732	20,996	21,189	21,157	20,633	21,063	21,079	20,957	20,956	20,958
Production workers	15,005	14,980	15,176	15,172	14,616	15,096	15,090	14,956	14,959	14,963
DURABLE GOODS	12,508	12,596	12,812	12,775	12,419	12,760	12,786	12,714	12,742	12,686
Production workers	8,994	8,907	9,123	9,116	8,608	9,123	9,124	9,044	9,070	9,029
Lumber and wood products	763.0	780.0	778.4	776.6	752	757	752	752	760	765
Furniture and fixtures	496.2	483.5	486.4	480.0	490	485	488	488	481	483
Stone, clay, and glass products	713.3	728.2	721.9	719.4	701	715	711	710	708	707
Primary metal industries	1,227.6	1,244.5	1,245.4	1,235.2	1,229	1,237	1,256	1,245	1,237	1,236
Fabricated metal products	1,707.2	1,716.1	1,730.3	1,735.3	1,692	1,737	1,730	1,714	1,717	1,730
Machinery, except electrical	2,362.1	2,407.1	2,496.8	2,450.2	2,369	2,488	2,500	2,492	2,490	2,498
Electric and electronic equipment	2,402.9	2,404.8	2,433.6	2,445.7	2,428	2,424	2,431	2,492	2,415	2,427
Transportation equipment	2,053.5	1,933.2	2,053.6	2,049.0	2,037	2,057	2,073	2,079	2,067	2,093
Instruments and related products	865.4	895.3	891.8	897.4	866	893	894	895	891	898
Miscellaneous manufacturing	476.5	480.6	483.1	467.3	458	451	450	451	447	446
NONDURABLE GOODS	8,324	8,399	8,387	8,382	8,214	8,303	8,293	8,243	8,212	8,272
Production workers	6,009	6,053	6,055	6,056	5,908	5,973	5,968	5,912	5,889	5,954
Food and kindred products	1,768.2	1,810.0	1,814.3	1,775.9	1,708	1,720	1,707	1,696	1,691	1,714
Tobacco manufacturers	76.4	80.0	72.5	73.6	69	69	68	68	68	68
Textile mill products	800.0	890.4	889.1	892.4	897	892	892	886	884	890
Apparel and other textile products	1,346.3	1,306.9	1,310.7	1,322.2	1,330	1,312	1,324	1,302	1,295	1,304
Paper and allied products	695.0	723.3	718.4	718.5	692	715	718	717	714	715
Printing and publishing	1,231.2	1,245.4	1,245.3	1,256.2	1,199	1,282	1,250	1,247	1,244	1,254
Chemicals and allied products	1,107.6	1,121.2	1,113.1	1,115.2	1,098	1,119	1,116	1,111	1,109	1,113
Petroleum and coal products	211.7	218.3	218.2	220.4	210	212	212	213	215	219
Rubber and misc. plastics products	766.6	765.8	762.3	765.7	755	775	777	764	751	754
Leather and leather products	256.3	245.8	242.6	241.7	256	247	229	243	243	241
SERVICE-PRODUCING	61,693	62,643	63,099	63,746	61,483	62,952	62,990	63,163	63,254	63,528
TRANSPORTATION AND PUBLIC UTILITIES	5,039	5,210	5,203	5,255	5,014	5,190	5,169	5,194	5,181	5,229
WHOLESALE AND RETAIL TRADE	19,813	20,137	20,240	20,352	19,744	20,116	20,122	20,126	20,149	20,281
WHOLESALE TRADE	5,050	5,211	5,203	5,250	5,025	5,160	5,182	5,185	5,187	5,224
RETAIL TRADE	14,763	14,926	15,037	15,102	14,719	14,936	14,940	14,941	14,962	15,057
FINANCE, INSURANCE, AND REAL ESTATE	4,788	5,053	5,000	5,020	4,793	4,958	4,972	5,003	4,995	5,025
SERVICES	16,497	17,312	17,254	17,325	16,664	17,051	17,092	17,141	17,220	17,290
GOVERNMENT	15,556	14,931	15,362	15,792	15,466	15,637	15,635	15,699	15,709	15,703
FEDERAL	2,766	2,846	2,787	2,777	2,760	2,788	2,785	2,813	2,798	2,791
STATE AND LOCAL	12,610	12,087	12,575	13,015	12,706	12,849	12,850	12,886	12,911	12,912

preliminary.

NOTE: Establishment data shown in tables B-1 through B-6 have been revised based on March 1978 benchmark levels and updated seasonal adjustment factors; consequently, they are not comparable with data published prior to the October 5, 1979 release. For a discussion of the effect of these revisions, see "BLS Establishment Estimates Revised to March 1978 Benchmark Levels," *Employment and Earnings*, October 1979, Vol. 26, No. 10.

ESTABLISHMENT DATA

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Table B-2. Average weekly hours of production or nonsupervisory workers, on private nonagricultural payrolls by industry

Industry	Not seasonally adjusted					Seasonally adjusted				
	OCT. 1978	AUG. 1979	SEPT. 1979 ^a	OCT. 1979 ^a	OCT. 1978	JUNE 1979	JULY 1979	AUG. 1979	SEPT. 1979 ^a	OCT. 1979 ^a
TOTAL PRIVATE	35.9	36.0	35.8	35.6	35.8	35.6	35.6	35.6	35.7	35.5
MINING	43.7	43.1	43.5	43.5	43.1	43.0	41.6	43.2	43.1	42.9
CONSTRUCTION	37.9	38.0	37.9	37.6	36.9	37.2	36.8	37.2	37.5	36.5
MANUFACTURING	40.6	40.0	40.3	40.2	40.5	40.1	40.2	40.1	40.1	40.1
Overtime hours	3.6	3.3	3.6	3.4	3.6	3.4	3.3	3.2	3.2	3.2
DURABLE GOODS	41.8	40.8	40.8	40.7	41.3	40.7	40.7	40.7	40.7	40.7
Overtime hours	4.1	3.6	3.6	3.5	3.9	3.6	3.5	3.3	3.3	3.3
Lumber and wood products	40.4	39.9	40.1	39.9	40.0	39.4	39.3	39.5	39.7	39.5
Furniture and fixtures	39.6	38.6	39.0	39.4	39.1	38.5	38.4	38.5	38.6	38.9
Stone, clay, and glass products	42.3	41.7	41.7	41.5	41.9	41.6	41.4	41.3	41.5	41.1
Primary metal industries	41.9	40.6	41.2	40.5	42.2	41.2	41.3	41.0	40.9	40.7
Fabricated metal products	41.0	40.5	40.9	40.9	40.9	40.7	40.8	40.6	40.8	40.8
Machinery, except electrical	42.0	41.3	41.8	41.4	42.0	42.0	41.9	41.6	41.6	41.6
Electric and electronic equipment	40.4	39.7	40.4	40.3	40.4	40.3	40.2	39.8	40.2	40.5
Transportation equipment	42.7	40.5	40.7	41.1	42.7	40.8	40.9	41.7	40.6	41.1
Instruments and related products	41.0	40.3	40.8	40.6	40.9	40.6	40.7	40.5	40.7	40.5
Miscellaneous manufacturing	39.1	38.9	39.3	39.3	38.9	39.3	39.1	39.1	39.1	39.1
NONDURABLE GOODS	39.5	39.4	39.6	39.4	39.6	39.2	39.2	39.2	39.3	39.3
Overtime hours	3.4	3.2	3.5	3.3	3.2	3.0	3.0	3.0	3.1	3.1
Food and kindred products	39.9	40.3	40.6	39.9	39.8	39.8	39.8	39.7	40.0	39.8
Tobacco manufacturers	37.6	37.6	39.0	38.6	37.1	37.9	38.5	38.9	38.5	38.1
Textile mill products	40.3	40.3	40.6	40.8	40.3	40.1	40.1	40.1	40.6	40.8
Apparel and other textile products	35.5	35.0	35.3	35.3	35.3	35.2	35.3	35.3	35.2	35.1
Paper and allied products	42.6	42.6	42.7	42.9	42.6	42.5	42.5	42.6	42.4	42.9
Printing and publishing	37.6	37.9	37.9	37.8	37.7	37.6	37.5	37.7	37.5	37.3
Chemicals and allied products	42.0	41.8	41.9	42.0	42.0	41.7	41.9	42.0	41.8	42.0
Petroleum and coal products	44.3	43.6	44.7	44.6	43.9	43.3	43.6	43.7	44.1	44.2
Rubber and mac. plastics products	41.3	40.4	40.5	40.3	41.1	40.7	40.6	40.2	40.3	40.1
Leather and leather products	37.0	36.6	36.6	36.3	37.0	36.4	36.6	36.5	36.6	36.3
TRANSPORTATION AND PUBLIC UTILITIES	40.0	40.3	40.1	39.9	40.0	39.8	39.7	39.9	40.1	39.9
WHOLESALE AND RETAIL TRADE	32.8	33.2	32.6	32.4	32.9	32.6	32.6	32.5	32.6	32.5
WHOLESALE TRADE	39.0	38.9	38.8	38.7	38.9	38.8	38.8	38.7	38.7	38.6
RETAIL TRADE	30.6	31.4	30.7	30.6	31.0	30.6	30.6	30.8	30.7	30.6
FINANCE, INSURANCE, AND REAL ESTATE	36.6	36.2	36.3	36.4	36.5	36.2	36.3	36.1	36.4	36.3
SERVICES	32.7	33.2	32.7	32.5	32.7	32.7	32.8	32.7	32.7	32.5

^a Data relate to production workers in mining and manufacturing; to construction workers in construction; and to nonsupervisory workers in transportation and public utilities, wholesale and retail trade, finance, insurance, and real estate; and services. These groups account for approximately four-fifths of the total employment on private nonagricultural payrolls.

^a = preliminary.

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Table B-3. Average hourly and weekly earnings of production or nonsupervisory workers on private nonagricultural payrolls by industry

Industry	Average hourly earnings				Average weekly earnings			
	OCT. 1976	AUG. 1974	SEPT. 1970 ^a	OCT. 1974 ^b	OCT. 1976	AUG. 1974	SEPT. 1970 ^a	OCT. 1974 ^b
TOTAL PRIVATE	85.07	86.19	86.30	86.31	6210.73	6222.84	6225.56	6224.64
Seasonally adjusted	5.84	6.22	6.26	6.28	209.07	241.43	223.46	222.96
MINING	7.98	8.40	8.55	8.53	340.73	365.49	371.93	371.06
CONSTRUCTION	6.89	9.32	9.50	9.51	336.93	358.16	366.05	355.67
MANUFACTURING	6.33	6.69	6.80	6.83	257.00	267.60	274.04	274.57
DURABLE GOODS	6.76	7.12	7.24	7.27	279.88	287.65	295.39	295.69
Lumber and wood products	5.77	6.23	6.31	6.26	233.11	248.58	253.03	249.77
Furniture and fixtures	4.76	5.10	5.18	5.20	189.20	198.86	202.02	204.88
Stone, clay, and glass products	6.09	6.90	6.97	7.02	274.33	287.73	290.45	291.33
Primary metal industries	6.42	6.10	6.15	6.14	352.60	371.88	376.96	376.17
Fabricated metal products	6.49	6.83	6.93	6.98	286.08	276.82	283.44	285.68
Machinery, except electrical	6.95	7.35	7.50	7.51	291.90	303.56	313.50	310.91
Electric and electronic equipment	5.95	6.36	6.46	6.51	240.39	262.49	260.98	264.06
Transportation equipment	6.21	6.44	6.58	6.68	350.57	341.82	349.41	356.75
Instruments and related products	5.79	6.14	6.21	6.28	237.39	247.44	253.37	254.97
Miscellaneous manufacturing	4.76	5.04	5.07	5.11	186.12	196.06	199.25	200.62
NONDURABLE GOODS	5.85	6.04	6.11	6.18	223.18	237.98	241.96	241.92
Food and kindred products	5.89	6.28	6.34	6.38	235.01	253.08	257.40	254.56
Tobacco manufacturers	5.82	6.59	6.54	6.38	418.63	447.70	455.06	449.27
Textile mill products	6.62	6.77	6.81	6.68	178.13	192.23	196.25	197.47
Apparel and other textile products	6.62	6.21	6.28	6.32	142.71	149.88	151.04	156.50
Paper and allied products	6.66	7.22	7.31	7.30	285.90	307.57	312.14	315.76
Printing and publishing	6.61	6.90	7.05	7.05	249.46	263.03	267.20	263.67
Chemicals and allied products	7.19	7.65	7.71	7.77	301.98	319.77	323.05	326.34
Petroleum and coal products	6.70	6.35	6.51	6.53	185.41	187.66	185.10	182.04
Rubber and misc. plastics products	5.68	5.98	6.02	6.05	234.38	237.60	243.81	243.62
Leather and leather products	5.94	6.22	6.29	6.31	145.70	154.45	157.01	156.45
TRANSPORTATION AND PUBLIC UTILITIES	7.78	8.32	8.43	8.43	311.20	335.30	338.04	336.36
WHOLESALE AND RETAIL TRADE	4.70	5.06	5.13	5.14	157.11	167.99	167.24	166.54
WHOLESALE TRADE	6.95	6.81	6.51	6.51	235.95	249.35	252.89	251.94
RETAIL TRADE	4.29	4.52	4.58	4.59	132.13	141.93	140.61	139.56
FINANCE, INSURANCE, AND REAL ESTATE	5.02	5.29	5.38	5.37	183.73	191.80	195.29	195.47
SERVICES	5.11	5.30	5.45	5.47	167.10	175.96	178.22	177.76

^a See footnote 1, table B-2.

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Table B-4. Hourly earnings index for production or nonsupervisory workers¹ on private nonagricultural payrolls by industry division, seasonally adjusted

Industry	OCT. 1976	MAY 1979	JUNE 1979	JULY 1979	AUG. 1979	SEPT. ^P 1979	OCT. ^P 1979	Percent change from—	
								OCT., 1976=100	SEPT., 1979=100
TOTAL PRIVATE NONFARM:									
Current dollars	218.1	227.5	229.0	230.9	232.2	234.2	236.9	7.7	0.3
Constant (1967) dollars	106.7	108.1	108.7	109.0	109.1	109.4	109.6	(2)	(3)
MINING	244.9	262.7	264.9	266.0	265.6	265.6	267.0	7.3	.5
CONSTRUCTION	210.5	220.6	220.1	222.1	223.1	223.1	224.5	9.4	.1
MANUFACTURING	229.8	232.3	233.9	235.6	236.9	238.1	240.1	9.8	.7
TRANSPORTATION AND PUBLIC UTILITIES	235.4	245.7	249.4	251.3	252.6	253.0	255.5	9.5	.2
WHOLESALE AND RETAIL TRADE	211.7	221.0	222.9	223.0	225.0	226.0	227.1	7.3	.1
FINANCE, INSURANCE, AND REAL ESTATE	199.6	207.0	209.0	210.8	211.5	214.4	215.3	9.6	-.5
SERVICES	217.2	224.3	229.7	237.0	238.4	231.6	232.0	9.8	.2

1 SEE FOOTNOTE 1, TABLE B-2.

2 PERCENT CHANGE = AS -3,7 FROM SEPTEMBER 1976 TO SEPTEMBER 1979, THE LATEST MONTH AVAILABLE.

3 PERCENT CHANGE = AS -3,3 FROM AUGUST 1976 TO SEPTEMBER 1979, THE LATEST MONTH AVAILABLE.

N.A. = not available.

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NOTE: All series are in current dollars except where indicated. The index excludes 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 in the proportion of workers in high-wage and low-wage industries.

Table B-5. Indexes of aggregate weekly hours of production or nonsupervisory workers¹ on private nonagricultural payrolls by industry, seasonally adjusted

Industry division and group	1978					1979							
	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT. ^P	OCT. ^P
TOTAL PRIVATE	123.0	123.7	124.2	124.4	124.7	125.7	123.0	128.9	125.7	125.7	125.5	125.9	125.9
GOODS-PRODUCING	107.9	106.9	104.9	110.3	110.2	111.3	106.6	110.3	110.1	109.9	109.4	109.4	109.3
MINING	146.4	150.4	151.3	152.0	152.5	152.5	152.0	151.0	152.5	149.4	150.7	157.0	155.4
CONSTRUCTION	125.5	124.0	127.9	128.9	126.7	132.7	124.9	133.7	134.6	133.9	134.5	135.2	132.6
MANUFACTURING	103.4	104.8	105.1	105.6	105.8	106.0	102.0	104.7	104.3	104.4	103.3	103.4	103.5
DURABLE GOODS	106.8	107.9	108.6	109.2	109.9	110.1	105.0	108.3	107.9	107.9	108.0	107.1	106.6
Lumber and wood products	113.9	115.0	115.6	115.9	114.9	114.4	114.4	112.4	112.2	111.9	112.3	113.8	114.1
Furniture and fixtures	109.2	109.4	110.2	109.9	109.1	109.4	105.8	105.9	105.3	105.9	104.5	104.0	104.2
Stone, clay, and glass products	111.9	112.9	113.4	113.0	112.8	114.9	111.5	113.1	113.0	111.5	110.8	111.4	109.6
Primary metal industries	97.0	99.1	99.6	100.1	100.3	100.2	99.7	99.7	97.9	97.8	95.9	95.3	94.5
Fabricated metal products	105.1	106.5	107.8	107.6	108.7	108.6	102.7	106.1	107.1	106.7	104.8	105.7	104.2
Machinery, except electrical	112.4	112.5	115.3	115.9	117.4	117.5	115.0	117.9	117.6	115.0	114.2	117.7	115.4
Electric and electronic equipment	103.7	104.8	105.5	106.1	107.6	108.5	104.6	108.4	108.6	104.5	104.7	104.4	104.0
Transportation equipment	103.6	104.9	105.6	105.9	106.9	105.9	98.3	102.4	99.4	100.3	102.0	100.3	97.3
Instruments and related products	124.6	125.1	126.3	126.8	129.4	129.7	127.2	128.1	128.4	129.1	127.2	127.2	129.0
Nonferrous manufacturing industry	101.4	102.1	101.8	102.3	101.7	101.7	97.5	99.7	100.3	100.7	102.6	105.4	100.2
NONDURABLE GOODS	98.5	99.3	99.0	100.3	99.8	100.1	97.8	99.5	99.1	99.1	98.2	96.0	96.0
Food and kindred products	95.2	96.4	97.7	98.1	97.0	98.1	96.8	97.0	96.8	95.9	96.0	95.0	96.2
Tobacco manufacturers	71.7	72.4	73.0	71.8	70.0	72.4	73.9	76.5	76.8	73.0	86.7	70.3	70.9
Textile mill products	90.4	91.0	91.0	91.0	90.3	89.0	86.7	88.5	89.6	89.8	88.0	85.9	91.0
Apparel and other textile products	90.4	91.3	91.0	91.0	90.3	89.0	86.6	88.5	88.7	89.5	88.0	87.3	87.9
Paper and allied products	98.0	100.4	100.7	101.1	101.6	103.0	100.6	102.4	102.1	103.2	103.1	104.1	103.6
Printing and publishing	99.9	101.4	101.5	102.5	103.1	103.9	101.7	103.1	103.3	104.4	104.7	103.7	104.5
Chemicals and allied products	107.3	108.1	107.6	108.7	108.5	108.1	107.7	108.2	108.4	108.6	108.2	107.5	109.2
Petroleum and coal products	123.0	124.4	123.6	122.7	123.9	125.0	125.7	124.4	123.1	123.0	124.2	126.2	131.0
Rubber and misc. plastics products	147.6	149.9	152.0	152.3	154.0	154.4	144.6	153.4	154.0	150.5	145.6	143.5	144.0
Leather and leather products	70.2	69.4	68.4	67.9	68.6	68.1	62.6	68.4	69.0	61.3	64.9	65.7	64.5
SERVICE-PRODUCING	133.5	134.0	134.2	134.2	134.8	135.8	135.3	135.0	136.5	136.7	136.4	137.3	137.5
TRANSPORTATION AND PUBLIC UTILITIES	111.7	112.0	112.5	112.8	113.5	113.7	109.2	113.4	115.0	114.2	115.2	115.4	116.0
WHOLESALE AND RETAIL TRADE	129.0	129.2	129.5	129.0	129.3	130.2	130.6	130.4	130.0	129.9	129.6	130.3	130.8
WHOLESALE TRADE	129.4	129.4	130.5	130.3	130.6	132.3	131.3	132.1	132.6	132.7	132.6	134.4	133.3
RETAIL TRADE	126.0	129.0	129.0	128.5	128.7	129.3	130.3	129.1	129.9	129.9	129.5	129.5	129.0
FINANCE, INSURANCE, AND REAL ESTATE	141.8	142.4	142.7	143.3	144.1	144.0	145.5	146.3	145.7	146.5	146.3	147.1	147.5
SERVICES	147.3	148.3	148.4	148.6	149.5	151.3	151.0	151.7	152.6	153.5	153.4	154.1	153.8

1 See footnote 1, table B-2.

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Table B-6. Indexes of diffusion: Percent of industries in which employment¹ increased

Year and month	Over 1 month span	Over 3 month span	Over 6 month span	Over 12 month span
1976				
January.....	77.0	85.8	86.9	84.0
February.....	70.3	84.3	85.8	83.7
March.....	69.2	82.3	79.4	85.2
April.....	70.6	73.8	72.4	77.6
May.....	59.6	64.8	67.7	82.6
June.....	51.7	62.5	71.5	80.2
July.....	59.0	56.4	60.8	78.2
August.....	54.4	68.3	66.9	77.3
September.....	68.9	55.8	68.6	78.8
October.....	47.4	66.9	73.8	79.4
November.....	65.1	62.2	77.5	80.8
December.....	66.0	78.8	78.2	82.6
1977				
January.....	73.0	80.2	86.3	80.5
February.....	67.2	84.3	84.6	81.4
March.....	72.4	82.6	84.0	82.8
April.....	71.5	81.7	82.3	84.6
May.....	70.3	76.5	79.1	85.2
June.....	65.1	72.7	77.6	86.6
July.....	70.3	70.3	75.3	84.9
August.....	57.8	70.9	76.7	83.1
September.....	67.2	67.7	79.7	83.1
October.....	64.2	76.2	80.5	82.8
November.....	73.3	79.7	84.0	81.1
December.....	75.3	79.4	82.3	82.0
1978				
January.....	68.3	80.2	83.1	81.4
February.....	69.2	75.6	79.1	83.1
March.....	69.5	77.3	77.6	81.1
April.....	68.0	69.8	73.5	82.0
May.....	57.8	67.2	72.7	81.7
June.....	66.6	66.6	71.2	82.3
July.....	64.5	69.5	73.0	81.4
August.....	60.5	67.2	77.3	78.2
September.....	62.5	71.2	79.7	77.9
October.....	73.0	78.2	82.3	73.5
November.....	75.9	81.1	82.3	76.2
December.....	74.4	82.3	80.5	71.8
1979				
January.....	70.3	76.5	74.1	71.8
February.....	65.1	72.1	67.4	70.6
March.....	60.5	57.8	61.9	63.7p
April.....	44.8	55.2	58.1	66.0p
May.....	54.7	51.5	50.3	
June.....	57.0	58.4	46.8p	
July.....	61.6	56.7	59.6p	
August.....	48.8	52.6p		
September.....	47.7p	60.5p		
October.....	74.7p			
November.....				
December.....				

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

Chart 1. Civilian labor force and employment
(Seasonally adjusted)

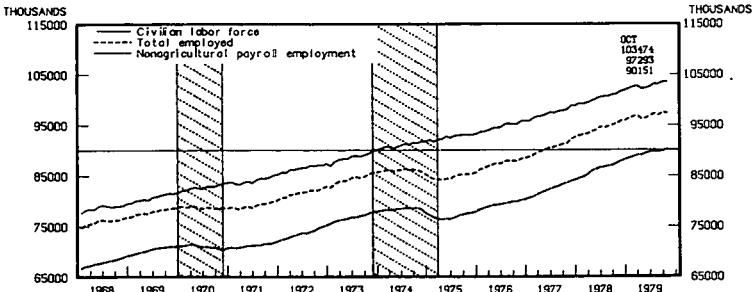


Chart 2. Unemployment rate--all civilian workers

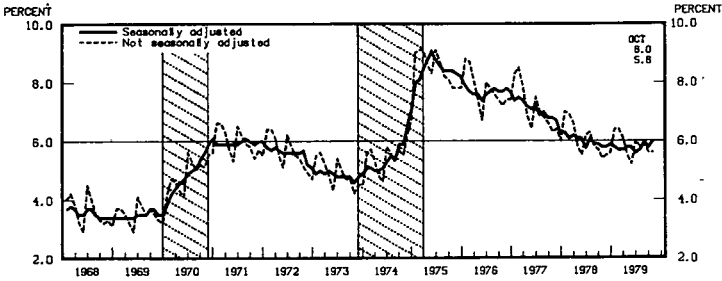
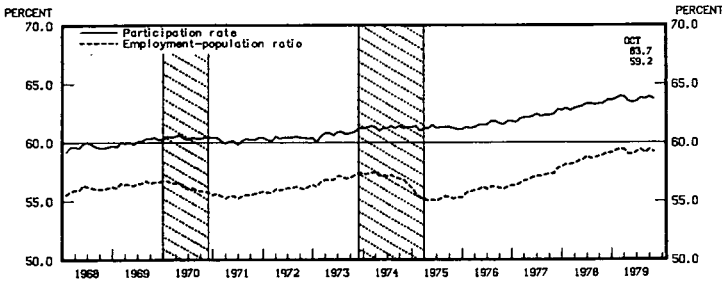


Chart 3. Civilian labor force participation rate
and total employment-population ratio
(Seasonally adjusted)



Note: The shaded areas depict the business cycle peaks and troughs as designated by the National Bureau of Economic Research.

Senator BENTSEN. Commissioner, I am very pleased you brought that up because comments were made and frankly they give me some concern. I recall reading in the Wall Street Journal on October 29 where the President said that the Consumer Price Index measures costs as though every month every homeowner in the country had to renegotiate a home loan on the basis of higher interest rates but that greatly exaggerates in the Consumer Price Index the effect of higher interest rates on home loans.

Does it?

Ms. NORWOOD. The Consumer Price Index measures the price of the fixed market basket and, as I explained in my statement, it measures the price at which someone entering the marketplace would enter into a mortgage. That's the concept.

I think there is some confusion in that people look at the Consumer Price Index sometimes as though it is a cost-of-living measure and the CPI as it is now constructed is not a true cost-of-living measure.

Senator BENTSEN. I guess, then, that's the same problem we run into. I see Mr. Kahn made his statement about home purchases and was talking about that, as I recall, adding 2 points to the CPI rate, if I remember right. Obviously, a home purchase is an infrequent thing to happen.

Ms. NORWOOD. Well, let me explain it this way, sir.

The CPI as it is officially developed includes, as I explained in my statement, the current price—

Senator BENTSEN. I understand. I want to know if he's correct that it raised it 2 points.

Ms. NORWOOD. What he was saying, I think, was that if one were to substitute for the mortgage interest cost component something like the rent component of the CPI as a rental equivalency kind of approach but using the CPI rent, you would get perhaps 2 percent less.

Senator BENTSEN. I guess my problem is now these things are perceived. That's the concern too. You say that this is not a cost-of-living measure, but it gets perceived that way, doesn't it?

Ms. NORWOOD. Yes. That is certainly true, and I think the basic point that I would like to make and to be sure is understood is that mortgage interest is only one component of a purchase of a home. There are many others. There's the price of the house that goes into the index. There are property taxes. There are home repairs and finance and insurance. Now one cannot look just at mortgage interest.

As I have discussed with you before, one could look at the flow of services of the cost of shelter to the consumer and remove the investment potential that is in a house and the depreciation—the appreciation and depreciation. That is a different concept, but it's not just a problem of mortgage interest. The issue is the treatment of home purchase.

Senator BENTSEN. Well, let's look at the other infrequent purchase. Let's take an automobile or the durables component—suppose we're talking about refrigerators—how do you work that in? How do you handle the infrequent purchases?

Ms. NORWOOD. The way it is handled in the CPI is that the base period market basket includes the expenditures of those people who purchased a refrigerator, a washing machine, an automobile. That is

the weight. It represents the number of people who made the purchases during the base period. The price is the current market price to buy this basic market basket.

Senator BENTSEN. Well, let me ask you, then, do we have a realistic indicator to use in labor contracts for an adjustment when we get into the cost-of-living question? Now, you may have a 3-month lag there, as I recall, before it's utilized, but is the CPI increase a true evaluation of the cost that should be factored in their labor contracts?

Ms. NORWOOD. Let me say two things to that, sir. One, as I said in my statement, in collective bargaining agreements, at least for the first 9 months of 1979, the cost-of-living escalators recovered 56 percent of the increases in CPI, not 100 percent of it. That's because of the way in which their agreements work. I think that's an important point.

I think that it is true certainly that there are many different points of view about how a consumer price index should be put together. We have at the moment a consumer price index which is basically one which calculates the cost in today's prices of purchasing the market basket that was purchased by the particular index family group in the base period. There are differences of opinion about the treatment of durable goods and about whether a durable good which is used for a longer period of time for many years should be handled differently. There's room for much difference of opinion about that. There has been a lot of discussion about it.

I think that the Bureau of Labor Statistics during the period of the revision program focused primarily on the housing component rather than on all durable goods because housing is the largest in the index. The weight for housing is quite large in the index. We suggested alternative approaches. There were many, many different points of view expressed and I think today there is room for difference in point of view. However, the CPI as it is presently calculated treats home purchase as an item purchased by the index family in the base period and the price at which it would be repurchased today, just as we do with oranges and apples.

Senator BENTSEN. What do you do about figuring in, or do you, where a family changes buying habits because of high prices? Let's say the price of beef is way up and they say, OK, we'll go to chicken, and so they are not buying beef any more. That's really not part of their market basket. Do you still interpret it as though they were buying beef?

Ms. NORWOOD. Well, the answer to that in one sense is, yes, because the market basket is a base period market basket. As you are aware, the implicit price deflator produced by the Department of Commerce has shifting weights. We have done some work in the Bureau of Labor Statistics looking at the effect of possible shifts in response to relative price changes in food and other items. We intend to do a lot more work in this area. But what we have is I think clearly what we describe it to be, and in that sense it is a measure which says if I want to protect the income to buy the market basket, that I purchased or that the index family purchased during the base period, the CPI measures current prices for it—the difference between the base period and the current prices of today is the measure which protects that basic market basket.

I think the problem is, Senator Bentsen, that the index is used for many, many, many purposes, and it may well be that for some purposes you want to look at different weights and for other purposes you may want to look at a fixed weight index.

If you look at the implicit deflator, they do once a year produce a fixed weight deflator and they produce a deflator which has weights moving every month in terms of what people are buying. But it should be understood that the CPI does not do that.

Senator BENTSEN. All right. Let me get to another one then. Last month we were talking about the problems of unemployment and I asked you if you saw any really definitive sign of expansion or contraction in the labor market—as I recall, both surveys were going up—and as I recall your comment then, you did not see anything that showed a strong sign of contraction in the labor market at that time. Now you have these two surveys going in divergent directions. Would you make the same statement now or would you modify it?

Ms. NORWOOD. I think that we now still have an economy which is showing a slowdown in the rate of employment growth, which is showing some strength in the service sector in particular, and I think that it is too soon to say where we are moving.

The two surveys do show different trends, but I think you have to look at them over a longer period of time. The Current Population Survey [CPS] has a much larger variance because it's a sample survey. Last month, for example, the CPI showed an increase, a rather larger increase. This month the CPS has declined, employment has declined, and I think that that may well be partly a correction. The establishment survey is showing increases, as your chart shows, after several months of rather negligible increases. There is very little evidence of growth in the goods-producing sector over the past several months. There is still employment growth in the service sectors I believe. I think that these findings are consistent with other data—that is, data that are not produced by the Bureau of Labor Statistics things like growth in output, growth in factory orders, and growth in retail sales.

Senator BENTSEN. My time has expired. Congressman Wylie.

Representative WYLIE. Thank you very much, Senator Bentsen.

Ms. Norwood, the unemployment rate is essentially unchanged from the 5.8 percent to 6 percent, right?

Ms. NORWOOD. It is a statistically significant change, but it is very small, yes. I think perhaps the correct thing to say is that over a long period of time we have been within a very narrow band of 5.6 to 6 percent.

Representative WYLIE. Well, over an annual period, that's essentially not a very large change, and the Consumer Price Index is relatively unchanged for the same period—12 percent to 13 percent I think you said in your statement. Industrial production is largely unchanged, and real disposable income for workers, as you have indicated, is definitely declining.

Ms. NORWOOD. Yes.

Representative WYLIE. This indicates that something is going to have to give before long. Is that a fair statement?

Ms. NORWOOD. I can comment only on the data. I think your assessment of the data is certainly correct.

Representative WYLIE. Are we about to enter the second recession of 1979?

Ms. NORWOOD. I don't know whether there has been a recession or whether there will be a recession. As you know, we don't forecast; but quite apart from that, I was very interested in an article in the Wall Street Journal which said, and I quote:

That the arbitrator of when recessions begin and end, the National Bureau of Economic Research, has just canceled a news conference in which its analysts had planned to tell reporters where the economy stands. After meeting privately a few days ago, the National Bureau of Economic Research explained, "we concluded that the data are so contradictory that it's hard to say where we do stand."

I think that the issue of recession-yes, recession-no, has become rather a semantic one and that what we really should do is look at where we are in the employment, unemployment, and price areas. It is clear that we are having very high rates of inflation. I think the Producer Price Index we released yesterday showed that even outside of the energy and food area there are widespread increases occurring. The employment situation shows, in my view, a clear slowdown in recent months, but there is still some growth going on, I believe, in the service industries.

Representative WYLIE. Well, the Washington Post this morning had an article about the fact that food and energy prices increased slower than usual, and that the inflation rate apparently now is more broadbased than it has ever been before.

When I first came on this committee we looked at food prices and fuel prices, and there generally was a relationship between them and the inflation rate. That's not true any longer; is it?

Mr. LAYNG. I think the nature of the increase in the Producer Price Index now has become more broadbased. It has spilled over into areas like chemicals and pharmaceutical preparations, areas which use energy, and you're getting some secondary effects. You're also getting some effects of fairly large increases in metals and the secondary impacts of metals. We have had a series of large increases in metals, both ferrous and nonferrous, so far this year and those are spilling over into products which use or contain a large percentage of metals, such as capital equipment, a lot of machinery, and automobiles. But it's characteristic of an inflationary period that this is essentially how it usually unfolds. It was very similar in 1973, 1974, and 1975 when we started out with food first, then energy, and then we spilled over into nonfood and nonenergy and that is now happening to us in this situation.

Representative WYLIE. You're John Layng?

Mr. LAYNG. Yes.

Representative WYLIE. You're the person quoted in the Washington Post as saying that.

Mr. LAYNG. I never spoke to that fellow.

Representative WYLIE. Pardon me?

Mr. LAYNG. I never did speak to that fellow, so I don't know where he got that quotation, but I wouldn't essentially disagree with it.

Ms. NORWOOD. That frequently happens to us.

Representative WYLIE. That does frequently happen?

Ms. NORWOOD. Yes, it does. But he was right.

Representative WYLIE. He is right. He says that you said that "the food and energy prices increases that, month after month, have hit American consumers and businesses are slowing, only to be replaced by more broad-based increases on everything from new cars to machine tools." Then it says the Labor Department's John Layng had a much harsher analysis. Did you see this article?

Mr. LAYNG. It was read to me.

Representative WYLIE. "The new report shows inflation is now much more broad-based throughout the economy than in previous months when energy and food prices were the main problems." What does that mean for the economy?

Mr. LAYNG. It means a lot more products are increasing at very sharp rates. If you just look at some of the other intermediate materials outside of energy and food, you see some very large increases this month and some very large increases above a year ago, increases that are far in excess of 15 percent, and they focus primarily in metals and in the secondary products depending on energy, such as chemicals and pharmaceuticals. If you look at the Producer Price Index release you will see a number of categories which run in excess of 20 percent above a year ago and it's spread over a number of sectors.

Another way to characterize that might be if you look at the non-food and nonenergy products of either finished goods or intermediate materials or crude materials, there has been an acceleration outside of food and energy in recent months of fairly sizable magnitude.

Ms. NORWOOD. I think we are both quoted as saying that in the Wall Street Journal today.

Representative WYLIE. It is something we should be concerned about?

Ms. NORWOOD. Yes, absolutely.

Representative WYLIE. Do you have any suggestions as to what we should do about this? That's an invitation. That's not trying to put you on the spot.

Ms. NORWOOD. No, I think you are well aware certainly of steps that have been taken and I certainly will not comment on them. We try to measure what the effects of some of these things are as they occur in the economy.

Representative WYLIE. You're a statistician, not a politician?

Ms. NORWOOD. We are statisticians and economists. We are not politicians and we believe this is an extremely important point, sir, because there's been, as you know, a lot of discussion about confidence in statistics. There was an article in this morning's New York Times about the money supply problem. It is extremely important that the people of this country understand the objective nature of the manner in which the data of this country are put together and we all try in all of the statistical agencies to do the best possible job that we can and to be as open as we can about what we do, even when mistakes are found.

Representative WYLIE. I received a letter this week from Mr. Bill Papier. Is that a familiar name to you?

Ms. NORWOOD. Yes.

Representative WYLIE. He's in the Bureau of Labor Statistics in Ohio, and he says we count the unemployment rate all wrong. It's based on heads of households in other countries, and therefore West

Germany and Japan and some of the other nations have a far lower unemployment rate than the United States, whereas they might have just as high an unemployment rate if they used our approach. Would you care to comment on that?

Ms. NORWOOD. I certainly would.

Representative WYLIE. All right.

Ms. NORWOOD. First, let me say that we have had a report issued on Labor Day from the Levitan Commission which has reviewed the whole question of the definition of employment and unemployment. Secretary Marshall under the law will be reporting to the Congress within 6 months on that. So these issues are being looked at.

We have in this country now a very large proportion, something like 60 percent, of the husband and wife households in this country which have more than one earner during the course of the year, and I think for us to look merely at the so-called head of household, whoever that may be, whether husband or wife, is just a mistake.

Now we do some work in the Bureau of Labor Statistics to try to look at how we compare to other countries. What we do in roughly eight countries is we try to take the data which they have and change them to the extent that it is possible to our concept. It's just a statistical manipulation that is made. And it shows different patterns. It shows the United States with a rate lower than in Canada, for example, but considerably higher than in Japan, and we can submit that for the record should you be interested. But I would like to say that I think Mr. Papier is wrong about using only heads of household in the count.

Representative WYLIE. You think he's wrong in his analysis? One of the bases of his determination that your figures are wrong is that we shouldn't count part-time students who are unemployed when they leave and go back to school, for example. I want to apologize for a personal reference here, but our son is a college student who worked in a store and was only working part time. When he left to go back to school, his name was submitted to somebody. He got an application for unemployment compensation which he didn't fill out, but any way he was carried as a statistic as being unemployed.

Ms. NORWOOD. That is an issue certainly. By the way, when I said he was wrong, I meant about looking only at heads of households. There are many issues that can be raised and the Bureau of Labor Statistics for that reason publishes a great deal of data. We in fact emphasize to people that we think it is extremely important not to look at a single number but to look in all areas at some of the components of those numbers.

Representative WYLIE. Well, apparently everyone who ever had a job and now doesn't have a job is counted as unemployed. Is that correct or not?

Ms. NORWOOD. In the survey the respondent is asked whether he is employed and, if not, whether he is looking for work and available for work. Those are two requirements. Hence, a student who returns to school and is not looking for a job is not considered unemployed. Now it is true that part-time and full-time work are counted and that people who are seeking part-time work are counted among the unemployed. That was one of the issues that was looked at by the Levitan Commission. I would call your attention to table A-7 of the Bureau

of Statistics release which has seven unemployment rate definitions. One of them makes an adjustment for part-time work.

Representative WYLIE. My time has expired, but may I send you Mr. Papier's letter and ask you to comment on it for me? I was really interested in this. It's not just an academic process for me.

Ms. NORWOOD. Yes. I'd just like to point out to you, Congressman Wylie, that all of these issues are issues which were considered by the National Commission on Employment and Unemployment. We are in the process now of reviewing their recommendations. I'm chairing a committee within the Department of Labor, since the Secretary is required under the law to ascertain the views of other agencies and then to make a report to the Congress. We are now in the process of getting the views of all interested people and we will be responding.

Representative WYLIE. I will give you the views of another interested person. Thank you.

Ms. NORWOOD. Fine.

Senator BENTSEN. Thank you, Congressman.

Commissioner, apparently we are about to be requested for \$1½ billion in the way of a bailout to Chrysler, with a total of \$3 billion to be raised, and that will be the largest sum that the Federal Government has ever been called on to come up with to help a private concern as I can recall. I noticed that DRI did a study and I want to carefully say that study was done for Chrysler, as I understand it. I want you to know where these numbers come from. But they say the short-term impact would be 500,000 to 600,000 people being put out of work if Chrysler would go bankrupt.

What kind of effect—I'm not asking you to comment on the merits of that kind of a bailout—would that have on the economy and on the unemployment numbers? What kind of a relationship would you anticipate in that kind of situation?

Ms. NORWOOD. I think that's an extremely difficult question to answer. As I understand it from the newspapers, there are roughly 110,000 to 120,000 people employed directly by the Chrysler Corp. DRI and Chase Econometrics both made some estimates. Their estimates ranged from 100,000 to 300,000 for the long-range effect, but but you know the issues that are involved—

Senator BENTSEN. I was given a number of 500,000 to 600,000; long term, 200,000 to 300,000.

Ms. NORWOOD. I was talking about the longer term.

Senator BENTSEN. All right.

Ms. NORWOOD. Part of all of that depends upon the assumptions they made and I'm not at all familiar with their assumptions and I know of no way really to do that in an effective manner.

Senator BENTSEN. Well, Commissioner, I understand that. I'm trying to get to this point because it's going to be a very difficult decision for this Congress deciding whether it wants to do something like that, but if you accepted their numbers, if you assumed that their assumptions were correct—I'm not asking you to evaluate what their assumptions are—if you assumed their numbers are correct, what would the effect be on the rest of the numbers in our economy?

Ms. NORWOOD. As I remember the studies, the estimates include the direct effect in the auto sector and the indirect effect on all supply-industries, as well as the indirect effect on consumption due to

loss of wages and salaries. We have a labor force of 100 million, so 100,000 would be about 0.1 of a percentage point increase in the unemployment rate, if you were to look at it that way. But I would like to emphasize that I don't know anything about those numbers and I'm not sure—

Senator BENTSEN. I qualified that very carefully for you.

Ms. NORWOOD. And I wouldn't want to make that kind of estimate, but if there were—100,000 more people unemployed would add one-tenth of a point to the unemployment rate. That's just a mathematical calculation.

Senator BENTSEN. But you really haven't answered the question. If you would accept the numbers they gave of 500,000 to 600,000 short term in the DRI study, and the 200,000 to 300,000 long term, what further effect is there on the economy?

Ms. NORWOOD. Well, I think 500,000 would be five-tenths, but I don't think that—

Senator BENTSEN. Would you stop there? Is that it, or what other effect do you see on the rest of your numbers?

Ms. NORWOOD. Well, that's the whole problem really. I think that's the problem with their numbers because it is difficult to estimate the total effect. Would somebody take up this slack? Would there be some unemployment that would be created and more employment created in some of the other companies? Would there be more imports and therefore would there be more employment in the importing sector? These are all issues that get involved in the determination of the numbers. So, all I can give you is a straight mathematical calculation which is not terribly useful. One can always be concerned about the assumptions used in deriving these estimates.

Senator BENTSEN. Well, I think you have helped point out the problem in trying to say what the overall impact really would be and how it finally correlates to the rest of the economy, what the reflex actions are, where the jobs are that would be filled by someone else, which parts and segments would be picked up, and which lines would continue to run under somebody else. Those are the problems in trying to evaluate this concern.

Let me ask you this one final question. Do you find that your numbers normally are more challenged as we get into elections, particularly when they are not good numbers?

Ms. NORWOOD. Our numbers are always challenged. I think that what I could say is that in a period of high inflation, in a period of high unemployment, or in a period when people are worried about the economy, as well as in a period of election, there is a great deal of attention paid to the numbers that BLS puts out.

Senator BENTSEN. You're a great diplomat, Commissioner. Thank you very much.

Representative WYLIE. I would just like to ask one more question on the Chrysler matter. I have been listening to some testimony on the Chrysler situation, and I have come to the conclusion that I will favor some sort of a loan guarantee because I think that's probably the least of the evils. But when you use these figures that Senator Bentsen referred to, you're talking in terms of a bankruptcy where all the people would be out of work, and there would be a considerable amount

of ripple effect which I don't think you could really tell how serious it might be.

For instance, Buckeye Steel Castings, which is in my district, is a supplier for Chrysler. They called and said that if Chrysler goes bankrupt, we have a little problem down here in Ohio. We don't make Chrysler cars, but we supply products that go into the Chrysler cars.

I talked to the head of a company a week and a half ago, and he said they are definitely interested in buying some parts of Chrysler, so that would have an effect on whether there would be unemployment or not. There are a lot of intangibles here, it seems to me, but I just wanted to say that because we have been holding hearings on Chrysler in the House Banking Committee, and I think, as I say, the bottom line for me probably is the loan guarantee arrangement.

Do you have any suggestions on what your opinion might be as to what you might do?

Ms. NORWOOD. No, sir.

Representative WYLIE. That's another political question.

Thank you, Mr. Chairman.

Senator BENTSEN. Thank you very much. The committee stands adjourned.

[Whereupon, at 11:55 a.m., the committee adjourned, subject to the call of the Chair.]

EMPLOYMENT-UNEMPLOYMENT

FRIDAY, DECEMBER 7, 1979

CONGRESS OF THE UNITED STATES,
JOINT ECONOMIC COMMITTEE,
Washington, D.C.

The committee met, pursuant to notice, at 10:05 a.m., in room 5110, Dirksen Senate Office Building, Hon. Lloyd Bentsen (chairman of the committee) presiding.

Present: Senators Bentsen and Proxmire.

Also present: John M. Albertine, executive director; M. Catherine Miller, professional staff member; Betty Maddox, administrative assistant; Katie MacArthur, press assistant; and Carol A. Corcoran, minority professional staff member.

OPENING STATEMENT OF SENATOR BENTSEN, CHAIRMAN

Senator BENTSEN. This hearing will come to order.

For 4 months now, we have seen our Nation's unemployment rate flopping up and down as if it were a "yo-yo" on a short string, bouncing back and forth from 5.8 to 6 percent. In November, the rate went down to 5.8 percent. Total employment for the month rose 350,000 over October.

Now, it's ironic and it's a little puzzling that with this reporting on unemployment—"baffling" might be a better word—we keep getting signals from various economic measurers that the Nation is either on the verge of a recession or it's in the middle of one.

Day after day we read in the newspapers of cutbacks and layoffs. Just the other day, 13,000 workers have lost their jobs at United States Steel. General Motors, Ford, Chrysler—there have been 100,000 people laid off indefinitely, and yet 40,000 more on short-term layoffs, but in the Nation as a whole the unemployment rate went down last month.

Amid all of that continuing uncertainty about the jobless rate, however, there remains one economic factor that isn't at all ambiguous. Inflation, after rising for months at a double-digit rate, is still going through the roof, is still the top economic problem this Nation faces today. The Producer Price Index for finished goods, in November, was up 1.3 percent. We learned that yesterday. That's a 16.8 percent annual rate, and we don't see any change. We don't see any relief in sight.

Commissioner Norwood, we're here today confused by either the meaning or lack of meaning in the November employment figures. We hope you'll be able to provide us with an explanation that will make everything perfectly clear.

Senator Proxmire.

OPENING STATEMENT OF SENATOR PROXMIRE

Senator PROXMIRE. I just have a brief statement, Mr. Chairman.

The unemployment figures for November once again should give the economists and the policymakers a warning that policy should be made on the basis of facts and not on the basis of predictions.

Our failure to do so has cost us heavily. If we had acted on the facts instead of on predictions, there would have been a balanced budget this fiscal year. I opposed a balanced budget last April when the first budget resolution was up. It was overwhelmingly defeated in the Senate.

But on the basis of what's happened since then and what the chairman has just talked about, with respect to inflation, it seems very clear that that would have been the right policy. Instead, on the basis of predictions, and prognostications and forecasts, we have a \$30 billion deficit at a time of roaring inflation, the worst in our peacetime history, and steady or declining unemployment.

Statements made month by month by month over the past year that we are in a recession, or will be next month, could cost us dearly. They've prevented us from coming to grips with our No. 1 problem—rampaging inflation, on the specious grounds that we dare not act in the face of an oncoming recession.

If and when a recession is here, as shown by figures and not by computer estimates, we can and should act. Until then, inflation is our No. 1 problem, a problem of very great size which we have failed to come to grips with because of the present confused state of economics and economists, the status of which merits Carlyle's description of economics as "the dismal science."

Thank you, Mr. Chairman.

Senator BENTSEN. Commissioner, if you would proceed with your testimony, and we're pleased to have you back in this country.

STATEMENT OF HON. JANET L. NORWOOD, COMMISSIONER, BUREAU OF LABOR STATISTICS, DEPARTMENT OF LABOR, ACCOMPANIED BY W. JOHN LAYNG, ASSISTANT COMMISSIONER, OFFICE OF PRICES AND LIVING CONDITIONS; AND ROBERT L. STEIN, ASSISTANT COMMISSIONER, OFFICE OF CURRENT EMPLOYMENT ANALYSIS

Ms. NORWOOD. Thank you, Senator Bentsen and Senator Proxmire.

Total employment as measured by the household survey rose by 350,000 in November, following a modest decline in October. The unemployment rate was 5.8 percent in November, as compared with 6 percent in October. The rate has been at or close to the 5.8-percent level for the past 16 months.

The number of employees on nonfarm payrolls, as reported by business establishments, rose by 220,000 over the month; since March of this year, payroll employment has advanced by 1.1 million, an average gain of about 140,000 a month. This comparatively slow growth is less than half of the brisk monthly gains from March 1978 to March 1979.

A slowdown in employment growth is also evidenced in employment figures from the household survey. Total employment grew by 3.6 million from March 1978 to March 1979, but gains since that time have been limited to about 800,000. Both the employment-population ratio and the civilian labor force participation rate climbed to alltime peaks in February 1979—59.4 and 63.9, respectively—but have not moved any higher since that time. Both measures continue to reflect long time increases in employment among adult women and declines among adult men.

The unemployment rate edged down to 5.8 percent in November; over the past 16 months the rate has averaged 5.8 percent, and has shown no persistent upward or downward trend. In addition, unemployment rates for most worker groups have shown no dramatic change in recent months.

The jobless rate for adult men was the same in November as in October, but was a little higher than in most of 1979. The rate for adult women continued to fluctuate, showing a slight decline in November. The teenage rate remained well within the range of the series during the past 16 months.

Unemployment among black workers, which had shown a temporary rise in October, returned to about its September level. The November jobless rate for black workers was 10.8 percent, about twice the rate for white workers. Of the 1 million black teenagers in the labor force, one-third were seeking but were unable to find work.

The job growth in nonfarm industries continued to occur largely in the service-producing industries. In the goods-producing sector, a small gain was reported in construction, as building contractors sought to complete many projects that were already underway. Manufacturing employment was unchanged; many of the layoffs announced in the steel and auto industry were scheduled to take place after the establishment survey reporting period—the payroll period including the 12th day.

Nevertheless, employment in transportation equipment, which includes autos, was down by 30,000 over the month, and 100,000 from the levels of February and March 1979.

The factory workweek moved down two-tenths of 1 hour in November, as hours were reduced sharply in primary metals and transportation equipment. The factory workweek was 0.6 of 1 hour below early 1979 levels.

PRICES

The Producer Price Index that we released yesterday can be described as containing some bad news and some good news.

The bad news was that food prices at the producer level jumped 2.6 percent in November, as meat prices rose sharply. As a result, the Producer Price Index for all finished goods rose 1.3 percent, up somewhat from October's 1-percent rise.

The good news was that the increase in prices of finished goods other than food was the smallest so far this year. The increase of 0.8 percent was substantially less than the 1.4-percent increase reported in October as prices of gasoline, heating oil, and capital equipment slowed.

The November increase of 0.9 percent in the prices of intermediate or semifinished materials was also considerably less than the 1.8-percent rise reported in October. Price increases were smaller for a broad range of materials used in manufacturing and construction, as well as for energy goods. Crude material prices, on the other hand, continued to increase in November; crude foodstuffs and feedstuffs increased, primarily as a result of a rise in poultry, hog, and cattle prices.

Prices of crude materials other than food continued to rise rapidly in November. Ferrous and nonferrous scrap prices continued to rise, as well as several other basic materials. Crude energy materials moved up 1.7 percent following a 2.5-percent rise in October as domestic crude petroleum prices registered their smallest increase since last May.

In summary, although employment has continued to grow in recent months, the increase has been much slower than in 1978 or early 1979.

Unemployment has been essentially unchanged for the past 16 months. This fall, however, there were sizable cutbacks in automobile employment and in November there were reductions in hours both in transportation equipment and primary metals.

The Producer Price Index this month reflected large increases in food prices, especially for pork and chicken, at both the crude and finished stages of processing. These increases do not appear to be related to supply shortages, and may, therefore, not continue upward.

The considerable moderation in inflation rates in the nonfood areas, at intermediate and finished stages of processing, is indeed an encouraging sign.

REVISION IN SEASONAL ADJUSTMENT PROCEDURES FOR 1980

I'd like to inform you this morning of two changes we plan to make in the seasonal adjustment methods to the labor force data. Both changes have been reviewed with the Interagency Subcommittee on Economic Statistics, chaired by Lyle Gramley, and are consistent with the recommendations of the National Commission on Employment and Unemployment Statistics.

As you know, seasonal adjustment factors are usually revised at the end of each year. The changes will affect next month's release of December 1979 data, the annual revision of recent historical seasonally adjusted data, and the monthly data in 1980 and subsequent years.

First, we will introduce X-11 ARIMA models in place of the current practice of using X-11 alone; X-11 ARIMA is an extension of X-11 which is currently used in Canada, and we've been studying it for

some time. Our tests have shown that use of X-11 ARIMA, which essentially places more adjustment emphasis on recent data, provides better seasonal adjustment results.

Second, also beginning next month, BLS will calculate—and we will publish in advance in accordance with our standard practice—seasonal adjustment factors, but for the first 6 months of the calendar year, rather than for all 12 months.

In July we will publish, for use during the second half of the year, again in advance, a new set of seasonal factors based on data which include the experience through June, and official historical revisions will continue to be made at the end of each calendar year.

I believe that the new approach will provide important improvements; in particular, use of the 6-month updating cycle will improve the accuracy of the seasonally adjusted unemployment rates published for the second half of the year.

I would also like to submit, Mr. Chairman, for the record a set of answers to questions that you wrote to me about on the underground economy. We're prepared to answer those orally, if you like but I will submit written answers for the record.

[The table attached to Ms. Norwood's statement, together with the Employment Situation press release and the response to written questions on the underground economy, follows:]

UNEMPLOYMENT RATES BY ALTERNATIVE SEASONAL ADJUSTED METHODS

Month and year	Unadjusted rate	Standard X-11 method				X-11 ARIMA method		Range (cols. 2-8)	
		Official	Con-current	Stable	Total	Residual	Extrapolated		Con-current
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1978									
November.....	5.5	5.8	5.8	5.8	5.7	5.8	5.8	5.8	0.1
December.....	5.6	5.9	5.9	6.0	5.8	6.0	5.9	5.9	.2
1979									
January.....	6.4	5.8	5.8	5.8	5.7	5.5	5.8	5.8	.3
February.....	6.4	5.7	5.7	5.7	5.7	5.5	5.7	5.8	.3
March.....	6.1	5.7	5.7	5.8	5.7	5.6	5.7	5.7	.2
April.....	5.5	5.8	5.8	5.7	5.7	5.8	5.8	5.8	.1
May.....	5.2	5.8	5.8	5.8	5.8	5.9	5.8	5.7	.2
June.....	6.0	5.6	5.7	5.5	5.7	5.6	5.6	5.7	.2
July.....	5.8	5.7	5.7	5.6	5.8	5.7	5.7	5.7	.2
August.....	5.9	6.0	5.9	5.9	6.0	6.1	6.0	5.9	.2
September.....	5.6	5.8	5.8	5.8	5.8	5.9	5.8	5.8	.1
October.....	5.6	6.0	5.9	6.0	6.0	6.1	6.0	6.0	.2
November.....	5.6	5.8	5.8	5.9	5.8	5.8	5.8	5.8	.1

Source: U.S. Department of Labor, Bureau of Labor Statistics, December 1979.

NOTES TO TABLE COLUMN NUMBERS

(1) Unadjusted rate—Unemployment rate not seasonally adjusted.

(2) Official rate (standard X-11 method)—The published seasonally adjusted rate. Each of the 3 major labor force components—agricultural employment, nonagricultural employment and unemployment data—for 4 age-sex groups (males and females under and over 20 yr of age) are separately adjusted then added to derive seasonally adjusted total figures. Teenage unemployment and nonagricultural employment are adjusted by the standard X-11 method's additive option, while all other series are adjusted by the multiplicative option. Adult male unemployment is adjusted multiplicatively using the prior trend adjustment feature of the X-11. The rate is computed by adding the 12 components to a civilian labor force total, and dividing and derived civilian labor force into the unemployment total. These series are revised at the end of each year. Factors for the current year are computed at the beginning of the year for the 12 succeeding months, and published in advance.

The current "implicit" factors for the overall unemployment rate, derived by dividing the original unemployment rate by the seasonally adjusted rate for the months of 1978, are: January, 111.1; February, 112.0; March, 106.7; April, 95.5; May, 89.5; June, 105.6; July, 102.1; August, 98.5; September, 97.3; October, 93.1; November, 95.7; December, 95.5.

(3) Concurrent (standard X-11 method)—The procedure for computation of the official rate is followed, except that the data are re-seasonally adjusted by the standard X-11 method each month as the most recent data become available, i.e.,

the rate for January 1979 is based on adjustment of data for the period, January 1967 to January 1979. The rates for the current year are shown as first computed, while data for 1978 are as revised to incorporate experience through December 1978.

(4) **Stable (standard X-11 method)**—The stable seasonal option of the standard X-11 method uses final seasonal factors computed as an unweighted average of all seasonal-irregular ratios for the entire span of the period, January 1967 to December 1978. In essence, this procedure assumes that seasonal patterns are relatively constant from year-to-year. The unweighted average is updated and series revised at the end of each year.

(5) **Total (standard X-11 method)**—This is an alternative aggregation procedure, in which total unemployment and labor force levels are directly adjusted by the standard X-11 (multiplicative option) to derive the rate. The series are revised at the end of each year.

(6) **Residual (standard X-11 method)**—The labor force and employment levels are adjusted directly, with the level of unemployment derived as a residual. The rate is computed by dividing the residual unemployment level by the directly adjusted civilian labor force. The series are revised at the end of each year.

(7) **Extrapolated (X-11 ARIMA method)**—Data for the 12 component groups of the unemployment rate are estimated using ARIMA (autoregressive, integrated, moving average) models. The enlarged series is then seasonally adjusted with the X-11 program, and the rates are computed as in the official procedure. The series are revised at the end of each year. Factors for the current year are extrapolated in 6-mo intervals, January to June at the beginning of year, July to December at mid-year after June data become available.

(8) **Concurrent (X-11 ARIMA)**—The procedure for computation of the X-11 ARIMA rate is followed, except that the data are re-seasonally adjusted each month as the most recent data become available, i.e., the rate for January 1979 is based on adjustment of data for the period, January 1967 to January 1979. The rates for the current year are shown as first computed, while data for 1978 are revised to reflect experience through December 1978.

Methods of adjustment—The standard X-11 method was developed by Julius Shiskin at the Bureau of the Census. The method is described in "X-11 Variant of the Census Method II Seasonal Adjustment Program," by Julius Shiskin, Alan Young, and John Musgrove, (technical paper No. 15, Bureau of the Census, 1967).

The X-11 ARIMA method was developed at Statistics Canada by Estela Bee Dagum and is the official method for seasonally adjusting the Canadian labor force series. A general description of the method is contained in "A Comparison and Assessment of Seasonal Adjustment Methods for Employment and Unemployment Statistics," by Estela Bee Dagum (background paper No. 5, U.S. National Commission on Employment and Unemployment Statistics, February 1978).

News

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THE EMPLOYMENT SITUATION: NOVEMBER 1979

Employment rose in November and unemployment edged down, the Bureau of Labor Statistics of the U. S. Department of Labor reported today. The Nation's overall unemployment rate was 5.8 percent, compared with 6.0 percent in October. The jobless rate has fluctuated between 5.6 and 6.0 percent for more than a year.

Total employment--as measured by the monthly survey of households--rose 350,000 in November to 97.6 million. Total employment has grown by 1.9 million since November 1978, with more than half of the increase occurring between last November and March.

Nonfarm payroll employment--as measured by the monthly survey of establishments--advanced by 220,000 in November to 90.2 million. Over the year, payroll jobs increased by 2.4 million; again, much of the growth took place in the 4 months prior to April.

Unemployment

The number of unemployed persons edged down by 140,000 in November to 6.0 million. The overall unemployment rate moved from 6.0 percent in October to 5.8 percent, the same as the September rate and within the relatively narrow range in which unemployment has remained since August 1978. (See table A-1.)

Over-the-month declines in unemployment occurred among adult women and blacks, whose jobless rates declined to 5.5 and 10.8 percent, respectively, reversing increases of comparable magnitude in October. The unemployment rate for adult men (4.3 percent) and white workers (5.2 percent), on the other hand, were unchanged. In other worker categories, jobless rates fell among part-time and white-collar workers, while the rate for blue-collar workers was about unchanged from the previous month. Blue-collar unemployment was up markedly over the year, however, in contrast to movements among most other major worker groups. (See table A-2.)

Total Employment and the Labor Force

Total employment increased by 350,000 in November to 97.6 million. This increase took place primarily among adult women and white workers. Employment in white-collar jobs rose by 220,000 in

November, with most of the increase occurring among sales workers. Although movements in employment have tended to be erratic in recent months, employment has increased by 1.9 million over the past year. Adult women accounted for three-fourths of the year-to-year growth. (See table A-1.)

The civilian labor force, at 103.7 million, edged up by 210,000 in November. Over-the-month increases in the labor force occurred entirely among white workers, as the number of blacks in the labor force declined. Since November 1978, the overall labor force has advanced by 2.1 million.

The labor force participation rate was 63.8 percent in November. Over the year, participation has increased by 0.2 percentage point, due entirely to increased labor force activity among adult women. Adult male and teenage participation rates were both down from a year earlier.

Table A. Major indicators of labor market activity, seasonally adjusted

Selected categories	Quarterly averages			Monthly data			Oct.- Nov. change
	1978		1979	1979			
	III	II	III	Sept.	Oct.	Nov.	
HOUSEHOLD DATA							
Thousands of persons							
Civilian labor force.....	100,753	102,295	103,202	103,498	103,474	103,685	211
Total employment.....	94,726	96,415	97,208	97,513	97,293	97,646	353
Unemployment.....	6,027	5,880	5,994	5,985	6,182	6,039	-143
Not in labor force.....	58,482	58,886	58,604	58,515	58,901	58,904	3
Discouraged workers.....	853	826	739	N.A.	N.A.	N.A.	N.A.
Percent of labor force							
Unemployment rates:							
All workers.....	6.0	5.7	5.8	5.8	6.0	5.8	-0.2
Adult men.....	4.1	3.9	4.2	4.2	4.3	4.3	0
Adult women.....	6.1	5.7	5.6	5.5	5.8	5.5	-3
Teenagers.....	16.1	16.2	16.1	16.4	16.6	15.9	-7
White.....	5.2	4.9	5.1	5.1	5.2	5.2	0
Black and other.....	11.7	11.6	10.8	10.6	11.7	10.8	-9
Full-time workers.....	5.5	5.2	5.4	5.4	5.5	5.4	-1
ESTABLISHMENT DATA							
Thousands of jobs							
Nonfarm payroll employment.....	86,866	89,353	89,759	89,803	89,967p	90,185p	218p
Goods-producing industries.....	25,731	26,630	26,638	26,593	26,559p	26,604p	45p
Service-producing industries.....	61,135	62,723	63,121	63,210	63,408p	63,581p	173p
Hours of work							
Average weekly hours:							
Total private nonfarm.....	35.8	35.5	35.6	35.7	35.6p	35.6p	0p
Manufacturing.....	40.5	39.8	40.2	40.2	40.2p	40.0p	-0.2p
Manufacturing overtime.....	3.5	3.2	3.2	3.2	3.2p	3.2p	0p

p=preliminary

N.A.=not available

Industry Payroll Employment

Nonfarm payroll employment rose to 90.2 million in November, up 220,000 from the revised October level. Payroll employment increased 2.4 million over the past year. (See table B-1.)

Most of the November gain occurred in the service-producing sector. With the exception of government, employment growth took place throughout the sector. The services industry recorded the largest increase, 75,000, while trade and finance each advanced by about 40,000.

Employment in the goods-producing sector grew by 45,000, with nearly all of the increase occurring in construction. Employment in manufacturing was unchanged, as small gains in nondurable goods were offset by declines in durable goods. Within the durable goods industries, transportation equipment accounted for most of the decrease, due primarily to layoffs in automobile and truck production.

Hours

The average workweek of production or nonsupervisory workers on private nonagricultural payrolls was 35.6 in November, unchanged from October. Manufacturing hours fell by 0.2 to 40.0 hours and were 0.6 hour below the first quarter level. Sharp over-the-month declines occurred in both the primary metals and transportation equipment workweeks. Factory overtime remained at 3.2 hours for the third straight month. (See table B-2.)

The index of aggregate weekly hours rose 0.4 percent in November to 126.3 (1967=100), as a result of the over-the-month rise in employment. The index was up 2.1 percent over the year. (See table B-5.)

Hourly and Weekly Earnings

Average hourly earnings of production or nonsupervisory workers on private nonagricultural payrolls rose 0.8 percent in November and were 7.7 percent above November 1978 (seasonally adjusted). Average weekly earnings rose 1.0 percent in November and were up 7.1 percent over the year.

Before adjustment for seasonality, average hourly earnings rose 2 cents in November to \$6.34, 46 cents above November 1978; average weekly earnings were \$225.07 in November, down 55 cents from October but up \$14.57 over the year. (See table B-3.)

The Hourly Earnings Index

The Hourly Earnings Index—earnings adjusted for overtime in manufacturing, seasonality, and the effects of changes in the proportion of workers in high-wage and low-wage industries—was 236.9 (1967=100) in November, 0.8 percent higher than in October. The Index was 8.1 percent above November a year ago. In dollars of constant purchasing power, the Index decreased 4.1 percent during the 12-month period ended in October. (See table B-4.)

Explanatory Note

This release presents and analyzes statistics from two major surveys. Data on labor force, total employment, and unemployment (A tables) are derived from the Current Population Survey—a sample survey of households which is conducted by the Bureau of the Census for the Bureau of Labor Statistics. Beginning in September 1975, the sample was enlarged by 9,000 households in order to provide greater reliability for smaller States and thus permit the publication of annual statistics for all 50 States and the District of Columbia. These supplementary households were added to the 47,000 national household sample in January 1978; thus the sample now consists of about 56,000 households selected to represent the U.S. civilian noninstitutional population 16 years and over.

Statistics on nonagricultural payroll employment, hours, and earnings (B tables) are collected by the Bureau of Labor Statistics, in cooperation with State agencies, from payroll records of a sample of approximately 162,000 establishments. Unless otherwise indicated, data for both statistical series relate to the week containing the 12th day of the specified month.

Comparability of household and payroll employment statistics

Employment data from the household and payroll surveys differ in several basic respects. The household survey provides information on the labor force activity of the entire civilian noninstitutional population, 16 years of age and over, without duplication. Each person is classified as either employed, unemployed, or not in the labor force. The household survey counts employed persons in both agriculture and nonagricultural industries and, in addition to wage and salary workers (including private household workers), counts the self-employed, unpaid family workers, and persons "with a job but not at work" and not paid for the period absent.

The payroll survey relates only to paid wage and salary employees (regardless of age) on the payrolls of nonagricultural establishments. Persons who worked at more than one job during the survey week or otherwise appear on more than one payroll are counted more than once in the establishment survey. Such persons are counted only once in the household survey and are classified in the job at which they worked the greatest number of hours.

Unemployment

To be classified in the household survey as unemployed an individual must: (1) Have been without a

job during the survey week; (2) have made specific efforts to find employment sometime during the prior 4 weeks; and (3) be presently available for work. In addition, persons on layoff and those waiting to begin a new job (within 30 days), neither of whom must meet the jobseeking requirements, are also classified as unemployed. The unemployed total includes all persons who satisfactorily meet the above criteria, regardless of their eligibility for unemployment insurance benefits or any kind of public assistance. The unemployment rate represents the unemployed as a proportion of the civilian labor force (the employed and unemployed combined).

The Bureau regularly publishes a wide variety of labor market measures. See, for example, the demographic, occupational, and industry detail in tables A-2 and A-3 of this release and the comprehensive data package in Employment and Earnings each month. A special grouping of seven unemployment measures is set forth in table A-7. Identified by the symbols U-1 through U-7, these measures represent a range of possible definitions of unemployment and of the labor force—from the most restrictive (U-1) to the most comprehensive (U-7). The official rate of unemployment appears as U-5.

Seasonal adjustment

Nearly all economic phenomena are affected to some degree by seasonal variations. These are recurring, predictable events which are repeated more or less regularly each year—changes in weather, opening and closing of schools, major holidays, industry production schedules, etc. The cumulative effects of these events are often large. For example, on average over the year, they explain about 95 percent of the month-to-month variance in the unemployment figures. Since seasonal variations tend to be large relative to the underlying cyclical trends, it is necessary to use seasonally-adjusted data to interpret short-term economic developments. At the beginning of each year, seasonal adjustment factors for unemployment and other labor force series are calculated for use during the entire year, taking into account the prior year's experience.

All seasonally-adjusted civilian labor force and unemployment rate statistics, as well as the major employment and unemployment estimates, are computed by aggregating independently adjusted series. The official unemployment rate for all civilian workers is derived by dividing the estimate for total unem-

ployment (the sum of four seasonally-adjusted age-sex components) by the civilian labor force (the sum of 12 seasonally-adjusted age-sex components).

For establishment data, the seasonally-adjusted series for all employees, production workers, average weekly hours, and average hourly earnings are adjusted by aggregating the seasonally-adjusted data from the respective component series. These data are also revised annually, often in conjunction with benchmark (comprehensive counts of employment) adjustments. (The most recent revision of seasonally-adjusted data was based on data through June 1979.)

Sampling variability

Both the household and establishment survey statistics are subject to sampling error, which should be taken into account in evaluating the levels of a series as well as changes over time. Because the household survey is based upon a probability sample, the results may differ from the figures that would be obtained if it were possible to take a complete census using the same questionnaires and procedures. The standard error is the measure of sampling variability, that is, of the variation that occurs by chance because a sample rather than the entire population is surveyed. The chances are about 68 out of 100 that an estimate from the survey differs from a figure that would be obtained through a complete census by less than the standard error. Tables A through I in the "Explanatory Notes" of Employment and Earnings provide approximations of the standard errors for unemployment and other labor force categories. To obtain a 90-percent level of confidence, the confidence interval generally used by BLS, the errors should be multiplied by 1.6. The following examples provide an indication of the magnitude of sampling error: For a monthly change in total em-

ployment, the standard error is on the order of plus or minus 182,000. Similarly, the standard error on a change in total unemployment is approximately 115,000. The standard error on a change in the national unemployment rate is 0.12 percentage point.

Although the relatively large size of the monthly establishment survey assures a high degree of accuracy, the estimates derived from it also may differ from the figures obtained if a complete census using the same schedules and procedures were possible. However, since the estimating procedures utilize the previous month's level as the base in computing the current month's level of employment (link-relative technique), sampling and response errors may accumulate over several months. To remove this accumulated error, the employment estimates are adjusted to new benchmarks (comprehensive counts of employment), usually on an annual basis. In addition to taking account of sampling and response errors, the benchmark revision adjusts the estimates for changes in the industrial classification of individual establishments. Employment estimates are currently projected from March 1978 levels.

One measure of the reliability of the employment estimates for individual industries is the root-mean-square error (RMSE). The RMSE is the standard deviation adjusted for the bias in estimates. If the bias is small, the chances are about 68 out of 100 that an estimate from the sample would differ from its benchmark by less than the RMSE. For total nonagricultural employment, the RMSE is on the order of plus or minus 83,000. Measures of reliability (approximations of the RMSE) for establishment-survey data and actual amounts of revision due to benchmark adjustments are provided in tables K through P in the "Explanatory Notes" of Employment and Earnings.

HOUSEHOLD DATA

HOUSEHOLD DATA

Table A-1. Employment status of the noninstitutional population

(Numbers in thousands)

Employment status	Not seasonally adjusted			Seasonally adjusted						
	Nov.		Dec.	Nov.		July		Sept.		
	1978	1979	1979	1978	1979	1979	1979	1979	1979	
TOTAL										
Total noninstitutional population ¹	162,033	164,468	164,682	162,033	163,685	163,891	164,106	164,468	164,682	
Armed Forces ²	2,117	2,093	2,092	2,117	2,082	2,090	2,092	2,093	2,092	
Civilian noninstitutional population ¹	159,916	162,375	162,589	159,916	161,604	161,801	162,013	162,375	162,589	
Civilian labor force	101,659	103,939	103,719	101,628	103,059	103,049	103,498	103,474	103,685	
Participation rate	63.6	64.0	63.8	63.6	63.8	63.7	63.9	63.7	63.6	
Employed	96,029	98,158	97,943	95,751	97,210	96,900	97,453	97,293	97,646	
Employment-population ratio ³	59.3	59.7	59.5	59.1	59.4	59.1	59.4	59.2	59.3	
Agriculture	3,100	3,467	3,257	3,275	3,262	3,322	3,400	3,288	3,426	
Nonagricultural industries	92,929	94,691	94,686	92,476	93,949	93,578	94,113	94,005	94,221	
Unemployed	5,629	5,781	5,776	5,877	5,840	6,189	5,985	6,182	6,238	
Unemployment rate	5.5	5.6	5.6	5.8	5.7	6.0	5.8	6.0	5.8	
Not in labor force	58,258	58,436	58,870	58,288	58,545	58,752	58,515	58,901	58,904	
Men, 20 years and over										
Total noninstitutional population ¹	69,182	70,380	70,487	69,182	69,995	70,099	70,205	70,380	70,487	
Civilian noninstitutional population ¹	67,486	68,697	68,804	67,486	68,319	68,417	68,522	68,697	68,804	
Civilian labor force	53,924	54,878	54,662	53,938	54,567	54,527	54,653	54,696	54,683	
Participation rate	78.9	79.9	79.4	79.9	79.9	79.8	79.6	79.6	79.5	
Employed	51,955	52,816	52,485	51,825	52,319	52,227	52,022	52,366	52,347	
Employment-population ratio ³	75.1	75.0	74.5	74.9	74.7	74.5	74.6	74.4	74.3	
Agriculture	2,277	2,472	2,403	2,337	2,323	2,385	2,395	2,372	2,485	
Nonagricultural industries	49,678	50,344	50,082	49,488	49,996	49,843	49,627	49,994	49,862	
Unemployed	1,969	2,062	2,177	2,113	2,249	2,300	2,271	2,330	2,336	
Unemployment rate	3.7	3.8	4.0	3.9	4.1	4.2	4.2	4.3	4.3	
Not in labor force	13,563	13,619	14,142	13,548	13,752	13,890	13,669	14,001	14,121	
Women, 20 years and over										
Total noninstitutional population ¹	76,110	77,429	77,547	76,110	77,014	77,127	77,245	77,429	77,547	
Civilian noninstitutional population ¹	76,001	77,308	77,426	76,001	76,897	77,006	77,124	77,308	77,426	
Civilian labor force	38,583	39,958	39,963	38,095	39,010	39,292	39,331	39,516	39,516	
Participation rate	50.7	51.7	51.6	50.1	50.7	51.0	51.0	51.0	51.0	
Employed	36,362	37,684	37,799	35,887	36,861	36,968	37,178	37,039	37,325	
Employment-population ratio ³	47.8	48.7	48.7	47.2	47.9	47.9	48.1	47.8	48.1	
Agriculture	534	654	654	591	571	588	640	556	632	
Nonagricultural industries	35,827	37,030	37,207	35,316	36,276	36,371	36,538	36,483	36,693	
Unemployed	2,181	2,274	2,164	2,208	2,150	2,324	2,153	2,279	2,190	
Unemployment rate	5.7	5.7	5.4	5.8	5.5	5.9	5.5	5.8	5.5	
Not in labor force	37,458	37,350	37,463	37,906	37,887	37,714	37,793	37,991	37,910	
Both sexes, 16-19 years										
Total noninstitutional population ¹	16,741	16,659	16,648	16,741	16,677	16,665	16,655	16,659	16,648	
Civilian noninstitutional population ¹	16,429	16,370	16,368	16,429	16,387	16,377	16,367	16,370	16,368	
Civilian labor force	9,192	9,103	9,095	9,095	9,081	9,200	9,514	9,461	9,487	
Participation rate	55.9	55.6	55.6	54.4	54.9	56.4	58.1	57.8	58.0	
Employed	7,712	7,658	7,660	7,639	7,603	7,705	7,953	7,886	7,974	
Employment-population ratio ³	46.1	46.0	46.0	45.6	45.6	46.2	47.7	47.3	47.9	
Agriculture	289	341	262	367	355	381	365	360	329	
Nonagricultural industries	7,424	7,316	7,397	7,272	7,246	7,324	7,588	7,528	7,645	
Unemployed	1,480	1,445	1,435	1,556	1,480	1,525	1,561	1,573	1,513	
Unemployment rate	16.1	15.9	15.8	16.2	15.3	16.5	16.4	16.6	15.9	
Not in labor force	7,237	7,267	7,265	6,834	6,906	7,147	6,853	6,909	6,873	
White										
Total noninstitutional population ¹	142,031	143,937	144,101	142,031	143,383	143,461	143,621	143,937	144,101	
Civilian noninstitutional population ¹	140,332	142,296	142,461	140,332	141,661	141,822	141,981	142,296	142,461	
Civilian labor force	89,521	91,435	91,351	89,468	90,554	90,662	91,081	90,997	91,280	
Participation rate	63.8	64.3	64.1	63.8	63.9	64.2	64.2	63.9	64.1	
Employed	85,261	87,020	86,862	85,013	86,093	85,829	86,395	86,283	86,579	
Employment-population ratio ³	60.0	60.5	60.3	59.9	60.1	59.8	60.2	59.9	60.1	
Unemployed	4,260	4,415	4,490	4,455	4,460	4,832	4,687	4,755	4,702	
Unemployment rate	8.0	8.8	9.9	9.0	9.9	11.1	10.6	11.2	10.8	
Not in labor force	50,811	50,861	51,110	50,864	51,107	51,161	50,900	51,299	51,181	
Black and other										
Total noninstitutional population ¹	20,002	20,531	20,580	20,002	20,382	20,431	20,484	20,531	20,580	
Civilian noninstitutional population ¹	19,585	20,079	20,128	19,585	19,943	19,979	20,032	20,079	20,128	
Civilian labor force	12,137	12,504	12,368	12,163	12,364	12,340	12,408	12,546	12,392	
Participation rate	62.0	62.3	61.4	62.1	62.0	61.8	61.9	62.5	61.6	
Employed	10,768	11,137	11,081	10,746	11,025	10,987	11,095	11,083	11,035	
Employment-population ratio ³	53.0	54.2	53.8	53.7	54.1	53.8	54.2	54.0	53.7	
Unemployed	1,369	1,366	1,287	1,417	1,338	1,353	1,313	1,463	1,307	
Unemployment rate	11.3	10.9	10.8	11.7	10.8	11.0	10.6	11.7	10.8	
Not in labor force	7,487	7,575	7,760	7,422	7,579	7,639	7,624	7,533	7,736	

¹ The population and Armed Forces figures are not adjusted for seasonal variations; however, identical numbers appear in the unadjusted and seasonally adjusted columns.

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

HOUSEHOLD DATA

HOUSEHOLD DATA

Table A-2. Major unemployment indicators, seasonally adjusted

Selected categories	Number of unemployed persons (in thousands)		Unemployment rates					
	Nov.	Nov.	Nov.	July	Aug.	Sept.	Oct.	Nov.
	1978	1979	1978	1979	1979	1979	1979	1979
CHARACTERISTICS								
Total, 18 years and over	5,877	6,039	5.8	5.7	6.0	5.8	6.0	5.8
Men, 20 years and over	2,113	2,336	3.9	4.1	4.2	4.2	4.3	4.3
Women, 20 years and over	2,208	2,190	5.8	5.5	5.9	5.5	5.8	5.5
Both sexes, 18-19 years	1,556	1,513	16.2	15.3	16.5	16.4	16.6	15.9
White, total	4,855	4,702	5.0	4.9	5.3	5.1	5.2	5.2
Men, 20 years and over	1,826	1,882	3.4	3.6	3.8	3.7	3.7	3.8
Women, 20 years and over	1,648	1,664	5.0	4.7	5.2	4.8	5.1	4.9
Both sexes, 18-19 years	1,181	1,196	13.8	13.3	14.9	14.6	14.4	14.0
Black and other, total	1,417	1,335	11.7	10.8	11.0	10.6	11.7	10.8
Men, 20 years and over	484	493	8.3	8.3	8.3	7.9	9.0	8.3
Women, 20 years and over	543	510	10.3	9.8	10.3	9.6	10.1	9.3
Both sexes, 18-19 years	390	332	36.5	30.9	30.7	31.5	35.7	32.1
Married men, spouse present	961	1,172	2.4	2.9	3.0	2.8	2.9	2.9
Married women, spouse present	1,299	1,162	5.5	4.8	5.4	4.7	5.3	4.8
Women who head families	377	428	7.7	8.1	7.9	7.6	8.4	8.3
Full-time workers	4,491	4,769	5.2	5.3	5.4	5.4	5.5	5.4
Part-time workers	1,350	1,243	8.9	8.2	8.8	8.3	9.0	8.2
Unemployed 15 weeks and over ¹	1,196	1,190	1.2	1.0	1.2	1.1	1.2	1.1
Labor force time lost ²	—	—	6.2	6.4	6.5	6.2	6.4	6.4
OCCUPATION³								
White-collar workers	1,608	1,611	3.2	3.2	3.6	3.3	3.5	3.1
Professional and technical	358	365	2.4	2.5	2.6	2.5	2.8	2.4
Managers and administrators, except farm	222	201	2.2	1.9	2.3	2.2	2.3	1.9
Sales workers	201	231	3.1	3.5	4.2	3.9	3.8	3.5
Clerical workers	827	813	4.5	4.4	5.0	4.5	4.7	4.3
Blue-collar workers	2,219	2,607	6.4	6.8	7.6	7.1	7.3	7.5
Craft and kindred workers	527	671	4.0	4.2	4.9	4.1	4.8	4.9
Operatives, except transport	907	1,083	7.5	8.3	9.3	9.2	9.2	8.9
Transport equipment operatives	161	186	4.2	5.2	6.8	6.2	5.6	4.9
Nonfarm laborers	628	666	11.6	10.9	11.5	10.8	10.6	12.7
Service workers	1,035	912	7.8	7.2	7.0	6.7	7.0	6.6
Farm workers	92	127	3.2	4.5	3.8	4.2	4.3	4.4
INDUSTRY⁴								
Nonagricultural private wage and salary workers ⁵	4,188	4,460	5.6	5.7	6.1	5.8	6.0	5.9
Construction	530	560	10.8	9.5	9.5	8.8	10.1	10.5
Manufacturing	1,154	1,355	5.1	5.8	6.2	6.1	6.2	5.9
Durable goods	621	788	4.6	5.5	5.7	5.3	5.6	5.7
Non-durable goods	533	567	5.8	6.2	6.9	7.3	7.0	6.1
Transportation and public utilities	178	237	3.3	3.9	3.8	4.1	3.8	4.3
Wholesale and retail trade	1,198	1,228	6.5	6.2	6.6	6.4	6.5	6.5
Finance and service industries	1,096 ⁶	1,032	5.0	4.9	5.4	4.7	4.9	4.6
Government workers	616	578	3.9	3.5	3.8	3.3	4.1	3.6
Agricultural wage and salary workers ⁷	122	171	7.9	10.4	9.9	10.3	9.8	10.2

¹ Unemployment rate calculated as a percent of civilian labor force.² Aggregate hours lost by the unemployed and persons on part time for economic reasons as a percent of potentially available labor force hours.³ Unemployment by occupation includes all experienced unemployed persons, whereas that by

by industry covers only unemployed wage and salary workers.

⁴ Includes mining, not shown separately.

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Table A-3. Selected employment indicators

Subtotal categories	Not seasonally adjusted		Seasonally adjusted					
	Nov.	Nov.	Nov.	July	Aug.	Sept.	Oct.	Nov.
	1978	1979	1978	1979	1979	1979	1979	1979
CHARACTERISTICS								
Total employed, 16 years and over	96,029	97,943	95,751	97,210	96,900	97,513	97,293	97,646
Men	55,976	56,433	56,096	56,595	56,316	56,653	56,538	56,545
Women	40,058	41,510	39,655	40,615	40,585	40,860	40,758	41,101
Married men, spouse present	39,136	39,003	38,944	39,163	39,146	39,175	39,135	38,809
Married women, spouse present	22,685	23,533	22,274	22,890	22,777	22,965	22,922	22,937
OCCUPATION								
White-collar workers	48,355	50,352	47,888	49,573	49,615	49,779	49,648	49,869
Professional and technical	14,642	15,300	14,297	15,063	14,983	15,078	14,929	14,941
Managers and administrators, except farm.	10,148	10,656	10,030	10,675	10,772	10,640	10,648	10,530
Sales workers	6,174	6,432	6,192	6,161	6,085	6,114	6,247	6,451
Clerical workers	17,392	17,965	17,369	17,673	17,774	17,947	17,825	17,947
Blue-collar workers	32,110	32,084	32,202	31,949	31,767	32,287	32,191	32,169
Craft and kindred workers	12,650	12,912	12,846	12,832	12,755	13,057	12,974	12,912
Operatives, except transport	11,206	11,081	11,177	10,853	10,880	10,987	10,969	11,048
Transport equipment operators	3,669	3,677	3,640	3,610	3,571	3,622	3,561	3,648
Nonfarm laborers	4,585	4,815	4,739	4,652	4,561	4,621	4,667	4,561
Service workers	12,978	12,500	13,009	12,697	12,591	12,796	12,377	12,935
Farm workers	2,586	2,606	2,739	2,657	2,703	2,736	2,702	2,760
MAJOR INDUSTRY AND CLASS OF WORKER								
Agriculture	1,298	1,370	1,424	1,403	1,363	1,391	1,373	1,504
Wage and salary workers	1,561	1,629	1,563	1,552	1,632	1,678	1,617	1,633
Self-employed workers	241	257	293	294	310	327	312	313
Unpaid family workers								
Nonegricultural industries	86,168	87,582	85,578	86,277	86,227	86,891	87,032	86,983
Government	15,604	15,624	15,373	15,382	15,260	15,450	15,549	15,393
Private industries	70,564	71,958	70,205	70,895	70,967	71,441	71,483	71,590
Private households	1,361	1,235	1,335	1,217	1,205	1,332	1,270	1,212
Owner industries	69,203	70,723	68,870	69,678	69,761	70,109	70,213	70,378
Self-employed workers	6,341	6,126	6,370	6,753	6,489	6,662	6,814	6,750
Unpaid family workers	419	377	455	529	483	453	421	409
PERSONS AT WORK¹								
Nonegricultural industries	89,170	90,948	86,653	89,074	89,154	88,824	88,487	88,372
Full-time schedule	72,797	74,241	73,394	73,138	73,222	73,252	73,164	72,785
Part-time for economic reasons	2,977	3,195	3,131	3,340	3,355	3,111	3,230	3,358
Usually work full time	1,241	1,378	1,279	1,394	1,478	1,255	1,293	1,419
Usually work part time	1,736	1,817	1,852	1,946	1,877	1,856	1,937	1,939
Part-time for noneconomic reasons	13,396	13,512	12,128	12,597	12,577	12,461	12,093	12,228

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

Table A-4. Duration of unemployment

Weeks of unemployment	Not seasonally adjusted		Seasonally adjusted					
	Nov.	Nov.	Nov.	July	Aug.	Sept.	Oct.	Nov.
	1978	1979	1978	1979	1979	1979	1979	1979
DURATION								
Less than 5 weeks	2,757	2,890	2,833	2,788	3,226	2,743	2,963	2,970
5 to 14 weeks	1,800	1,820	1,774	1,970	1,743	2,050	1,965	1,795
15 weeks and over	1,072	1,067	1,196	1,052	1,191	1,133	1,223	1,190
15 to 20 weeks	601	583	685	600	662	627	703	665
21 weeks and over	472	484	511	451	529	507	520	524
Average (mean) duration, in weeks	10.9	11.0	11.0	10.0	10.5	10.6	10.5	10.5
Median duration, in weeks	5.7	5.0	5.4	6.1	4.9	5.9	5.6	5.2
PERCENT DISTRIBUTION								
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than 5 weeks	49.0	50.0	48.8	48.0	52.4	46.3	48.2	49.9
5 to 14 weeks	32.0	31.5	30.6	33.9	28.3	38.6	31.9	30.1
15 weeks and over	19.0	18.5	20.6	18.1	19.3	15.1	19.9	20.0
15 to 20 weeks	10.7	10.1	11.8	10.3	10.7	10.6	11.4	11.2
21 weeks and over	8.4	8.4	8.8	7.8	8.6	8.5	8.4	8.8

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Table A-5. Reasons for unemployment

(Numbers in thousands)

Reason	Not seasonally adjusted		Seasonally adjusted					
	Nov.	Nov.	Nov.	July	Aug.	Sept.	Oct.	Nov.
	1978	1979	1978	1979	1979	1979	1979	1979
NUMBER OF UNEMPLOYED								
Lost last job	2,236	2,589	2,372	2,532	2,724	2,608	2,771	2,745
On layoff	833	855	746	793	960	836	916	1,008
Other job losers	1,603	1,734	1,626	1,739	1,765	1,771	1,855	1,737
Left last job	822	840	825	838	898	818	825	883
Reentered labor force	1,770	1,600	1,754	1,737	1,758	1,785	1,788	1,665
Seeking first job	802	667	872	698	720	803	793	737
PERCENT DISTRIBUTION								
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Job losers	39.8	44.8	40.7	43.7	44.4	43.4	44.9	45.8
On layoff	11.3	14.8	12.8	13.7	15.6	13.9	14.6	16.8
Other job losers	28.5	30.0	27.9	30.0	28.8	29.5	30.0	29.0
Job leavers	14.6	14.5	14.2	14.4	14.6	13.6	13.4	14.1
Reentrants	31.4	29.1	30.1	29.9	29.3	29.7	29.0	27.8
New entrants	14.2	11.6	15.0	12.0	11.7	13.4	12.8	12.3
UNEMPLOYED AS A PERCENT OF THE CIVILIAN LABOR FORCE								
Job losers	2.2	2.5	2.3	2.5	2.6	2.5	2.7	2.6
On layoff .....	.8	.8	.8	.8	.9	.8	.8	.8
Reentrants	1.7	1.6	1.7	1.7	1.7	1.7	1.7	1.6
New entrants .....	.8	.6	.9	.7	.7	.8	.8	.7

Table A-6. Unemployment by sex and age, seasonally adjusted

Sex and age	Number of unemployed persons (in thousands)		Unemployment rates					
	Nov.	Nov.	Nov.	July	Aug.	Sept.	Oct.	Nov.
	1978	1979	1978	1979	1979	1979	1979	1979
Total, 18 years and over	5,877	6,039	5.8	5.7	6.0	5.8	6.0	5.8
18 to 18 years	1,556	1,513	16.2	15.3	16.5	16.4	16.6	15.9
18 to 17 years	781	695	19.3	17.1	18.1	16.8	18.5	17.4
18 to 16 years	776	819	14.0	14.4	15.5	16.0	15.3	14.8
20 to 24 years	1,361	1,381	9.0	9.0	9.3	9.2	9.5	8.8
25 years and over	2,951	3,177	3.8	3.9	4.1	3.8	4.0	4.0
25 to 54 years	2,514	2,762	4.0	4.0	4.3	4.1	4.3	4.3
55 years and over	438	412	2.9	3.2	3.2	2.9	2.9	2.8
Men, 18 years and over	2,923	3,130	5.0	5.0	5.2	5.2	5.2	5.2
18 to 18 years	810	794	15.9	14.9	16.0	16.2	15.7	15.9
18 to 17 years	436	391	20.1	15.2	17.3	16.6	17.1	18.3
18 to 16 years	371	399	12.7	14.9	15.3	15.6	14.6	13.9
20 to 24 years	659	689	8.5	8.8	8.9	8.8	9.5	8.4
25 years and over	1,413	1,647	3.1	3.3	3.5	3.4	3.4	3.5
25 to 54 years	1,188	1,420	3.2	3.3	3.6	3.5	3.6	3.8
55 years and over	230	235	2.5	3.4	3.2	2.9	2.7	2.6
Women, 18 years and over	2,954	2,909	6.9	6.6	7.0	6.6	7.0	6.6
18 to 18 years	746	719	16.5	15.8	17.1	16.7	17.6	16.0
18 to 17 years	345	304	18.3	19.2	18.9	17.0	20.0	16.3
18 to 16 years	407	420	15.5	13.8	15.8	16.5	16.0	15.9
20 to 24 years	662	652	9.6	9.3	9.9	9.7	9.6	9.3
25 years and over	1,538	1,530	4.9	4.7	5.0	4.6	4.9	4.7
25 to 54 years	1,326	1,341	5.2	5.0	5.4	4.9	5.3	5.0
55 years and over	198	177	3.5	2.9	3.3	3.0	3.4	3.1

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Table A-7. Range of unemployment measures based on varying definitions of unemployment and the labor force, seasonally adjusted

Measure	Quarterly averages					Monthly data		
	1978		1979			1979		
	III	IV	I	II	III	Sept.	Oct.	Nov.
U-1—Persons unemployed 15 weeks or longer as a percent of the civilian labor force	1.3	1.2	1.2	1.2	1.1	1.1	1.2	1.1
U-2—Job losers as a percent of the civilian labor force	2.4	2.4	2.4	2.4	2.5	2.5	2.7	2.6
U-3—Unemployed persons 25 years and over as a percent of the civilian labor force 25 years and over	4.1	3.9	3.9	3.9	3.9	3.8	4.0	4.0
U-4—Unemployed full-time jobseekers as a percent of the full-time labor force	5.5	5.2	5.2	5.2	5.4	5.4	5.5	5.4
U-5—Total unemployed as a percent of the civilian labor force (official measure)	6.0	5.8	5.7	5.7	5.8	5.8	6.0	5.8
U-6—Total full-time jobseekers plus % part-time jobseekers plus % total on part time for economic reasons as a percent of the civilian labor force less % of the part-time labor force	7.5	7.2	7.2	7.3	7.3	7.2	7.4	7.4
U-7—Total full-time jobseekers plus % part-time jobseekers plus % total on part time for economic reasons plus discouraged workers as a percent of the civilian labor force plus discouraged workers less % of the part-time labor force	8.4	8.0	7.9	8.1	8.0	F.A.	F.A.	F.A.

N.A. = not available.

Table A-8. Employment status of the noninstitutional population by race and Hispanic origin, not seasonally adjusted

Employment status	Total		White		Black ¹		Hispanic origin ²	
	Nov. 1978	Nov. 1979	Nov. 1978	Nov. 1979	Nov. 1978	Nov. 1979	Nov. 1978	Nov. 1979
	TOTAL							
Civilian noninstitutional population	159,916	162,589	140,332	142,461	16,795	17,183	7,451	7,834
Civilian labor force	101,659	103,719	89,521	91,351	10,338	10,476	4,796	4,979
Percent of population	63.6	63.8	63.8	64.1	63.6	61.0	64.4	63.6
Employment	96,025	97,963	85,261	86,862	9,091	9,306	4,413	4,537
Agriculture	3,100	3,257	2,814	2,985	238	229	183	223
Nonagricultural industries	92,929	94,706	82,447	83,877	8,853	9,077	4,230	4,314
Unemployment	5,639	5,776	4,260	4,490	1,247	1,170	383	442
Unemployment rate	5.5	5.6	4.8	4.9	12.1	11.2	8.0	8.9
Not in labor force	58,258	58,870	50,811	51,110	6,457	6,707	2,655	2,855

¹ Data relate to black workers only. According to the 1970 Census, they comprised about 88 percent of the "black and other" population group.² Data on persons of Hispanic origin are tabulated separately, without regard to race, which means that they are also included in the data for white and black workers. At the time of the 1970 Census, approximately 58 percent of this population was white.

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Table A-9. Employment status of male Vietnam-era veterans and nonveterans by age, not seasonally adjusted

(Numbers in thousands)

Veteran status and age	Civilian noninstitutional population		Civilian labor force								
			Total		Employed		Unemployed				
	Nov. 1978	Nov. 1979	Nov. 1978	Nov. 1979	Nov. 1978	Nov. 1979	Nov. 1978	Nov. 1979	Nov. 1978	Nov. 1979	
VETERANS¹											
Total, 20 years and over	8,424	8,553	7,984	8,106	7,655	7,792	329	314	4.1	3.9	
20 to 24 years	664	477	593	438	529	364	64	54	10.8	12.3	
25 to 29 years	6,998	7,184	6,738	6,903	6,895	6,664	283	239	3.6	3.5	
25 to 29 years	2,175	1,867	2,079	1,739	1,956	1,669	123	90	5.9	5.2	
30 to 34 years	3,524	3,630	3,401	3,536	3,310	3,435	91	101	2.7	2.9	
35 to 39 years	1,299	1,687	1,258	1,628	1,229	1,580	29	48	2.3	2.9	
40 years and over	762	892	653	765	631	744	22	21	3.4	2.7	
NONVETERANS²											
Total, 25 to 39 years	14,011	14,916	13,353	14,217	12,892	13,604	461	613	3.5	4.3	
25 to 29 years	6,338	6,819	6,001	6,478	5,749	6,152	252	326	4.2	5.0	
30 to 34 years	4,019	4,203	3,857	4,106	3,737	3,937	120	169	3.1	4.1	
35 to 39 years	3,654	3,794	3,495	3,633	3,406	3,515	89	118	2.5	3.2	

¹ Vietnam-era veterans are those who served between August 5, 1964 and May 7, 1975.² Nonveterans are males who have never served in the Armed Forces. Published data are limited to those 25-39 years of age, the group that most closely corresponds to the bulk of the Vietnam-era veteran population.

NOTE: Seasonally-adjusted data are no longer being provided because the changing age composition of the Vietnam-era veterans' population distorts the ability to identify seasonality in the series.

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Table A-10. Employment status of the noninstitutional population for the ten largest States

State and employment status	Not seasonally adjusted ¹			Seasonally adjusted					
	Nov. 1976	Oct. 1979	Nov. 1979	Nov. 1976	July 1979	Aug. 1979	Sept. 1979	Oct. 1979	Nov. 1979
California									
Civilian noninstitutional population ²	16,477	16,606	16,832	16,477	16,704	16,731	16,760	16,804	16,832
Civilian labor force	10,687	11,067	11,050	10,716	10,919	11,051	11,038	11,083	11,081
Employed	10,041	10,431	10,420	10,045	10,250	10,330	10,325	10,395	10,444
Unemployed	646	636	630	671	669	721	713	688	637
Unemployment rate	6.0	5.8	5.7	6.1	5.8	6.5	6.5	6.2	5.7
Florida									
Civilian noninstitutional population ²	6,585	6,781	6,799	6,585	6,723	6,740	6,758	6,781	6,799
Civilian labor force	3,710	3,820	3,737	(2)	(2)	(2)	(2)	(2)	(2)
Employed	3,479	3,580	3,518	(2)	(2)	(2)	(2)	(2)	(2)
Unemployed	231	241	219	(2)	(2)	(2)	(2)	(2)	(2)
Unemployment rate	6.2	6.3	5.9	(2)	(2)	(2)	(2)	(2)	(2)
Illinois									
Civilian noninstitutional population ²	8,236	8,309	8,315	8,236	8,288	8,289	8,295	8,309	8,315
Civilian labor force	5,814	5,816	5,828	5,830	5,876	5,889	5,890	5,891	5,894
Employed	5,133	5,118	5,130	5,120	5,131	5,112	5,069	5,100	5,117
Unemployed	280	296	298	310	285	237	331	311	327
Unemployment rate	5.2	5.5	5.5	5.7	4.6	4.4	6.1	5.7	6.0
Massachusetts									
Civilian noninstitutional population ²	4,386	4,393	4,397	4,386	4,377 ³	4,381	4,385	4,393	4,397
Civilian labor force	2,836	2,851	2,819	(2)	(2)	(2)	(2)	(2)	(2)
Employed	2,668	2,727	2,685	2,675	2,736	2,757	2,750	2,706	2,673
Unemployed	168	124	134	(2)	(2)	(2)	(2)	(2)	(2)
Unemployment rate	5.2	4.4	4.8	(2)	(2)	(2)	(2)	(2)	(2)
Michigan									
Civilian noninstitutional population ²	6,679	6,765	6,773	6,679	6,738	6,744	6,752	6,765	6,773
Civilian labor force	4,241	4,363	4,369	(2)	(2)	(2)	(2)	(2)	(2)
Employed	3,960	4,026	4,024	(2)	(2)	(2)	(2)	(2)	(2)
Unemployed	280	315	345	299	323	302	348	378	364
Unemployment rate	6.6	7.2	7.9	(2)	(2)	(2)	(2)	(2)	(2)
New Jersey									
Civilian noninstitutional population ²	5,477	5,537	5,582	5,477	5,517	5,522	5,527	5,537	5,582
Civilian labor force	3,564	3,563	3,547	3,563	3,530	3,528	3,568	3,570	3,527
Employed	3,365	3,339	3,315	3,330	3,266	3,262	3,349	3,322	3,281
Unemployed	219	226	232	233	264	266	219	248	246
Unemployment rate	6.1	6.3	6.6	6.5	7.5	7.5	6.1	6.9	7.0
New York									
Civilian noninstitutional population ²	13,268	13,320	13,324	13,268	13,298	13,300	13,304	13,320	13,324
Civilian labor force	7,906	7,952	8,094	7,965	8,001	7,971	7,989	8,018	8,153
Employed	7,340	7,391	7,532	7,405	7,400	7,387	7,393	7,425	7,597
Unemployed	566	561	561	560	601	584	596	593	556
Unemployment rate	7.2	7.1	6.9	7.0	7.5	7.8	7.5	7.4	6.8
Ohio									
Civilian noninstitutional population ²	7,900	7,975	7,981	7,900	7,949	7,955	7,961	7,975	7,981
Civilian labor force	5,107	5,122	5,098	5,109	5,095	5,045	5,084	5,100	5,100
Employed	4,856	4,819	4,829	4,835	4,850	4,887	4,793	4,778	4,808
Unemployed	251	302	269	274	345	358	291	322	292
Unemployment rate	4.9	5.9	5.3	5.4	6.9	7.1	5.7	6.3	5.7
Pennsylvania									
Civilian noninstitutional population ²	8,870	8,937	8,942	8,870	8,913	8,916	8,923	8,937	8,942
Civilian labor force	5,332	5,364	5,375	5,350	5,316	5,286	5,327	5,339	5,392
Employed	4,980	4,938	5,006	4,960	4,900	4,903	4,951	4,984	4,966
Unemployed	352	426	369	390	336	385	376	445	406
Unemployment rate	6.6	7.9	6.9	7.3	6.3	7.3	7.1	8.3	7.5
Texas									
Civilian noninstitutional population ²	9,272	9,478	9,496	9,272	9,416	9,433	9,451	9,478	9,496
Civilian labor force	6,100	6,268	6,272	6,094	6,183	6,186	6,241	6,245	6,266
Employed	5,908	6,028	6,003	5,797	5,907	5,866	5,996	5,989	5,992
Unemployed	292	236	269	297	276	270	245	256	274
Unemployment rate	4.8	3.8	4.3	4.9	4.5	4.4	3.9	4.1	4.4

¹ The population figures are not adjusted for seasonal variations; therefore, identical numbers appear in the unadjusted and the seasonally adjusted columns.

² These are the official Bureau of Labor Statistics estimates used in the administration of Federal fund allocation programs.

³ Seasonally-adjusted data are not presented for this series, because the variations that are due to seasonal influences cannot be separated with sufficient precision from those which arise from the biennial-cycle and irregular components of the original time series.

ESTABLISHMENT DATA

ESTABLISHMENT DATA

Table B-1. Employees on nonagricultural payrolls by industry

(In thousands)

Industry	Not seasonally adjusted				Seasonally adjusted					
	NOV. 1978	SEPT. 1979	DEC. 1979	NOV. 1979	JULY 1978	AUG. 1979	SEPT. 1979	DEC. 1979	NOV. 1979	
TOTAL	68,422	70,211	90,667	90,987	47,600	49,713	44,762	69,503	69,967	90,145
GOODS-PRODUCING	26,407	27,156	27,043	26,901	26,120	26,723	26,599	26,593	26,554	26,010
MINING	420	480	463	467	419	456	468	473	440	446
CONSTRUCTION	4,584	4,984	4,975	4,897	4,426	4,488	4,674	4,671	4,663	4,751
MANUFACTURING	20,903	21,192	21,005	21,017	20,772	21,079	20,957	20,449	20,686	21,087
Production workers	15,956	15,172	15,076	15,004	14,933	15,000	14,956	14,957	14,900	14,877
DURABLE GOODS	12,583	12,905	12,729	12,667	12,510	12,746	12,710	12,737	12,600	12,914
Production workers	9,057	9,116	9,052	9,004	8,953	9,124	9,080	9,088	9,045	9,120
Lumber and wood products	757.2	776.3	771.6	769.6	760	753	752	750	740	752
Furniture and fixtures	496.0	495.3	497.9	499.0	492	494	494	490	492	495
Stone, clay, and glass products	712.9	723.6	720.2	716.9	706	711	710	708	708	709
Primary metal industries	1,236.1	1,244.3	1,224.1	1,221.0	1,192	1,208	1,195	1,198	1,225	1,227
Fabricated metal products	1,717.9	1,735.3	1,730.7	1,741.2	1,706	1,730	1,714	1,715	1,723	1,729
Machinery, except electrical	2,384.9	2,404.8	2,403.3	2,401.6	2,392	2,500	2,492	2,490	2,491	2,496
Electric and electronic equipment	2,057.2	2,138.1	2,101.1	2,104.9	2,037	2,111	2,092	2,111	2,132	2,128
Transportation equipment	2,073.8	2,051.0	2,040.1	2,031.0	2,057	2,073	2,079	2,076	2,074	1,995
Instruments and related products	672.0	692.7	695.0	696.9	670	694	695	692	696	695
Miscellaneous manufacturing	673.6	663.8	666.5	663.1	660	650	651	648	649	650
NONDURABLE GOODS	6,320	6,387	6,356	6,330	6,262	6,293	6,263	6,112	6,128	6,273
Production workers	6,031	6,058	6,024	6,000	5,950	5,966	5,942	5,891	5,925	5,989
Food and kindred products	1,746.9	1,818.1	1,785.9	1,731.2	1,725	1,707	1,696	1,691	1,705	1,719
Tobacco manufactures	75.2	72.2	72.2	64.0	69	69	66	65	65	60
Textile mill products	901.8	869.4	895.3	895.8	897	892	896	894	886	869
Apparel and other textile products	1,345.0	1,309.1	1,316.2	1,312.5	1,330	1,124	1,162	1,144	1,198	1,149
Paper and allied products	702.4	716.5	717.6	717.5	700	710	717	714	715	719
Printing and publishing	1,215.1	1,268.1	1,255.4	1,265.6	1,212	1,250	1,247	1,245	1,253	1,261
Chemicals and allied products	1,103.2	1,114.9	1,116.1	1,116.8	1,102	1,110	1,111	1,111	1,114	1,118
Petroleum and coal products	210.7	216.1	216.0	219.1	210	212	213	215	216	219
Rubber and misc. plastics products	771.9	782.0	782.5	782.1	763	777	780	781	780	783
Leather and leather products	255.1	243.1	243.0	243.3	254	249	243	243	243	244
SERVICE-PRODUCING	62,215	63,055	63,624	64,086	61,720	62,900	63,163	63,210	63,400	63,931
TRANSPORTATION AND PUBLIC UTILITIES	5,063	5,242	5,243	5,259	5,038	5,149	5,150	5,150	5,217	5,233
WHOLESALE AND RETAIL TRADE	20,095	20,260	20,315	20,557	19,829	20,122	20,126	20,104	20,240	20,285
WHOLESALE TRADE	5,068	5,200	5,238	5,254	5,058	5,182	5,185	5,150	5,238	5,238
RETAIL TRADE	15,026	15,058	15,081	15,303	14,773	14,940	14,941	14,954	15,002	15,047
FINANCE, INSURANCE, AND REAL ESTATE	4,617	5,002	5,013	5,068	4,627	4,972	5,003	4,997	5,018	5,056
SERVICES	16,537	17,225	17,295	17,317	16,354	17,092	17,141	17,141	17,240	17,336
GOVERNMENT	15,703	15,326	15,756	15,907	15,672	15,635	15,690	15,673	15,669	15,673
FEDERAL	7,746	7,751	7,756	7,760	7,757	7,785	7,813	7,792	7,770	7,771
STATE AND LOCAL	12,957	12,575	13,004	13,147	12,715	12,850	12,876	12,911	12,899	12,902

preliminary.

NOTE: Establishment data shown in tables B-1 through B-8 have been revised based on March 1978 benchmark levels and updated seasonal adjustment factors; consequently, they are not comparable with data published prior to the October 5, 1979 release. For a discussion of the effect of these revisions, see "BLS Establishments: Estimates Revised to March 1978 Benchmark Levels," Employment and Earnings, October 1979, Vol. 26, No. 10.

ESTABLISHMENT DATA

ESTABLISHMENT DATA

Table B-2. Average weekly hours of production or nonsupervisory workers, on private nonagricultural payrolls by industry

Industry	Not seasonally adjusted				Seasonally adjusted					
	NOV. 1978	SEPT. 1979	OCT. 1979 ^a	NOV. 1979 ^a	NOV. 1978	JULY 1979	AUG. 1979	SEPT. 1979	OCT. 1979 ^a	NOV. 1979
TOTAL PRIVATE	35.8	35.8	35.7	35.5	35.8	35.6	35.6	35.7	35.6	35.6
MINING	43.8	43.5	43.6	43.8	43.3	41.0	43.2	43.1	43.0	43.3
CONSTRUCTION	36.5	37.9	37.0	36.5	36.8	36.8	37.2	37.5	36.6	36.6
MANUFACTURING	40.9	40.3	40.3	40.2	40.6	40.2	40.1	40.2	40.2	40.0
Overtime hours	3.0	3.0	3.0	3.3	3.7	3.3	3.2	3.2	3.2	3.2
DURABLE GOODS	41.6	40.8	40.8	40.7	41.3	40.7	40.7	40.7	40.7	40.5
Overtime hours	4.1	3.6	3.5	3.4	4.0	3.5	3.3	3.3	3.3	3.3
Lumber and wood products	39.0	40.1	39.7	38.6	40.0	39.3	39.5	39.7	39.3	38.7
Furniture and fixtures	39.4	39.0	39.3	39.1	39.1	38.4	38.3	39.6	38.8	38.8
Stone, clay, and glass products	42.1	41.7	41.7	41.7	41.8	41.8	41.3	41.5	41.3	41.5
Primary metal industries	42.2	41.3	40.9	40.4	42.2	41.3	41.0	41.9	41.1	40.4
Fabricated metal products	41.4	40.6	40.9	40.9	41.1	40.8	40.6	40.7	40.8	40.6
Machinery, except electrical	42.5	41.9	41.4	41.4	42.2	41.9	41.4	41.9	41.6	41.9
Electric and electronic equipment	40.7	40.5	40.3	40.9	40.4	40.2	39.8	40.3	40.3	40.6
Transportation equipment	43.0	40.7	41.2	40.5	42.7	40.9	41.7	40.6	41.2	40.3
Instruments and related products	41.3	40.7	40.8	41.7	40.9	40.7	40.5	40.8	40.7	41.3
Miscellaneous manufacturing	39.8	39.3	39.4	38.8	38.9	39.3	39.1	39.1	39.2	39.3
NONDURABLE GOODS	39.7	39.6	39.4	39.5	39.5	39.2	39.2	39.3	39.3	39.3
Overtime hours	3.3	3.5	3.2	3.2	3.2	3.0	3.0	3.1	3.0	3.1
Food and kindred products	40.0	40.6	40.1	40.0	39.8	39.8	39.7	40.0	40.0	39.4
Tobacco manufacturing	38.7	39.1	38.8	38.8	37.5	38.5	38.0	38.8	38.3	37.4
Textile mill products	40.6	40.8	40.0	41.1	40.4	40.1	40.1	40.6	40.8	40.9
Apparel and other textile products	35.9	35.4	35.5	35.5	35.0	35.3	35.3	35.3	35.3	35.2
Paper and allied products	43.2	42.7	42.7	42.7	43.0	42.5	42.6	42.8	42.7	42.5
Printing and publishing	38.1	37.0	37.5	37.9	37.8	37.5	37.7	37.3	37.4	37.6
Chemicals and allied products	42.3	41.8	41.7	42.1	42.1	41.9	42.0	41.7	41.7	41.9
Petroleum and coal products	44.5	44.7	44.2	44.0	44.1	43.4	43.7	44.1	43.8	43.6
Rubber and misc. plastics products	41.8	40.3	40.8	40.3	41.1	40.8	40.2	40.3	40.2	39.8
Leather and leather products	37.0	36.8	36.5	36.8	36.9	36.6	36.5	37.0	36.5	36.7
TRANSPORTATION AND PUBLIC UTILITIES	39.9	39.9	39.8	39.7	39.9	39.7	39.9	39.9	39.8	39.7
WHOLESALE AND RETAIL TRADE	32.5	32.7	32.5	32.4	32.8	32.8	32.5	32.4	32.7	32.7
WHOLESALE TRADE	36.8	36.8	36.9	36.9	36.8	36.8	36.7	36.7	36.8	36.8
RETAIL TRADE	30.8	30.7	30.5	30.4	30.9	30.9	30.5	30.7	30.7	30.7
FINANCE, INSURANCE, AND REAL ESTATE	36.3	36.3	36.3	36.4	36.4	36.3	36.1	36.4	36.2	36.5
SERVICES	32.6	32.7	32.6	32.6	32.7	32.8	32.7	32.7	32.6	32.7

¹ Data relate to production workers in mining and manufacturing; to construction workers in construction; and to nonsupervisory workers in transportation and public utilities; wholesale and retail trade; finance, insurance, and real estate; and services. These groups account for approximately four-fifths of the total employment on private nonagricultural payrolls.

^a = preliminary.

ESTABLISHMENT DATA

ESTABLISHMENT DATA

Table B-3. Average hourly and weekly earnings of production or nonsupervisory workers¹ on private nonagricultural payrolls by industry

Industry	Average hourly earnings				Average weekly earnings			
	NOV. 1976	SEPT. 1976	OCT. P. 1976	NOV. P. 1976	NOV. 1976	SEPT. 1976	OCT. P. 1976	NOV. P. 1976
TOTAL PRIVATE	65.86	66.31	66.32	66.36	\$210.50	\$225.90	\$225.62	\$225.07
<i>Seasonally adjusted</i>	5.67	6.26	6.27	6.32	210.15	223.48	223.41	224.99
MINING	8.05	8.57	8.57	8.71	358.59	372.80	373.65	381.50
CONSTRUCTION	8.89	9.51	9.49	9.49	326.44	360.43	356.02	366.39
MANUFACTURING	6.38	6.80	6.82	6.85	260.94	274.04	274.05	275.37
DURABLE GOODS	6.82	7.24	7.25	7.28	283.71	295.30	295.80	296.30
Lumber and wood products	5.75	6.32	6.25	6.24	229.43	253.43	246.13	246.86
Furniture and fixtures	4.80	5.18	5.20	5.22	188.12	202.02	201.38	204.10
Stone, clay, and glass products	6.58	6.98	6.99	7.03	275.33	291.07	291.44	293.15
Primary metal industries	6.52	6.16	6.11	6.20	359.94	376.31	374.60	371.88
Fabricated metal products	6.56	6.93	6.97	7.09	276.76	282.76	285.07	286.50
Machinery, except electrical	7.61	7.44	7.47	7.52	297.93	313.41	316.75	314.34
Electric and electronic equipment	5.97	6.46	6.49	6.52	242.98	261.63	261.55	266.07
Transportation equipment	6.27	6.59	6.45	6.46	355.61	369.61	356.34	350.73
Instruments and related products	5.94	6.21	6.32	6.41	241.19	252.75	257.04	267.10
Miscellaneous manufacturing	4.79	5.07	5.11	5.13	188.73	199.25	201.33	204.17
NONDURABLE GOODS	5.70	6.11	6.14	6.20	226.29	241.96	241.92	244.90
Food and kindred products	5.97	6.33	6.36	6.44	236.20	257.08	255.04	259.60
Tobacco manufacturers	6.02	6.54	6.42	7.01	232.97	255.71	246.10	271.90
Textile mill products	4.85	4.82	4.83	4.85	180.47	196.64	197.04	199.14
Apparel and other textile products	4.66	4.46	4.32	4.33	185.04	151.51	154.36	153.72
Paper and allied products	6.75	7.34	7.33	7.40	291.40	312.36	316.99	315.86
Printing and publishing	6.66	7.04	7.06	7.09	253.75	280.82	284.75	286.71
Chemicals and allied products	7.22	7.73	7.81	7.87	305.41	323.11	325.68	331.33
Petroleum and coal products	6.74	6.51	6.30	6.57	390.71	425.30	419.90	421.64
Rubber and misc. plastics products	5.71	6.03	6.13	6.11	236.34	244.22	247.65	245.01
Leather and leather products	3.96	4.29	4.31	4.33	147.26	157.07	157.32	159.18
TRANSPORTATION AND PUBLIC UTILITIES	7.78	8.45	8.46	8.49	310.42	337.16	336.71	337.05
WHOLESALE AND RETAIL TRADE	4.80	5.13	5.14	5.18	156.00	167.75	167.05	167.83
WHOLESALE TRADE	6.07	6.51	6.51	6.58	235.52	252.59	253.24	256.62
RETAIL TRADE	4.31	4.58	4.59	4.62	131.69	140.61	140.00	140.45
FINANCE, INSURANCE, AND REAL ESTATE	5.03	5.36	5.36	5.39	182.59	195.29	195.29	196.20
SERVICES	5.13	5.45	5.48	5.52	167.24	178.22	176.65	179.95

¹ See footnote 1, table B-2.

preliminary.

ESTABLISHMENT DATA

ESTABLISHMENT DATA

Table B-4. Hourly earnings index for production or nonsupervisory workers on private nonagricultural payrolls by industry division, seasonally adjusted

Industry	FOV. 1979	JOSF 1979	JULY 1979	AGO. 1979	SEPT. 1979	OCT. 1979	NOV. P 1979	Percent change from—	
								NOV. 1979-NOV. 1979	OCT. 1979-NOV. 1979
TOTAL PRIVATE NONFARM:									
Current dollars	219.2	229.0	230.9	232.2	239.3	235.0	236.9	9.1	0.8
Constant 1967 dollars	104.6	105.7	104.6	105.1	104.9	104.3	N.A.	(2)	(3)
MINING	249.9	252.9	266.9	265.6	266.1	268.0	271.4	8.6	1.3
CONSTRUCTION	211.0	222.9	225.1	223.1	224.4	221.9	225.6	6.6	.8
MANUFACTURING	222.8	233.9	237.4	235.0	239.7	240.0	241.9	6.7	.8
TRANSPORTATION AND PUBLIC UTILITIES	216.3	244.0	251.3	252.6	255.6	256.6	258.7	6.3	.6
WHOLESALE AND RETAIL TRADE	211.0	222.6	223.0	225.4	227.0	227.3	229.6	7.8	1.0
FINANCE, INSURANCE, AND REAL ESTATE	200.7	204.3	215.8	211.5	214.4	213.6	215.3	7.3	.8
SERVICES	217.7	225.7	225.0	224.3	231.5	232.2	233.0	7.4	.7

1 SEE FOOTNOTE 1, TABLE D-2.
 2 DIRECT CHANGE WAS -0.1 FROM OCTOBER 1978 TO OCTOBER 1979, THE LATEST MONTH AVAILABLE.
 3 PERCENT CHANGE WAS -.6 FROM SEPTEMBER 1979 TO OCTOBER 1979, THE LATEST MONTH AVAILABLE.

N.A. = not available.
 preliminary.

NOTE: All series are in current dollars except where indicated. The index excludes 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 in the proportion of workers in high-wage and low-wage industries.

Table B-5. Indexes of aggregate weekly hours of production or nonsupervisory workers on private nonagricultural payrolls by industry, seasonally adjusted

Industry division and group	1978					1979							
	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT. P	NOV. P
TOTAL PRIVATE	123.7	124.2	124.4	124.7	125.7	123.6	125.4	125.7	125.7	125.5	125.9	125.8	126.3
GOODS-PRODUCING	100.9	109.8	110.3	110.2	111.3	104.8	110.3	110.1	109.9	106.4	109.7	108.9	108.8
MINING	150.4	151.3	152.0	152.5	152.5	152.0	151.6	158.5	148.4	156.7	157.4	157.9	159.2
CONSTRUCTION	126.0	127.4	128.9	126.7	132.7	124.9	133.7	134.0	133.9	134.5	135.8	132.7	134.4
MANUFACTURING	104.8	105.1	105.6	105.8	106.0	102.0	104.7	104.3	104.4	103.3	103.4	103.0	102.6
DURABLE GOODS	107.9	108.4	104.2	104.9	110.1	105.0	108.3	107.9	107.9	104.9	107.1	106.0	105.0
Lumber and wood products	115.0	115.4	115.9	114.9	118.4	112.4	113.3	112.7	111.9	112.3	113.6	112.0	109.4
Furniture and fixtures	100.4	110.2	109.9	109.1	108.4	105.0	105.9	105.3	105.9	104.5	104.8	105.0	104.2
Stone, clay, and glass products	112.4	113.4	113.0	112.8	114.9	111.5	113.1	113.0	111.5	110.8	111.2	110.4	111.2
Primary metal industries	99.1	99.4	100.1	100.3	100.2	98.7	97.9	97.9	97.8	95.9	95.3	94.5	92.9
Fabricated metal products	113.5	107.8	107.8	108.7	108.8	102.7	104.6	107.1	106.7	104.6	105.4	105.0	105.7
Machinery, except electrical	113.5	113.3	115.4	117.4	117.5	113.0	117.4	117.0	116.0	116.2	117.7	114.2	114.3
Electric and electronic equipment	104.8	105.5	104.6	107.8	108.5	104.4	108.2	108.9	108.5	104.7	107.2	107.9	108.1
Transportation equipment	104.9	105.4	105.9	106.9	105.9	94.3	102.4	99.4	100.3	102.4	104.1	97.1	92.7
Instruments and related products	125.7	124.3	128.2	129.4	129.7	127.2	128.1	126.4	128.1	127.2	127.2	127.5	129.1
Miscellaneous manufacturing industry	102.1	101.4	102.3	101.7	101.7	97.5	98.7	100.3	100.7	100.6	99.9	100.2	100.4
NONDURABLE GOODS	99.5	99.8	100.3	99.8	100.1	97.8	99.5	99.1	99.1	98.2	98.1	98.7	98.9
Food and kindred products	98.4	97.7	98.1	97.0	98.1	96.0	97.0	96.8	95.9	96.6	95.0	96.2	96.3
Tobacco manufactures	72.4	73.4	71.8	70.0	73.4	73.9	74.5	72.4	73.0	46.7	70.5	68.9	60.7
Textile mill products	91.0	91.0	91.0	90.3	89.9	86.7	86.5	86.6	86.8	86.0	86.0	86.0	91.3
Apparel and other textile products	91.3	91.0	91.0	90.3	89.9	86.8	86.5	86.7	86.5	86.0	87.5	87.9	87.4
Paper and allied products	100.4	100.7	101.1	101.8	103.0	100.8	102.3	102.1	103.2	103.1	102.2	103.2	102.7
Printing and publishing	101.4	101.5	102.3	103.1	103.4	101.7	103.1	103.3	104.4	104.7	103.4	104.5	105.9
Chemicals and allied products	108.1	107.8	108.7	108.5	108.1	107.7	108.3	108.4	108.8	106.2	107.6	108.1	109.5
Petroleum and coal products	124.8	123.6	122.7	123.9	125.9	129.7	128.2	127.1	123.0	124.2	124.8	126.3	128.4
Rubber and resins, plastics products	104.8	102.0	103.5	104.0	104.4	104.4	103.4	105.4	105.8	105.4	103.9	103.4	102.7
Leather and leather products	99.4	98.4	97.9	96.4	94.1	93.9	95.4	94.0	91.3	94.9	94.1	95.2	95.9
SERVICE-PRODUCING	134.0	134.2	134.2	134.6	135.8	135.3	135.9	134.5	134.7	134.6	137.2	137.4	138.4
TRANSPORTATION AND PUBLIC UTILITIES	112.0	112.5	112.8	113.3	113.7	109.2	113.4	115.0	114.2	115.2	114.9	115.5	115.7
WHOLESALE AND RETAIL TRADE	129.2	129.5	129.0	129.3	130.2	130.6	130.2	130.0	129.9	129.6	130.4	131.1	131.4
WHOLESALE TRADE	129.4	130.5	130.5	130.8	132.3	131.3	132.0	132.8	132.7	132.4	132.5	133.9	134.8
RETAIL TRADE	129.0	129.0	128.5	128.7	129.3	130.3	129.1	129.9	129.9	129.5	129.6	130.1	130.2
FINANCE, INSURANCE, AND REAL ESTATE	142.6	142.7	143.3	144.1	144.6	145.5	144.5	145.7	146.5	146.3	147.1	146.7	148.6
SERVICES	140.3	140.4	140.6	140.8	141.1	141.0	141.7	142.6	143.5	143.2	143.8	144.1	145.4

1 See footnote 1, table B-2.

preliminary.

ESTABLISHMENT DATA

ESTABLISHMENT DATA

Table B-6. Indexes of diffusion: Percent of industries in which employment¹ increased

Year and month	Over 1-month span	Over 3-month span	Over 6-month span	Over 12-month span
1976				
January.....	77.0	85.8	86.9	84.0
February.....	70.3	84.3	85.8	83.7
March.....	69.2	82.3	79.4	85.2
April.....	70.6	73.8	72.4	77.6
May.....	59.6	64.8	67.7	82.6
June.....	51.7	62.5	71.5	80.2
July.....	59.0	56.4	60.8	78.2
August.....	54.4	68.3	66.9	77.3
September.....	68.9	55.6	68.6	78.8
October.....	47.4	66.9	73.8	79.4
November.....	65.1	62.2	77.9	80.8
December.....	66.0	78.8	78.2	82.6
1977				
January.....	73.0	80.2	86.3	80.5
February.....	67.2	84.3	84.6	81.4
March.....	72.4	82.6	84.0	82.8
April.....	71.5	81.7	82.3	84.6
May.....	70.3	76.5	79.1	85.2
June.....	85.1	75.2	77.6	86.6
July.....	70.3	70.3	75.3	84.9
August.....	57.8	70.9	76.7	82.1
September.....	67.2	67.7	79.7	83.1
October.....	64.2	76.2	80.5	82.8
November.....	73.3	79.7	84.0	81.1
December.....	75.3	79.4	82.3	82.0
1978				
January.....	68.3	80.2	83.1	81.4
February.....	69.2	75.6	79.1	83.1
March.....	69.5	77.3	77.6	81.1
April.....	68.0	69.8	73.5	82.0
May.....	57.8	67.2	72.7	81.7
June.....	66.6	66.6	71.2	82.3
July.....	64.5	69.5	73.0	81.4
August.....	60.5	67.2	77.3	78.2
September.....	62.5	71.2	79.7	77.9
October.....	73.0	78.2	82.3	73.5
November.....	75.9	81.1	82.3	76.2
December.....	74.4	82.3	80.5	71.8
1979				
January.....	70.3	76.5	74.1	71.8
February.....	65.1	72.1	67.4	70.6
March.....	60.5	57.8	61.9	63.7
April.....	44.8	55.2	58.1	63.7p
May.....	54.7	51.5	50.3	61.3p
June.....	57.0	56.4	46.8	
July.....	61.6	56.7	56.7p	
August.....	48.8	52.0	58.7p	
September.....	46.8	51.2p		
October.....	67.7p	66.3p		
November.....	65.4p			
December.....				

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

p = preliminary.

Chart 1. Civilian labor force, and employment
(Seasonally adjusted)

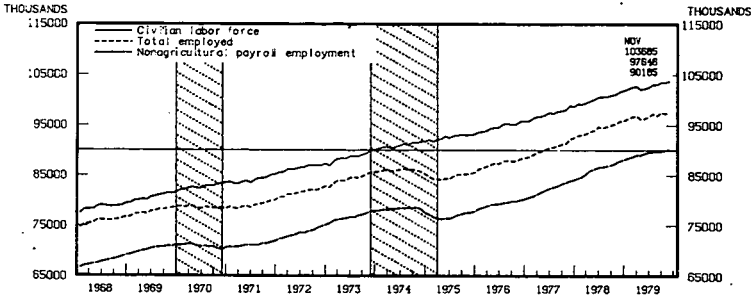


Chart 2. Unemployment rate—all civilian workers

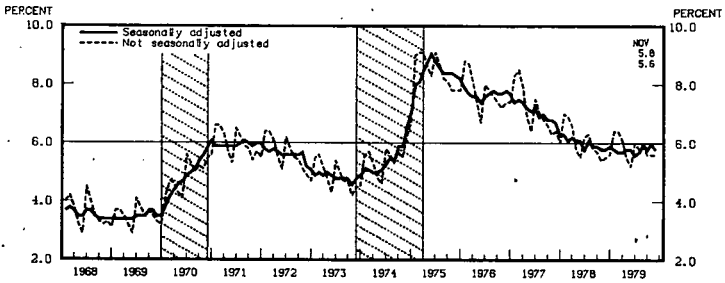
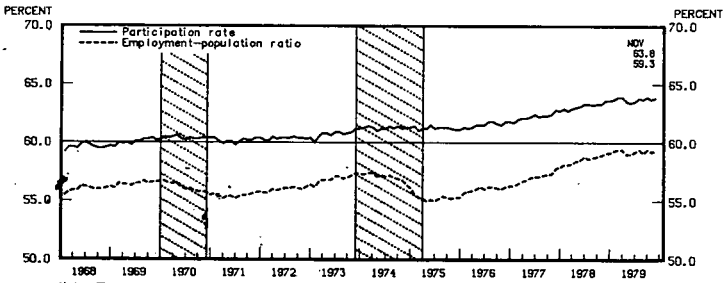


Chart 3. Civilian labor force participation rate
and total employment—population ratio
(Seasonally adjusted)



Note: The shaded areas depict the business cycle peaks and troughs as designated by the National Bureau of Economic Research.

RESPONSE OF HON. JANET L. NORWOOD TO WRITTEN QUESTIONS POSED BY
SENATOR BENTSEN ON THE MEASUREMENT OF THE UNDERGROUND ECONOMY

Question 1. Does the BLS consider Professor Guttman's methodology statistically sound in arriving at his estimates for unemployment and the labor force?

Answer. Professor Guttman's unemployment and labor force estimates adjusted to take account of the "subterranean economy" presented in his testimony were based on his methodology described in "Are the Unemployed, Unemployed?," *Financial Analysts Journal*, September/October 1978. The methodology used by Professor Guttman is described briefly below. He first estimates the total number of persons who draw their income exclusively from the subterranean sector of the economy, subdivided into two components—permanent and temporary participants. The estimate of permanent participants is based on the unsubstantiated assumption that the 2 percentage point drop that occurred in the labor force participation rate among 35 to 44-year-old males between 1961 and 1977 was a result of all persons moving from the regular economy into the subterranean economy. The Bureau of Labor Statistics (BLS) has no way to assess the validity of this assumption. Changes in labor force participation are the result of many factors. Moreover, the 2 percentage point drop is applied to the total labor force.

His estimate of the temporary participants is even more precarious, as it is the average monthly seasonal adjustment component of the unemployment figures in 1977, regardless of sign. That is, each month the unemployment level is adjusted upward or downward to take out the usual, recurring movements in time series that are related to seasonal factors such as opening and closing of schools, weather patterns, industry production schedules, and the like. Professor Guttman uses the average adjustment figure as a measure of persons temporarily employed in the subterranean economy. It should be noted that seasonal adjustment only affects changes within the year and nets out over the entire year. The fact that unemployment varies month to month for reasons other than the general state of the economy has no relationship whatsoever to the number of unemployed workers who might have unreported sources of income.

Based on his estimate of the total number working in the subterranean economy, he assumes a certain percentage are presently tabulated as unemployed and a certain percentage are not presently tabulated as labor force members. In the case of the unemployed, he arbitrarily selects 15 percent as a "conservative estimate" of the total number in the subterranean economy that are probably counted as unemployed. His method for calculating the number of persons deriving all of their income from the subterranean economy and excluded from present counts of the labor force is unclear, and the BLS has no information which would permit us to validate the estimates.

In sum, Guttman's estimates for unemployment and the labor force, adjusted for the subterranean economy, are based on a series of arbitrary and unsupported assumptions.

Question 2. Does the BLS have any reason to believe—through tests or outside agency checks—that a substantial number of persons are counting themselves as unemployed when, in fact, they are engaging in some form of economic activity?

Answer. Generally, we have no reason to believe it, but, on the other hand, we also cannot disprove it. The Current Population Survey (CPS) is voluntary, with responses held as confidential. Persons do not specifically classify themselves as unemployed, nor do they usually know their ultimate labor force classification. Jobless status is determined through a series of questions in which the word "unemployment" is never actually mentioned. We also do not make any explicit distinction between legal and illegal work activities. We record and report whatever the respondent tells us. In general, we believe that the estimates of employment and unemployment from the CPS are considerably more accurate than are the data on income.

Question 3. Would the BLS support the statement in Professor Guttman's testimony that "the extent of poverty in the U.S. is less than that indicated by official statistics, since these do not take into account the subterranean income of low income households"?

Answer. The official definition of poverty was developed some years ago by an interagency committee based on pioneering work in this field by Molly Orshansky. The poverty level is updated each year to reflect price changes and is officially issued by the Office of Management and Budget. The number of families

in poverty is determined by income data reported in the Current Population Survey (CPS).

As you know, the CPS is not designed primarily to develop income data and both the BLS and Census Bureau agree that there is some underreporting of income on a survey of this kind. To the extent that low income households receive income from the subterranean economy and do not report it, their income is understated and this would affect the number of households in poverty, as presently defined. We have no information, however, which permits us to quantify the extent to which income from subterranean sources is underreported. Nor do we have information which would identify the pattern of income distribution of the income from the subterranean economy.

Question 4. Would the BLS agree with Professor Guttman's statement that "productivity is greater than official statistics indicate, since these official government statistics do not include subterranean income. . . . Business sectors which handle a great deal of currency, such as retailing and services, are important examples"?

Answer. To the extent to which there is a substantial subterranean economy which is not included in the official government statistics, as Professor Guttman alleges, productivity could be either higher or lower than officially reported. The impact of the nonreporting of the subterranean economy on productivity measures would depend on several factors; in particular, on whether the nonreporting affected both the output and the input data for the measures as well as the efficiency of the offbook work and its relative importance in the economy.

However, it is important to note that the official government statistics on productivity are indexes of change. The question on the effect of the exclusion of the subterranean economy depends not only on whether average productivity levels of the measured and the subterranean sectors are different but whether their productivity growth rates are different. It is also dependent on whether or not the relative importance of the two sectors is changing. We know of no way to develop the data required to prove or to disprove Professor Guttman's hypothesis.

Question 5. Mr. Fogel and Professor Guttman both comment on the relatively high number of persons in the low-income categories and certain socio-economic classifications who were nonfilers of income tax returns. These persons apparently also exhibited high unemployment rates. Can BLS provide unemployment rates on an income stratified basis and for those occupational categories mentioned in the statements?

Answer. (See attachments—table A-23 and table 51.) Indeed, joblessness among some of the occupational categories specified by Fogel and Guttman are relatively high—particularly nonfarm laborers and service workers—but this is not the case for farmers and farm laborers. The inverse relationship between income and unemployment is well established. For example, computation of the unemployment rates for persons with annual incomes of less than \$5,000 and those with incomes of \$5,000 or more from the data in table 51 yields jobless rates of 14.1 percent and 4 percent, respectively.

Question 6. Mr. Henry argues a different point of view than Professor Guttman concerning the measurement of unemployment. Would BLS comment on Mr. Henry's theories regarding the impact of the underground economy on unemployment?

Answer. We would tend to agree with Mr. Henry that Professor Guttman has placed too much emphasis on the subterranean economy as a possible reason for a now higher average unemployment rate. Mr. Henry points out several inconsistencies in Professor Guttman's arguments, some of which are the same as those that we outlined in our answer to your first question. Mr. Henry provides a number of more plausible explanations for higher average unemployment than the growth of the subterranean economy, such as the changing composition of the labor force—an explanation that has received wide play in the current literature. Also, Mr. Henry points out that, besides arguing that some persons may be incorrectly classified as unemployed, one can also argue that some persons not presently counted as unemployed should be so counted. This is an age-old argument. This diverse body of opinion about the meaning and measurement of unemployment was the primary reason that the BLS initiated publication of the unemployment indicators symbolized by U-1 through U-7, which range from a very narrow to a very broad view.

TABLE A-23.—UNEMPLOYMENT RATES OF PERSONS 16 YRS. AND OVER AND PERCENT DISTRIBUTION OF THE UNEMPLOYED, BY OCCUPATION GROUP: ANNUAL AVERAGES, 1959-78

Year	Experienced workers															Persons with no previous work experience ¹	
	Total unemployed	White-collar workers					Blue-collar workers					Service workers					
		Total	Professional and technical	Managers and administrators	Sales workers	Clerical workers	Total	Craft and kindred workers	Operatives		Non-farm laborers	Total	Private household workers	Other service workers	Farmers and farm laborers		
									Total	Except transport							Transport equipment
Unemployment rate																	
1959.....	5.5	2.6	1.7	1.3	3.8	3.7	7.6	5.3	7.6	(2)	(2)	12.6	6.1	5.2	6.4	2.6	-----
1960.....	5.5	2.7	1.7	1.4	3.8	3.8	7.8	5.3	8.0	(2)	(2)	12.6	5.8	5.3	6.0	2.7	-----
1961.....	6.7	3.3	2.0	1.8	4.9	4.6	9.2	6.3	9.6	(2)	(2)	14.7	7.2	6.4	7.4	2.8	-----
1962.....	5.5	2.8	1.7	1.5	4.3	4.0	7.4	5.1	7.5	(2)	(2)	12.5	6.2	5.5	6.5	2.3	-----
1963.....	5.7	2.9	1.8	1.5	4.3	4.0	7.3	4.8	7.5	(2)	(2)	12.4	6.1	5.8	6.3	3.0	-----
1964.....	5.2	2.6	1.7	1.4	3.5	3.7	6.3	4.1	6.6	(2)	(2)	10.8	6.0	5.4	6.1	3.1	-----
1965.....	4.5	2.3	1.5	1.1	3.4	3.3	5.3	3.6	5.5	(2)	(2)	8.6	5.3	4.7	5.5	2.6	-----
1966.....	3.8	2.0	1.3	1.0	2.8	2.9	4.2	2.8	4.4	(2)	(2)	7.4	4.6	4.1	4.8	2.2	-----
1967.....	3.8	2.2	1.3	.9	3.2	3.1	4.4	2.5	5.0	(2)	(2)	7.6	4.5	4.1	4.6	2.3	-----
1968.....	3.6	2.0	1.2	1.0	2.8	3.0	4.1	2.4	4.5	(2)	(2)	7.2	4.4	3.9	4.6	2.1	-----
1969.....	3.5	2.1	1.3	.9	2.9	3.0	3.9	2.2	4.4	(2)	(2)	6.7	4.2	3.6	4.3	1.9	-----
1970.....	4.9	2.8	2.0	1.3	3.9	4.0	6.2	3.8	7.1	(2)	(2)	9.5	5.3	4.2	5.5	2.6	-----
1971.....	5.9	3.5	2.9	1.6	4.3	4.8	7.4	4.7	8.3	(2)	(2)	10.8	6.3	4.5	6.6	2.6	-----
1972.....	5.6	3.4	2.4	1.8	4.3	4.7	6.5	4.3	0.9	7.6	4.7	10.3	6.3	4.0	6.6	2.6	-----
1973.....	4.9	2.9	2.2	1.4	3.7	4.2	5.3	3.7	5.7	6.1	4.1	8.4	5.7	4.4	5.9	2.5	-----
1974.....	5.6	3.3	2.3	1.8	4.2	4.6	6.7	4.4	7.5	8.2	5.1	10.1	6.3	4.4	6.5	2.5	-----
1975.....	8.5	4.7	3.2	3.0	5.8	6.6	11.7	8.3	13.2	14.7	8.5	15.6	8.6	5.4	8.9	3.5	-----
1976.....	7.7	4.6	3.2	3.1	5.4	6.4	9.4	6.9	10.1	10.8	7.7	13.7	8.7	5.7	9.1	4.5	-----
1977.....	7.0	4.3	3.0	2.8	5.3	5.9	8.1	5.6	8.8	9.5	6.6	12.0	8.2	5.0	8.5	4.6	-----
1978.....	6.0	3.5	2.6	2.1	4.1	4.9	6.9	4.6	7.4	8.1	5.2	10.7	7.4	5.1	7.6	3.8	-----

Percent distribution																		
1959	100.0	19.7	3.3	2.4	4.5	9.5	52.6	12.7	26.0	(2)	(1)	14.0	13.4	2.9	10.5	3.8	5	10.4
1960	100.0	20.2	3.4	2.5	4.3	10.0	52.8	12.3	27.1	(2)	(2)	13.3	12.9	2.9	10.0	3.7		10.3
1961	100.0	21.0	3.4	2.8	4.6	10.1	51.1	12.4	26.5	(2)	(2)	12.3	13.6	3.0	10.6	3.1		11.
1962	100.0	21.7	3.6	2.8	4.7	10.6	49.2	11.8	24.9	(2)	(2)	12.4	14.2	3.0	11.2	2.7		12.1
1963	100.0	21.7	3.8	2.7	4.6	10.6	47.7	11.2	24.7	(2)	(2)	11.9	13.9	3.0	10.9	3.3		13.4
1964	100.0	21.6	3.9	2.7	4.1	10.8	45.8	10.3	23.9	(2)	(2)	11.1	14.9	3.1	11.8	3.6		14.7
1965	100.0	22.3	4.0	2.5	4.8	11.1	43.4	10.2	22.9	(2)	(2)	10.3	14.9	2.9	12.0	3.3		16.1
1966	100.0	23.6	4.3	2.6	4.6	12.1	41.5	9.7	21.9	(2)	(2)	9.9	15.5	2.9	12.7	2.8		16.6
1967	100.0	25.3	4.5	2.3	5.1	13.4	42.6	8.4	24.5	(2)	(2)	9.7	14.8	2.5	12.3	2.9		14.5
1968	100.0	25.7	4.5	2.7	4.7	13.9	41.7	8.7	23.2	(2)	(2)	9.8	15.5	2.5	13.0	2.6		14.5
1969	100.0	27.6	5.1	2.7	4.9	14.8	40.8	8.0	23.4	(2)	(2)	9.4	14.8	2.2	12.7	2.2		14.6
1970	100.0	27.2	5.6	2.7	4.8	14.2	45.1	9.7	25.8	(2)	(2)	9.6	13.2	1.7	11.5	2.0		12.4
1971	100.0	27.8	6.7	2.9	4.5	13.7	43.6	10.2	23.7	(2)	(2)	9.8	14.4	1.4	13.0	1.6		12.6
1972	100.0	28.3	5.8	3.0	4.9	14.5	40.8	10.0	20.8	17.6	3.3	10.0	15.2	1.2	14.0	1.7		14.0
1973	100.0	28.3	6.0	2.9	4.8	14.6	30.2	10.1	19.9	16.7	3.3	9.2	15.7	1.4	14.2	1.8		15.0
1974	100.0	28.0	5.6	3.3	4.7	14.3	42.1	10.3	22.1	18.7	3.5	9.7	15.1	1.1	13.9	1.6		13.3
1975	100.0	26.8	5.4	3.5	4.3	13.6	47.4	12.7	25.0	21.2	3.8	9.8	13.9	.9	13.1	1.4		10.4
1976	100.0	29.0	6.0	4.1	4.3	14.6	41.3	11.4	20.5	16.7	3.7	9.4	15.8	.9	14.9	1.8		12.4
1977	100.0	29.5	6.2	4.0	4.6	14.6	38.7	10.8	19.4	15.9	3.6	9.0	10.1	.9	15.2	1.9		13.7
1978	100.0	28.4	6.3	3.5	4.2	14.3	38.4	10.0	19.1	15.9	3.2	9.4	17.0	1.0	16.0	1.8		14.4

¹ Unemployed persons who never held a full-time civilian job.
² Not available.

Note: Unemployment rates by occupation group are not considered significantly affected by the changes in the occupational classification system for the 1970 Census of Population that were introduced into the Current Population Survey in January 1971, and the question that was added to the

survey in December 1971. However, the new classification system does affect the comparability of the percent distribution of unemployment. For further explanation, see the note on historic comparability of labor force statistics at the beginning of the statistical appendix.

Source: Employment and Training Report of the President, 1979.

TABLE 51.—CURRENT EMPLOYMENT STATUS AND OCCUPATION—PERSONS 14 YRS. OLD AND OVER BY TOTAL MONEY INCOME IN 1976, BY SEX

[Numbers in thousands; persons 14 yrs. old and over as of March 1977]

Total money income	In labor force											
	Employed											Clerical and kindred workers
	White-collar workers										Sales workers	
	Total †	Total	Total	Professional, technical, and kindred workers				Managers and administrators, except farm				
				Total	Salaried	Self-employed ‡	Total	Salaried	Self-employed ‡			
Total										Salaried			Self-employed ‡
BOTH SEXES												
Total.....	164, 935	97, 129	89, 385	44, 677	13, 650	12, 585	1, 065	9, 502	7, 966	1, 596	5, 781	15, 083
Without income.....	16, 989	3, 269	2, 107	854	109	109	-----	74	74	-----	173	498
With income.....	135, 946	93, 860	87, 278	44, 023	13, 540	12, 475	1, 065	9, 488	7, 893	1, 596	5, 608	15, 367
\$1 to \$999 or less.....	15, 400	7, 110	5, 912	2, 301	469	369	101	293	83	210	671	860
\$1,000 to \$1,499.....	6, 413	2, 778	2, 330	932	177	166	11	73	51	23	193	486
\$1,500 to \$1,999.....	6, 205	2, 473	2, 119	866	183	160	22	72	46	26	171	441
\$2,000 to \$2,499.....	7, 159	2, 936	2, 534	959	211	192	19	110	74	36	185	453
\$2,500 to \$2,999.....	5, 401	2, 346	2, 023	859	174	150	24	78	01	17	179	420
\$3,000 to \$3,499.....	5, 936	2, 854	2, 509	1, 090	236	210	26	103	99	45	198	532
\$3,500 to \$3,999.....	4, 622	2, 264	1, 972	864	206	185	21	86	59	27	169	403
\$4,000 to \$4,999.....	6, 651	5, 278	4, 696	1, 902	406	377	29	185	120	65	357	954
\$5,000 to \$5,999.....	8, 174	5, 886	5, 366	2, 381	497	477	20	268	218	69	293	1, 303
\$6,000 to \$6,999.....	7, 395	5, 697	5, 293	2, 569	457	436	21	314	254	59	287	1, 511
\$7,000 to \$7,999.....	6, 692	5, 413	5, 087	2, 486	474	462	12	365	282	83	267	1, 380
\$8,000 to \$8,999.....	6, 231	5, 242	4, 944	2, 584	598	563	35	422	344	78	233	1, 331
\$9,000 to \$9,999.....	5, 269	4, 524	4, 327	2, 245	687	651	36	353	287	66	186	1, 019
\$10,000 to \$11,999.....	9, 577	8, 489	8, 160	4, 244	1, 474	1, 427	47	686	733	131	380	1, 506
\$12,000 to \$14,999.....	11, 074	10, 230	9, 958	5, 120	2, 036	1, 951	85	1, 260	1, 066	194	477	1, 340
\$15,000 to \$19,999.....	11, 592	10, 873	10, 654	5, 691	2, 342	2, 249	92	1, 741	1, 565	176	572	1, 036
\$20,000 to \$24,999.....	4, 921	4, 622	4, 556	2, 893	1, 192	1, 106	86	1, 130	1, 023	105	341	230
\$25,000 and over.....	5, 236	4, 648	4, 810	4, 033	1, 722	1, 344	378	1, 729	1, 354	185	444	140
Median income (dollars).....	6, 002	8, 362	6, 762	9, 988	12, 622	12, 504	16, 068	14, 560	15, 427	9, 904	7, 364	7, 214
Standard error (dollars).....	29	36	37	55	92	89	967	171	130	355	174	56
Mean income (dollars).....	8, 242	10, 131	10, 509	12, 317	14, 952	14, 238	23, 322	17, 088	17, 987	12, 643	10, 334	7, 777
Standard error (dollars).....	30	39	41	69	139	128	884	176	107	466	200	33

Year-round full-time workers:													
Percent of civilian income recipients..	41.7	59.0	62.5	68.0	70.7	71.9	57.6	84.1	85.4	77.6	53.7	60.8	
Median income (dollars).....	11,723	11,781	11,846	12,707	14,951	14,667.	24,889	15,898	16,598	11,042	12,616	9,106	
Standard error (dollars).....	49	50	50	61	120	127	1,129	135	153	430	231	66	
Mean income (dollars).....	13,531	13,581	13,642	15,407	17,900	16,983	31,309	18,661	19,530	13,925	15,264	10,129	
Standard error (dollars).....	52	53	53	85	164	147	1,207	190	199	543	291	67	
MALE													
Total.....	786,782	597,120	52,788	22,011	7,783	8,993	789	7,483	8,187	1,295	3,385	3,361	
Without income.....	6,006	1,016	536	92	16	16	-----	9	8	-----	33	36	
With income.....	72,775	56,104	52,252	21,919	7,767	6,977	789	7,475	6,179	1,295	3,353	3,325	
\$1 to \$999 or less.....	5,346	2,822	2,245	658	108	73	35	152	33	119	293	105	
\$1,000 to \$1,499.....	1,758	1,020	827	197	39	36	4	34	21	13	52	72	
\$1,500 to \$1,999.....	1,898	1,022	848	216	74	68	6	31	18	13	41	70	
\$2,000 to \$2,499.....	2,386	1,155	964	206	67	62	5	45	31	13	34	60	
\$2,500 to \$2,999.....	1,820	914	756	197	45	38	7	40	26	13	40	65	
\$3,000 to \$3,499.....	2,136	1,004	648	230	77	67	10	46	18	28	45	61	
\$3,500 to \$3,999.....	1,867	656	714	208	72	61	11	43	27	16	61	32	
\$4,000 to \$4,999.....	3,761	2,080	1,765	426	141	133	7	91	50	41	104	89	
\$5,000 to \$5,999.....	3,726	2,494	2,204	579	184	175	10	152	93	59	101	141	
\$6,000 to \$6,999.....	3,551	2,508	2,251	598	169	158	11	177	127	50	113	138	
\$7,000 to \$7,999.....	3,457	2,690	2,467	695	165	155	9	210	148	62	164	156	
\$8,000 to \$8,999.....	3,345	2,727	2,524	777	216	193	23	244	178	63	161	155	
\$9,000 to \$9,999.....	3,137	2,618	2,460	801	243	217	26	235	172	63	141	181	
\$10,000 to \$11,999.....	6,432	5,703	5,435	1,991	610	573	36	658	536	122	316	408	
\$12,000 to \$14,999.....	8,539	7,928	7,690	3,148	1,155	1,090	65	1,014	836	178	397	582	
\$15,000 to \$19,999.....	10,094	9,585	9,378	4,522	1,726	1,643	83	1,559	1,399	159	515	722	
\$20,000 to \$24,999.....	4,578	4,334	4,271	2,627	1,050	975	75	1,065	969	97	331	180	
\$25,000 and over.....	4,944	4,643	4,605	3,846	1,625	1,259	366	1,680	1,498	182	433	108	
Median income (dollars).....	9,426	11,374	11,920	15,026	18,125	15,850	22,852	16,417	17,313	11,414	12,001	11,589	
Standard error (dollars).....	53	56	62	82	131	123	1,217	150	175	397	241	199	
Mean income (dollars).....	11,165	12,202	13,300	17,258	19,072	17,957	28,933	19,237	20,245	14,432	14,190	11,661	
Standard error (dollars).....	48	57	60	118	212	197	1,049	207	220	541	298	154	
Year-round full-time workers:													
Percent of civilian income recipients..	51.2	67.3	71.2	79.9	80.2	81.1	71.9	87.9	58.9	83.2	68.3	73.1	
Median income (dollars).....	13,659	13,882	13,945	16,366	17,431	17,073	26,192	17,351	10,271	12,091	15,198	13,323	
Standard error (dollars).....	58	59	60	54	159	149	1,239	172	198	368	221	167	
Mean income (dollars).....	15,701	15,728	15,799	19,323	2,011	19,839	32,688	20,319	24,347	15,084	17,590	13,943	
Standard error (dollars).....	70	70	71	128	229	209	1,254	217	228	599	356	164	

TABLE 51.—CURRENT EMPLOYMENT STATUS AND OCCUPATION—PERSONS 14 YRS. OLD AND OVER BY TOTAL MONEY INCOME IN 1976, BY SEX—Continued

[Numbers in thousands; persons 14 yrs. old and over as of March 1977]

Total money income	In labor force													Unem- ployed	Not in labor force
	Employed														
	Blue-collar workers				Service workers				Farm workers						
	Total	Craft and kindred workers	Operatives, including transport		Laborers, except farm	Total	Private house- hold workers	Service workers, except private house- hold	Total	Farmers and farm man- agers	Farm laborers and super- visors				
Opera- tives, except trans- port			Trans- port equip- ment opera- tives												
BOTH SEXES															
Total.....	28,945	11,287	13,603	10,194	3,047	4,063	13,034	1,516	11,518	2,529	1,372	1,157	7,745	66,852	
Without income.....	414	61	211	184	27	141	670	194	476	169	7	163	1,162	25,718	
With income.....	28,531	11,217	13,392	10,012	3,380	3,922	12,364	1,322	11,042	2,359	1,366	994	6,582	41,133	
\$1 to \$999 or less.....	1,106	194	473	368	84	439	2,065	654	1,411	441	248	194	1,198	8,265	
\$1,000 to \$1,499.....	540	103	280	217	63	157	758	88	669	100	25	75	448	3,629	
\$1,500 to \$1,999.....	541	109	264	196	68	169	609	105	504	103	40	63	354	3,733	
\$2,000 to \$2,499.....	665	152	333	253	80	180	813	92	721	96	53	43	402	4,218	
\$2,500 to \$2,999.....	517	102	264	214	50	151	562	100	462	85	40	45	323	3,050	
\$3,000 to \$3,999.....	647	149	378	317	61	121	695	68	627	76	37	39	344	3,081	
\$3,500 to \$3,999.....	524	120	324	259	65	80	499	53	446	85	39	46	292	2,354	
\$4,000 to \$4,999.....	1,521	345	930	758	172	245	1,103	83	1,019	171	86	84	582	3,317	
\$5,000 to \$5,999.....	1,827	447	1,129	923	206	251	1,003	31	972	186	95	91	490	2,186	
\$6,000 to \$6,999.....	1,780	499	1,036	886	150	244	783	11	771	162	76	86	53	1,581	
\$7,000 to \$7,999.....	1,863	538	1,014	817	197	311	629	8	621	109	56	63	326	1,163	
\$8,000 to \$8,999.....	1,761	574	977	742	236	211	490	14	476	108	52	57	298	903	
\$9,000 to \$9,999.....	1,581	623	758	580	179	200	422	6	416	79	45	34	197	688	
\$10,000 to \$11,999.....	3,129	1,361	1,415	1,016	399	353	648	5	642	137	97	40	328	972	
\$12,000 to \$14,999.....	4,154	2,006	1,716	1,166	550	432	566	-----	566	115	91	24	274	782	
\$15,000 to \$19,999.....	4,362	2,481	1,566	1,028	538	315	479	-----	479	122	115	7	219	613	
\$20,000 to \$24,999.....	1,459	1,003	393	178	214	43	164	2	162	61	55	5	65	246	
\$25,000 and over.....	575	413	145	74	69	19	77	-----	77	123	115	8	38	332	
Median income (dollars).....	9,616	12,334	8,278	7,728	10,335	6,686	4,165	1,039	4,668	5,123	6,261	3,915	3,880	2,615	
Standard error (dollars).....	66	78	73	74	157	159	62	95	64	163	298	218	86	21	
Mean income (dollars).....	10,201	12,567	9,089	8,499	10,835	7,233	5,377	1,752	5,811	7,398	9,391	4,660	5,123	3,866	
Standard error (dollars).....	67	76	63	65	151	111	57	70	62	267	429	182	77	30	

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Year-round full-time workers:														
Percent of civilian income recipients.....	63.6	72.2	61.5	60.6	64.1	46.3	39.6	10.5	43.1	66.2	79.1	48.5	12.6	2.3
Median income (dollars).....	11,939	13,689	10,356	9,722	12,302	10,072	7,932	3,112	8,064	6,505	6,956	6,034	8,299	8,632
Standard error (dollars).....	78	106	86	112	144	164	96	271	112	198	390	241	210	300
Mean income (dollars).....	12,369	14,151	11,050	10,393	12,889	10,404	9,083	3,454	9,247	8,938	10,028	6,494	9,577	10,563
Standard error (dollars).....	55	83	77	79	183	131	98	255	99	365	506	290	254	348
MALE														
Total.....	23,737	10,600	9,384	6,222	3,161	3,673	4,869	68	4,802	2,170	1,288	882	4,333	20,708
Without income.....	245	35	93	74	18	118	138	20	118	60	1	59	480	4,989
With income.....	23,491	10,646	9,291	6,148	3,143	3,555	4,732	48	4,684	2,110	1,287	823	3,852	15,719
\$1 to \$999 or less.....	788	153	245	176	69	391	475	30	444	324	201	123	577	2,519
\$1,000 to \$1,499.....	379	83	152	109	43	143	167	1	166	84	24	60	193	732
\$1,500 to \$1,999.....	390	95	141	97	44	154	155	2	153	86	37	51	174	876
\$2,000 to \$2,499.....	478	136	179	119	60	163	196	-----	196	85	50	35	190	1,226
\$2,500 to \$2,999.....	352	81	139	101	38	132	137	-----	137	70	36	34	157	902
\$3,000 to \$3,499.....	402	126	187	139	48	89	154	2	152	61	33	28	157	1,130
\$3,500 to \$3,999.....	332	101	162	108	55	69	94	-----	94	79	39	40	142	1,008
\$4,000 to \$4,999.....	883	302	367	239	128	214	296	4	291	160	85	76	315	1,625
\$5,000 to \$5,999.....	1,112	386	516	337	179	210	338	3	335	175	94	82	291	1,130
\$6,000 to \$6,999.....	1,195	445	532	391	140	216	307	-----	307	154	72	82	257	926
\$7,000 to \$7,999.....	1,374	480	613	426	187	281	299	2	297	99	54	45	223	651
\$8,000 to \$8,999.....	1,392	537	669	444	225	187	252	4	249	103	50	53	203	531
\$9,000 to \$9,999.....	1,315	575	555	378	177	185	271	-----	271	73	42	31	158	461
\$10,000 to \$11,999.....	2,851	1,310	1,206	815	391	335	456	1	456	137	97	40	268	612
\$12,000 to \$14,999.....	3,960	1,962	1,581	1,035	547	417	468	-----	468	115	91	24	238	549
\$15,000 to \$19,999.....	4,296	2,462	1,525	991	534	308	440	-----	440	121	114	7	207	403
\$20,000 to \$24,999.....	1,428	1,000	386	176	210	42	155	-----	115	61	55	5	63	190
\$25,000 and over.....	567	413	135	66	69	19	71	-----	71	122	114	8	38	245
Median income (dollars).....	10,846	12,618	10,256	10,081	10,810	6,984	7,157	(3)	7,219	5,594	6,638	4,532	5,069	3,735
Standard error (dollars).....	65	82	84	108	173	153	143	(3)	143	162	309	234	130	39
Mean income (dollars).....	11,129	12,882	10,533	10,139	11,306	7,438	8,117	(3)	8,178	7,987	9,831	5,102	6,302	5,265
Standard error (dollars).....	53	78	79	87	156	119	115	(3)	115	292	450	206	115	59
Year-round full-time workers:														
Percent of civilian income recipients.....	66.1	72.9	65.7	64.7	67.8	47.0	56.0	(3)	56.5	70.6	82.4	52.1	14.4	2.8
Median income (dollars).....	12,716	13,962	12,036	11,807	12,361	10,310	10,547	(3)	10,560	6,682	7,052	6,310	9,689	11,478
Standard error (dollars).....	60	112	90	146	146	174	148	(3)	149	200	423	220	348	576
Mean income (dollars).....	13,194	14,404	12,369	12,042	12,980	10,591	11,477	(3)	11,485	9,214	10,157	6,857	10,985	13,440
Standard error (dollars).....	59	84	91	97	185	138	144	(3)	144	379	514	305	343	597

TABLE 51.—CURRENT EMPLOYMENT STATUS AND OCCUPATION—PERSONS 14 YRS. OLD AND OVER BY TOTAL MONEY INCOME IN 1976, BY SEX—Continued

[Numbers in thousands; person 14 yrs. old ad over as of March 1977]

Total money income	In labor force												
	Employed												
	White-collar workers											Sales workers	Clerical and kindred workers
	Professional, technical, and kindred workers					Managers and administrators, except farm							
Total ¹	Total	Total	Total	Total	Total	Salaried	Self-employed ²	Total	Salaried	Self-employed ²	Total	Total	
FEMALE													
Total.....	86,153	40,009	36,597	22,866	5,867	5,591	276	2,079	1,779	300	2,395	12,524	
Without income.....	22,983	2,253	1,571	762	93	93	---	66	65	---	141	462	
With income.....	63,170	37,756	35,026	22,104	5,774	5,498	276	2,013	1,714	300	2,255	12,062	
\$1 to \$999 or less.....	10,054	4,287	3,667	1,642	362	296	66	140	50	91	378	762	
\$1,000 to \$1,499.....	4,654	1,758	1,503	735	138	131	7	40	30	10	143	414	
\$1,500 to \$1,999.....	4,307	1,451	1,271	651	109	92	16	41	28	13	130	371	
\$2,000 to \$2,499.....	4,773	1,781	1,569	754	144	130	14	66	43	22	152	393	
\$2,500 to \$2,999.....	3,581	1,333	1,266	662	129	112	17	57	41	4	131	363	
\$3,000 to \$3,499.....	3,800	1,849	1,662	860	159	143	16	39	35	16	153	491	
\$3,500 to \$3,999.....	2,755	1,408	1,258	656	134	124	10	44	33	11	108	371	
\$4,000 to \$4,999.....	4,890	3,198	2,931	1,476	265	243	22	93	70	23	252	865	
\$5,000 to \$5,999.....	4,448	3,391	3,192	1,602	312	302	10	136	126	10	192	1,162	
\$6,000 to \$6,999.....	3,844	3,188	3,042	1,971	298	278	20	137	128	9	173	1,373	
\$7,000 to \$7,999.....	3,235	2,723	2,620	1,791	309	307	2	155	134	22	103	1,224	
\$8,000 to \$8,999.....	2,886	2,515	2,420	1,807	381	370	12	170	165	13	72	1,176	
\$9,000 to \$9,999.....	2,132	1,906	1,867	1,444	443	434	9	110	115	4	45	836	
\$10,000 to \$11,999.....	3,146	2,785	2,725	2,555	864	853	11	220	219	9	64	1,098	
\$12,000 to \$14,999.....	2,534	2,302	2,266	1,972	861	851	20	246	230	16	79	766	
\$15,000 to \$19,999.....	1,498	1,288	1,275	1,169	616	606	10	182	166	7	56	313	
\$20,000 to \$24,999.....	343	287	285	266	142	131	11	64	56	6	10	50	
\$25,000 and over.....	292	205	205	190	97	85	12	50	47	3	11	32	
Median income (dollars).....	3,576	5,505	5,747	6,420	9,353	9,510	3,571	8,336	8,851	3,316	3,684	6,611	
Standard error (dollars).....	28	35	36	47	106	108	431	156	156	394	136	50	
Mean income (dollars).....	4,875	6,136	6,345	7,417	9,410	9,516	7,260	9,111	9,845	4,923	4,607	6,707	
Standard error (dollars).....	24	32	33	46	104	101	845	198	204	551	113	49	
Year-round full-time workers:													
Percent of civilian income recipients.....	26.7	46.7	49.5	56.1	58.1	60.2	16.5	69.8	72.8	53.1	32.0	57.4	
Median income (dollars).....	8,312	8,340	8,378	9,144	11,365	11,373	(^o)	10,069	10,446	4,201	6,701	8,369	
Standard error (dollars).....	41	42	42	56	113	113	(^o)	198	190	492	158	50	
Mean income (dollars).....	8,956	8,984	9,019	9,880	12,123	12,096	(^o)	10,913	11,531	6,081	7,895	8,791	
Standard error (dollars).....	45	45	46	57	121	116	(^o)	229	227	826	223	57	

Total money income	In labor force													Unem- ployed	Not in labor force
	Employed														
	Blue-collar workers					Service workers				Farm workers					
	Total	Craft and kindred workers	Operatives, including transport			Labor- ers, except farm	Total	Private house- hold workers	Service workers, except private house- hold	Total	Farmers and farm man- agers	Farm laborers and super- visors			
Total			Oper- atives, except transport	Trans- port equip- ment operatives											
FEMALE															
Total.....	5,208	598	4,220	3,974	246	390	8,164	1,448	6,716	358	84	274	3,412	46,144	
Without income.....	168	26	119	110	8	23	532	174	358	109	6	103	682	20,729	
With income.....	5,040	571	4,101	3,864	237	367	7,632	1,274	6,358	250	78	171	2,730	25,415	
\$1 to \$999 or less.....	317	41	228	212	15	49	1,590	624	966	117	47	70	620	5,767	
\$1,000 to \$1,499.....	161	19	128	108	20	13	591	88	503	16	-----	16	255	2,896	
\$1,500 to \$1,999.....	152	14	123	99	24	15	454	104	350	15	3	12	180	2,856	
\$2,000 to \$2,499.....	186	17	153	134	20	17	617	92	525	11	3	8	211	2,992	
\$2,500 to \$2,999.....	165	21	125	112	12	20	425	100	325	15	4	11	166	2,148	
\$3,000 to \$3,499.....	245	23	191	178	13	31	541	66	475	15	4	11	187	1,951	
\$3,500 to \$3,999.....	192	19	161	151	10	12	404	53	351	6	-----	6	150	1,346	
\$4,000 to \$4,999.....	638	43	563	519	44	31	807	79	728	10	2	9	267	1,691	
\$5,000 to \$5,999.....	715	61	613	586	27	41	665	28	637	11	2	9	199	1,056	
\$6,000 to \$6,999.....	587	55	505	494	10	28	476	11	465	8	4	4	146	655	
\$7,000 to \$7,999.....	489	58	401	392	9	30	330	6	324	10	2	8	103	512	
\$8,000 to \$8,999.....	369	37	308	297	11	24	238	10	228	6	2	4	95	372	
\$9,000 to \$9,999.....	266	47	203	202	2	15	151	6	145	6	3	3	38	227	
\$10,000 to \$11,999.....	279	51	209	201	8	18	191	5	187	-----	-----	-----	60	360	
\$12,000 to \$14,999.....	194	44	135	132	3	16	99	-----	99	1	1	-----	36	232	
\$15,000 to \$19,999.....	66	19	40	37	4	7	39	-----	39	1	1	-----	12	210	
\$20,000 to \$24,999.....	10	3	6	2	5	1	9	2	7	-----	-----	-----	2	56	
\$25,000 and over.....	8	-----	8	8	-----	-----	6	-----	6	2	1	1	-----	87	
Median income (dollars).....	5,648	6,522	5,616	5,713	4,090	4,853	3,129	1,076	3,549	1,226	833	1,485	2,795	2,199	
Standard error (dollars).....	62	271	65	66	291	351	50	108	67	276	116	298	97	16	
Mean income (dollars).....	5,875	6,702	5,816	5,891	4,604	5,249	3,678	1,736	4,067	2,420	2,182	2,530	3,461	3,002	
Standard error (dollars).....	64	214	70	71	314	249	45	69	50	284	619	301	73	30	
Year-round full-time workers:															
Percent of civilian income recipients.....	51.9	59.8	52.0	54.1	16.3	39.4	29.5	10.5	33.3	29.0	24.7	31.0	10.2	1.9	
Median income (dollars).....	7,043	8,026	6,864	4,865	(*)	7,728	5,945	3,005	6,111	(*)	(*)	(*)	6,404	7,071	
Standard error (dollars).....	86	345	82	81	(*)	331	84	256	100	(*)	(*)	(*)	202	318	
Mean income (dollars).....	7,471	8,400	7,270	7,258	(*)	8,246	6,262	3,284	6,450	(*)	(*)	(*)	6,758	7,935	
Standard error (dollars).....	82	244	86	88	(*)	352	84	247	86	(*)	(*)	(*)	212	316	

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† Includes members of the armed forces, not shown separately.
 * Includes a very small number of unpaid family workers.
 † Not available.

Source: U.S. Department of Commerce, Bureau of the Census, "Money Income in 1976 of Families and Persons in the U.S.," No. 114, July 1978.

Ms. NORWOOD. Now we would all be glad to answer any questions you may have.

Senator BENTSEN. Thank you very much, Commissioner, for the continuing bad news on the consumer front, and the continuing stable news on the employment side.

Would you agree that far and away the No. 1 problem this country has is inflation?

Ms. NORWOOD. Absolutely.

Senator BENTSEN. Do you see anything in the background of the inflation factor that shows any sign of improvement?

Ms. NORWOOD. I think that there has been a slowing in the rates of increase in some of the energy items, and, as I indicated, capital equipment prices this past month certainly seemed to be going up at a slower rate, so there are some encouraging signs. But that is just 1 month of data.

Senator BENTSEN. What do you think the increases OPEC countries have foisted on us—have they now fed through the system and are we seeing them at the retail level; for example, the last series of increases?

Ms. NORWOOD. Many of them have. I guess most of them have reached the retail level.

Senator BENTSEN. The only trouble with that, OPEC is about to have another meeting to decide whether to increase prices again.

We had a question arise in the Senate Finance Committee yesterday when we were trying to decide on whether we continued to use the unemployment rate figure of 4½ percent as a national trigger, or whether we went to what unemployment in individual States was doing, but we were talking about the insured unemployed. What is the differential, roughly? Can you give it to me, between that percentage of insured unemployment and the total percentage of unemployed in the country?

Ms. NORWOOD. The insured unemployed rate is 2.9 percent, and as we indicated, the overall rate is 5.8. So there is almost 3 points difference; that's primarily, of course, because the insured unemployed only cover those people who are eligible for unemployment benefits, and all of the reentrants and new entrants are not covered, and the coverage varies from one State to another.

Senator BENTSEN. You say 2.9 as opposed to the 5.8?

Ms. NORWOOD. Yes.

Senator BENTSEN. Then you're talking about more than half. That's half?

Ms. NORWOOD. That was for the week of the 17th, but in general, over this year, the insured unemployment rate has varied from about 2.8 to 3.3.

Senator BENTSEN. Now, to get to Professor Guttman's methodology, he was talking about the underground barterage system, underground trade, underground employment; he was saying that the numbers that are published exaggerate the unemployment rate. A lot of people are really employed but they're not reporting it, and they're being paid under the table or otherwise.

I asked you in a series of questions to comment on that. Do you think that his figures are statistically sound or not?

Ms. NORWOOD. No, sir, I do not. I believe they're based on arbitrary and unrealistic assumptions.

Senator BENTSEN. Well, that's saying it pretty plain. [Laughter.]

Ms. NORWOOD. I'd be glad to expound on that if you would like.

Senator BENTSEN. Why don't you give us a little background on why you think that?

Ms. NORWOOD. He used basically two components. First, he talked about permanent workers versus temporary workers.

The permanent workers in the subterranean economy, he measured by assuming that between 1961 and 1977 there was—and there actually was—a 2-percent drop in labor force participation of workers, 35 to 44 years—male workers 35 to 44 years old. He just made an assumption that that drop, those 2 percent could be applied to the entire labor force, not just to males; and he assumed that they had all moved to the subterranean economy. I find no reason to expect that that happened.

The estimates for temporary workers are even more precarious because what he did there was to take the seasonal adjustment movement every month, regardless of sign, whether they went up or down, and used those as an estimate.

Now, as you know, the purpose of seasonal adjustments is to take account of special things that happen each month, like bad weather, or school closings or openings, and so on. Over the year they average out. And yet he used that as an estimate of the temporary workers.

I don't understand how one can find any relationship there.

Senator BENTSEN. Well, he was talking about a substantial number of people who list themselves as unemployed, who are actually employed. Do you have any check through other agencies? Does BLS check to verify or disprove that kind of allegation?

Ms. NORWOOD. No. What I would like to be sure to emphasize is that I think his estimates are rather arbitrary, and I believe they're unrealistic. That is not to say that I have any evidence to prove that the data that we are producing include all of these people.

However, I think it is important to recognize that the household survey does not ask people specifically whether they are unemployed; it asks a series of questions, and we may well pick up many of the people who are "off the book." In fact, I've been told that we pick up a number of people who list their occupations as being prostitutes, in the household survey.

Senator BENTSEN. You do what? [Laughter.]

Ms. NORWOOD. We pick up a lot of people in the household survey who list their occupations as being prostitutes. That's the sort of occupation one would expect would not be reported.

I cannot say to you, however, that the household survey picks up everyone, because I have no way of assessing that.

Senator BENTSEN. Let's talk about what I saw in the paper the other day—today or yesterday, about the sect down in Guyana, Jim Jones' group. I read a report that very substantial number of those people were receiving welfare checks.

Now, how would they be carried on welfare roles? Would they be listed as unemployed, I assume, while they were living down in Guyana, participating in that particular sect?

Ms. NORWOOD. I'm pleased to be able to answer that question by saying that that's an issue, really, for the people who administer the welfare system. We don't cover people outside the United States in our survey; we would have no way of picking them up.

Senator BENTSEN. There ought to be a way. Well, how about Professor Guttman's statement that productivity is greater than the official statistics indicate; would you agree with that or not?

Ms. NORWOOD. I think that that's a more difficult question to answer. Professor Guttman alleges, of course, that there is a large subterranean economy, and to the extent that that allegation could be true, the productivity figures could be either higher or lower. And that would depend on several things.

It would depend, first of all, on whether the people who were not counted, the unreported people, were excluded both from the output side and the input side, or whether one part was in—that is, say, the receipts—but not the workers, or vice versa, or whether they were both excluded from the total.

The other issue is that it would depend on whether they were more efficient or less efficient than the average.

And the third issue, which I think is quite important to recognize, is that our productivity measurements are basically measurements of the rate of change and not the level, so that unless there were a substantial change in the rate of growth of productivity of the off-book or subterranean workers, it would not affect the productivity index.

So it depends on a lot of issues. But I certainly would not say that it could not affect them. It certainly could affect them. I just don't know how strongly.

Senator BENTSEN. Commissioner, I'm deeply concerned about what's happening in the steel industry, because I see it in the process of liquidation in this country. And if that happens, the ripple effect can be horrendous for us.

Ms. NORWOOD. Yes.

Senator BENTSEN. The automobile industry is already in trouble. The defense industry obviously would have serious problems if we had to depend on imported steel. Of course, my State has a very modern plant and doesn't share the problem to that extent. But I keep getting these numbers thrown at me about the Japanese worker and about the German worker. And on the one side, I'm told that the U.S. worker, on the question of productivity, still today is more productive, due to the tools he uses and the equipment that he uses, than the Japanese worker.

The trend is very bad for us. They're catching up very quickly. But then I'm told that if you isolate the steel industry, that in that kind of a situation, that you're finding that the Japanese worker is paid less and that we have some real problems there; that the productivity of the American workers is not as much as the Japanese worker.

Do you have numbers that can tell us that? That's one of the arguments that's thrown to us on the Senate Finance Committee when we're talking about tariffs and we're talking about triggers on prices and subsidies, that type of thing.

Ms. NORWOOD. I think that there are several points that can be made there. First of all, our data do show that the average annual rate of change in productivity shows that in general for all manufacturing, the Japanese are doing better than we are.

Senator BENTSEN. Yes.

Ms. NORWOOD. Yes, double.

Senator BENTSEN. More than that. The increase last year was about three-tenths of 1 percent and the Japanese about 8 percent. I've seen some variance in those numbers.

Ms. NORWOOD. I would be glad to submit that for the record.

[The following information was subsequently supplied for the record:]

INTERNATIONAL COMPARISONS OF PRODUCTIVITY AND LABOR COSTS IN THE STEEL INDUSTRY; UNITED STATES, JAPAN, FRANCE, GERMANY, UNITED KINGDOM; 1964 AND 1972-78*

INTRODUCTION

The Bureau of Labor Statistics has been comparing trends and levels of productivity, as measured by output per hour worked, hourly labor costs, and unit labor costs in the steel industry of the United States, Japan, France, Germany, and the United Kingdom since the late 1960's. The accompanying tables show the comparisons for 1964, the first year for which such comparisons have been made, and for 1972 to 1978. The level comparisons for the four foreign countries are presented in ranges, showing minimum and maximum estimates for each country relative to the United States. These comparisons are subject to certain technical as well as data limitations, discussed in the technical note following the tables, but the Bureau feels reasonably confident that the relative levels of productivity and labor costs for the foreign countries fall within the given ranges.

The productivity and unit labor cost comparisons are affected not only by the relative efficiency of the average steel plant in each country, but by differences in the utilization of steel capacity. Therefore, in interpreting the data for any specific year, the level of steel activity should be taken into account.

IRON AND STEEL INDUSTRY: OUTPUT PER HOUR, HOURLY LABOR COST, UNIT LABOR COST, ALL EMPLOYEES, 5 COUNTRIES, 1964 AND 1972-78

A. RELATIVE LEVELS (UNITED STATES=100)

Year	Output per hour		Hourly labor cost ¹		Unit labor cost ¹	
	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum
United States: Each year.....	100	100	100	100	100	100
Japan:						
1964.....	46	53	16	16	30	35
1972.....	85	101	33	34	32	40
1973.....	94	112	41	42	37	45
1974.....	95	113	44	46	39	48
1975.....	103	123	44	46	36	44
1976.....	108	128	44	45	34	42
1977.....	104	123	49	51	40	49
1978 ²	104	124	58	60	47	58
France:						
1964.....	48	52	34	35	66	72
1972.....	62	69	44	44	64	71
1973.....	59	66	54	54	83	91
1974.....	61	68	55	55	82	90
1975.....	61	68	65	65	97	107
1976.....	63	70	63	63	92	101
1977.....	64	72	64	64	90	99
1978 ²	68	76	73	73	97	107
Germany:						
1964.....	53	60	35	35	59	67
1972.....	76	84	58	58	68	75
1973.....	73	80	71	71	88	97
1974.....	80	88	78	78	88	97
1975.....	82	91	76	76	83	92
1976.....	82	91	72	72	79	87
1977.....	81	89	78	78	88	97
1978 ²	87	95	86	86	90	99
United Kingdom:						
1964.....	48	51	29	30	57	61
1972.....	51	54	33	34	62	67
1973.....	48	51	33	34	66	71
1974.....	43	46	35	36	75	81
1975.....	43	46	37	38	80	87
1976.....	48	51	33	34	65	70
1977.....	43	46	33	34	72	77
1978 ²	42	44	38	39	87	94

¹ Data in national currency converted to U.S. dollars at the annual average exchange rate for the listed year.

² Data for 1978 are preliminary and based on partial year data.

*Prepared by the U.S. Department of Labor, Bureau of Labor Statistics, Office of Productivity and Technology, November 1979.

B. INDEXES (1964=100)

Year	Output per hour	Hourly labor cost	Unit labor cost		Output	Total hours	Total labor cost	Exchange rate ¹
			National currency	U.S. dollars				
United States:								
1964	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1972	119.8	160.9	134.3	134.3	105.6	88.2	141.8	100.0
1973	133.8	175.7	131.3	131.3	128.5	96.0	168.7	100.0
1974	135.7	202.3	149.1	149.1	129.1	95.2	192.6	100.0
1975	116.9	239.3	204.7	204.7	94.4	80.8	193.3	100.0
1976	123.4	257.3	208.6	208.6	103.1	83.6	215.0	100.0
1977	127.3	277.6	218.1	218.1	107.4	84.4	234.2	100.0
1978 ²	133.3	311.7	233.9	233.9	115.8	86.9	270.8	100.0
Japan:								
1964	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1972	222.4	277.1	124.6	148.9	254.4	114.4	317.1	119.4
1973	276.4	341.2	123.4	164.9	314.1	113.6	387.7	133.6
1974	281.9	454.8	161.3	200.3	310.3	110.1	500.6	124.1
1975	265.3	548.9	206.9	252.5	271.0	101.8	558.8	122.0
1976	291.5	584.5	200.5	244.8	296.8	101.8	595.2	122.1
1977	289.3	638.2	220.6	298.2	289.8	100.2	639.4	135.1
1978 ²	304.4	666.1	218.9	378.2	290.2	95.3	635.1	172.8
France:								
1964	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1972	159.2	231.6	145.5	141.4	130.0	81.7	189.1	97.2
1973	169.1	272.3	161.1	177.9	137.7	81.4	221.8	110.4
1974	175.9	346.2	196.8	200.7	149.3	84.9	293.8	102.0
1975	151.5	432.3	285.4	326.6	118.4	78.2	337.9	114.5
1976	164.9	503.8	305.5	313.6	128.7	78.0	393.1	102.6
1977	174.6	562.9	322.3	321.4	124.8	71.5	402.3	99.7
1978 ²	193.6	674.7	348.5	373.1	129.8	67.0	452.3	107.1
Germany:								
1964	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1972	170.2	210.8	123.9	154.4	143.2	84.1	177.3	124.7
1973	181.2	235.4	129.9	195.0	163.6	90.3	212.5	150.1
1974	202.0	290.0	143.6	221.0	172.3	85.3	247.4	153.9
1975	179.2	317.6	177.2	286.9	134.5	75.0	238.4	161.9
1976	189.2	333.1	176.1	278.1	141.5	74.8	249.1	158.0
1977	191.4	359.8	187.9	321.8	135.1	70.6	253.8	171.2
1978 ²	214.5	382.3	178.2	353.0	147.4	68.7	262.7	198.1
United Kingdom:								
1964	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1972	126.4	206.8	163.6	146.5	94.4	74.7	154.5	89.6
1973	134.1	232.7	173.5	152.3	105.1	78.4	182.4	87.8
1974	123.1	290.0	235.6	197.5	93.6	76.0	220.5	83.8
1975	105.8	384.5	363.6	289.3	78.6	74.3	285.7	79.6
1976	123.4	455.9	369.4	238.8	86.8	70.4	320.8	64.6
1977	114.9	504.4	439.1	274.4	81.2	70.7	356.7	62.5
1978 ²	116.3	601.5	517.2	356.4	78.9	67.9	408.1	68.9

¹ Value of foreign currency relative to the U.S. dollar.² Data for 1978 are preliminary and based on partial year data.

C. ABSOLUTE LEVELS

Year	United States	Japan		France		Germany		United Kingdom	
		Minimum	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum
Output (in short tons per 1,000 hr): ¹									
1964.....	76.25	35.34	40.54	36.39	39.60	40.20	45.94	36.59	38.77
1972.....	91.32	77.28	91.91	56.77	63.33	69.75	76.88	46.16	49.10
Total hours per short ton: ¹									
1964.....	13.12	24.67	28.30	25.26	27.48	21.77	24.87	25.79	27.33
1972.....	10.95	10.88	12.94	15.79	17.61	13.01	14.34	20.37	21.66
Hourly labor cost (in U.S. dollars): ²									
1964.....	4.63	0.74	0.75	1.57	1.60	1.63	1.63	1.33	1.37
1972.....	7.44	2.43	2.50	3.31	3.31	4.29	4.29	2.47	2.54
Unit labor cost (in U.S. dollars, ² per short ton): ¹									
1964.....	60.69	18.37	21.09	40.02	43.61	35.57	40.64	34.54	37.23
1972.....	81.51	26.45	32.32	52.25	58.28	55.75	61.45	50.55	54.64
Output (in thousands of short tons): ¹									
1964.....	86,252.4	33,010.8	36,381.3	16,563.0	18,023.6	29,603.6	33,829.8	20,408.9	21,483.5
1972.....	91,061.3	83,994.3	92,557.8	21,248.9	23,704.3	43,204.4	47,621.8	19,232.0	20,328.3
Hours worked (in thousands):									
1964.....	1,131,224	872,469	960,895	455,187	455,187	736,330	736,330	548,462	563,518
1972.....	997,127	973,880	1,123,831	374,277	374,277	619,427	619,427	409,756	420,998
Employment:									
1964.....	562,127	368,161	405,152	206,890	206,890	372,354	372,354	259,007	259,007
1972.....	507,826	451,713	512,021	195,469	195,469	335,551	335,551	213,059	213,059
Average annual hours worked:									
1964.....	2,012.4	2,369.8	2,371.7	2,200.1	2,200.1	1,977.5	1,977.5	2,117.6	2,175.7
1972.....	1,963.5	2,156.0	2,157.0	1,914.8	1,914.8	1,846.0	1,846.0	1,923.2	1,976.0
Total labor cost (in thousands of U.S. dollars): ²									
1964.....	5,234,687	649,732	716,441	716,426	727,161	1,203,197	1,203,197	730,674	771,663
1972.....	7,422,786	2,361,791	2,814,011	1,274,606	1,274,606	2,655,066	2,655,066	1,011,109	1,067,830

¹ Weighted output (see technical note), deflated so that U.S. weighted output in the weight base year, 1967, equals unweighted output.

² Exchange rates: 1964, U.S. dollar equals 362 yen, 4.902 francs, 3.975 deutsche marks, and 0.3582 pounds. 1972; U.S. dollar equals 303 yen, 5.044 francs, 3.188 deutsche marks, and 0.3999 pounds.

TECHNICAL NOTE

With the exception of a few products—wire products are excluded for Japan, wheels and axles for Germany, and wire and wire products for the United Kingdom—the Bureau's 1964 and 1972 estimates of comparative productivity and labor costs in the iron and steel industry are based on the U.S. definition of the industry, which covers blast furnaces, steel works, and rolling and finishing mills (SIC 331). In addition, each country's output has been measured using a common set of weights, and the labor input data have been carefully matched with the output figures. The estimates for 1973 to 1977 were obtained by applying trend indexes to the 1972 benchmarks. Except for the United States, these trend indexes are based on different output weights and data sources than the 1964 and 1972 figures.

While the Bureau has attempted to adjust the 1964 and 1972 figures for comparability of coverage among countries, some differences remain. Where the data for a foreign country are known to differ significantly in product coverage, e.g., by the exclusion of wire and wire products from the data for the United Kingdom, comparability has been maintained between the output and labor input figures and the effect on inter-country comparisons of steel productivity and labor costs is believed to be small. There are other possible differences among the countries in the extent of vertical integration for which no adjustments have been made, such as differences in the proportions of own-produced versus purchased coke, but such differences also appear to have only a small effect upon the comparisons.

For the 1964 and 1972 benchmark years, each country's output has been adjusted for differences in product mix among countries and over time by weighting the component products according to 1967 U.S. labor requirements (hours of labor required per ton of each product).¹ Ideally, for balanced international comparisons, both U.S. and second-country weights should be used. However weights are not available for any other country. The weights used are cumulative, that is, for each end product, they reflect all stages of production within the industry from coke through the end products. They were derived from incremental weights compiled for the use of the Bureau through arrangements made by the American Iron and Steel Institute. Incremental weights reflect only the hours of labor required at each stage of processing. For example, the incremental weight for wire rods reflects only the labor required to make wire rods from semi-finished steel, whereas the cumulative weight for wire rods includes the labor requirements embodied in the production of the coke, pig iron, crude steel, and semi-finished steel used to make the wire rods. Cumulative weights have been used for the country-to-country comparisons because of possible country differences in tonnage yields from one stage of production to another. Incremental weights would not reflect inter-country differences in yields or changes in tonnage yields over time. The use of cumulative weights has a disadvantage, however, in that it assumes that all stages of production (or equivalent production) take place in the same year that the final product is produced and therefore no account is taken of year-to-year changes in inventories.

While the 1964 and 1972 output figures for each country have been adjusted for inter-country differences in product mix, no adjustments have been made for possible differences among countries in the quality of steel produced. Reportedly, the Japanese steel industry, and, to a lesser extent, European producers, ship some seconds which would be recycled as scrap in the United States and ship higher proportions of less finely finished products, for example, untrimmed steel plates than the U.S. steel industry. To the extent that this is true, the output figures for the foreign countries would be somewhat overstated relative to the United States.

The comparative productivity and labor cost results for the foreign countries have been presented in ranges rather than as single best estimates because of gaps in the available data.² For the European countries, the principal data gaps

¹ In the original comparisons for 1964, the component products were weighted according to 1961 U.S. labor requirements. The change from 1961 to 1967 weights has very little effect on the relative levels of productivity and labor costs.

² In the tables, minimum and maximum estimates are shown only for the level comparisons. The trend indexes for the four foreign countries, 1964=100, are based on the midpoint of minimum and maximum estimates for each year.

relate to the absence of some product detail. For example, the European data on pipe and tubing are reported in two categories, welded and seamless, whereas the U.S. data system covers seven categories of pipe and tubing, some with sharply different labor requirement weights. In such cases, two output distributions have been estimated, one emphasizing low-weight product categories and the other emphasizing high-weight product categories. For Japan, the principal data gap relates to labor input. There is substantial employment of contract labor in Japanese steelmaking activities, and the use of contract labor is said to vary from period to period. The Bureau has not been able to obtain adequate data on how many contract workers are employed or the number of hours or rates of pay for these workers. Therefore, it has been necessary to make minimum and maximum estimates based largely on financial data reported by Japanese steel companies.

In making minimum and maximum estimates for the ratios of output per hour and unit labor cost, it has been assumed that (1) the numerator (e.g., output) and denominator (e.g., hours) of the ratio (output per hour) are each normally distributed, and (2) the values of numerator and denominator bounded by their minimum and maximum estimates have a specific level of confidence. The ratio may be approximated as a range by using the minimum and maximum values established for the numerator and denominator, which are independently estimated. Applying a formula devised by Geary,³ it is possible to calculate the minimum and maximum boundaries of the ratio (e.g., output per hour) so that the range will have the same level of confidence as the specific level of confidence of numerator and denominator. Originally, minimum and maximum values of output per hour and unit labor cost were estimated by combining minimum and maximum values of the component series. This led to ranges of estimates that were wider than warranted. The above method was not followed for calculating hourly labor cost ratios since, in those cases where a range of estimates is shown, the component hours and labor cost series are not independently estimated.

OUTPUT PER HOUR, HOURLY COMPENSATION, AND UNIT LABOR COSTS IN MANUFACTURING, 11 COUNTRIES, 1950-78, AVERAGE ANNUAL RATES OF CHANGE*

(Note.—Data for the foreign countries are consistent with the July 10, 1979, press release, International Comparisons of Manufacturing Productivity and Labor Costs, Preliminary Measures for 1978. The U.S. data reflect subsequent revisions. Rates of change computed from the least squares trend of the logarithms of the index numbers.)

OUTPUT PER HOUR

Country	1950-78 ¹	1960-78 ¹	1960-65	1965-70	1970-75	1970-78 ¹	1976	1977	1978
United States.....	2.6	2.6	4.9	1.4	2.0	2.3	4.4	3.1	.6
Canada.....	4.1	4.0	4.5	4.5	3.2	3.1	4.6	4.8	4.2
Japan.....	8.7	8.5	8.5	13.4	4.5	4.5	8.1	5.6	8.3
Belgium.....	NA	7.4	4.8	8.2	8.1	7.8	9.7	6.2	NA
Denmark.....	5.7	6.9	5.4	8.7	6.4	5.8	7.5	2.1	2.8
France.....	5.3	5.6	5.2	6.7	4.6	5.0	8.5	5.0	4.9
Germany.....	5.8	5.5	6.0	5.5	5.6	5.4	5.9	5.4	3.7
Italy.....	6.2	6.2	7.2	6.7	5.8	4.6	8.5	1.1	2.9
Netherlands.....	6.3	7.4	5.3	9.1	7.0	6.4	9.9	3.5	NA
Sweden.....	5.3	5.6	6.8	7.3	4.7	2.9	.7	-.6	5.5
United Kingdom.....	3.2	3.2	4.1	3.7	3.1	1.8	3.0	-1.0	1.6

NA=Not available.

¹ For Belgium and the Netherlands, data relate to period ending 1977 only.

NOTE.—Data relate to all employed persons in the United States and Canada; all employees in the other countries.

³ Geary, R. C., "The Frequency Distribution of the Quotient of Two Normal Variates," *Journal of the Royal Statistical Society*, 93 (1930), pp. 442-446.

*Prepared by the U.S. Department of Labor, Bureau of Labor Statistics, Office of Productivity and Technology, Oct. 30, 1979.

HOURLY COMPENSATION

Country	1950-78 ¹	1960-78 ¹	1960-65	1965-70	1970-75	1970-78 ¹	1976	1977	1978
United States.....	5.4	6.3	3.5	6.1	8.0	8.6	8.3	8.6	8.3
Canada.....	6.5	8.2	3.6	7.5	11.0	11.7	14.0	10.7	7.0
Japan.....	12.8	15.6	13.2	15.3	20.6	16.6	8.2	9.2	6.3
Belgium.....	NA	12.2	9.6	9.3	17.4	16.4	11.1	11.2	NA
Denmark.....	10.2	12.6	9.6	12.5	15.2	14.3	11.4	10.2	9.9
France ²	10.0	11.3	9.2	8.8	15.4	15.7	14.5	14.9	13.0
Germany.....	9.7	10.4	9.4	8.5	13.5	11.7	7.3	9.7	7.2
Italy.....	11.9	15.4	14.0	10.9	22.0	21.6	19.8	18.8	13.9
Netherlands.....	11.1	13.6	11.5	12.4	16.7	15.3	12.0	8.2	NA
Sweden.....	9.9	11.8	10.3	9.5	14.2	15.3	19.4	11.7	13.0
United Kingdom.....	8.9	11.4	6.4	7.4	17.3	17.9	18.1	10.2	16.9

NA = Not available.

¹ For Belgium and the Netherlands, data relate to period ending 1977 only.

² Compensation includes adjustments for payroll and employment taxes that are not compensation to employees, but are labor costs to employers.

NOTE.—Data relate to all employed persons in the United States and Canada; all employees in the other countries.

UNIT LABOR COSTS: NATIONAL CURRENCY BASIS

Country	1950-78 ¹	1960-78 ¹	1960-65	1965-70	1970-75	1970-78 ¹	1976	1977	1978
United States.....	2.7	3.6	-1.3	4.6	5.8	6.1	3.8	5.3	7.7
Canada.....	2.4	4.0	-9	2.9	7.5	8.4	9.0	5.6	2.7
Japan.....	3.7	6.5	4.3	1.7	15.4	11.5	0	3.4	-1.8
Belgium.....	NA	4.5	4.6	1.0	8.5	7.9	1.3	4.7	NA
Denmark.....	4.2	5.3	4.0	3.5	8.3	8.1	3.6	7.9	7.0
France.....	4.4	5.4	3.8	1.9	10.4	10.2	5.5	9.5	7.7
Germany.....	3.7	4.7	3.2	2.9	7.4	5.9	1.3	4.1	3.4
Italy.....	5.4	8.7	6.3	3.8	15.3	16.3	10.4	17.5	10.6
Netherlands.....	4.5	5.7	5.9	3.1	9.1	8.3	1.9	4.5	NA
Sweden.....	4.4	5.8	3.2	2.1	9.1	12.0	18.6	12.4	7.1
United Kingdom.....	5.5	7.9	2.3	3.6	13.8	15.8	14.7	11.3	15.1

NA = Not available.

¹ For Belgium and the Netherlands, data relate to period ending 1977 only.

NOTE.—Data relate to all employed persons in the United States and Canada; all employees in the other countries.

UNIT LABOR COSTS: U.S. DOLLAR BASIS

Country	1950-78 ¹	1960-78 ¹	1960-65	1965-70	1970-75	1970-78 ¹	1976	1977	1978
United States.....	2.7	3.6	-1.3	4.6	5.8	6.1	3.8	5.3	7.7
Canada.....	2.2	4.1	-2.9	3.4	8.2	7.5	12.5	-2.0	-4.3
Japan.....	4.8	8.9	4.2	1.9	20.8	17.1	.2	14.4	26.2
Belgium.....	NA	6.6	4.7	.9	15.9	13.2	-3.7	12.7	NA
Denmark.....	4.7	6.5	3.9	1.4	14.9	12.1	-1.7	8.6	16.6
France.....	3.1	5.7	3.8	1.1	16.3	12.6	-5.4	6.3	17.6
Germany.....	6.0	8.8	4.0	4.4	17.2	13.5	-1.2	12.8	19.7
Italy.....	4.7	7.2	6.2	3.8	14.1	10.4	-13.3	10.5	15.1
Netherlands.....	6.0	8.3	6.7	3.0	18.0	14.8	-2.7	12.6	NA
Sweden.....	5.0	7.0	3.3	2.0	14.3	14.2	12.8	9.6	6.0
United Kingdom.....	4.1	5.4	2.2	-4	12.1	10.8	-6.8	7.6	26.5

NA = Not available.

¹ For Belgium and the Netherlands, data relate to period ending 1977 only.

NOTE.—Data relate to all employed persons in the United States and Canada; all employees in the other countries.

Ms. NORWOOD. I think when you get to the steel industry, what you're talking about is something different, and that is the question of the level of productivity rather than the rate of change.

Senator BENTSEN. That's right exactly. That's what I'm interested in.

Ms. NORWOOD. Now, that's a very difficult question to answer. We have done some work on the steel industry and on trying to compare the levels of productivity and the labor costs in Japan and in European

countries. And I would be glad to submit for the record whatever updating we have of that. I can tell you, however, that those estimates are very difficult to make.

Senator BENTSEN. I get a lot of them thrown to me as though they're gospel. I really want the best numbers that you think you can give me on the steel industry here, the productivity of the employee, not the rate of increase or decrease, but what the productivity is of the employee in this country, as compared to the Japanese and as compared to the Germans, some of our principal competitors.

Ms. NORWOOD. Mr. Mark, an Assistant Commissioner with BLS, is just telling me that our latest estimates in 1978 show the Japanese at about 105 to 120 percent of the U.S. level, and Germany at about 90 percent.

Senator BENTSEN. Was that total for all industry?

Ms. NORWOOD. For the steel industry.

Senator BENTSEN. OK.

Ms. NORWOOD. That's the only industry, by the way, that we've done level estimates for. And I would like to emphasize that there is a great deal of difficulty in getting at really valid level data for particular industries in other countries. Some years ago, when I entered the Bureau, I was responsible for the beginning of that steel study, and I know the problems that we had with it. But those are our latest estimates.

Senator BENTSEN. Thank you.

Senator PROXMIRE.

Senator PROXMIRE. Madam Commissioner, this report is puzzling, but in the context of what we've been told everywhere else, it's very encouraging, it seems to me. For one thing, when we look at the release from the BLS, we find that employment, seasonally adjusted, seems to be the highest it's ever been. It's 97,646,000; is that correct?

Ms. NORWOOD. Yes, sir.

Senator PROXMIRE. Also, the participation rate is a little bit below its peak, but it's close to the highest it's ever been and far higher than it was in previous decades; is that correct, close to 60 percent, still?

Ms. NORWOOD. Yes.

Senator PROXMIRE. Which means that it's 60 percent of all people 16 years old or older, not institutionalized, are working.

Ms. NORWOOD. Close to it.

Senator PROXMIRE. So when we look at the donut instead of the hole, the statistics are most encouraging in this area. Then when we look at the breakdown in unemployment rates, we find a drop in adult women unemployment from 5.8 to 5.5 percent. I take it that's statistically significant and there's no way that an error would be accountable for that; is that right?

Ms. NORWOOD. It's statistically significant, certainly. But remember that it was up last month. It's down this month.

Senator PROXMIRE. It's down to the level that it was in September; is that right?

Ms. NORWOOD. Yes.

Senator PROXMIRE. Then we take a look at the black unemployment. That also is down close to the level it was in September and about the level it was in the third quarter, and a very, very sharp improvement, from 11.7 percent down to 10.8 percent.

Ms. NORWOOD. Yes, the November rate dropped down to its third quarter level.

Senator PROXMIRE. The chairman properly pointed to all the disturbing figures we have on layoffs in the steel industry, the automobile industry, and so forth. How do you account for this?

Ms. NORWOOD. I think there are two points. One is that our data show that in manufacturing, in the entire goods producing sector, there has been a flatness and even a slight, perhaps, decline.

The second point is that the service industries are largely responsible for whatever growth there is. And, of course, we have very little growth. A couple hundred thousand increase over the month is relatively small. So there has been a real slowdown. The steel figures are not in these data. Those announcements occurred after the survey week.

Senator PROXMIRE. Now, we also have the unfortunate reflection of inflation in a drop in dollars of constant purchasing power. At the end of the release, the text part, it says—

In dollars of constant purchasing power, the index decreased 4.1 percent during the 12-month period ended in October.

I've seen other figures that indicate an even sharper drop in weekly earnings, real weekly earnings. I realize there are more people working, but is it accurate or inaccurate to say that the standard of living of the American people seems to have decreased because of inflation in the last year already, inasmuch as real income, allowing for inflation, has declined? Is that right or not?

Ms. NORWOOD. I think by any of the wage or compensation measures, real compensation or wages have declined; yes, absolutely.

Senator PROXMIRE. Now, when we take a look at Professor Guttman's position and your answers with respect to his findings, what you really say is, you can't tell, is that right; that this is an area where you challenge Professor Guttman's assumptions, but you just can't tell us what the level of employment in the so-called underground economy is?

Ms. NORWOOD. I think his numbers cannot. I don't believe his numbers. But you're quite right, we have no way of ascertaining whether or not there is a large omission.

Senator PROXMIRE. They could be higher, they could be lower, and so forth.

Ms. NORWOOD. It's possible.

Senator PROXMIRE. You talked about—it's very interesting, the first time I've heard about this. But you have a count to some extent on people working as prostitutes, and you have some number. Can you tell us how many that is? [Laughter.]

Ms. NORWOOD. I don't have it here. In looking at our discussion of the Guttman questions, I was asking what kind of evidence we do have that we pick up the kinds of occupations and the kinds of employment that people would not be likely to report.

Senator PROXMIRE. The reason I ask this is that I think that there are some people involved in so-called illegal enterprise, whether it's prostitution or gambling or drug dealing and so forth, who do some of it on book. Credit cards are used with respect to prostitution, for example, and people gamble with credit cards.

So that there's some—I don't know the extent to which it's traced, but there's some way to trace it and some taxes are paid on gambling earnings, and I presume some, perhaps, even on prostitution earnings.

But the reason I raise that point is because it would stand to reason that the overwhelming proportion of people employed in those activities that are illegal would, at least at the level where their incomes wouldn't be very great, would probably not admit that they were engaged in illegal activities. Isn't that right? Isn't that logical, whether we have any statistical confirmation of that? Doesn't that seem logical or not?

Ms. NORWOOD. I think that it is true that they would not admit that they were engaged in illegal activities. But the point that I was trying to make is that we don't ask them that. We ask them about their economic activity, and we don't ask them whether it's legal or not legal. We ask them if they're working or if they're looking for work.

Senator PROXMIRE. Let me give you an example which is a kind of a heartbreaking example, but one that I think suggests the size of this. A recent survey of students at Grosse Point High School found that they spent \$4,000 as teenagers, and they spent more on drugs than they did on food, more on drugs than they did on clothing. They admitted that privately.

Now, that kind of drug dealing, where one teenager buys from another, is an aspect of the economy which, when you consider the number of teenagers there are in this country and the fact that it's a very sad fact that this goes on, is likely to be very substantial and involves hundreds of thousands of people who are counted as unemployed. I imagine most of those young people, when asked, if they're 16 years or over and they're asked whether they're at work, would say no, or their parents would, in answering the door to a person inquiring in the household survey. Is that right?

Ms. NORWOOD. I would agree with you that certainly we would not catch the income in any sense that transpires in those sorts of transactions. The unemployment figures might not necessarily be affected, because they would be asked, really, whether they were looking for work or not. That's the question.

Senator PROXMIRE. I think in many cases they might well be looking for work that's more respectable and less risky and so forth.

Ms. NORWOOD. It's possible. I certainly cannot say to you that we are positive that we are covering all of this. This is a serious problem.

Senator PROXMIRE. The reason I raise this for statistical purposes is what I talk about now is what almost all of us think of when we think about underground; that is, illegal activity of one sort or another. I think that is by far the smallest part. The big part is the off-the-book economic activity, the fellow who is either employed with a modest income or he is unemployed, and he agrees to do all kinds of odd jobs, and he's paid and there's no reporting of it. He may well be employed even though he says he's unemployed and looking for better work. But meanwhile he's going to be doing any number of things that people do—paint up a house, fix a house, do all sorts of construction activity, all kinds of janitorial activity, and that kind of thing. And it's to the interest of both parties that they not report it and that it be done on a cash basis.

Isn't that likely to be very large? The "Wall Street Journal" made an estimate that this could involve several million people. Is there any reason to challenge that?

Ms. NORWOOD. Well, you know, everyone is making estimates of this. We had a number of reporters and magazine writers in, discussing the issue, and we certainly have no data to prove it or disprove it. But I think it is, nevertheless, important to know that if people do not classify themselves in any survey, they never know in fact what their ultimate classification is. They are never asked specifically. The word "unemployment" is not used in the questionnaire and people are not given the opportunity to directly classify themselves as unemployed.

If, on the other hand, people are moonlighting by having another job, they may well be counted. But I am sure that some of them are probably not.

Senator PROXMIRE. Could you do this for us in the next month or so. See if there are any suggestions as to how we can get at this. I think Professor Guttman deserves a great deal of credit for trying. I would agree with you that his findings are not likely to be accurate. He does try to do something that can be very important to us. And if you come up with any kind of suggestions that we can do this in a reasonable and economical way, it would seem we'd have a far better understanding of whether this would affect unemployment figures by reducing them by half a percent, by 1 percent, a tenth of a percent, or it wouldn't have any effect. And I hope that we could do that.

Ms. NORWOOD. We certainly would look into it, Senator Proxmire. It's a subject that I happen to be very much interested in. In fact, in the OECD working party on unemployment statistics that I chair, they have raised this as a basic issue for all kinds of reasons. And we are working on it, although it is very difficult.

Senator PROXMIRE. Now let me ask about the price situation. As I understand it, the big increase was because of consumer foods, in the Producer Price Index press release that came out yesterday.

Ms. NORWOOD. True. Crude, too, at the crude level.

Senator PROXMIRE. But it was the finished price of food in the final producer price statistics that was up.

Ms. NORWOOD. Yes.

Senator PROXMIRE. Is there any reason to suspect that that's just a 1-month aberration and that it may increase?

Ms. NORWOOD. I think there were some very big increases. Poultry, as I recall, was 21 percent, for example, and pork was quite high. And those had not had increases before. So there were some cases where there may be just kind of a catching up, that may not continue.

On the other hand, there were other areas in the food area where there were increases.

Senator PROXMIRE. Is there any basis for expecting that food prices may increase, what, at a level or rate of about 12 percent annually in the coming year, anything of that kind, any estimate?

Ms. NORWOOD. I don't know what the Agriculture Department has been estimating. I think for the commodities which had large increases, there was a kind of catchup. The pork index, I believe, is below the level of 1 year ago, for example. There appears to be no indication that there are shortages of supply.

Senator PROXMIRE. But these producer prices reflected in food are going to be translated, likely to some extent, at least, into higher CPI figures in the coming months; is that right?

Ms. NORWOOD. Not necessarily.

Senator PROXMIRE. Not one for one. But that would be the tendency.

Ms. NORWOOD. There is another element that I think is very important. In the CPI, since the latest revision, we cover food prices through the whole month. In the Producer Price Index, which is in the process of revision, we are currently pricing a single day in the month.

Now, some of the increases in food prices may well have occurred before the 12th, which is the day on which the food prices were collected for the Producer Price Index. If that occurred, they may have already shown up in it.

Senator PROXMIRE. Now the energy figures were better, much better, one of the best improvements we've had. Is that right?

Ms. NORWOOD. Yes, sir.

Senator PROXMIRE. And that's one of the reasons why the index, aside and apart from food, was improved. Is that right? If you leave energy and food aside, the rest of the index was about the same as it has been for some time, increasing at what, about an eight-tenths of 1 percent rate per month?

Ms. NORWOOD. Six-tenths. Finished good, excluding energy and food, was about six-tenths. Capital equipment was much lower.

Senator PROXMIRE. How about housing costs?

Ms. NORWOOD. That's not in the Producer Price Index. Construction materials, however, are.

Senator PROXMIRE. Let me ask you one final question about housing. I've asked Mr. Russell about this. Somebody's got to do something about that. We all throw our hands up. The New York Times had a fine editorial the other day on what a recession it was, but here we're told that the Consumer Price Index goes up at an annual rate of about 14 percent. Wrong, according to Mr. Russell, whose the expert in the Government on it.

That doesn't reflect the increasing cost of labor. What it reflects is something else, because we've included in that the increase in housing prices for that month, the increase in interest rates, mortgage rates for that month, and only one person in a hundred will buy a house or have an increase in their housing costs in that particular month. Yet it's reflected as if everybody bought housing, and they didn't.

He agrees it's wrong. And when Fred Kahn speaks about it, he almost foams at the mouth. He says that this is absolutely wrong. It's a distortion. It's unfair. It's unwise.

Now it's not so bad from the standpoint of people on social security who are getting an adjustment because of that and people who are on COLA's, as many Americans are, but when this turns around and interest rates begin to fall and maybe housing prices begin to moderate, you're going to get a reverse situation in which the inflation rate is understated.

At any rate, why can't we as a government seem to get a grip on this and get a Consumer Price Index that reflects the increasing cost of living. That's what everybody expects to do, and that's what it's required to do. In the COLA's which are so important, we have a situation now where we have a false inflation statistic which is actually very inflationary in our economy because it's driving up wages which in turn drives up prices.

Ms. NORWOOD. Senator Proxmire, I think you raised an issue that is extremely complex. I would not agree that it is simply a question of mortgage interest rates. I also would not agree that the CPI assumes—

Senator PROXMIRE. Mortgage interest rates and housing prices and the price of housing go up 3 percent in a month, and that's a big factor in calculating the cost of housing.

Ms. NORWOOD. I would not agree that those are the only issues. There are many ways of calculating consumer price indexes. As you know, I discussed with you and I discussed with the committee some of the various proposals that the Bureau of Labor Statistics made to try to remove the appreciation, the investment potential, from the housing component of the index.

I do not believe that the mortgage interest issue, which is the one that is now being focused on, because, of course, mortgage interest rates are rising—I do not believe that is the basic issue.

Senator PROXMIRE. Let me just interrupt for just a minute. They tell us that the mortgage interest rates and the increasing housing prices were very largely responsible for the increase in the housing part of the CPI. They have further told us that two-thirds of the increase in the CPI—I guess it was October—was because of housing cost increases.

Mr. LAYNG. Housing total, correct?

Senator PROXMIRE. That's right.

Mr. LAYNG. It's more comprehensive than homeownership.

Senator PROXMIRE. I'm sure it is, but these are two of the big elements, right?

Mr. LAYNG. About half of that was due to it.

Senator PROXMIRE. Half of two-thirds. You still get a big—if you can ignore that part of it, you obviously would get a much lesser increase in the cost of living in that month.

Ms. NORWOOD. Certainly. If you eliminate housing—

Senator PROXMIRE. I wouldn't eliminate it, but apply it to those who are affected and calculate the percentage.

Ms. NORWOOD. The Bureau of Labor Statistics has been running some experimental indexes, and I think that you should understand the way in which some of the people who have been focusing on mortgage interest have been determining the extent of so-called overstatement. They have been using the weight of housing in the CPI and for prices, they have been using the rent index of the CPI. I would say that would have a downward bias if you did that.

I happen to have figures here for September. You would have gotten over the 12-month period about a 10.5, 10.4 percent increase. However, we have also run a user-cost approach which is what the BLS staff originally proposed.

The user-cost approach for the month of September would have produced a rate of 11.8 percent, which is only three-tenths of a percent lower, so it depends entirely—

Senator PROXMIRE. What's the user cost?

Ms. NORWOOD. The user-cost approach tries to look at the various elements in homeownership that are actually paid out and to actually take account of the appreciation and depreciation of the house, and it takes account of the entire stock of houses, rather than as we now do on the index just the expenditures by those people who actually purchase a house in the survey year. That is the year of the expenditure survey which serves as the weight base.

There are many ways of calculating indexes, and I think that it is useful to focus on the housing component. I think it's incorrect to focus only on the issue of mortgage interest.

Senator PROXMIRE. I think that's right.

Ms. NORWOOD. And I would add, in fact, that what Mr. Kahn has suggested would provide us with an index that had a 15-year moving average and which on the up side of mortgage interest would take 15 years to move up. On the down side, it would have the mortgage interest component going up when mortgage interest rates were going down, and I think that would be even harder to explain.

So I think it's a much broader issue. We have discussed this. As a matter of fact, we are the ones who brought it up some 10 years ago. We've published a great deal on it. We will be publishing more in the Monthly Labor Review in the next several months, and we are developing some alternative experimental indexes.

But I don't think it's a very simple matter. You cannot say that what is there now is absolutely wrong. There is a theory behind it. There are other theories that could be applied. In fact, I think for purposes of escalation, what one really wants is a cost of living index that I would define as a constant utility market basket index, and I'm not at all sure that some of the people like Mr. Kahn and others would define it that way.

I think they would define it more in terms of current outlays. I would not agree with that, but there are many ways of calculating indexes. We have always welcomed public discussion, and we continue to do so.

Senator PROXMIRE. Well, it was very helpful.

Mr. Chairman, I apologize for taking so long. Let me just suggest that maybe sometime in the future you might have Mr. Kahn come up. As you know, he's an extraordinarily able man and a fine economist, and he has to deal with this thing; and let him give us his view on it. I think it might be very helpful to have that before the committee because of its significance.

Ms. NORWOOD. Yes, I think that would be fine. And I have had discussions with Mr. Kahn, and we do understand our disagreements. You may also be interested in knowing that I am testifying next Friday before Mr. Simon's task force on inflation, and he is apparently going to have Mr. Kahn and some people from CBO as well as from the AFL-CIO on this issue.

Senator BENTSEN. Thank you very much. It was a good hearing. We enjoyed your testimony.

[Whereupon, at 11 a.m., the committee adjourned, subject to the call of the Chair.]

