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EMPLOYMENT-UNEMPLOYMENT

HEARINGS

BEFORE THE

JOINT ECONOMIC COMMITTEE

CONGRESS OF THE UNITED STATES

NINETY-FIFTH CONGRESS

FIRST SESSION

PART 11

SEPTEMBER 2, OCTOBER 7, NOVEMBER 4, AND
DECEMBER 2, 1977, AND JANUARY 11, 1978

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EMPLOYMENT-UNEMPLOYMENT

FRIDAY, SEPTEMBER 2, 1977

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

The committee met, pursuant to notice, at 10:05 a.m., in room 5302, Dirksen Senate Office Building, Hon. William Proxmire (member of the committee) presiding.

Present: Senators Sparkman and Proxmire.

Also present: John R. Stark, executive director; G. Thomas Cator, William Chastka, Kent H. Hughes, Deborah Norelli, and Morton Schwartz, professional staff members; Mark Borchelt, administrative assistant; and M. Catherine Miller and Mark R. Policinski, minority professional staff members.

OPENING STATEMENT OF SENATOR PROXMIRE

Senator PROXMIRE. The meeting will come to order. We are honored to have once again the Commissioner of Labor Statistics, Julius Shiskin, to testify on the figures we received this morning and yesterday, the unemployment figures and the wholesale price figures. Unfortunately, the unemployment figures are not good. In August there was a rise in unemployment from 6.9 percent in July to 7.1 percent. We are now back up to the June figures. The discouraging aspect of this is we have made no progress really in reducing unemployment since April. We have been stagnating in an area where we had had a good recovery over the past 2 years until April of this year.

There has been a very, very modest increase in employment. I think a distinct slowdown in the last 2 months. Whereas we have been averaging about 250,000 new jobs a month over a period of 2½ years. In the last couple of months, that slowed down to only a hundred thousand. Also, the clearest, sharpest distinction in the unemployment figures we have this morning are in black unemployment. In fact, from between July and August, white unemployment remained exactly the same at 6.1 percent. Black unemployment shot up very sharply from 13.2 percent to 14.5 percent, which is close to the highest level of black unemployment I understand we have had in recent years. It is the highest ratio of black-to-white unemployment that we have had in some time, an alarming ratio here.

The wholesale price picture is still encouraging, with only a tenth of a percent increase in August oven July and that continues the excellent performance over the past 4 months. But I think once again that the reason for the good performance was because we had a sharp reduction in farm prices. They went down during this period. They

went down again last month. A more realistic notion of the underlying rate of inflation might be the industrial price picture, where there was a rise of about 6 percent at an annual rate, one-half of 1 percent rise in August.

We have lots of questions for you this morning, Mr. Commissioner, including questions relating to the issue I raised last time, with respect to the effect of illegal aliens on unemployment and the effect of raising the social security retirement from age 65 to 68. You responded to me in an excellent letter, and I will place that letter in the record and then we may have some questions on that a little later.

[The letter referred to follows:]

U.S. DEPARTMENT OF LABOR,
BUREAU OF LABOR STATISTICS,
OFFICE OF THE COMMISSIONER,
Washington, D.C., August 24, 1977.

Hon. WILLIAM PROXMIRE,
U.S. Senate,
Washington, D.C.

DEAR SENATOR PROXMIRE: This is in reply to the questions you raised at the August 4 Joint Economic Committee hearings concerning (1) illegal aliens and (2) the statement by the Secretary of Commerce on increasing the age of retirement.

The agency which has been given the responsibility for developing data on illegal aliens is the United States Immigration and Naturalization Service. The Immigration and Naturalization Service is now in the process of developing procedures for a residential survey, in which they will visit 100,000 households in the 12 most populous States in an effort to locate a sample of about 10,000 households which include illegal aliens. From these households, they hope to obtain extensive demographic and labor market information about the target population group. This survey is to be preceded by a pre-test and by a pilot survey; if they prove successful, the full-scale survey would be conducted in December 1977, and a final report would be issued in May 1978. Detailed information about the plans for the residential survey, as well as general information about illegal aliens, may be obtained from Mr. Leonel J. Castillo, Commissioner of the Immigration and Naturalization Service (376-8330).

Regarding the comment by Secretary of Commerce Kreps, in which she suggested increasing the age of retirement under social security from 65 to 68—Mrs. Kreps had in mind that for the next quarter century it should be a voluntary, not a mandatory choice for a worker to postpone retirement until age 68. A similar proposal is contained in a 1975 report of The Quadrennial Advisory Council on Social Security. The Council recommended that serious consideration be given to gradually extending the eligibility age, for both early and full social security retirement benefits, starting in the year 2005 because of expected substantially higher costs. By that year, the number of people drawing benefits will be growing proportionally faster than the number of people paying social security taxes on earnings.

For the near-term future, it is difficult to estimate the impact which a change in age of eligibility would have on employment. Currently, most workers retiring under social security now retire prior to age 65; only one worker out of five delays retirement until 65. The trend toward early retirement has been accelerating in recent years.

I hope this satisfactorily answers your questions.

Sincerely yours,

JULIUS SHISKIN,
Commissioner.

Senator PROXMIRE. We are interested in hearing your statement. Go right ahead.

STATEMENT OF HON. JULIUS SHISKIN, 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

Mr. SHISKIN. Thank you. As usual, I have Mr. Stein and Mr. Layng with me.

Mr. Chairman, I wish to offer the Joint Economic Committee a few brief comments to supplement our press release, "The Employment Situation," issued this morning at 9 a.m.

In August, the labor force rose by 392,000, total employment rose by 182,000. The unemployment rate rose to 7.1 percent, the same rate as in June.

The slowdown in the rate of growth in the economy, which was evident last month, is again reflected in the August labor market statistics. The unemployment rate has been on a plateau of about 7 percent since April. As can be seen in the simple table below, over this 4-month period, the civilian labor force continued to rise vigorously, but the average monthly increases in total employment, nonagricultural employment, and manufacturing employment have all been much smaller than during the 6-month period following the 1976 pause (May–October 1976). The number of unemployed has shown little change during the past 4 months, whereas it declined during the preceding 6 months. The average workweek in manufacturing and aggregate hours in private nonagricultural industries both declined over the last 4 months compared to substantial rises in the preceding 6 months. However, the recent developments are more favorable than those during the May–October pause last year, except for aggregate hours which show little difference.

I am not going to read the table, but let me summarize it in one sentence. In a nutshell, the table shows that the economy is slowing down from a rapid rate of growth earlier this year, but economic performance is better than during the pause last year.

The present slowdown in the labor markets is consistent with that shown by other major economic indicators, specifically the decline in the leading indicator index and in retail sales. Also, the latest data for inventories indicate some buildup, and the net change in inventories was high in the second quarter. Under these circumstances, some reduction in inventory investment is to be expected.

The unemployment rate for job losers rose for the second month in a row and is consistent with recent rises in the layoff rate. The percentage of industries showing a rise in employment dropped below 50 for the first time in almost a year. The average duration of unemployment, which usually lags other measures of unemployment, declined again. The employment-population ratio held steady.

Despite economic recovery, the number of black unemployed and their unemployment rate are both higher than a year ago. This is true not only for total blacks, but also for adult men, adult women, and teenagers separately. Most of the over-the-year increase in black unemployment, however, occurred among adult men.

I would like to interpret this observation. We put out a press release a few days ago on youth unemployment, which got a good deal of attention. What I tried to do in this last sentence was call attention to the fact that the impact of the unemployment rise is pervasive among all blacks, and in fact, as I say here, most of the rise occurred not among teenagers, but among black adult males.

In my summary of the situation last month, I said, "The labor market data indicate that the sustained and substantial improvement during the first part of this year is being followed by a slower rate of growth. Taken together with the sharp rise in inventories in the second quarter, they suggest that we are experiencing some inventory adjustment again." The August data reinforce this judgment.

In August, wholesale prices once again showed little change, as measured both by the All Commodities WPI and by the Finished Goods Price Index. This was the third consecutive month in which the overall changes balanced out two conflicting trends. Declines in farm products and processed foods and feeds have been offset by modest rises in industrial commodities. Among finished goods, the declines in consumer food have been offset by moderate increases in other finished goods.

I want to call to your attention a shift in emphasis that we have introduced into our Wholesale Price Index release. There is a problem that the All Commodities WPI is a combination of prices at all stages of processing (crude, intermediate, and finished). Because of this multiple counting of price changes, the All Commodities Index can, under some circumstances, produce exaggerated trends (if the items that are duplicated are changing more or less than average). Since the Finished Goods Price Index, which has been published in the release for the last 10 years, does not suffer from this limitation, we are placing increased emphasis on it.

My colleagues and I shall now try to answer your questions.

[The tables attached to Mr. Shiskin's statement, together with the press release referred to, follow:]

CHANGES IN MAJOR EMPLOYMENT INDICATORS OVER VARIOUS STAGES OF THE CURRENT ECONOMIC EXPANSION

[In thousands]

	Average monthly change		
	April to August 1977	October 1976 to April 1977	May to October 1976
Household survey:			
Civilian labor force	234	243	150
Total employment	187	381	20
Nonagricultural employment	(189)	(389)	(24)
Unemployment	47	−138	131
Payroll survey:			
Total nonagricultural employment	191	311	100
Manufacturing employment	19	98	−12
Average weekly hours in manufacturing	−0.05	0.07	−0.08
Index of aggregate hours on private nonagricultural payrolls	−.08	.57	.04

UNEMPLOYMENT RATES BY ALTERNATE SEASONAL ADJUSTMENT METHODS

Month	Unadjusted rate	Official adjusted rate	Alternative age-sex procedures: All multiplicative	All additive	Year ahead	Concurrent	Stable 67 to 73	Other aggregations (all multiplicative): Duration	Reasons	Total	Residual	Direct adjustment rate	Composite	Range (cols. 2 to 13)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1975														
January	9.0	7.9	7.9	8.2	8.2	8.0	8.1	8.0	7.9	8.0	8.4	8.1	8.1	0.5
February	9.1	8.0	8.2	8.3	8.2	8.0	8.1	7.9	7.9	8.1	8.3	8.0	8.1	.4
March	9.1	8.5	8.5	8.7	8.7	8.6	8.6	8.4	8.3	8.5	8.7	8.5	8.5	.4
April	8.6	8.6	8.7	8.7	8.9	8.8	8.8	8.6	8.6	8.7	8.6	8.7	8.7	.2
May	8.3	9.0	9.0	8.7	9.2	9.0	9.2	8.9	9.1	9.2	8.8	9.3	9.0	.5
June	9.1	8.7	8.6	8.7	8.6	8.7	8.6	8.7	8.8	8.3	8.6	8.3	8.6	.5
July	8.7	8.7	8.6	8.6	8.4	8.7	8.6	8.5	8.7	8.5	8.5	8.6	8.6	.2
August	8.2	8.5	8.5	8.4	8.4	8.5	8.3	8.6	8.7	8.5	8.4	8.6	8.5	.4
September	8.1	8.6	8.6	8.4	8.3	8.6	8.3	8.8	8.8	8.5	8.4	8.5	8.5	.5
October	7.8	8.6	8.7	8.4	8.6	8.7	8.3	8.7	8.7	8.6	8.5	8.6	8.6	.4
November	7.8	8.4	8.4	8.2	8.3	8.5	8.2	8.6	8.4	8.4	8.2	8.4	8.4	.4
December	7.8	8.3	8.4	8.2	8.3	8.3	8.3	8.5	8.2	8.3	8.2	8.4	8.3	.2
1976														
January	8.8	7.8	7.8	8.0	7.8	7.8	8.1	8.0	7.8	7.8	8.2	7.9	7.9	.4
February	8.7	7.6	7.6	7.8	7.6	7.6	7.7	7.5	7.5	7.6	7.7	7.6	7.6	.3
March	8.1	7.5	7.5	7.6	7.5	7.5	7.7	7.3	7.4	7.5	7.6	7.5	7.5	.4
April	7.4	7.5	7.5	7.5	7.4	7.4	7.6	7.4	7.5	7.5	7.4	7.5	7.5	.2
May	6.7	7.3	7.4	7.2	7.2	7.2	7.5	7.2	7.4	7.5	7.2	7.5	7.4	.3
June	8.0	7.6	7.5	7.5	7.5	7.6	7.5	7.5	7.5	7.3	7.4	7.3	7.5	.3
July	7.8	7.8	7.8	7.7	7.8	7.8	7.7	7.6	7.8	7.7	7.7	7.7	7.7	.2
August	7.6	7.9	7.9	7.8	7.9	7.9	7.7	8.0	8.0	7.9	7.8	8.0	7.9	.3
September	7.4	7.8	7.8	7.7	7.8	7.8	7.6	8.0	7.9	7.8	7.8	7.8	7.8	.4
October	7.2	7.9	8.0	7.8	7.9	7.9	7.7	8.0	7.9	8.0	7.9	7.9	7.9	.3
November	7.4	8.0	8.0	7.8	8.1	8.0	7.8	8.1	8.0	8.0	7.8	8.0	7.9	.3
December	7.4	7.8	7.9	7.8	7.9	7.8	7.9	7.9	7.8	7.8	7.8	7.9	7.8	.1
1977														
January	8.3	7.3	7.3	7.3	7.3	7.4	7.5	7.4	7.4	7.4	7.6	7.4	7.4	.3
February	8.5	7.5	7.5	7.7	7.5	7.5	7.6	7.4	7.4	7.5	7.6	7.5	7.5	.3
March	7.9	7.3	7.3	7.4	7.3	7.3	7.5	7.3	7.3	7.3	7.3	7.4	7.3	.2
April	6.9	7.0	7.0	7.0	7.0	7.0	7.1	7.0	7.0	7.0	6.9	7.0	7.0	.2
May	6.4	6.9	7.0	6.8	6.9	7.0	7.1	7.0	7.1	7.1	7.0	7.1	7.0	.3
June	7.5	7.1	7.0	7.1	7.1	7.1	7.0	7.0	7.0	6.9	7.0	6.8	7.0	.3
July	7.0	6.9	6.9	6.9	6.9	6.9	6.8	6.8	6.9	6.9	6.8	6.9	6.9	.1
August	6.8	7.1	7.1	7.1	7.1	7.0	6.9	7.2	7.2	7.2	7.1	7.1	7.1	.3
September														
October														
November														
December														

See footnote on next page.

An explanation of cols. 1 to 13 follows:

(1) Unemployment rate not seasonally adjusted.

(2) Official rate: This is the published seasonally adjusted rate. Each of 4 unemployed age-sex components—males and females, 16 to 19 and 20 years of age and over—is independently adjusted. The teenage unemployment components are adjusted using the additive procedure of the X–11 method, while adults are adjusted using the X–11 multiplicative option. The rate is calculated by aggregating the 4 and dividing them by 12 summed labor force components—these 4 plus 8 employment components, which are the 4 age-sex groups in agriculture and nonagricultural industries. This employment total is also used in the calculation of the labor force base in columns (3) to (9).

The current "implicit" factors for the total unemployment rate are as follows:

January	113.8	July	100.2
February	113.7	August	96.1
March	108.1	September	94.6
April	98.7	October	90.1
May	92.2	November	93.0
June	105.2	December	93.8

(3) Multiplicative rate: The 4 basic unemployed age-sex groups—males and females, 16 to 19 and 20 years and over—are adjusted by the X–11 multiplicative procedure. This procedure was used to adjust unemployment data in 1975 and previous years.

(4) Additive rate: The 4 basic unemployed age-sex groups—males and females, 16 to 19 and 20 years and over—are adjusted by the X–11 additive procedure.

(5) Year-ahead factors: The official seasonal adjustment procedure for each of the components is followed through computation of the factors for the last years of data. A projected factor—the factor for the last year plus ½ of the difference from the previous year—is then computed for each of the components, and the rate is calculated. The rates are as first calculated and are not subject to revision.

(6) Concurrent adjustment through current month: The official procedure is followed with data reseasonally adjusted incorporating the experience through the current month; that is, the rate for March 1976 is based on adjustment of data for the period, January 1967–March 1976. The rates are as first calculated and are not subject to revision.

(7) Stable seasonals (January 1967–December 1973): The stable seasonal option in the X–11 program uses an unweighted average of all available seasonal-irregular ratios to compute final seasonal factors. In essence, it assumes that seasonal patterns are relatively constant from year to year. A cutoff of input data as of December 1973 was selected to avoid the impact of cyclical changes in the 1974–75 period.

(8) Duration: Unemployment total is aggregated from 3 independently adjusted unemployment by duration groups (0 to 4, 5 to 14, 15 plus).

(9) Reasons: Unemployment total is aggregated from 4 independently seasonally adjusted unemployment levels by reasons for unemployment—job losers, job leavers, new entrants, and reentrants.

(10) Unemployment and labor force levels adjusted directly.

(11) Labor force and employment levels adjusted directly; unemployment as a residual and rate then calculated.

(12) Unemployment rate adjusted directly.

(13) Average of columns 2 to 12.

Note: The X–11 method, developed by Julius Shiskin at the Bureau of the Census over the period 1955–65, was used in computing all the seasonally adjusted series described above.

Source: U.S. Department of Labor, Bureau of Labor Statistics, Sept. 2, 1977.

News United States Department of Labor

Bureau of Labor Statistics Washington, D.C. 20212

Contact: J. Bregger (202) 523-1944
523-1371
K. Hoyle (202) 523-1913
523-1208
home: 333-1384

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TRANSMISSION OF MATERIAL IN THIS RELEASE IS EMBARGOED UNTIL 9:00 A. M. (EDT), FRIDAY, SEPTEMBER 2, 1977

THE EMPLOYMENT SITUATION: AUGUST 1977

Both employment and unemployment rose in August, it was reported today by the Bureau of Labor Statistics of the U. S. Department of Labor. The Nation's unemployment rate increased slightly, returning to the June level of 7.1 percent. The rate has hovered around the 7-percent mark for the past 5 months.

Total employment--as measured by the monthly survey of households--resumed its advance in August with a modest increase of 210,000 to 90.8 million. The number of employed persons has grown by 2.9 million over the past year, while the proportion of the population with jobs has increased from 56.2 to 57.1 percent.

Nonfarm payroll employment--as measured by the monthly survey of establishments--was up only slightly (90,000) over the month. At 82.4 million, the payroll job count was 2.8 million above its year-ago level.

Unemployment

The number of unemployed persons rose by 180,000 in August to 6.9 million, seasonally adjusted. The increase occurred primarily among persons losing their jobs, as their proportion of the jobless total rose for the second consecutive month, to 47 percent The overall unemployment rate was 7.1 percent, up from 6.9 percent in July. The jobless rate has fluctuated around the 7-percent mark since April, after declining from 8 percent in the preceding 5-month period. Nearly all worker groups shared in the over-the-year improvement--two notable exceptions were blacks and Vietnam-era veterans. (See tables A-1, A-2, and A-5.)

The over-the-month increase in unemployment was concentrated among black workers. At 14.5 percent in August, their unemployment rate matched the post-World War II high recorded in September 1975. Jobless rates were up for both black men (11.7 percent) and women (12.2 percent), while the rate for black teenagers (40.4 percent) approximated

July's extremely high level. By contrast, there was little change in the unemployment rates among white men (4.5 percent), women (6.3 percent), or teenagers (14.7 percent). As a result of these developments, the ratio of black-to-white jobless rates continued its recent updrift to the unusually high level of 2.4 to 1 in August. (See table A-2.)

The average (mean) duration of unemployment was 13.5 weeks in August, continuing a downward trend that began in early 1976. Average duration has declined about one and a half weeks since May.

The number of persons working part time for economic reasons declined 170,000 from July and stood at 3.2 million in August. All of the decline occurred among those who usually work at full-time jobs. (See table A-3.)

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

Selected categories	Quarterly averages					Monthly data		
	1976			1977		1977		
	II	III	IV	I	II	June	July	Aug.
HOUSEHOLD DATA	Thousands of persons							
Civilian labor force	94,544	95,261	95,711	96,067	97,186	97,641	97,305	97,697
Total employment	87,501	87,804	88,133	88,998	90,370	90,679	90,561	90,771
Unemployment	7,043	7,457	7,578	7,068	6,816	6,962	6,744	6,926
Not in labor force	59,032	58,963	59,132	59,379	58,908	58,686	59,242	59,064
Discouraged workers	903	827	992	929	1,061	N.A.	N.A.	N.A.
	Percent of labor force							
Unemployment rates:								
All workers	7.4	7.8	7.9	7.4	7.0	7.1	6.9	7.1
Adult men	5.7	6.0	6.2	5.6	5.1	5.0	5.1	5.2
Adult women	7.1	7.7	7.6	7.1	6.9	7.2	6.9	7.1
Teenagers	18.8	18.8	19.1	18.6	18.1	18.6	17.4	17.5
White	6.8	7.1	7.2	6.7	6.3	6.3	6.1	6.1
Black and other	12.9	13.1	13.4	12.8	12.8	13.2	13.2	14.5
Full-time workers	7.0	7.4	7.5	6.8	6.5	6.5	6.5	6.8
ESTABLISHMENT DATA	Thousands of jobs							
Nonfarm payroll employment	79,333	79,683	80,090	80,927	81,909	82,121	82,366p	82,448p
Goods-producing industries	23,380	23,372	23,440	23,765	24,292	24,353	24,419p	24,307p
Service-producing industries	55,953	56,311	56,650	57,162	57,617	57,768	57,947p	58,141p
	Hours of work							
Average weekly hours:								
Total private nonfarm	36.2	36.1	36.2	36.1	36.2	36.2	36.1p	36.0p
Manufacturing	40.0	39.9	40.0	40.1	40.4	40.5	40.3p	40.1p
Manufacturing overtime	3.0	3.0	3.1	3.1	3.4	3.4	3.4p	3.3p

p=preliminary. N.A.=not available.

Total Employment and the Labor Force

Total employment edged up by 210,000 in August to 90.8 million. Except for a pause in July, this continued the pattern of steady growth dating back to last fall. All of the increase in employment occurred among white workers--adult men and teenagers. However, the employment-population ratio--the proportion of the total noninstitutional population that is employed--remained at July's level of 57.1 percent. Although there has been little change since April, the August ratio was almost a full percentage point above the year-ago level. (See table A-1.)

The civilian labor force increased by 390,000 in August, following a 340,000 decline in July. Most of this increase occurred among teenagers, who had accounted for the July reduction. The total civilian labor force has shown strong gains throughout most of 1977 and over the past 12 months has grown by 2.3 million. The labor force participation rate, at 62.3 percent, was little changed from July but half a point higher than the year-earlier rate.

Industry Payroll Employment

Reflecting divergent movements in goods- and service-producing employment, total nonagricultural payroll employment grew slightly in August. Over-the-month employment gains were posted in 41 percent of the industries comprising the BLS diffusion index of nonagricultural payroll employment; the index had dropped this low only one other time during the past 2 years. Substantial gains during 10 of the past 12 months, however, have raised the payroll job count 2.8 million over the year to the seasonally-adjusted August level of 82.4 million. (See tables B-1 and B-6.)

The modest rise in overall payroll employment in August resulted from an increase in the service-producing sector's job count, which more than offset the employment declines in the goods sector. The service-producing sector posted its largest increase in 5 months, adding nearly 200,000 jobs. Employment growth was particularly strong in services and trade.

The goods-producing sector registered its first setback since October, declining by more than 100,000 jobs. Manufacturing dropped back to its May level, primarily due to reductions in nondurable goods. Contract construction suffered a loss of some of its

prior month's gain, but the industry's employment remained well above the levels prevailing in 1976 and early 1977.

Hours

For the third consecutive month, the average workweek for production or nonsupervisory workers on private nonagricultural payrolls dropped a tenth of an hour. The August level of 36.0 hours, seasonally adjusted, was the lowest since last September (with the exception of January's weather-induced low). The manufacturing workweek declined 0.2 hour in August to 40.1 hours. Manufacturing overtime was 3.4 hours for the fifth straight month. (See table B-2.)

The index of aggregate weekly hours of private production or nonsupervisory workers on nonagricultural payrolls declined 0.3 percent in August. The drop was concentrated in the goods-producing sector, with the manufacturing index dropping 1.1 percent. The overall index, which is regarded as the most comprehensive measure of labor force activity, has been declining since May, following strong growth earlier in 1977. At 115.3 (1967=100), the index was still 3.1 percent above last August's level. (See table B-5.)

Hourly and Weekly Earnings

On a seasonally-adjusted basis, average hourly earnings of production or nonsupervisory workers on private nonagricultural payrolls held steady over the month, while weekly earnings experienced a moderate decline. The 0.3-percent decrease reflects a similar drop in weekly hours. Hourly and weekly earnings were 7.1 and 6.8 percent above their respective levels of a year ago.

Before adjustment for seasonality, average hourly earnings were $5.23 in August, down 1 cent from July but up 34 cents from the level 12 months earlier. Average weekly earnings, at $190.37, declined 89 cents over the month but were $11.40 above the August 1976 level. (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 199.1 (1967=100) in August, 0.1 percent higher than in July. The index was 6.6 percent above August a year ago. During the 12-month period ended in July, the Hourly Earnings Index in dollars of constant purchasing power rose 0.3 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 conducted by the Bureau of the Census for the Bureau of Labor Statistics. The sample consists of about 47,000 households selected to represent the U.S. civilian noninstitutional population 16 years of age 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 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 population 16 years of age and over, without duplication, since each person is classified as employed, unemployed, or not in the labor force.

The payroll survey relates only to paid wage and salary employees (regardless of age) on the payrolls of nonagricultural establishments. The household survey counts employed persons in both agriculture and in nonagricultural industries and, in addition to wage and salary workers (including private household workers), includes the self-employed, unpaid family workers, and persons "with a job but not at work" and not paid for the period absent. 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) 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).

To meet the extensive needs of data users, the Bureau regularly publishes data on a wide variety of labor market indicators—see, for example, the demographic, occupational, and industry detail in tables A-2 and A-3. 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, extending 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, school vacations, 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 90 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, current seasonal adjustment factors for unemployment and other labor force series are calculated taking into account the prior year's experience, and revised data are introduced in the release containing January data.

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 unemployment (the sum of four seasonally-adjusted age-sex components) by the civilian labor force (the sum of 12 seasonally-adjusted age-sex components). Several alternative methods for seasonally adjusting the overall unemployment rate are also used on a regular basis in order to illustrate the degree of uncertainty that arises because of the seasonal adjustment procedure. Among these alternative methods are five different age-sex adjustments,

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including a concurrent adjustment and one based on stable factors and four based on other unemployment aggregations. Alternative rates for 1976 are shown in the table at the end of this note. (Current alternative rates and an explanation of the methods may be obtained from BLS upon request.)

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 revised annually, usually in conjunction with the annual benchmark adjustments (comprehensive counts of employment).

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 questionnaire and procedures. The standard error is the measure of sampling variability, that is, the variations that might occur by chance because only a sample of the population is surveyed. Tables A-E in the "Explanatory Notes" of *Employment and Earnings* provide standard errors for unemployment and other labor force categories.

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. Moreover, since the estimating procedures employ 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, usually annually. 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 1974 benchmark levels. Measures of reliability for employment estimates are provided in the "Explanatory Notes" of *Employment and Earnings*, as are the actual amounts of revisions due to benchmark adjustments (tables G-L).

Unemployment rate by alternative seasonal adjustment methods

Month	Unadjusted rate	Official Adjusted Rate	Alternative age-sex procedures					Other aggregations (all multiplicative)				Direct adjustment	Composite	Range (cols. 2-13)
			All multiplicative	All additive	Year-ahead	Concurrent	Stable 1967-73	Duration	Reasons	Total	Residual			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1976														
January	8.8	7.8	7.8	8.0	7.8	7.8	8.1	8.0	7.8	7.8	8.2	7.9	7.9	0.4
February	8.7	7.6	7.6	7.8	7.6	7.6	7.7	7.5	7.5	7.6	7.7	7.6	7.6	.3
March	8.1	7.5	7.5	7.6	7.5	7.5	7.7	7.3	7.4	7.5	7.6	7.5	7.5	.4
April	7.4	7.5	7.5	7.5	7.4	7.4	7.6	7.4	7.5	7.5	7.4	7.5	7.5	.2
May	6.7	7.3	7.4	7.2	7.2	7.2	7.5	7.2	7.4	7.5	7.2	7.5	7.3	.3
June	8.0	7.6	7.5	7.5	7.5	7.6	7.5	7.5	7.5	7.3	7.4	7.3	7.5	.3
July	7.8	7.8	7.8	7.7	7.8	7.8	7.7	7.6	7.8	7.7	7.7	7.7	7.7	.2
August	7.6	7.9	7.9	7.8	7.9	7.9	7.7	8.0	8.0	7.9	7.8	8.0	7.9	.3
September	7.4	7.8	7.8	7.7	7.8	7.8	7.6	8.0	7.9	7.8	7.8	7.8	7.8	.4
October	7.2	7.9	8.0	7.8	7.9	7.9	7.7	8.0	7.9	8.0	7.9	7.9	7.9	.3
November	7.4	8.0	8.0	7.8	8.1	8.0	7.8	8.1	8.0	8.0	7.8	8.0	8.0	.3
December	7.4	7.8	7.9	7.8	7.9	7.8	7.9	7.9	7.8	7.8	7.8	7.9	7.8	.1

Table A-1. Employment status of the noninstitutional population

[Numbers in thousands]

Employment status	Not seasonally adjusted			Seasonally adjusted					
	Aug. 1976	July 1977	Aug. 1977	Aug. 1976	Apr. 1977	May 1977	June 1977	July 1977	Aug. 1977
TOTAL									
Total noninstitutional population[1]	156,367	158,682	158,899	156,367	157,986	158,228	158,456	158,682	158,899
Armed Forces[1]	2,147	2,135	2,137	2,147	2,132	2,128	2,129	2,135	2,137
Civilian noninstitutional population[1]	154,220	156,547	156,761	154,220	155,854	156,101	156,327	156,547	156,761
Civilian labor force	96,690	99,314	99,073	95,351	96,760	97,158	97,641	97,305	97,697
Participation rate	62.7	63.4	63.2	61.8	62.1	62.2	62.5	62.2	62.3
Employed	89,368	92,372	92,315	87,834	90,023	90,408	90,679	90,561	90,771
Employment-population ratio[2]	57.2	58.2	58.1	56.2	57.0	57.1	57.2	57.1	57.1
Agriculture	3,843	3,790	3,682	3,372	3,260	3,386	3,338	3,213	3,252
Nonagricultural industries	85,525	88,582	88,633	84,462	86,763	87,022	87,341	87,348	87,519
Unemployed	7,322	6,941	6,757	7,517	6,737	6,750	6,962	6,744	6,926
Unemployment rate	7.6	7.0	6.8	7.9	7.0	6.9	7.1	6.9	7.1
Not in labor force	57,530	57,234	57,689	58,869	59,094	58,943	58,686	59,242	59,064
Men, 20 years and over									
Total noninstitutional population[1]	66,384	67,537	67,642	66,384	67,209	67,324	67,431	67,537	67,642
Civilian noninstitutional population[1]	64,688	65,845	65,947	64,688	65,522	65,641	65,743	65,845	65,947
Civilian labor force	52,068	52,902	52,978	51,698	52,089	52,282	52,497	52,494	52,588
Participation rate	80.5	80.3	80.3	79.9	79.5	79.6	79.9	79.7	79.7
Employed	49,307	50,379	50,513	48,638	49,465	49,531	49,859	49,794	49,854
Employment-population ratio[2]	74.3	74.6	74.7	73.3	73.6	73.6	73.9	73.7	73.7
Agriculture	2,531	2,464	2,492	2,393	2,280	2,373	2,372	2,305	2,355
Nonagricultural industries	46,776	47,916	48,021	46,245	47,185	47,158	47,487	47,489	47,499
Unemployed	2,761	2,522	2,466	3,060	2,624	2,751	2,638	2,700	2,734
Unemployment rate	5.3	4.8	4.7	5.9	5.0	5.3	5.0	5.1	5.2
Not in labor force	12,619	12,943	12,969	12,990	13,433	13,359	13,246	13,351	13,359
Women, 20 years and over									
Total noninstitutional population[1]	73,168	74,315	74,429	73,168	73,958	74,081	74,198	74,315	74,429
Civilian noninstitutional population[1]	73,078	74,217	74,332	73,078	73,863	73,987	74,101	74,217	74,332
Civilian labor force	34,059	34,918	35,188	34,562	35,455	35,634	35,675	35,667	35,723
Participation rate	46.6	47.0	47.3	47.3	48.0	48.2	48.1	48.1	48.1
Employed	31,289	32,456	32,551	31,883	32,985	33,288	33,116	33,212	33,172
Employment-population ratio[2]	42.8	43.7	43.7	43.6	44.6	44.9	44.6	44.7	44.6
Agriculture	633	683	612	532	577	597	564	525	515
Nonagricultural industries	30,656	31,772	31,939	31,351	32,408	32,691	32,552	32,687	32,657
Unemployed	2,770	2,462	2,638	2,679	2,470	2,346	2,559	2,455	2,551
Unemployment rate	8.1	7.1	7.5	7.8	7.0	6.6	7.2	6.9	7.1
Not in labor force	39,020	39,299	39,143	38,516	38,408	38,353	38,426	38,550	38,609
Both sexes, 16-19 years									
Total noninstitutional population[1]	16,815	16,830	16,828	16,815	16,819	16,823	16,827	16,830	16,828
Civilian noninstitutional population[1]	16,454	16,485	16,483	16,454	16,468	16,473	16,483	16,485	16,483
Civilian labor force	10,563	11,494	10,906	9,091	9,216	9,242	9,469	9,144	9,386
Participation rate	64.2	69.7	66.2	55.3	56.0	56.1	57.4	55.5	56.9
Employed	8,772	9,537	9,252	7,313	7,573	7,589	7,704	7,555	7,745
Employment-population ratio[2]	52.3	56.7	55.0	43.5	45.0	45.1	45.8	44.9	46.0
Agriculture	679	643	579	447	403	416	402	383	382
Nonagricultural industries	8,093	8,894	8,673	6,866	7,170	7,173	7,302	7,172	7,363
Unemployed	1,791	1,957	1,654	1,778	1,643	1,653	1,765	1,589	1,641
Unemployment rate	17.0	17.0	15.2	19.6	17.8	17.9	18.6	17.4	17.5
Not in labor force	5,891	4,992	5,576	7,363	7,252	7,231	7,014	7,341	7,097
WHITE									
Total noninstitutional population[1]	137,601	139,450	139,620	137,601	138,894	139,089	139,270	139,450	139,620
Civilian noninstitutional population[1]	135,822	137,698	137,865	135,822	137,139	137,337	137,522	137,698	137,865
Civilian labor force	85,453	87,616	87,407	84,403	85,642	85,937	86,268	85,968	86,285
Participation rate	62.9	63.6	63.4	62.1	62.4	62.6	62.7	62.4	62.6
Employed	79,604	82,331	82,278	78,370	80,249	80,603	80,813	80,752	81,010
Employment-population ratio[2]	57.9	59.0	58.9	57.0	57.8	58.0	58.0	57.9	58.0
Unemployed	5,849	5,285	5,128	6,033	5,393	5,334	5,455	5,216	5,275
Unemployment rate	6.8	6.0	5.9	7.1	6.3	6.2	6.3	6.1	6.1
Not in labor force	50,369	50,082	50,459	51,419	51,497	51,400	51,254	51,730	51,580
BLACK AND OTHER									
Total noninstitutional population[1]	18,766	19,232	19,279	18,766	19,091	19,140	19,186	19,232	19,279
Civilian noninstitutional population[1]	18,398	18,850	18,896	18,398	18,714	18,763	18,805	18,850	18,896
Civilian labor force	11,237	11,697	11,666	10,979	11,071	11,171	11,325	11,236	11,402
Participation rate	61.1	62.1	61.7	59.7	59.2	59.5	60.2	59.6	60.3
Employed	9,763	10,042	10,037	9,484	9,711	9,730	9,833	9,758	9,744
Employment-population ratio[2]	52.0	52.2	52.1	50.5	50.9	50.8	51.3	50.7	50.5
Unemployed	1,474	1,656	1,629	1,495	1,360	1,441	1,492	1,478	1,658
Unemployment rate	13.1	14.2	14.0	13.6	12.3	12.9	13.2	13.2	14.5
Not in labor force	7,161	7,152	7,230	7,419	7,643	7,592	7,480	7,614	7,494

[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).

Table A-2. Major unemployment indicators, seasonally adjusted

Selected categories	Number of unemployed persons (In thousands)		Unemployment rates					
	Aug. 1976	Aug. 1977	Aug. 1976	Apr. 1977	May 1977	June 1977	July 1977	Aug. 1977
CHARACTERISTICS								
Total, 16 years and over	7,517	6,926	7.9	7.0	6.9	7.1	6.9	7.1
Men, 20 years and over	3,060	2,734	5.9	5.0	5.3	5.0	5.1	5.2
Women, 20 years and over	2,679	2,551	7.8	7.0	6.6	7.2	6.9	7.1
Both sexes, 16-19 years	1,778	1,641	19.6	17.8	17.9	18.6	17.4	17.5
White, total	6,033	5,275	7.1	6.3	6.2	6.3	6.1	6.1
Men, 20 years and over	2,524	2,099	5.4	4.6	4.7	4.5	4.6	4.5
Women, 20 years and over	2,116	1,952	7.1	6.1	5.9	6.4	6.2	6.3
Both sexes, 16-19 years	1,393	1,224	17.1	16.1	15.7	16.1	14.3	14.7
Black and other, total	1,495	1,658	13.6	12.3	12.9	13.2	13.2	14.5
Men, 20 years and over	554	647	10.3	8.5	9.9	9.6	10.1	11.7
Women, 20 years and over	553	590	11.9	12.3	11.8	11.9	10.9	12.2
Both sexes, 16-19 years	388	421	40.0	36.2	38.7	39.4	40.7	40.4
Married men, spouse present	1,704	1,405	4.3	3.6	3.6	3.4	3.4	3.5
Married women, spouse present	1,679	1,469	7.6	6.6	6.3	6.8	6.6	6.6
Women who head families	462	465	11.0	9.2	8.4	9.4	9.3	10.5
Full-time workers	6,085	5,633	7.5	6.5	6.5	6.5	6.5	6.8
Part-time workers	1,429	1,293	10.0	9.9	9.9	10.7	9.2	8.9
Unemployed 15 weeks and over[1]	2,341	1,808	2.5	1.9	1.9	1.8	1.9	1.9
Labor force time lost[2]	--	--	8.4	7.4	7.5	7.5	7.4	7.7
OCCUPATION[3]								
White-collar workers	2,269	1,970	4.9	4.4	4.3	4.2	4.0	4.2
Professional and technical	431	419	3.1	3.2	2.9	3.0	2.8	3.0
Managers and administrators, except farm	334	250	3.5	2.9	2.8	2.7	2.6	2.5
Sales workers	340	320	5.8	5.1	5.5	5.2	5.4	5.3
Clerical workers	1,164	981	7.0	6.0	5.7	5.7	5.4	5.8
Blue-collar workers	3,148	2,779	9.8	7.8	7.9	7.7	8.2	8.4
Craft and kindred workers	848	695	7.0	4.9	5.6	5.6	5.6	5.5
Operatives, except transport	1,275	1,137	11.3	9.3	8.9	9.4	10.1	10.0
Transport equipment operatives	286	286	8.1	6.0	6.7	5.7	7.5	7.6
Nonfarm laborers	739	661	14.5	12.6	12.5	10.9	10.7	12.6
Service workers	1,146	1,154	8.5	8.1	9.0	8.2	7.7	8.4
Farm workers	109	106	3.6	4.8	4.4	4.8	3.8	3.7
INDUSTRY[3]								
Nonagricultural private wage and salary workers[4]	5,612	4,968	8.2	7.0	7.1	6.9	6.8	7.0
Construction	747	520	16.5	12.0	13.0	12.6	12.1	11.5
Manufacturing	1,723	1,503	8.1	6.7	6.2	6.3	6.7	7.0
Durable goods	969	822	7.7	6.0	5.7	5.6	6.1	6.5
Nondurable goods	754	681	8.7	7.7	7.0	7.3	7.6	7.7
Transportation and public utilities	330	250	4.8	4.4	4.3	4.1	4.7	4.9
Wholesale and retail trade	1,590	1,501	8.9	7.8	8.3	7.9	7.7	8.3
Finance and service industries	1,286	1,156	6.6	6.1	6.6	6.0	5.7	5.6
Government workers	710	701	4.4	4.0	4.1	4.2	3.9	4.4
Agricultural wage and salary workers	155	136	10.4	12.3	11.5	11.0	9.7	9.3
VETERAN STATUS								
Male Vietnam-era veterans:[5]								
20 to 34 years	482	511	7.6	7.3	7.5	7.6	7.9	7.8
20 to 24 years	146	165	16.1	14.4	13.6	18.1	16.3	17.4
25 to 29 years	217	182	7.1	7.7	7.8	7.1	7.2	6.3
30 to 34 years	119	164	5.1	4.3	5.1	4.5	5.8	6.0
Male nonveterans:								
20 to 34 years	1,316	1,261	8.7	7.3c	7.2	6.9	7.6	7.9
20 to 24 years	753	729	11.2	10.1	10.2	8.9	9.9	10.5
25 to 29 years	383	336	7.9	5.7	5.4	6.3	6.8	6.6
30 to 34 years	180	196	5.0	4.2	4.1	4.0	4.6	4.9

[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 by industry covers only unemployed wage and salary workers.

[4] Includes mining, not shown separately.

[5] Vietnam-era veterans are those who served between August 5, 1964, and May 7, 1975.

c=corrected.

Table A-3. Selected employment indicators

[In thousands]

Selected categories	Not seasonally adjusted		Seasonally adjusted					
	Aug. 1976	Aug. 1977	Aug. 1976	Apr. 1977	May 1977	June 1977	July 1977	Aug. 1977
CHARACTERISTICS								
Total employed, 16 years and over	89,367	92,315	87,834	90,023	90,408	90,679	90,561	90,771
Men	54,196	55,565	52,596	53,575	53,722	53,987	53,900	53,958
Women	35,171	36,751	35,238	36,448	36,686	36,692	36,661	36,813
Married men, spouse present	38,466	38,623	38 179	38,536	38,509	38,582	38,434	38,316
Married women, spouse present	19,831	20,231	20,402	21,076	20,962	20,831	20,846	20,814
OCCUPATION								
White-collar workers	43,441	44,828	43,731	44,851	44,766	44,798	45,105	45,114
Professional and technical	12,981	13,226	13,421	13,591	13,483	13,638	13,863	13,720
Managers and administrators, except farm	9,421	9,894	9,309	9,434	9,400	9,570	9,583	9,688
Sales workers	5,593	5,814	5,504	5,765	5,695	5,673	5,716	5,722
Clerical workers	15,446	15,984	15,447	16,061	16,188	15,917	15,943	15,984
Blue-collar workers	30,180	31,566	28,912	30,193	30,423	30,432	30,063	30,231
Craft and kindred workers	11,656	12,325	11,286	11,896	11,894	11,891	11,887	11,931
Operatives, except transport	10,372	10,611	10,015	10,394	10,530	10,378	10,270	10,242
Transport equipment operatives	3,286	3,483	3,266	3,482	3,552	3,551	3,397	3,462
Nonfarm laborers	4,866	5,147	4,345	4,421	4,447	4,612	4,509	4,596
Service workers	12,452	12,779	12,265	12,250	12,372	12,697	12,460	12,591
Farm workers	3,295	3,143	2,913	2,779	2,904	2,838	2,743	2,778
MAJOR INDUSTRY AND CLASS OF WORKER								
Agriculture:								
Wage and salary workers	1,604	1,595	1,339	1,310	1,325	1,381	1,271	1,331
Self-employed workers	1,776	1,675	1,700	1,548	1,655	1,595	1,561	1,604
Unpaid family workers	462	413	352	366	393	378	363	315
Nonagricultural industries:								
Wage and salary workers	79,341	81,929	78,423	80,306	80,429	80,814	80,738	80,951
Government	14,658	14,671	15,262	14,960	15,075	14,961	15,131	15,282
Private industries	64,683	67,258	63,161	65,346	65,354	65,853	65,607	65,669
Private households	1,409	1,426	1,384	1,320	1,305	1,388	1,445	1,401
Other industries	63,274	65,832	61,777	64,026	64,049	64,465	64,162	64,268
Self-employed workers	5,719	6,213	5,661	5,954	6,050	5,997	5,896	6,151
Unpaid family workers	464	490	444	499	550	518	523	469
PERSONS AT WORK [1]								
Nonagricultural industries	74,350	77,770	78,991	81,005	81,771	81,618	82,572	82,613
Full-time schedules	62,683	65,655	64,687	66,436	67,219	67,126	67,867	67,755
Part time for economic reasons	3,682	3,744	3,178	3,174	3,290	3,368	3,371	3,199
Usually work full time	1,384	1,226	1,350	1,167	1,314	1,341	1,440	1,196
Usually work part time	2,298	2,518	1,828	2,007	1,976	2,027	1,931	2,003
Part time for noneconomic reasons	7,985	8,371	11,126	11,395	11,262	11,124	11,334	11,659

[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]

Weeks of unemployment	Not seasonally adjusted		Seasonally adjusted					
	Aug. 1976	Aug. 1977	Aug. 1976	Apr. 1977	May 1977	June 1977	July 1977	Aug. 1977
DURATION								
Less than 5 weeks	2,738	2,741	2,867	3,100	2,782	3,058	2,830	2,870
5 to 14 weeks	2,526	2,427	2,433	1,857	2,093	2,023	1,969	2,338
15 weeks and over	2,058	1,589	2,341	1,816	1,836	1,737	1,834	1,808
15 to 26 weeks	785	706	1,127	715	800	798	917	966
27 weeks and over	1,274	883	1,214	1,101	1,036	939	917	842
Average (mean) duration, in weeks	15.2	13.4	15.4	14.3	14.9	14.4	14.1	13.5
PERCENT DISTRIBUTION								
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than 5 weeks	37.4	40.6	37.5	45.8	41.5	44.9	42.7	40.9
5 to 14 weeks	34.5	35.9	31.8	27.4	31.2	29.7	29.7	33.3
15 weeks and over	28.1	23.5	30.6	26.8	27.4	25.5	27.6	25.8
15 to 26 weeks	10.7	10.4	14.7	10.6	11.9	11.7	13.8	13.8
27 weeks and over	17.4	13.1	15.9	16.3	15.4	13.8	13.8	12.0

Table A-5. Reasons for unemployment

(Numbers in thousands)

Reasons	Not seasonally adjusted		Seasonally adjusted					
	Aug. 1976	Aug. 1977	Aug. 1976	Apr. 1977	May 1977	June 1977	July 1977	Aug. 1977
NUMBER OF UNEMPLOYED								
Lost last job	3,308	2,871	3,790	2,953	3,038	2,927	3,075	3,289
On layoff	937	801	1,191	754	749	827	919	1,018
Other job losers	2,371	2,070	2,599	2,199	2,289	2,100	2,156	2,271
Left last job	1,080	989	994	846	944	954	841	910
Reentered labor force	1,939	1,855	1,941	2,001	1,993	1,889	1,822	1,857
Seeking first job	997	1,042	955	972	893	1,077	974	1,000
PERCENT DISTRIBUTION								
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Job losers	45.2	42.5	49.3	43.6	44.2	42.7	45.8	46.6
On layoff	12.8	11.9	15.5	11.1	10.9	12.1	13.7	14.4
Other job losers	32.4	30.6	33.8	32.5	33.3	30.7	32.1	32.2
Job leavers	14.7	14.6	12.9	12.5	13.7	13.9	12.5	12.9
Reentrants	26.5	27.5	25.3	29.5	29.0	27.6	27.1	26.3
New entrants	13.6	15.4	12.4	14.4	13.0	15.7	14.5	14.2
UNEMPLOYED AS A PERCENT OF THE CIVILIAN LABOR FORCE								
Job losers	3.4	2.9	4.0	3.1	3.1	3.0	3.2	3.4
Job leavers	1.1	1.0	1.0	.9	1.0	1.0	.9	.9
Reentrants	2.0	1.9	2.0	2.1	2.1	1.9	1.9	1.9
New entrants	1.0	1.1	1.0	1.0	.9	1.1	1.0	1.0

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

Sex and age	Number of unemployed persons (in thousands)		Unemployment rates					
	Aug. 1976	Aug. 1977	Aug. 1976	Apr. 1977	May 1977	June 1977	July 1977	Aug. 1977
Total, 16 years and over	7,517	6,926	7.9	7.0	6.9	7.1	6.9	7.1
16 to 19 years	1,778	1,641	19.6	17.8	17.9	18.6	17.4	17.5
16 to 17 years	843	811	22.1	19.2	20.4	21.3	19.9	20.7
18 to 19 years	936	831	18.0	16.8	16.3	16.5	15.3	15.6
20 to 24 years	1,657	1,609	11.9	10.8	10.7	10.5	10.6	11.1
25 years and over	4,075	3,662	5.6	4.9	4.8	5.0	5.0	5.0
25 to 54 years	3,438	3,147	5.9	5.1	5.1	5.3	5.2	5.3
55 years and over	688	550	4.8	4.1	4.0	3.8	3.9	3.9
Men, 16 years and over	3,968	3,609	7.0	6.1	6.3	6.2	6.2	6.3
16 to 19 years	908	875	18.7	17.0	17.0	18.6	16.9	17.6
16 to 17 years	452	472	21.5	17.9	18.7	22.7	20.2	21.7
18 to 19 years	467	414	16.8	16.0	16.0	15.5	14.7	14.8
20 to 24 years	903	899	11.8	10.5	10.6	9.9	10.6	11.3
25 years and over	2,189	1,856	5.0	4.1	4.2	4.1	4.2	4.2
25 to 54 years	1,813	1,566	5.1	4.3	4.4	4.3	4.3	4.4
55 years and over	408	307	4.6	3.7	3.9	3.3	3.6	3.5
Women, 16 years and over	3,549	3,317	9.1	8.2	7.9	8.4	8.0	8.3
16 to 19 years	870	766	20.6	18.8	19.0	18.7	17.9	17.4
16 to 17 years	391	339	22.9	20.8	22.5	19.7	19.5	19.4
18 to 19 years	489	437	19.4	17.7	16.6	17.5	16.0	16.4
20 to 24 years	754	710	11.9	11.2	10.9	11.0	10.5	10.8
25 years and over	1,886	1,806	6.7	6.0	5.7	6.3	6.2	6.2
25 to 54 years	1,625	1,581	7.1	6.5	6.1	6.7	6.4	6.6
55 years and over	280	243	5.2	4.6	4.3	4.6	4.4	4.6

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

[Percent]

Measures	Quarterly averages					Monthly data		
	1976			1977		1977		
	II	III	IV	I	II	June	July	Aug.
U-1—Persons unemployed 15 weeks or longer as a percent of the civilian labor force	2.2	2.4	2.6	2.2	1.8	1.8	1.9	1.9
U-2—Job losers as a percent of the civilian labor force	3.7	3.9	3.9	3.4	3.1	3.0	3.2	3.4
U-3—Unemployed household heads as a percent of the household head labor force	4.9	5.3	5.3	4.8	4.4	4.3	4.3	4.6
U-4—Unemployed full-time jobseekers as a percent of the full-time labor force	7.0	7.4	7.5	6.8	6.5	6.5	6.5	6.8
U-5—Total unemployed as a percent of the civilian labor force (official measure)	7.4	7.8	7.9	7.4	7.0	7.1	6.9	7.1
U-6—Total full-time jobseekers plus ½ part-time jobseekers plus ½ total on part time for economic reasons as a percent of the civilian labor force less ½ of the part-time labor force	9.1	9.5	9.7	9.0	8.6	8.7	8.6	8.7
U-7—Total full-time jobseekers plus ½ part-time jobseekers plus ½ total on part time for economic reasons plus discouraged workers as a percent of the civilian labor force plus discouraged workers less ½ of the part-time labor force	10.0	10.3	10.7	9.9	9.7	N.A.	N.A.	N.A.

N.A.= not available.

Table B-1. Employees on nonagricultural payrolls, by industry

(In thousands)

Industry	Not seasonally adjusted				Seasonally adjusted					
	Aug. 1976	June 1977	July 1977[p]	Aug. 1977[p]	Aug. 1976	Apr. 1977	May 1977	June 1977	July 1977[p]	Aug. 1977[p]
TOTAL	79,555	82,930	82,152	82,349	79,618	81,686	81,921	82,121	82,356	82,448
GOODS-PRODUCING	23,806	24,679	24,557	24,778	23,310	24,217	24,306	24,353	24,409	24,307
MINING	766	870	841	834	752	847	845	855	827	819
CONTRACT CONSTRUCTION	3,869	4,047	4,147	4,201	3,579	3,842	3,861	3,876	3,916	3,886
MANUFACTURING	19,171	19,762	19,569	19,743	18,979	19,528	19,600	19,622	19,666	19,602
Production workers	13,797	14,258	14,042	14,175	13,627	14,066	14,145	14,144	14,161	14,058
DURABLE GOODS	11,108	11,598	11,478	11,483	11,083	11,423	11,469	11,491	11,526	11,509
Production workers	7,922	8,334	8,199	8,181	7,911	8,177	8,233	8,240	8,262	8,221
Ordnance and accessories	157.1	156.5	156.4	156.1	157	157	157	157	156	156
Lumber and wood products	629.0	659.9	660.4	665.3	605	639	638	637	641	640
Furniture and fixtures	491.8	511.1	501.6	509.2	486	507	509	510	514	503
Stone, clay, and glass products	644.6	672.2	673.3	675.2	628	651	654	659	661	657
Primary metal industries	1,214.8	1,233.9	1,211.9	1,205.5	1,215	1,208	1,217	1,218	1,209	1,206
Fabricated metal products	1,396.7	1,463.6	1,443.7	1,460.3	1,394	1,433	1,447	1,452	1,457	1,457
Machinery, except electrical	2,069.2	2,180.8	2,171.0	2,174.6	2,090	2,150	2,165	2,168	2,191	2,197
Electrical equipment	1,837.6	1,938.8	1,935.4	1,946.5	1,843	1,919	1,931	1,933	1,945	1,952
Transportation equipment	1,724.2	1,827.5	1,790.4	1,738.4	1,737	1,808	1,802	1,809	1,810	1,804
Instruments and related products	512.3	530.4	526.3	526.5	510	526	526	528	528	524
Miscellaneous manufacturing	430.4	423.4	407.4	425.1	418	425	423	420	414	413
NONDURABLE GOODS	8,063	8,164	8,091	8,260	7,896	8,105	8,131	8,131	8,140	8,093
Production workers	5,875	5,924	5,843	5,994	5,716	5,889	5,912	5,904	5,899	5,837
Food and kindred products	1,835.2	1,727.0	1,761.3	1,840.0	1,715	1,743	1,735	1,737	1,730	1,720
Tobacco manufactures	85.0	64.8	65.8	77.7	78	73	71	72	72	72
Textile mill products	974.9	995.6	972.7	984.5	969	981	988	987	992	979
Apparel and other textile products	1,299.7	1,316.3	1,256.9	1,293.5	1,292	1,291	1,298	1,306	1,301	1,286
Paper and allied products	684.7	709.6	705.4	711.0	679	697	703	703	707	705
Printing and publishing	1,079.1	1,112.6	1,109.2	1,111.9	1,082	1,102	1,109	1,111	1,115	1,115
Chemicals and allied products	1,048.5	1,067.5	1,069.4	1,075.6	1,040	1,060	1,063	1,060	1,064	1,067
Petroleum and coal products	207.1	213.7	215.8	215.5	202	211	210	210	210	210
Rubber and plastics products, nec.	576.5	684.3	674.7	680.5	572	680	685	680	684	675
Leather and leather products	272.7	272.1	259.6	269.6	267	267	269	265	265	264
SERVICE-PRODUCING	55,749	58,251	57,595	57,571	56,308	57,469	57,615	57,768	57,947	58,141
TRANSPORTATION AND PUBLIC UTILITIES	4,528	4,629	4,601	4,594	4,501	4,575	4,586	4,579	4,569	4,567
WHOLESALE AND RETAIL TRADE	17,754	18,342	18,307	18,348	17,764	18,203	18,235	18,247	18,295	18,359
WHOLESALE TRADE	4,302	4,409	4,422	4,433	4,272	4,371	4,384	4,383	4,396	4,402
RETAIL TRADE	13,452	13,933	13,885	13,915	13,492	13,832	13,851	13,864	13,899	13,957
FINANCE, INSURANCE, AND REAL ESTATE	4,368	4,534	4,564	4,584	4,312	4,463	4,480	4,489	4,505	4,525
SERVICES	14,869	15,458	15,511	15,541	14,751	15,182	15,197	15,245	15,342	15,418
GOVERNMENT	14,230	15,288	14,612	14,504	14,980	15,046	15,117	15,208	15,236	15,272
FEDERAL	2,754	2,765	2,773	2,755	2,732	2,719	2,723	2,735	2,721	2,733
STATE AND LOCAL	11,476	12,523	11,839	11,749	12,248	12,327	12,394	12,473	12,515	12,539

[p]preliminary.

Table B-2. Average weekly hours of production or nonsupervisory workers[1] on private nonagricultural payrolls, by industry

Industry	Not seasonally adjusted				Seasonally adjusted					
	Aug. 1976	June 1977	July 1977p	Aug. 1977p	Aug. 1976	Apr. 1977	May 1977	June 1977	July 1977p	Aug. 1977p
TOTAL PRIVATE	36.6	36.4	36.5	36.4	36.1	36.2	36.3	36.2	36.1	36.0
MINING	41.2	44.6	43.7	42.0	41.2	44.4	44.0	44.0	43.6	42.0
CONTRACT CONSTRUCTION	37.9	37.4	37.8	37.2	36.8	37.3	37.4	36.8	36.8	36.2
MANUFACTURING	40.0	40.8	40.1	40.1	40.0	40.3	40.4	40.5	40.3	40.1
Overtime hours	3.1	3.5	3.3	3.5	3.0	3.4	3.4	3.4	3.4	3.4
DURABLE GOODS	40.5	41.5	40.6	40.7	40.8	40.8	41.1	41.2	41.0	41.0
Overtime hours	3.2	3.7	3.5	3.7	3.1	3.6	3.6	3.7	3.6	3.6
Ordnance and accessories	40.3	41.0	40.1	39.7	40.7	41.2	41.1	40.9	40.5	40.1
Lumber and wood products	40.6	40.7	40.3	40.1	40.2	40.0	40.0	39.9	40.5	39.7
Furniture and fixtures	39.0	39.2	38.5	39.3	38.5	38.4	38.7	38.8	38.9	38.8
Stone, clay, and glass products	41.5	42.0	41.5	41.8	41.1	41.7	41.7	41.7	41.3	41.4
Primary metal industries	40.6	41.7	41.0	41.0	40.9	41.5	41.6	41.6	41.2	41.3
Fabricated metal products	41.0	41.6	40.6	41.0	41.0	40.7	41.0	41.3	41.0	41.0
Machinery, except electrical	41.0	41.9	41.1	41.1	41.4	41.3	41.6	41.9	41.9	41.5
Electrical equipment	40.0	40.6	39.7	40.6	40.1	40.0	40.1	40.4	40.3	40.7
Transportation equipment	40.9	43.2	42.1	41.1	41.9	41.9	42.7	42.9	42.1	42.2
Instruments and related products	40.2	40.7	39.9	39.9	40.4	40.1	40.4	40.7	40.4	40.1
Miscellaneous manufacturing	38.5	39.4	38.3	38.7	38.5	38.9	39.0	39.2	38.7	38.7
NONDURABLE GOODS	39.2	39.8	39.3	39.2	38.9	39.5	39.5	39.6	39.3	39.0
Overtime hours	3.0	3.2	3.1	3.2	2.8	3.2	3.1	3.1	3.0	3.0
Food and kindred products	40.7	40.1	40.1	39.6	40.1	40.3	39.9	40.0	39.7	39.1
Tobacco manufactures	37.3	38.9	36.1	37.0	36.8	38.3	38.6	39.0	37.3	36.5
Textile mill products	39.6	40.9	40.1	40.3	39.3	40.5	40.7	40.5	40.4	40.0
Apparel and other textile products	35.6	36.0	35.5	35.5	35.2	35.1	35.7	35.9	35.4	35.1
Paper and allied products	42.4	43.3	42.7	42.7	42.1	43.3	43.0	43.1	42.7	42.4
Printing and publishing	37.7	37.7	37.7	37.9	37.5	37.7	37.6	37.7	37.8	37.7
Chemicals and allied products	41.1	42.0	41.6	41.4	41.3	41.9	41.7	41.9	41.7	41.6
Petroleum and coal products	42.0	43.2	43.4	42.3	42.3	42.7	42.6	43.0	43.0	42.6
Rubber and plastics products, nec	40.1	41.3	40.2	40.5	40.0	41.2	41.3	41.1	40.6	40.4
Leather and leather products	36.9	38.0	37.0	37.1	36.7	37.4	37.1	37.2	36.6	36.9
TRANSPORTATION AND PUBLIC UTILITIES	40.4	40.3	40.5	40.2	40.0	40.1	40.2	40.1	40.1	39.8
WHOLESALE AND RETAIL TRADE	34.3	33.6	34.1	34.1	33.6	33.5	33.4	33.3	33.3	33.3
WHOLESALE TRADE	39.0	38.9	39.0	39.0	38.9	39.0	38.7	38.8	38.8	38.9
RETAIL TRADE	33.0	32.1	32.7	32.7	32.0	31.9	31.9	31.7	31.7	31.7
FINANCE, INSURANCE, AND REAL ESTATE	36.9	36.6	36.7	36.6	36.8	36.6	36.7	36.6	36.6	36.5
SERVICES	34.0	33.5	33.8	33.8	33.5	33.5	33.5	33.3	33.2	33.3

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

p=preliminary.

ESTABLISHMENT DATA

Table B-3. Average hourly and weekly earnings of production or nonsupervisory workers[1] on private nonagricultural payrolls, by industry

Industry	Average hourly earnings				Average weekly earnings			
	Aug. 1976	June 1977	July 1977[P]	Aug. 1977[P]	Aug. 1976	June 1977	July 1977[P]	Aug. 1977[P]
TOTAL PRIVATE	$4.89	$5.22	$5.24	$5.23	$178.97	$190.01	$191.26	$190.37
Seasonally adjusted	4.91	5.22	5.26	5.26	177.25	188.96	189.89	189.36
MINING	6.29	6.88	6.85	6.85	259.15	306.85	299.35	287.70
CONTRACT CONSTRUCTION	7.71	7.97	8.00	8.02	292.21	298.08	302.40	298.34
MANUFACTURING	5.21	5.60	5.64	5.64	208.40	228.48	226.16	226.16
DURABLE GOODS	5.58	6.00	6.01	6.01	225.99	249.00	244.01	244.61
Ordnance and accessories	5.77	6.15	6.25	6.33	232.53	252.15	250.63	251.30
Lumber and wood products	4.83	5.01	5.08	5.12	196.10	203.91	204.72	205.31
Furniture and fixtures	4.01	4.28	4.29	4.39	156.39	167.78	165.17	172.53
Stone, clay, and glass products	5.36	5.79	5.82	5.83	222.44	243.18	241.53	243.69
Primary metal industries	6.92	7.45	7.51	7.58	280.95	310.67	307.91	310.78
Fabricated metal products	5.46	5.82	5.81	5.82	223.86	242.11	235.89	238.62
Machinery, except electrical	5.79	6.15	6.16	6.15	237.39	257.69	253.18	252.77
Electrical equipment	4.95	5.29	5.33	5.38	198.00	214.77	211.60	218.43
Transportation equipment	6.52	7.18	7.14	7.12	266.67	310.18	300.59	292.63
Instruments and related products	4.90	5.15	5.20	5.16	196.98	209.61	207.48	205.88
Miscellaneous manufacturing	4.00	4.31	4.34	4.32	154.00	169.81	166.22	167.18
NONDURABLE GOODS	4.70	5.03	5.10	5.12	184.24	200.19	200.43	200.70
Food and kindred products	4.98	5.28	5.34	5.40	202.69	211.73	214.13	213.84
Tobacco manufactures	4.62	5.77	5.68	5.56	172.33	224.45	205.05	205.72
Textile mill products	3.75	3.90	4.02	4.06	148.50	159.51	161.20	163.62
Apparel and other textile products	3.42	3.62	3.58	3.60	121.75	130.32	127.09	127.80
Paper and allied products	5.50	5.86	5.97	6.02	233.20	253.74	254.92	257.05
Printing and publishing	5.71	6.06	6.09	6.15	215.27	228.46	229.59	233.09
Chemicals and allied products	5.93	6.35	6.42	6.43	243.72	266.70	267.07	266.20
Petroleum and coal products	7.13	7.73	7.79	7.77	299.46	333.94	338.09	328.67
Rubber and plastics products, nec	4.40	5.12	5.13	5.13	176.44	211.46	206.23	207.77
Leather and leather products	3.45	3.63	3.60	3.62	127.31	137.94	133.20	134.30
TRANSPORTATION AND PUBLIC UTILITIES	6.56	6.83	6.91	6.93	265.02	275.25	279.86	278.59
WHOLESALE AND RETAIL TRADE	3.98	4.26	4.28	4.26	136.51	143.14	145.95	145.27
WHOLESALE TRADE	5.21	5.51	5.56	5.54	203.19	214.34	216.84	216.06
RETAIL TRADE	3.55	3.82	3.83	3.81	117.15	122.62	125.24	124.59
FINANCE, INSURANCE, AND REAL ESTATE	4.40	4.54	4.58	4.60	162.36	166.16	168.09	168.36
SERVICES	4.32	4.66	4.66	4.65	146.88	156.11	157.51	157.17

[1] See footnote 1, table B-2.
[P] preliminary.

ESTABLISHMENT DATA

Table B-4. Hourly earnings index for production or nonsupervisory workers[1] on private nonagricultural payrolls, by industry division, seasonally adjusted

(1967=100)

Industry	Aug. 1976	Mar. 1977	Apr. 1977	May 1977	June 1977	July P 1977	Aug. P 1977	Percent change from: Aug. 1976-Aug. 1977	Percent change from: July 1977-Aug. 1977
TOTAL PRIVATE NONFARM:									
Current dollars	186.8	194.1	195.3	196.5	197.5	198.9	199.1	6.6	0.1
Constant (1967) dollars	108.7	108.8	108.6	108.6	108.6	108.9	N.A.	(2)	(3)
MINING	202.3	210.4	212.1	213.1	215.4	216.5	219.4	8.5	1.3
CONTRACT CONSTRUCTION	187.1	191.6	192.6	193.1	195.1	196.2	194.9	4.2	-.7
MANUFACTURING	186.7	194.3	195.4	196.8	198.5	200.0	201.0	7.6	.5
TRANSPORTATION AND PUBLIC UTILITIES	200.9	206.7	208.6	210.1	210.5	211.8	210.4	4.7	-.7
WHOLESALE AND RETAIL TRADE	179.8	188.5	189.8	190.7	191.1	192.8	192.4	7.0	-.2
FINANCE, INSURANCE, AND REAL ESTATE	173.1	175.9	177.4	179.0	177.2	179.7	181.1	4.6	.7
SERVICES	189.8	198.7	199.7	200.7	201.8	202.5	203.5	7.2	.5

[1] See footnote 1, table B-2.

[2] Percent change was 0.3 from July 1976 to July 1977, the latest month available.
[3] Percent change was 0.3 from June 1977 to July 1977, the latest month available.
N.A. = not available.
P=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[1] on private nonagricultural payrolls, by industry, seasonally adjusted

(1967 = 100)

Industry division and group	1976					1977							
	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July P	Aug. P
TOTAL	111.8	112.2	112.2	112.8	113.3	112.3	114.2	115.2	115.6	116.1	115.8	115.7	115.3
GOODS-PRODUCING	95.7	95.9	96.0	97.2	96.9	95.2	98.3	100.0	100.9	101.7	101.8	101.5	99.9
MINING	115.6	131.7	131.1	132.6	134.0	130.7	134.6	141.5	142.2	140.2	141.8	136.6	127.8
CONTRACT CONSTRUCTION	102.5	99.4	104.2	105.7	104.3	96.4	105.9	108.1	112.0	112.7	111.3	112.8	109.6
MANUFACTURING	93.9	94.0	93.2	94.5	94.4	93.8	95.7	97.1	97.5	98.5	98.8	98.3	97.2
DURABLE GOODS	93.6	93.2	92.0	93.8	93.6	93.2	94.8	96.8	96.8	98.1	98.7	98.4	97.8
Ordnance and accessories	39.8	38.6	38.5	38.5	39.5	39.0	39.1	38.5	40.8	41.3	41.1	40.1	39.7
Lumber and wood products	97.6	98.2	99.4	100.8	101.9	101.1	103.0	103.4	104.1	104.1	103.8	105.8	103.7
Furniture and fixtures	101.2	102.4	102.2	102.8	103.5	98.5	102.7	105.3	106.0	107.4	107.7	108.2	105.9
Stone, clay, and glass products	98.6	98.9	99.7	100.2	99.1	96.1	97.1	101.5	104.1	104.7	105.7	105.1	104.7
Primary metal industries	89.8	88.8	86.2	85.7	85.0	84.8	85.5	88.5	90.0	91.1	91.1	89.8	89.3
Fabricated metal products	98.6	98.6	96.5	98.1	98.1	97.6	100.0	101.6	101.0	103.1	104.2	103.6	103.3
Machinery, except electrical	95.9	95.9	94.0	96.7	96.0	95.7	97.7	98.6	98.3	100.5	101.2	102.9	100.5
Electrical equipment and supplies	92.2	91.5	92.1	93.4	93.1	91.7	95.5	95.9	96.1	97.3	97.9	98.0	99.5
Transportation equipment	90.7	89.1	86.1	91.5	90.6	93.3	91.3	96.7	94.8	96.2	96.9	95.1	95.3
Instruments and related products	108.1	107.2	107.9	108.5	110.4	108.9	112.4	111.6	111.1	112.3	113.2	112.3	109.8
Miscellaneous manufacturing, ind.	91.8	92.2	92.0	92.1	91.6	93.1	96.8	96.0	95.1	95.0	94.3	91.4	90.8
NONDURABLE GOODS	94.2	95.2	95.0	95.4	95.5	94.7	97.1	97.6	98.5	98.9	98.9	98.1	96.3
Food and kindred products	96.5	96.4	96.2	96.6	95.5	95.1	97.5	97.9	98.8	97.2	97.5	96.1	93.1
Tobacco manufactures	84.0	82.1	83.0	81.6	81.6	76.1	83.0	75.5	80.7	77.2	79.4	74.6	73.1
Textile mill products	95.5	95.2	95.0	95.6	96.1	95.4	97.9	99.5	99.7	101.1	100.2	100.5	98.1
Apparel and other textile products	87.6	86.2	85.7	86.1	86.3	84.1	88.0	87.9	87.3	89.4	90.4	88.5	86.7
Paper and allied products	96.1	96.5	95.7	97.0	97.2	96.2	98.0	98.3	100.8	101.0	101.3	100.9	99.6
Printing and publishing	92.9	93.1	93.4	93.6	93.7	93.0	94.8	94.3	94.9	95.4	95.3	95.6	95.2
Chemicals and allied products	99.8	100.3	99.4	100.0	100.0	100.4	101.8	102.2	103.5	103.7	103.7	103.5	103.4
Petroleum and coal products	112.4	112.2	112.5	113.1	114.7	115.0	114.7	118.7	120.5	120.2	121.3	121.3	120.2
Rubber and plastics products, nec	105.2	124.3	125.6	125.7	127.6	127.7	129.6	131.7	134.7	135.8	133.9	132.7	129.4
Leather and leather products	72.5	72.1	71.0	70.4	70.5	69.1	71.9	71.9	73.9	73.9	72.9	71.7	71.9
SERVICE-PRODUCING	123.0	123.6	123.5	123.5	124.6	124.1	125.3	125.8	125.8	126.6	125.4	125.7	126.0
TRANSPORTATION AND PUBLIC UTILITIES	102.5	102.9	102.0	103.2	105.0	102.7	104.4	104.2	103.9	104.4	104.0	103.5	102.6
WHOLESALE AND RETAIL TRADE	119.0	119.7	119.3	118.9	120.0	119.1	120.7	121.5	121.7	121.7	121.1	121.4	121.8
WHOLESALE TRADE	114.7	114.9	114.8	114.8	114.8	115.4	117.0	116.9	117.8	117.3	117.3	117.4	117.8
RETAIL TRADE	120.6	121.6	121.0	120.4	122.0	120.4	122.1	123.2	123.1	123.3	122.5	122.9	123.3
FINANCE, INSURANCE, AND REAL ESTATE	127.3	127.7	128.3	129.1	129.8	130.6	130.2	131.1	131.0	131.6	131.5	131.9	131.8
SERVICES	136.6	137.2	137.6	137.7	138.4	138.8	139.7	140.0	140.1	140.2	139.5	139.7	140.8

[1] See footnote 1, table B-2.
P=preliminary.

Table B-6. Indexes of diffusion: Percent of industries in which employment[1] increased

Year and month	Over 1-month span	Over 3-month span	Over 6-month span	Over 12-month span
1974				
January	58.7	61.6	64.8	63.1
February	55.8	55.2	56.4	59.6
March	48.0	54.7	54.7	54.9
April	54.7	52.3	51.5	50.0
May	54.7	57.0	50.3	40.1
June	54.4	50.9	44.5	28.2
July	49.1	44.2	35.8	26.7
August	42.2	36.0	32.0	22.1
September	32.6	35.5	21.8	20.6
October	35.5	26.2	15.7	18.6
November	19.8	21.8	16.0	16.6
December	19.8	12.8	13.7	14.0
1975				
January	16.9	12.5	13.7	16.3
February	16.9	14.0	12.8	17.4
March	27.3	22.7	18.9	17.2
April	44.2	34.6	29.1	20.3
May	51.2	43.6	40.7	25.6
June	39.8	47.7	59.0	40.1
July	57.3	55.5	63.4	50.3
August	72.4	75.0	66.6	61.9
September	81.4	78.8	72.4	71.5
October	64.0	70.6	78.8	75.9
November	59.6	69.2	79.4	79.1
December	69.2	75.0	77.6	81.4
1976				
January	76.7	82.0	82.8	84.6
February	74.4	84.3	83.1	82.8
March	77.9	84.9	77.0	79.4
April	77.9	81.1	77.0	73.5
May	63.4	70.6	71.5	79.7
June	47.1	57.0	70.9	79.4
July	52.9	47.4	55.2	75.3
August	49.1	65.1	55.2	74.1
September	68.9	54.9	61.9	78.2
October	39.0	59.9	70.1	76.5
November	64.2	53.8	69.8	75.0
December	68.3	75.9	76.7	74.7
1977				
January	71.5	76.7	88.4	77.6p
February	61.6	84.6	86.6	73.3p
March	79.7	86.0	83.7	
April	79.1	83.7	82.3p	
May	68.9	71.5	73.5p	
June	57.8	64.0p		
July	67.7p	49.4p		
August	40.7p			
September				
October				
November				
December				

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

Senator PROXMIRE. All right, sir. You seem to indicate that there is nothing very alarming about the slowdown in the recovery reflected in these figures, because we had a similar slowdown or at least you are calling our attention to a similar slowdown a year ago, when between May and October, there was not the kind of vigorous recovery we had before or we have had since. At the same time, I just wonder how germane that may be. After all, you are not saying there is a seasonal element here that in spring and summer we have a slowdown of this kind.

Mr. SHISKIN. I am not saying that.

Senator PROXMIRE. All the seasonal factors are taken into account.

Mr. SHISKIN. If this pattern persists, our seasonal adjustments in the next year will wipe them out. They wipe out any regular pattern you get.

I would like to put it somewhat differently and say that I don't think we can be complacent about anyrise in unemployment or any slowdown in the rate of increase in employment. So, I think this is a matter of concern, and if this slowdown should persist for many more months, I think we will have a real problem

Senator PROXMIRE. The prediction we heard from the administration was that unemployment would continue to decline. They forecast a situation about a year or so from now where we would have 5.5 percent unemployment. They expect to have unemployment down by 1980 to around 4.75 percent. If they are going to achieve that kind of target, it is clear we have not made progress in that direction in the last 2 or 3 months.

Mr. SHISKIN. What I was saying is that if the trend we have seen in the last few months continues, it would be a matter of great concern, in my judgment.

Senator PROXMIRE. To what extent do you feel that this is an inventory adjustment problem? So often the changes in economic activity result in trying to work off excessive inventories. Do you feel that this may be a reflection of that?

Mr. SHISKIN. Yes, I do. I think it is quite similar to the experience we had last year when we had built up inventories. We have done it again, and particularly nondurable inventories. I think there is an inventory adjustment underway. I think the excess inventories are relatively small and will be worked off fairly soon. If that whole scenario is correct, then we should be resuming vigorous expansion later this year.

Senator PROXMIRE. We have not only the increase in unemployment last month and the failure to improve much since April, but we also have economic indicators for 3 successive months that have been slightly down, but down. We have the workweek, which is shorter, that means there is less work to do, which is a reinforcement of our unemployment figures. We have the diffusion index which, as you point out for the first time, indicates that less than 50 percent of the industries increased employment, and I think only 41 percent did. That is certainly a discouraging element, is it not?

Mr. SHISKIN. Yes, it is.

Senator PROXMIRE. But what concerns me most of all about these statistics we have this morning is as I indicated in my opening statement, that all, all of the increase in unemployment is concentrated

among blacks. That is a startling and astonishing element. You pointed out to me this is not among black teenagers. It is adult, black adults, where you had a head of household in many cases, and where you have a more tragic situation. How can you explain that? I know that manufacturing employment declined slightly, but why should there be this sharp increase from 13.1 to 14.5 percent unemployment among blacks?

Mr. SHISKIN. May I turn to the first part of your question about the general economy first?

Senator PROXMIRE. Yes.

Mr. SHISKIN. And make a comment on that. The leading indicators have gone down very slightly for 3 months in a row. Last year, they went down for 2 months in a row. The point was inplicit in my earlier statement, that I don't think that these movements, as yet, are foreshadowing a recession. I think there is a minor inventory adjustment underway. A month or two from now, I may change my mind and say something different. But that seems to be the case right now.

Let me explain that it is not a matter of number reading, chart reading, that has led me to this conclusion. The leading indicators should never be looked at without simultaneously looking at the measures of economic performance, which are the coincident indicators and the logging indicators, Many years ago, when the National Bureau, Wesley Mitchell and Geoffrey Moore and Arthur Burns set up this system, they found it very catchy, I think, to use the terms leading, coincident, and lagging. It created a great deal of interest.

Well, I have been using somewhat different terms to describe these relationships. For coincident indicators I usually use the term, "measures of economic performance," because that is just what they are. They tell you how well the economy is doing. But the lagging indicators, and that is what I want to talk about now, measure excesses and imbalances in the economy. Generally, usually before a recession takes place, you have a big increase in the lagging indicator index, which means that you have had a substantial development of excesses and imbalances throughout the economy. For example, the inventory-sales ratio would have risen sharply. The average duration of unemployment would have gone way down. Unit labor costs would have risen sharply and the prime interest rate would have risen vigorously. Now, not much of that has taken place so far in this expansion.

In fact, I have a little chart here——

Senator PROXMIRE. Some of that is taking place.

Mr. SHISKIN. But very little.

Senator PROXMIRE. Interest rates are rising.

Mr. SHISKIN. I have a chart here, in which I would like to have you look at, because it puts these movements in perspective.

Senator PROXMIRE. This young lady will distribute it for us. Thank you.

Mr. SHISKIN. That is a chart of the leading, coincident, and lagging indicators which comes out in the copy of BCD that came out yesterday. What I am talking about is the relationship between the top curve, the leading indicator index and the bottom curve, the index of lagging indicators. If you look, for example, at the pattern in the previous recession you will see that before the recession actually got underway, there was a very vigorous rise in the lagging indicator index, that is excesses and imbalances were developing in the economy. We don't have anything close to that yet. It is a very mild rise so far.

The most sensitive series there, the one representing excesses and imbalances, the most important one is unit labor costs, and that is rising. Let me come back to my point, which is that that rise so far is very small compared to what we have usually had before a serious decline in leading indicators.

Senator PROXMIRE. I think you have made a very good point.

Mr. SHISKIN. It is for that reason that I don't think that the picture we are getting is a prerecession picture. It may change in a few months but it is not that today.

Senator PROXMIRE. I don't hear any talk of our moving into a recession. The concern I hear is that the recovery is slowing down. In other words, we may be recovering still and may have many more months of recovery, but at such a slow rate we will continue to have unemployment hanging around 7 percent or close to that, and that we won't have the kind of growth that we need in our economy. There are indications of that. These figures would not necessarily refute that.

Mr. SHISKIN. I think they support it. But there is a widely used rule of thumb, which I don't think is correct. I was trying to refute that. That rule of thumb is that a 3-month decline in the leading indicator index is followed by a recession.

Senator PROXMIRE. It was two-tenths of 1 percent each month, and that is way out of——

Mr. SHISKIN. I am now willing to turn to your other question about the increase in black unemployment.

Senator PROXMIRE. On the fact that we had this enormous increase in unemployment among blacks, what appears to be an enormous increase from 13.1 to 14.5.

Mr. SHISKIN. Several months back, I was pointing out month after month that we have a two-tier pattern of unemployment. The unemployment rate for whites, for adult men, for adult women, has been improving. The unemployment rate for teenagers, for blacks, for part-time workers has been getting worse. I think we are seeing more of this pattern. There seems to be a structural difference in the behavior of these groups over recent business cycles. Although we have had some of this in the past, and it is not brand new, we are having more of it now. That is, even during periods of economic expansion, the blacks, the young people, have a very hard time.

Senator PROXMIRE. Can you tell us the last time we had this much of a disparity between black and white unemployment, where you had a 2.4 to 1——

Mr. SHISKIN. It occurred a few times since World War II. This is a very high ratio, and what you would expect during a period of economic expansion is that blacks would get jobs as well as whites.

Senator PROXMIRE. For the record, would you have your staff check it out and see if you can find out?

Mr. SHISKIN. We looked at that yesterday. Do you remember the the figures, Mr. Stein?

Senator PROXMIRE. When was the last time?

Mr. SHISKIN. There were very few episodes like this.

Mr. STEIN. We will check it for you.

Senator PROXMIRE. I would like to know the last month and year when that took place.

Mr. SHISKIN. When has the ratio of black to white unemployment been as high as August in the past?

Mr. STEIN. March 1967, when it was also 2.4 to 1.

Senator PROXMIRE. I have some more questions to ask later.

Senator Sparkman.

Senator SPARKMAN. Well, I hesitate to break in. You are carrying along so skillfully. I have been listening to the reports that have been given to us on the radio and on the TV over the past, and I rather gathered that the situation with reference to the economy was pretty stable.

I take it that—well it seemed to me that whereas we might have expected greater unemployment than we did have, that no sharp curves, and I know these diagrams, this diagram that we have, with reference to the different times, they seem to have pretty much the same pattern. All three of them. So it looks like it is only kind of a standoff basis. Now, I do want to ask you, though, about——

Mr. SHISKIN. May I say this? They have the same pattern, but the timing is different. The timing over the course of the business cycle is different. The top series (the leading indicator index) moves in advance of the second one, the middle series, which measures the economic performance. And the measures of economic performance move in advance of the bottom series, the lagging indicator index. So while the general patterns are very similar and they just merely reflect what Wesley Mitchell discovered many years ago, that our economy is characterized by periodic business cycles, nevertheless the timing of these three series over the course of the business cycle is different.

Senator SPARKMAN. Yes. I was interested in the point that the Commissioner brought up with reference to the disparagement of the differential as between blacks and nonblacks. Now, I just wondered if that was the result of blacks being employed in certain industries much more heavily than nonblacks?

Mr. STEIN. Well, this past month in particular, we have seen a slowdown in manufacturing and there are some industries there where blacks are pretty heavily represented, but I don't think we could say that was the entire story.

Senator SPARKMAN. Well, let me ask this general question. I was about to say encouraging, but should I say: "Does it take away some of the discouragement that we might have had?"

Mr. SHISKIN. I think we are having a very good economic expansion. The economy has been expanding now for 29 months. Economic expansions do not move along the path of the sine curve. That is, they are not very smooth. They rise vigorously for a while and then they may slow down or fall a little bit, and then they may rise again vigorously, and I think that is the kind of pattern we are seeing now. I don't feel discouraged, because for a few months the employment rate has slowed down and unemployment rate is staying steady. I think my own judgment, my guess, is that in a few months we will see a resumption of expansion.

Senator SPARKMAN. Thank you, Mr. Chairman.

Senator PROXMIRE. Along that line, with respect to blacks, certainly it seems to me very hard to find an industry which employed blacks so disproportionately their slowdown would account for anything like this. It is good there is not. At the same time, I think it is obvious to us

that unfortunately blacks have been viewed as marginal workers, among the last hired and the first fired. Usually, in any kind of a recovery, marginal workers tend to benefit disproportionately and they suffer more during a recession. Here we seem to have a situation where we have had layoffs and that may be to indicate what you suggested here, that we may be moving toward a—not a slowdown but a recession. The first people employers lay off are marginal workers, and in this case, unfortunately, those people are the blacks.

Mr. SHISKIN. Well, it may be, and as you know, it is very hard to forecast the future. It may be right that we are moving toward a recession. But my own judgment, as I have said now twice, is that a minor inventory adjustment is taking place and that a recession is not in sight.

Senator PROXMIRE. Incidentally, I asked Parren Mitchell to come this morning because he is the head of the Black Caucus. He is a fine Congressman, as we know. He is very interested in unemployment, but unfortunately, I could not reach him. But, I am hoping that maybe he can come next month.

It would have been particularly appropriate this morning to have him here to question. Is it possible in this situation that we simply do not measure the employment of people who live in the innercity nearly as accurately as we measure others? What I am talking about is that fact there seems to be a kind of other economic world in central cities. For instance, I have heard estimates that illegal gambling is said to be as high as a $50 billion a year industry. That would mean 5 million people at work. I doubt if it is that big, but it could be very big. Consider illegal gambling, prostitution, the fencing of stolen goods, all kinds of occupations of this kind, that are criminal occupations, but they occupy a lot of people. Now, for those people, it seems to me, it would be very, very hard to get any accurate notion of whether they are part of the labor force, and it seems to me that very often they would be counted as unemployed. When a survey person goes to a household and asks if the people are working it seems to me that if somebody is involved in the numbers racket and making a few bucks in that line, I think the answer would probably be no. If asked if they are looking for work, I think they would probably say sure. Isn't it true that your figures are likely to be inaccurate in this area?

Mr. SHISKIN. I would say the figures are less accurate in the industrial cities than anywhere else. However, I don't think that the explanation you just provided is accurate. Because we just looked into that in the last few weeks. We looked specifically into this question. As you know, in recent months, we have been releasing data—which compare employment and unemployment in the large central cities with employment and unemployment in the suburbs, in the outer ring. And we found that in the large Northeast cities and the Midwest, the percentage of young people working is very very low. It is running about 22 percent, compared to about twice that for the Nation as a whole. So, Mr. Stein and I looked into that, and we still consider our studies very tentative, because each stage of work suggests future work. But I will tell you what we found so far and this is what people report to us. When you go to the families in the inner cities and ask them whether they are employed, you find a very small percentage of the teenagers employed. And while the percentage of unemployed is quite large, there still is a very large number of people who are not

in the labor force. So, the next question you want to ask yourself is what are they doing? Now, we now have information on that. And I think I might say parenthetically that our data on the activities of people not in the labor force have been neglected.

Senator PROXMIRE. It is very, very hard to get it if people are involved in pushing drugs or if they are involved in running numbers and they know it is against the law and they are going to be arrested if they are revealed; they are not going to tell you.

Mr. SHISKIN. You said they were reported as unemployed. What is reported to us is that they are in school. In fact, the figures we have for teenagers indicate that there is a greater percentage of black teenagers in school in the industrial cities than white teenagers. So the answers we are getting of course is not that they are in crime, but that they are in school. However, we have another category of "other," which also shows quite a large increase.

Senator PROXMIRE. Once again, you do such a fine job on these areas, I think it would be helpful if you consider this startling black unemployment figure that we have for August of 1977. Please give us a letter if you can on whatever explanations you come up with as to why we have had this very big increase in black unemployment for this month.

Mr. SHISKIN. We will do the best we can.

Senator PROXMIRE. Now, let's get to the area where you have responded. As I say, in a most helpful way. Last month I asked about the effect of illegal aliens on unemployment. You wrote a letter to me responding to that question and I have inserted the letter in the record. In it you told me you are making a survey.

Mr. SHISKIN. We are not making it.

Senator PROXMIRE. A survey was made by the Bureau of Immigration and Naturalization. You say that will be available in May of 1978, right?

Mr. SHISKIN. Yes.

Senator PROXMIRE. How reliable is that likely to be? Isn't that likely to be something that could be way, way off? Again, I cannot imagine how you can expect an illegal alien to say, "Sure, I am an illegal alien." Once they admit that, they are likely, especially to a Government inquirer, they are likely to be on the way back to Mexico.

Mr. SHISKIN. I am glad the Bureau of Labor Statistics does not have to ask the illegal aliens whether they are illegal.

Senator PROXMIRE. How else would they find out?

Mr. SHISKIN. You know, I talked to those people at INS and they are pretty good. They know what they are doing. But they have a very tough assignment. There was a clause in the CETA law which required us to get information on offenders, and we haven't been able to do it. How do you ask a person especially in a voluntary survey, whether he is violating the law?

Senator PROXMIRE. Would the figures on unemployment include any illegal aliens, would they be counted as unemployed?

Mr. SHISKIN. Sure. We don't ask people——

Senator PROXMIRE. I would think it would be enormously high. They have a language barrier problem, therefore, they undoubtedly don't have the—anything like the educational background and so forth, that they could present to an employer to hire them. He jeopar-

dizes his position by doing so, by hiring them. I should think their unemployment would be very high.

Mr. SHISKIN. Let me say when we go to a household, we just ask them whether they are unemployed or employed, and, if not, we ask ask what they are doing. But we do not ask them whether they are illegal aliens or offenders. So, we don't know. Now, what you say seems reasonable. On the other hand, you know, there are other arguments I hear that illegal aliens are willing to work for low salaries and they are willing to do anything people ask them, mop floors, work Sundays and holidays, and so on. So it is hard to tell how that would balance out with any qualms employers would have in hiring them. We just don't know.

Senator PROXMIRE. Now, I also asked you about the impact on the labor force of making the retirement age 68 instead of 65. The administration has suggested that and I think the suggestion is a serious blunder. Now, I am sure there are lots of reasons to explain that, but I tell you, people in Wisconsin are up in arms. I am sure they are up in arms in Alabama, they don't like that notion they have to wait until they are 68 until they can retire with full social security. Something you said startled me. You said only one person in five waits until they are 65 to retire. That amazes me. In spite of the fact you have to be 65—80 percent of the people retire before they get their full social security benefits, is that correct?

Mr. SHISKIN. You have to remember that most people do dull and uninteresting work. When you get work like all of us here, I think there is a tendency to stay on. But when you are running a machine or doing some janitorial work, it is not the same.

Senator PROXMIRE. I know work is a disutility for most. What I am talking about is the fact you have got a clear economic incentive for waiting until you are 65. They quit earlier. Am I misinterpreting this situation?

Mr. STEIN. No; that is exactly right, Senator.

Senator PROXMIRE. Four out of five retire before they are 65. Well, I am——

Mr. SHISKIN. As I understand Mrs. Kreps' remarks, she said this would be voluntary, that is, people could continue to work until 68 on a voluntary basis and I believe those remarks were made before she was Secretary of Commerce. I think it makes a big difference if you have a system in which you can keep working, if you want to, until you are 68, before you can get full social security benefits. I think that has been overlooked. She had a press release——

Senator PROXMIRE. Let me get back to the unemployment figures again. I understand that the figures this morning indicate that unemployment rose mostly because more individuals lost their jobs. They did not voluntarily quit. Isn't that another sign of the failing of Government?

Mr. SHISKIN. Sure. The layoff rate is higher, another way of putting it is the number of job losers increased and manufacturing employment went down. So it all fits. I think also you should not overlook the slow decline in average weekly hours in the last 3 months, and the reason is it takes only a minor change in hours worked to offset a fairly large increase in employment. The average weekly hours are very sensitive figures.

Senator PROXMIRE. In August there was an increase in unemployment and a drop in hours worked, so that both those tend to be discouraging.

Mr. SHISKIN. A lot depends on what you consider the cause to be. I want to emphasize that. If you consider the cause, as I do, a relatively minor inventory adjustment, it is not so serious.

Senator PROXMIRE. Let's go behind that more for a moment. Obviously, the fundamental question is what retail sales are. Isn't that right?

Mr. SHISKIN. That is one.

Senator PROXMIRE. What is happening there, tell us about retail sales. You have any figures on that?

Mr. SHISKIN. The deflated figures have dropped substantially 3 months in a row.

Senator PROXMIRE. If you had steady retail sales or rising retail sales, you could say it is simply an inventory adjustment situation. Retail sales falling off means the demand is falling.

Mr. SHISKIN. That is a discouraging sign. I mentioned it in my paper.

Senator PROXMIRE. Now, in previous hearings, I have focused on the failure of real average weekly earnings to rise in almost a decade. We have had, throughout our history, a very sharp improvement in the standard of living for most Americans and I remember making a speech on the floor of the Senate a few years ago in which I pointed out that between 1952 and 1972, there was a doubling in real income. That seemed to come to a halt toward the end of the 1960's. In your present report on the employment situation, average weekly earnings have fallen again by three-tenths of a percent. Have you any further thoughts on the stagnant behavior of weekly earnings or is that another indication that the economy is weakening?

Mr. SHISKIN. No; I don't have any further thoughts. But I do wish to repeat some of the points I have made in the past; namely, the series on real spendable earnings includes full-time and part-time workers, young men and old men, young women and old women, and so on. We have had a rapidly changing mix in the labor force. The reason that real earnings, real spendable earnings have been declining is primarily the change in mix. We have a chart on this which I did not bring along today.

Senator PROXMIRE. You are saying you have got more part-time workers than you had before?

Mr. SHISKIN. And you have got more young workers. And that is dragging the average down. We have a chart on this which as I said, I brought once before but I did not bring along today. I will try to remember to bring it along next time. This chart shows real spendable earnings by various demographic groups. If you look at the adults, 25 and over, they have had a very vigorous and steady rise in spendable earnings.

Senator PROXMIRE. How is that done in the last 2 or 3 months?

Mr. SHISKIN. I regret to say, Mr. Chairman, the only data we have for that are annual.

Senator PROXMIRE. How did they do this year over last year?

Mr. SHISKIN. I don't remember. But the trend for adults is strongly up. If you look, however, at the household headed by females or the young people, they are very weak. But bear in mind that a large number of these young people and women live in families where there

are multiple earners; about half of the families now have two earners, so that is misleading. We keep coming to this issue and I keep saying the same thing. The trends of real earnings cannot be diagnosed well without looking at demographic breaks. The demographic breaks show a very different picture from the overall average.

Senator PROXMIRE. Could you, for the next month, provide us with the annual figures so we can know?

Mr. SHISKIN. I will bring a copy of that chart along and I think you will be very interested in looking at it.

Senator PROXMIRE. I mentioned the diffusion index as one of the elements that is discouraging. Most industries did not report an increase in employment last month and this was the first time in some time. The proportion of industries increasing employment in August has fallen to 41 percent, as I say. Can you give us any indication of whether or not that trend is likely to continue or whether it seems to be a transient situation because of the strikes or because of some other element which is not likely to persist?

Mr. SHISKIN. I don't think it is due to the strikes, but I think it is part of the pattern of the slowdown. And again, let me say if I am correct in assuming this is a short-term phenomenon, induced primarily by slight buildup of inventories, then in a few months, it will go away and we will have a resumption of the higher level. That is the scenario I see. However, I want to say again that economists have not distingushed themselves for making accurate forecasts.

Senator PROXMIRE. The unemployment situation worsened for a number of groups by age, sex, race, so forth. Several occupational groups showed sharp increases in unemployment. Unemployment for nonfarm laborers increased by almost two full percentage points, 12.6 percent. Why should that occur?

Mr. SHISKIN. Manufacturing and nonfarm laborers.

Senator PROXMIRE. Does that account for all of it? It is a big increase.

Mr. SHISKIN. I don't know.

Senator PROXMIRE. Construction, what happened there?

Mr. SHISKIN. Construction declined, too.

Senator PROXMIRE. You are an expert on business cycles. Recently Secretary Harris, Secretary of Housing and Urban Development, expressed concern at the rate of increase in lumber prices. That concerned this committee very much, as you know. Over the last 3 months, lumber prices have risen at a 10.6 percent annual rate. The figures she had indicated showed a much sharper increase, and she said increases, as I recall, in August alone, were 8 to 10 percent.

Mr. SHISKIN. The annual rates are usually calculated over several months.

Senator PROXMIRE. They were the rate for that month.

Mr. SHISKIN. As I remember, lumber prices were up 4 percent in both July and August. Some increases in lumber prices occurred after the pricing date for the August WPI. For the 3 months ended in August, prices of lumber and wood products increased at a seasonally adjusted annual rate of almost 50 percent.

Senator PROXMIRE. An average of 1.9 million private housing units were started in May, June, and July. That is an annual rate figure. Do you think the recent rate of price increase in lumber is unusually high, given the current demand for lumber? We have had an increase,

as I say, in housing starts. We typically do have some increase in prices for lumber when the housing starts begin. Can you give us a notion of how that increase in lumber prices can be reconciled?

Mr. SHISKIN. Well, I don't know much about these figures. Do you, Mr. Layng? For the past few months, we have had a very sharp spurt in lumber prices. As I understand what happened, there was a period earlier this year when housing starts were very vigorous, especially vigorous, and that lumber inventories were worked off. As a result there has been a shortage of lumber and that has led to a rise in prices.

Also, if you look at the details of our employment industry break, you will see that employment has been about steady in the lumber industry while hours have gone down sharply. You will wonder why in a period when prices are rising and housing starts are strong, why is lumber employment not going up? Well, we made a very intensive study of our data to see if we could find out why. One of the things we learned, is that there was a decline in the West. Most of it was in the West. In part of the West, we have had a lot of fires. So, that may explain recent developments in lumber employment. It would not explain it fully, but it may be that the fires were a factor.

If this is the correct explanation, it would explain why lumber prices are rising; that is, we are not producing quite as much lumber as we did, the demand is very strong, so prices go up.

Senator PROXMIRE. Let me see if I can get from you a reaction as to where we stand in the inflationary area at the present time. As you know, the big figure we have this morning is that day before yesterday or yesterday, the Wholesale Price Index was released. It again performed very well, rising inperceptibly, only a tenth of 1 percent. Unit labor costs increased 6.9 percent in the second quarter. The rate of increase in the WPI for commodities has slowed considerably, as I said. The percent increases in the Finished Goods Index has been negligible for the last few months, but the percent increase in Intermediate Food Materials Index has begun to pick up. The Intermediate Materials Index increased 0.6 percent and 0.5 percent in July and August, respectively. The food materials increased 1.9 percent in August. What does this tell us overall? Putting them together on the basis of your experience, about where do we stand on the inflation front?

Mr. SHISKIN. I think the price performance in the last 6 months has been excellent, very good.

Senator PROXMIRE. Leaving aside the erratic performance in the food farm prices.

Mr. SHISKIN. What I want to say is a lot of it has been food. We have done very well with food prices. However, if this expansion continues as I surely expect it to, we will, in the next 6 months or year, be bumping up against shortages here and there, and I think that we will get back to higher levels of inflation.

Senator PROXMIRE. I understand that the August release reports the unemployment rate for white teenagers rising at the same time that employment rose. Does that indicate the participation rate for the white teenagers rose more rapidly than employment, and if so, why should that take place in August? Is it an indication of a defective seasonal adjustment or is it a genuine development of more white——

Mr. SHISKIN. It is very hard to say. I am very reluctant to assign a great deal of significance to a single month's movements, particularly in an erratic area like teenage unemployment. I do not know, and I really have no comment on it. But Mr. Stein may have observed that more carefully.

Senator PROXMIRE. I am talking about white teenagers.

Mr. STEIN. I think the increase in white teenagers from 14.3 to 14.7 percent is, you know, so far within a range of sampling of a series, we could not put very much significance, attach much significance to it.

Senator PROXMIRE. All right. The unemployment rate for black teenagers remains above 40 percent. A recent BLS report focused on the difficulties black teenagers have experienced in finding summer jobs. Is that a personal condition? Do the demographics of the situation suggest any improvement in the future? Is black teenage unemployment exclusively or largely an urban problem?

Mr. SHISKIN. Well, first of all, let me say that in our youth employment report issued a few days ago, the age grouping was a little different from what we show here. It was 16 to 21, so 2 more years are included. By the way, from many points of view, that is a better age grouping, I think. Well, you know, I don't know what the explanation is. It is difficult to speculate. Now, it is clear that the industrial cities in our country particularly in the Northeast and Midwest, are disasters areas. The situation——

Senator PROXMIRE. I am talking about whether the long-range picture here, the demographics, the number of young black teenagers who are coming along, that would suggest the situation will ease or whether it might be continued, perhaps.

Mr. SHISKIN. It depends on how far ahead you look. If you look into the early 1980's, mid-1980's, the situation should improve. The reason is that in the early 1960's the birthdate began to decline, and as a a result, we are getting smaller rates of growth in the number of teenagers entering the labor markets. And that is going to be more so in the next few years. So, overall, the situation is likely to improve. However, it is mostly the birthdate for the whites that has been declining, while the birthdate for the blacks has not. So, what I think you will be seeing in the early 1980's is substantial improvement for the white teenagers but not blacks.

Senator PROXMIRE. Is that based on the Charles Bowman study?

Mr. SHISKIN. Well, I have not studied the Bowman report, but Mr. Stein keeps feeding me a lot of material which must come from that source. I have a nice little table which I showed to one of your assistants before the hearing, which you may want to take a look at; the table with the pluses and minuses.

[The table referred to follows:]

LONG-TERM LABOR FORCE TRENDS

Labor force	1970–75	1975–80	1980–90
Total	+++	++	+
Women	+++	+++	++
Men	+	++	+
Teenagers	+++	+	−

Note: +++=very rapid.

Senator PROXMIRE. What does that table mean? Plus, plus, plus is very rapid; plus, plus is not so rapid, and plus is just ambling along?

Mr. SHISKIN. If I can find my copy of that table, I will be in better shape. Here it is. Let's start from the bottom. In the early 1970's, we had a very rapid growth of teenagers. And that is going to fall sharply during this period, and it will be actually negative in the 1980's. So that will certainly improve the overall situation of teenagers. Let me emphasize again that this is mostly a decline in the birthrate for whites, so you are going to have a lot of blacks——

Senator PROXMIRE. That was my question. But I think that would still help blacks, because if I get fewer teenagers——

Mr. SHISKIN. The Government programs will be able to target them better because you will have fewer teenagers to help. So, they can zero in on the black teenagers.

Senator PROXMIRE. What it indicates, as far as teenagers are concerned, is that from 1970 to 1975 you had a very rapid increase in the teenage population. From 1975 to 1980, the rate of teenage population growth will slow down. And 1980 to 1990, it will actually decline. There will be fewer teenagers overall.

Mr. SHISKIN. Right.

Senator PROXMIRE. While there may be more blacks, speaking in proportion, nevertheless, the overall situation will improve so they should have an easier time getting work. You certainly want to rely on that. And the teenagers of today will be adults by then and will have been. Their lives would have been badly hurt.

Mr. SHISKIN. I agree with you. Also, you know, the unemployment rate for teenagers as a group is about 18 percent, and you have got a long way to go when you have an 18-percent unemployment rate: It is a long way to go to get down to a reasonable figure. There is a lot to be done here.

Senator PROXMIRE. Mr. Shiskin, a BLS report on summer jobs for youth in 1977, which was released last Wednesday, indicated 2.7 million youth were unemployed in July, and the teenage employment rate was 15.3 percent compared to 15.9 percent in July 1976. But the report indicates the decrease in youth unemployment took place entirely among white youth. Black youth was 34.8 percent in July. Over the last 4 years, the employment population ratio has declined from 43.3 percent in 1973 to 37.4 percent in 1977. How do these figures on black youth unemployment compare with the figures you gave us on unemployment in central cities?

Mr. SHISKIN. Well, I really have not made that direct comparison, but it is clear since these data all come from the same source, the Current Population Survey, they must be very similar. Since we get all the data from the same source, so they must be reasonably consistent.

Senator PROXMIRE. Now, I have just a few more questions that relate to the Carter welfare plan and how that might affect unemployment and how unemployment might affect the cost of that plan. I understand that estimates were based on an assumption that in 1980, unemployment will be only about 5.5 percent. In view of what we have this morning, we have had lately, that does not seem to be realistic. The higher unemployment is, the more that is going to cost. As a matter of fact, we have been talking, my staff has been talking to the HEW people and they argue that for every 1 percent increase in unemployment, the new welfare program will cost another $700 million. So, obviously, the 6.1 percent increase in welfare is going to

depend very heavily on how much unemployment we have. My question is whether you have had any opportunity to study that and whether you can give us any help in determining how that plan, which, as I understand it, requires people who are on welfare, and people who are able to work, to work; to work if jobs are available. It puts the Government in a situation of providing those jobs in many cases. If no job is available, then a higher payment must be paid to people on welfare.

Mr. SHISKIN. Well, what I can say, only, is that I have talked to the people in the department and particularly Assistant Secretary Parker about this problem, and he and I have agreed that a study of the potential impact of the welfare program on unemployment would be undertaken. And I have not checked up on how that stands, but my guess is not much has been done.

Mr. STEIN. ASPER and others have gotten a study underway, but it is an extremely complex undertaking. The welfare proposal itself is extremely complex. I suspect that it will take a little while to come up with some results on that.

Senator PROXMIRE. Now, let me give you some figures that I have calculated and see how you would react to them on this. If unemployment in fiscal year 1980 is not 5.5 percent, which is what the Carter estimates are, but 6.5 percent is more likely, the Carter package would cost $1.5 billion more. The present welfare system would cost half a billion dollars more so the Carter plan is $700 million more. The second possibility: If unemployment in fiscal year 1980 is 7.5 percent, the Carter package would cost an additional $2.7 billion more or a total of $33.4 billion. The present syste n would also cost more, but the increase would be less than under the Carter proposal. Incidentally, the expanded earning income tax credits for middle-income persons would add some more to it, as I understand. Do these figures I have suggested here seem to you to be reasonable or you are not in a position to answer that?

Mr. SHISKIN. I have not studied the implications of increases in the unemployment rate on the welfare program. I must suggest to your staff, however, that they ought to also make another assumption, which is the unemployment rate is not 5.5 percent, but lower, let us say 4.5 percent.

Senator PROXMIRE. Yes. I do not think that is very likely in 1980, do you? 1980?

Mr. SHISKIN. Didn't you say 1980?

Senator PROXMIRE. 1980, yes.

Mr. SHISKIN. So it seems to me, you know, to make a thorough study, you ought to get both sides, not just assume the worst all the time.

Senator PROXMIRE. In view of the fact you now have 7.1 percent unemployment, it has been at that level since May, I think it is unlikely it is going to be 5.5 percent next year. Now, maybe it will be.

Mr. SHISKIN. Well, sometimes the——

Senator PROXMIRE. I don't know anybody who predicts it will be that low next year.

Mr. SHISKIN. You know, forecasters are not very good at making quantitative forecasts. I am just suggesting that we just do not assume the worst all the time. Now, you know, Senator Proxmire, let me say this. We are really having a very good economic expansion.

This has been a very fine period of American economic history and we ought to face up to that. You know, last month, you wlll recall, Senator Javits asked us some questions about the growth in employment and how it compared with growth in early expansions. We prepared some tables for Senator Javits and I sent them to you or sent them to the JEC, at any rate, to put in the record. They show the last 29 months of expansion have been very good, particularly for employment, and that is what we ought to put a little more emphasis on this area.

Senator PROXMIRE. Yes; I think you are right. You ought to balance this. You could say that with far more emphasis last April than this August, this September, isn't that right?

Mr. SHISKIN. Sure. You don't have an even flow. Things got a little better and then a little worse. If you look at this whole period, we are enjoying a very vigorous period of economic growth. And to be dwelling on, you know, the weakness in the economy and all the pitfalls and troubles, does not seem well balanced. Of course, we have got to have the facts on the problems, because we want to solve them. But let's not lose our perspective. We are enjoying a very good economic expansion that compares favorably with the past economic growth. And I want to make sure that that is taken into account in viewing the overall economic situation.

Senator PROXMIRE. I think that is consistent with the fact that we have a very high level of unemployment and that unemployment has stagnated. I say that it is not inconsistent. I say that because what has happened is we have far more people in the labor force. We have people, women, and young people coming into the labor force that were not in the labor force before. And that has resulted in far more people at work. We have almost as high a percentage of the adult population at work as we have ever had. Very close to it. Isn't that right?

Mr. SHISKIN. Almost as high. Furthermore, you know, what has been happening in the last few months, we have had a slowdown in employment, but the growth in the labor force did not slow down much. During the pause last year, we were getting on the average of 150,000 additions to the labor force each month. During the following 6 months of expansion where the rate of growth was 7.5 percent in the first quarter, a little over 6 percent in the second quarter, during that vigorous period, the growth of the labor force averaged 243, almost 250,000 a month. Well, you know, in the last 4 months, we have had 235,000 increase per month.

Senator PROXMIRE. Just think how infuriating this must be to blacks who now see their unemployment level higher than it has been in years, a great increase last month over the month before. And here we are talking about one of the most vigorous recoveries we have had.

Mr. SHISKIN. I agree with that. We are enjoying a very good recovery. However, we have some very soft spots. The situation in the industrial cities is grim; the situation for blacks is grim. There are other grim situations in this otherwise very good expansion. But let's not lose sight of the fact that overall, we are having a very good economic expansion.

Senator PROXMIRE. That is a most helpful correction. Thank you very, very much, Mr. Shiskin. You have been most helpful. I have made some requests that you will respond to us in writing.

[Whereupon, at 11:05 a.m., the committee adjourned, subject to the call of the Chair.]

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

U.S. DEPARTMENT OF LABOR,
BUREAU OF LABOR STATISTICS,
OFFICE OF THE COMMISSIONER,
Washington, D.C., September 28, 1977.

Hon. WILLIAM PROXMIRE,
U.S. Senate,
Washington, D.C.

DEAR SENATOR PROXMIRE: I am writing in response to your letter of September 14, in which you raised questions about possible approaches for estimating the impact of illegal immigration on employment data. It is difficult to draw any conclusions concerning illegal immigration from the Current Population Survey (CPS) data on Hispanics because of a number of problems associated with these data. The primary problem relates to lack of accuracy in the population controls for this group. The data and the associated problems are described in more detail below.

One approach you suggested was to utilize the labor force data available from the CPS as a basis for estimating the size of the illegal immigrant work force. You suggested that higher male labor force participation rates and employment-population ratios for Hispanics could be a reflection of the impact of illegal immigration. An examination of the data available from 1973 through 1976 shows that the overall participation rate for adult males was, in fact, consistently 4 to 5 percentage points higher for Hispanics than for all whites; this difference results solely from the higher rate for 20 to 24 year old Hispanics. Similarly, employment-population ratios were 1 to 2 points higher among Hispanics. The Hispanic participation rate edged down in 1975 and 1976, however, while the employment-population ratio dropped off substantially (from 81 percent in 1974 to 77 percent in 1975 and 76 percent in 1976).

These data do not appear to be usable for estimating the level or trend of illegal immigration. The data do not distinguish the native-born from the foreign-born population. Also, the higher participation rates for Hispanics may simply be reflective of cultural differences as regards labor force attachment, or of other factors. Although participation rates are greater for Hispanics than for white men, the opposite is true among women.

We also compared the relative population growth of Hispanic and whites over the 1973–76 period. The data show an increase in the population of 12.2 percent for Hispanic adult males, more than twice that of their white counterparts—5.5 percent. Data from the Census Bureau which provide population estimates by type of Spanish origin show that population growth between March of 1973 and 1976 was somewhat greater for adult males of Mexican origin than for those of Puerto Rican or other Spanish origin. Further, growth was quite marked for 20–24 year old-males. These data are difficult to interpret, however. Some of the increases may be due to the higher birth rate of Hispanics. In addition, the population data are of somewhat dubious reliability. Both BLS and the Census Bureau have long been concerned over the accuracy of the population coverage of Hispanics in the CPS. The suspected undercount of Hispanics and other minorities in the 1970 Census affects CPS estimates, as the Decennial Census forms the basis for CPS design, coverage, and sampling procedures. Although the CPS is not able to distinguish between citizens and non-citizens (households are selected irrespective of citizenship), and we really do not know if illegals report themselves in any case, it is not likely that we would obtain information from those who have good reason to avoid government inquiry. In addition, unlike data for black and white persons, there are no birth, death, and migration data available to be used as independent population controls on which to base estimates of Hispanic population growth over time. Thus, although we believe that the survey produces fairly reliable estimates of the socio-economic characteristics of Hispanics, population estimates are not as reliable as those for black and white Americans.

As I noted in my letter of August 24, the Immigration and Naturalization Service is in the process of developing a survey in which they expect to locate a sample of about 10,000 households which include illegal aliens. Hopefully, this survey will provide needed estimates of the impact of illegal aliens on the economy.

Sincerely yours,

JULIUS SHISKIN,
Commissioner.

EMPLOYMENT-UNEMPLOYMENT

FRIDAY, OCTOBER 7, 1977

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

The committee met, pursuant to notice, at 10:08 a.m., in room 1202, Dirksen Senate Office Building, Hon. William Proxmire (member of the committee) presiding.

Present: Senators Proxmire and Kennedy; and Representative Rousselot.

Also present: Louis C. Krauthoff II, assistant director; Thomas F. Dernburg, G. Thomas Cator, and Katie MacArthur, professional staff members; Mark Borchelt, administrative assistant; and Charles H. Bradford, M. Catherine Miller, and Mark R. Policinski, minority professional staff members.

OPENING STATEMENT OF SENATOR PROXMIRE

Senator PROXMIRE. The committee will come to order.

Mr. Commissioner, you recall just yesterday morning you indicated that this is the 30th month of recovery, and while that is good news, that has been 2½ years of recovery; it seems that in one respect, at least, we are in the sixth month of stagnation; that is, since April, we have had just about the same level of unemployment.

It has been hovering between 6.9 and 7.1, and hasn't been able to get off that dreary flat.

Nevertheless, there is some good news; unemployment is down from 7.1 to 6.9 percent. Employment is up 320,000, but it is fascinating that there is an increase of 500,000 in adult women workers which more than accounts for the increase in employment.

Over the year, employment is up by 3.3 million, which is good news, and I think it is fascinating that the percentage of the population with jobs is up from 56.1 a year ago to 57.3, near an alltime high.

In other words, more people in this country are working as a percentage of the population than we have ever had before, with maybe 1 or 2 months' exception in all our history, which is good news.

The figures on blacks, which were so alarming last month, have receded, fortunately, to about the level they were in June and July. There was 13.2 percent unemployment for blacks in June and July and up to 14.5 percent in August, and, then, last month down to 13.1 percent.

It is still shamefully high, and it is, of course, a very bad disparity between black and white unemployment. The jobless rate for whites is just exactly the same which is an indication of stagnation, too, 6.1 percent for 3 months in a row.

It is down, as you point out, by 1 percent from a year ago.

Blacks are just as bad as a year ago, so that disparity between blacks and whites is one that we have to consider and meet.

There is some bad news here. The average weekly hours at 35.9 is close to the lowest in history, you tell us. The average duration of joblessness rose from 13.5 to 14.2 weeks. It means the people who are out of work have been out of work longer.

The number of discouraged workers shows no improvement in this quarter as compared to the last quarter. It is still 1.1 million, which seems to be quite a few; the average weekly earnings dropped slightly in money terms and sharply in real terms, or more sharply at least in real terms. Incidently, the Wholesale Price Index data released yesterday was, unfortunately, up more sharply than it has been in a long time. Industrial prices were up 0.8 percent, which is a sharp increase in light of the behavior we have had in the past. That is almost a 10-percent annual rate.

It is not in the report, but the number of jobseeking workers as measured by the classified index is close to an alltime high. It has gone up very sharply. It has increased about 70 percent in the last 1½ years, and it has increased every month by a substantial amount.

I might indicate we are also very interested in having your opinion on the layoffs in the steel industry, the massive layoffs in Youngstown, what that portends, what kind of ripple effect it might have.

After all, steel is a bellwether industry and we look to it. We want your comments on a number of things.

Go right ahead.

STATEMENT OF HON. JULIUS SHISKIN, COMMISSIONER, BUREAU OF LABOR STATISTICS, DEPARTMENT OF LABOR, ACCOMPANIED BY ROBERT L. STEIN, ASSISTANT COMMISSIONER, OFFICE OF CURRENT EMPLOYMENT ANALYSIS; AND JOHN EARLY, CHIEF, DIVISION OF INDUSTRIAL PRICES AND PRICE INDEXES

Mr. SHISKIN. First, let me point out that Mr. Robert Stein, who accompanies me every month and helps out with the unemployment and employment questions is on my right. John Layng, who usually handles the price data is away from the office, and, John Early, who is in charge of the wholesale price index is to my left.

I do have a brief statement which I would like to read. Unfortunately, these statements haven't arrived yet, but they will be here any moment for others who wish copies.

Mr. Chairman, and members of the committee, I wish to offer the Joint Economic Committee a few brief comments to supplement our press release "The Employment Situation," issued this morning at 9 a.m.

In September, the labor force rose by 171,000, employment rose by 324,000, and unemployment by 153,000. The unemployment rate dropped to 6.9 percent, the same level as 2 months ago. It has been hovering at about 7 percent since April.

The labor markets improved as the economy completed its 30th month of economic recovery in September. The increase in total employment was much greater than in recent months. More than 91 million people were employed last month. Thus, while the unemploy-

ment rate was the same in September as in July, total employment rose over the 2-month period by more than 500,000.

The employment-population ratio rose to 57.3 percent and is now within one-tenth of the alltime high last reached in early 1974.

Black unemployment decreased by 167,000 and was at roughly the same level, 1.5 million, and the rate 13.1 percent, as prevailed in July. Over the year, black employment has increased by 360,000, but unemployment has also increased by almost 100,000 leaving the unemployment rate about the same.

As I have indicated in my testimony before the JEC many times, movements in the monthly data must always be interpreted with caution. This is particularly true for some population groups such as the blacks, where the sampling error is larger. In light of the September data, the exceptionally large rise in black unemployment in August looks dubious.

Mr. Chairman, I would like to interrupt my reading to point out that in replying to a letter you sent us about 2 weeks ago. I sent you a reply, and I pointed out then that we didn't think the August figures were reliable. We sent you a copy of the statement we had sent to Secretary Marshall, who sent it on to the President along with some other material.

So we didn't think those figures——

Senator PROXMIRE. That was a very, very helpful analysis on black unemployment. You went into considerable detail. You pointed out the three or four distinct disadvantages that blacks have. But I felt it was an excellent explanation of the discrepancy, although it didn't purport to explain the sharp rise in August.

It was more of a statistical——

Mr. SHISKIN. A statistical problem. The survey covers 1 week a month. There are errors in all surveys——

Senator PROXMIRE. That was such a big increase, an increase from 13.2 to 14.5.

Mr. SHISKIN. That is another illustration of why I don't like to use the sampling errors, because a change like that in terms of sampling errors turns out to be significant. It seems in retrospect that that was way out of line, and was not significant in an economic sense.

Senator PROXMIRE. The blacks constitute about 11 percent of the population, and I think they would be 10 or 11 percent of the sample. That sample should be adequate.

Mr. SHISKIN. It is all planned out in terms of probabilities, and we say 90 percent of the time the estimate will fall within a given range of the "true" estimate. For the black rate, this is approximately plus or minus 0.8 percentage point.

But, there are some times when this is not true, and the August figure was one of them. I want everyone who is listening to be aware of what I am going to say now; namely, the September data do substantiate the longer term pattern of consistently high unemployment for blacks in this recovery period and indicate that all of the over-the-year improvement has been among whites. So that even though, Mr. Chairman, we don't believe—I don't believe, certainly—that the figures for August for blacks was exactly right, I do think that the interpretation of the trends is correct.

Senator PROXMIRE. All the improvement in the last year has been among whites. There has been no improvement among blacks; is that correct?

Mr. SHISKIN. Yes.

Senator PROXMIRE. The result is that we have as bad a discrepancy in general between white unemployment, which is relatively low, and black unemployment, which is high, as we have ever had.

Mr. SHISKIN. That is correct. As a matter of fact, we have another analysis which shows this in another way, that is, the employment-population rate for whites today is at an alltime high. It has never been this high before.

On the other hand, the employment-population ratio for the blacks is close to an alltime low. When I say "alltime," I mean recent history.

So the labor force is proceeding on two tracks. You have a track which is quite favorable. We are enjoying a good expansion, I think, and you know, no expansion is perfect. I wish the manufacturing sector was stronger. But, on the other hand, the trends are strong. But the blacks are not sharing in the benefits of the expansion.

They are not participating to the extent they were before, not as many of them are employed as a percentage of their working age population. They are not sharing the benefits of the current expansion, which are being enjoyed by the white population.

I have just been saying that I don't think the figures for August were right. But, despite that, the underlying trends clearly support the statements I have made about the discrepancy between the movements in the labor force, the favorable movement for whites and the quiet unfavorable movement for blacks.

May I go on with the summary?

Senator PROXMIRE. Yes, go ahead.

Mr. SHISKIN. Nonfarm employment also improved substantially. The estimates derived from the household survey showed an over-the-month increase of 360,000, while that from the business survey showed an improvement of 290,000.

Both figures are well above those for recent months. The BLS-diffusion index of 172 industries, which fell below 50 in August, rose to 64. Small declines in the average workweek and large rises in employment resulted in a rise in aggregate hours in the private nonagricultural sector for the first time since last May, but were still below that month's level.

It is noteworthy, however, that aggregate hours in the goods-producing industries and in manufacturing declined for the third consecutive month.

State and local government employment, which covers most public service jobs, rose for the seventh consecutive month. The increase since May was about 175,000. During this same period, public service employment-funded jobs increased about 200,000.

Price increases during the third quarter have been more moderate than earlier in the year. The Finished Goods Price Index for September showed an increase of 0.4 percent over the month after 3 months of little or no change.

Producers' prices for finished consumer goods rose 0.3 percent following three months of small declines. The Consumer Price Index rose 0.3 percent in August. Both August and July CPI increases were well below earlier months. Much of this prices moderation can be

traced to the sharp decline in farm prices during the May–August period.

In September, farm prices also declined, but only by 0.2 percent. Another contributing factor has been the moderation in energy price increases during the June-August period. However, producers' prices for energy picked up again in September.

In summary, the labor markets improved in September, with employment resuming its earlier vigorous advance. Prices rose somewhat more than during the previous 3 months, but at a much lower rate than earlier this year.

My colleagues and I shall now try to answer your questions.

Let me first say that in a complex report, the kind of reports we have put out in the last few days, there are bound to be some good findings and some bad findings.

The economy never proceeds uniformly up or down in all respects. My judgment is that the data for September are good. The economy has demonstrated an absolutely fantastic capacity to create jobs.

Here we have a situation where manufacturing is sluggish, but nevertheless, the growth in other parts of the economy are sufficiently strong to more than wipe that out. So I think we have a good report.

[The attachments to Mr. Shiskin's statement follow:]

UNEMPLOYMENT RATES BY ALTERNATE SEASONAL ADJUSTMENT METHODS

Month	Unadjusted rate	Official adjusted rate	Alternative age-sex procedures					Other aggregations (all multiplicative)				Direct adjustment rate	Composite	Range (cols. 2 to 13)
			All multiplicative	All additive	Year ahead	Concurrent	Stable 67–73	Duration	Reasons	Total	Residual			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1975														
January	9.0	7.9	7.9	8.2	8.2	8.0	8.1	8.0	7.9	8.0	8.4	8.1	8.1	0.5
February	9.1	8.0	8.1	8.3	8.2	8.0	8.1	7.9	7.9	8.1	8.3	8.0	8.1	.4
March	9.1	8.5	8.5	8.7	8.7	8.6	8.6	8.4	8.3	8.5	8.7	8.5	8.5	.4
April	8.6	8.6	8.7	8.7	8.9	8.8	8.8	8.6	8.6	8.7	8.6	8.7	8.7	.2
May	8.3	9.0	9.0	8.7	9.2	9.0	9.2	8.9	9.1	9.2	8.8	9.3	9.0	.5
June	9.1	8.7	8.6	8.7	8.6	8.7	8.6	8.7	8.8	8.3	8.6	8.3	8.6	.5
July	8.7	8.7	8.6	8.6	8.4	8.7	8.6	8.5	8.7	8.5	8.5	8.6	8.6	.2
August	8.2	8.5	8.5	8.4	8.4	8.5	8.3	8.6	8.7	8.5	8.4	8.6	8.5	.4
September	8.1	8.6	8.6	8.4	8.3	8.6	8.3	8.8	8.8	8.5	8.4	8.5	8.5	.5
October	7.8	8.6	8.7	8.4	8.6	8.7	8.3	8.7	8.7	8.6	8.5	8.6	8.6	.4
November	7.8	8.4	8.4	8.2	8.3	8.5	8.2	8.6	8.4	8.4	8.2	8.4	8.4	.4
December	7.8	8.3	8.4	8.2	8.3	8.3	8.3	8.5	8.2	8.3	8.2	8.4	8.3	.2
1976														
January	8.8	7.8	7.8	8.0	7.8	7.8	8.1	8.0	7.8	7.8	8.2	7.9	7.9	.4
February	8.7	7.6	7.6	7.8	7.6	7.6	7.7	7.5	7.5	7.6	7.7	7.6	7.6	.3
March	8.1	7.5	7.5	7.6	7.5	7.5	7.7	7.3	7.4	7.5	7.6	7.5	7.5	.4
April	7.4	7.5	7.5	7.5	7.4	7.4	7.6	7.4	7.5	7.5	7.4	7.5	7.5	.2
May	6.7	7.3	7.4	7.2	7.2	7.2	7.5	7.2	7.4	7.5	7.2	7.5	7.4	.3
June	8.0	7.6	7.5	7.5	7.5	7.6	7.5	7.5	7.5	7.3	7.4	7.3	7.5	.3
July	7.8	7.8	7.8	7.7	7.8	7.8	7.7	7.6	7.8	7.7	7.7	7.7	7.7	.2
August	7.6	7.9	7.9	7.8	7.9	7.9	7.7	8.0	8.0	7.9	7.8	8.0	7.9	.3
September	7.4	7.8	7.8	7.7	7.8	7.8	7.6	8.0	7.9	7.8	7.8	7.8	7.8	.4
October	7.2	7.9	8.0	7.8	7.9	7.9	7.7	8.0	7.9	8.0	7.9	7.9	7.9	.3
November	7.4	8.0	8.0	7.8	8.1	8.0	7.8	8.1	8.0	8.0	7.8	8.0	7.9	.3
December	7.4	7.8	7.9	7.8	7.9	7.8	7.9	7.9	7.8	7.8	7.8	7.9	7.8	.1

1977														
January	8.3	7.3	7.3	7.5	7.5	7.4	7.5	7.4	7.4	7.4	7.6	7.4	7.4	.3
February	8.5	7.5	7.5	7.7	7.5	7.5	7.6	7.4	7.4	7.5	7.6	7.5	7.5	.3
March	7.9	7.3	7.3	7.4	7.3	7.3	7.5	7.3	7.3	7.3	7.3	7.4	7.3	.2
April	6.9	7.0	7.0	7.0	7.0	7.0	7.1	7.0	7.0	7.0	6.9	7.0	7.0	.2
May	6.4	6.9	7.0	6.8	6.9	7.0	7.1	7.0	7.1	7.1	7.0	7.1	7.0	.3
June	7.5	7.1	7.0	7.1	7.1	7.1	7.0	7.0	7.0	6.9	7.0	6.8	7.0	.3
July	7.0	6.9	6.9	6.9	6.9	6.9	6.8	6.8	6.9	6.9	6.8	6.9	6.9	.1
August	6.8	7.1	7.1	7.1	7.1	7.0	6.9	7.2	7.2	7.1	7.1	7.1	7.1	.3
September	6.6	6.9	6.9	6.9	6.9	6.9	6.7	7.0	7.0	7.0	7.0	7.0	6.9	.3
October														
November														
December														

An explanation of cols. 1 to 13 follows:

(1) Unemployment rate not seasonally adjusted.

(2) Official rate: This is the published seasonally adjusted rate. Each of 4 unemployed age-sex components—males and females, 16 to 19 and 20 years of age and over—is independently adjusted. The teenage unemployment components are adjusted using the additive procedure of the X–11 method, while adults are adjusted using the X–11 multiplicative option. The rate is calculated by aggregating the 4 and dividing them by 12 summed labor force components—these 4 plus 8 employment components, which are the 4 age-sex groups in agriculture and nonagricultural industries. This employment total is also used in the calculation of the labor force base in columns (3) to (9).

The current "implicit" factors for the total unemployment rate are as follows:

January	113.8	July	100.2
February	113.7	August	96.1
March	108.1	September	94.6
April	98.7	October	90.1
May	92.2	November	93.0
June	105.2	December	93.8

(3) Multiplicative rate: The 4 basic unemployed age-sex groups—males and females, 16 to 19 and 20 years and over—are adjusted by the X–11 multiplicative procedure. This procedure was used to adjust unemployment data in 1975 and previous years.

(4) Additive rate: The 4 basic unemployed age-sex groups—males and females, 16 to 19 and 20 years and over—are adjusted by the X–11 additive procedure.

(5) Year-ahead factors: The official seasonal adjustment procedure for each of the components is followed through computation of the factors for the last years of data. A projected factor—the factor for the last year plus ½ of the difference from the previous year—is then computed for each of the components, and the rate is calculated. The rates are as first calculated and are not subject to revision.

(6) Concurrent adjustment through current month: The official procedure is followed with data reseasonally adjusted incorporating the experience through the current month; that is, the rate for March 1976 is based on adjustment of data for the period, January 1967–March 1976. The rates are as first calculated and are not subject to revision.

(7) Stable seasonals (January 1967–December 1973): The stable seasonal option in the X–11 program uses an unweighted average of all available seasonal-irregular ratios to compute final seasonal factors. In essence, it assumes that seasonal patterns are relatively constant from year to year. A cutoff of input data as of December 1973 was selected to avoid the impact of cyclical changes in the 1974–75 period.

(8) Duration: Unemployment total is aggregated from 3 independently adjusted unemployment by duration groups (0 to 4, 5 to 14, 15 plus).

(9) Reasons: Unemployment total is aggregated from 4 independently seasonally adjusted unemployment levels by reasons for unemployment—job losers, job leavers, new entrants, and reentrants.

(10) Unemployment and labor force levels adjusted directly.

(11) Labor force and employment levels adjusted directly; unemployment as a residual and rate then calculated.

(12) Unemployment rate adjusted directly.

(13) Average of columns 2 to 12.

Note: The X–11 method, developed by Julius Shiskin at the Bureau of the Census over the period 1955–65, was used in computing all the seasonally adjusted series described above.

Source: U.S. Department of Labor, Bureau of Labor Statistics, Oct. 7, 1977.

News
United States Department of Labor
Bureau of Labor Statistics
Washington, D.C. 20212

Contact: J. Bregger (202) 523-1944
523-1371
K. Hoyle (202) 523-1913
523-1208
home: 333-1384

USDL 77-881
TRANSMISSION OF MATERIAL IN THIS RELEASE IS EMBARGOED UNTIL 9:00 A. M. (EDT), FRIDAY, OCTOBER 7, 1977

THE EMPLOYMENT SITUATION: SEPTEMBER 1977

Employment rose in September and unemployment declined slightly, it was reported today by the Bureau of Labor Statistics of the U. S. Department of Labor. The overall unemployment rate was 6.9 percent, down from 7.1 percent in August. The rate has fluctuated within this narrow range since last April.

Total employment--as measured by the monthly survey of households--rose 320,000 over the month to 91.1 million in September. Employment has grown by 3.3 million over the past 12 months, and the percentage of the population with jobs (the employment-population ratio) has risen from 56.1 to 57.3 percent, just short of the alltime high last reached in March 1974.

Nonfarm payroll employment--as measured by the monthly survey of establishments--advanced at about the same pace as total employment over the month, with an increase of 290,000. Payroll jobs have expanded by 2.8 million since September 1976.

Unemployment

Unemployment declined by 150,000 in September to 6.8 million, seasonally adjusted. The over-the-month decline occurred primarily among persons who had lost their last job, most of whom had been recalled from layoff. The overall unemployment rate was 6.9 percent and has been at about this level since April; however, it was down about a percentage point from last fall. (See tables A-1 and A-5.)

Nearly all of the over-the-month reduction in unemployment took place among black workers (primarily adult men), reversing their increase in the prior month. The rate for blacks was 13.1 percent in September, down from 14.5 percent in August; it had been 13.2 percent in both June and July. The jobless rate for whites, on the other hand, was 6.1 percent for the third month in a row. Over the past year, however, there

has been no improvement in the unemployment situation for black workers, whereas the rate for whites declined substantially, by a full percentage point. The ratio of the two rates was in excess of 2 to 1 in September, considerably above the year earlier ratio of 1.8 to 1. Young blacks have continued to experience a particularly high incidence of joblessness as their rate has remained in the 35 to 40 percent range for the past 3 years.

Jobless rates were down from August to September for adult men (from 5.2 to 4.9 percent) but were little changed for adult women (7.0 percent) and teenagers (18.1 percent). There was also a three-tenths drop among full-time workers, returning their rate to 6.5 percent. (See table A-2.)

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

Selected categories	Quarterly averages					Monthly data		
	1976		1977			1977		
	III	IV	I	II	III	July	Aug.	Sept.
HOUSEHOLD DATA	Thousands of persons							
Civilian labor force	95,261	95,711	96,067	97,186	97,623	97,305	97,697	97,868
Total employment	87,804	88,133	88,998	90,370	90,809	90,561	90,771	91,095
Unemployment	7,457	7,578	7,068	6,816	6,814	6,744	6,926	6,773
Not in labor force	58,963	59,132	59,379	58,908	59,140	59,242	59,064	59,114
Discouraged workers	827	992	929	1,061	1,104	N.A.	N.A.	N.A.
	Percent of labor force							
Unemployment rates:								
All workers	7.8	7.9	7.4	7.0	7.0	6.9	7.1	6.9
Adult men	6.0	6.2	5.6	5.1	5.1	5.1	5.2	4.9
Adult women	7.7	7.6	7.1	6.9	7.0	6.9	7.1	7.0
Teenagers	18.8	19.1	18.6	18.1	17.7	17.4	17.5	18.1
White	7.1	7.2	6.7	6.3	6.1	6.1	6.1	6.1
Black and other	13.1	13.4	12.8	12.8	13.6	13.2	14.5	13.1
Full-time workers	7.4	7.5	6.8	6.5	6.6	6.5	6.8	6.5
ESTABLISHMENT DATA	Thousands of jobs							
Nonfarm payroll employment	79,683	80,090	80,927	81,909	82,525p	82,366	82,459p	82,750p
Goods-producing industries	23,372	23,440	23,765	24,292	24,347p	24,399	24,289p	24,352p
Service-producing industries	56,311	56,650	57,162	57,617	58,178p	57,967	58,170p	58,398p
	Hours of work							
Average weekly hours:								
Total private nonfarm	36.1	36.2	36.1	36.2	36.0p	36.1	36.0p	35.9p
Manufacturing	39.9	40.0	40.1	40.4	40.2p	40.3	40.2p	40.0p
Manufacturing overtime	3.0	3.1	3.1	3.4	3.3p	3.4	3.3p	3.3p

p=preliminary. N.A.=not available.

The average (mean) duration of joblessness rose from 13.5 weeks in August to 14.2 weeks in September, after having declined steadily since May. (See table A-4.)

Total Employment and the Labor Force

Total employment increased by 320,000 in September to 91.1 million, as an unusually large increase of 500,000 for adult women more than offset a 210,000 decline among teenagers. The number of employed adult men was about unchanged in September. Employment levels rose for both black and white workers. Total employment was 3.3 million above its year-ago level, with increases of nearly 1.8 million for adult women, 1.2 million for adult men, and 330,000 for teenagers.

The employment-population ratio--the proportion of the total noninstitutional population that is employed--was up two-tenths of a percentage point to 57.3 percent in September, after holding fairly steady between April and August. This was only a tenth of a point below the alltime high last recorded in March of 1974.

The civilian labor force, at 97.9 million in September, was up slightly over the month, as a large increase among adult women was partially countered by declines among adult men and teenagers. The labor force increased by 2.7 million from a year ago. The labor force participation rate was unchanged from the August rate of 62.3 percent but was 0.6 percentage point above the year-ago level. (See table A-1.)

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 as unemployed. These data are published on a quarterly basis.

At 1.1 million in the third quarter, the number of discouraged workers was little changed from the second quarter level. As usual, about two-thirds of this total indicated job-market factors as the reason for not seeking work. (See table A-8.)

Industry Payroll Employment

Total nonagricultural payroll employment registered its largest advance in 5 months, growing by 290,000 in September to 82.8 million, seasonally adjusted. August-September job gains were posted in 64 percent of the industries comprising the BLS diffusion index of private nonagricultural payroll employment, as the index rebounded from the unusually low level of the prior month. Employment has risen by 2.8 million over the past year. (See tables B-1 and B-6.)

Three-fourths of the over-the-month job growth took place in the service-producing sector, with gains dispersed throughout the sector. Contributing most strongly were services, retail trade, and State and local government. The services industry has grown steadily since mid-1975 and is responsible for more than a third of the sector's increase over the year.

Despite an August-September advance, the goods-producing sector did not fully recover from the prior month's decline. Manufacturing edged up slightly, as a majority of the durable goods industries posted increases. By contrast, nondurable goods employment was at a 6-month low. Although mining posted a sizeable gain, all of it stemmed from decreased strike activity. Contract construction employment was about unchanged over the month.

Hours

Declining a tenth of an hour for the fourth consecutive month, average weekly hours of production or nonsupervisory workers on private nonagricultural payrolls dropped to 35.9 in September, one of the lowest levels ever registered. While short-run movements in weekly hours tend to reflect economic conditions, the longer-term downtrend results primarily from structural changes in employment, particularly changes in the full-time/part-time mix. Manufacturing weekly hours, on the other hand, have not displayed a similar historical trend, and movements are more closely related to cyclical patterns. Over the month, weekly hours for manufacturing were down 0.2 to 40.0 hours, a return to late 1976 levels. Manufacturing overtime hours equaled the August level of 3.3 hours, after holding at 3.4 hours in the prior 4 months. (See table B-2.)

The index of aggregate weekly hours of production or nonsupervisory workers on private nonagricultural payrolls rose 0.3 percent, returning to the June level of 115.8 (1967=100). A slight decline in the index for the goods-producing sector was more than offset by a 0.6 percent rise in the service-producing sector's index. The overall index has advanced 3.2 percent since September 1976. (See table B-5.)

Hourly and Weekly Earnings

Average hourly earnings of production or nonsupervisory workers on private nonagricultural payrolls advanced 0.2 percent, seasonally adjusted. Due to a decline in average weekly hours, however, average weekly earnings edged down 0.1 percent, to their lowest level since June. Compared with their year-ago levels, average hourly and weekly earnings were up 7.5 percent and 7.2 percent, respectively.

Before adjustment for seasonality, average hourly earnings rose 8 cents from August to $5.34, 38 cents above the level of last September. Average weekly earnings increased by $1.31 to $192.77. Over the year, average weekly earnings have risen $13.22. (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 200.6 (1967=100) in September, 0.4 percent higher than in August. The index was 7.0 percent above September a year ago. During the 12-month period ended in August, the Hourly Earnings Index in dollars of constant purchasing power rose 0.4 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 conducted by the Bureau of the Census for the Bureau of Labor Statistics. The sample consists of about 47,000 households selected to represent the U.S. civilian noninstitutional population 16 years of age 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 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 population 16 years of age and over, without duplication, since each person is classified as employed, unemployed, or not in the labor force.

The payroll survey relates only to paid wage and salary employees (regardless of age) on the payrolls of nonagricultural establishments. The household survey counts employed persons in both agriculture and in nonagricultural industries and, in addition to wage and salary workers (including private household workers), includes the self-employed, unpaid family workers, and persons "with a job but not at work" and not paid for the period absent. 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) 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).

To meet the extensive needs of data users, the Bureau regularly publishes data on a wide variety of labor market indicators—see, for example, the demographic, occupational, and industry detail in tables A-2 and A-3. 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, extending 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, school vacations, 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 90 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, current seasonal adjustment factors for unemployment and other labor force series are calculated taking into account the prior year's experience, and revised data are introduced in the release containing January data.

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 unemployment (the sum of four seasonally-adjusted age-sex components) by the civilian labor force (the sum of 12 seasonally-adjusted age-sex components). Several alternative methods for seasonally adjusting the overall unemployment rate are also used on a regular basis in order to illustrate the degree of uncertainty that arises because of the seasonal adjustment procedure. Among these alternative methods are five different age-sex adjustments,

including a concurrent adjustment and one based on stable factors and four based on other unemployment aggregations. Alternative rates for 1976 are shown in the table at the end of this note. (Current alternative rates and an explanation of the methods may be obtained from BLS upon request.)

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 revised annually, usually in conjunction with the annual benchmark adjustments (comprehensive counts of employment).

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 questionnaire and procedures. The standard error is the measure of sampling variability, that is, the variations that might occur by chance because only a sample of the population is surveyed. Tables A-E in the "Explanatory Notes" of *Employment and Earnings* provide standard errors for unemployment and other labor force categories.

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. Moreover, since the estimating procedures employ 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, usually annually. 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 1974 benchmark levels. Measures of reliability for employment estimates are provided in the "Explanatory Notes" of *Employment and Earnings*, as are the actual amounts of revisions due to benchmark adjustments (tables G-L).

Unemployment rate by alternative seasonal adjustment methods

Month	Unadjusted rate	Official Adjusted Rate	Alternative age-sex procedures					Other aggregations (all multiplicative)				Direct adjustment	Composite	Range (cols. 2-13)
			All multiplicative	All additive	Year-ahead	Concurrent	Stable 1967-73	Duration	Reasons	Total	Residual			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1976														
January	8.8	7.8	7.8	8.0	7.8	7.8	8.1	8.0	7.8	7.8	8.2	7.9	7.9	0.4
February	8.7	7.6	7.6	7.8	7.6	7.6	7.7	7.5	7.5	7.6	7.7	7.6	7.6	.3
March	8.1	7.5	7.5	7.6	7.5	7.5	7.7	7.3	7.4	7.5	7.6	7.5	7.5	.4
April	7.4	7.5	7.5	7.5	7.4	7.4	7.6	7.4	7.5	7.5	7.4	7.5	7.5	.2
May	6.7	7.3	7.4	7.2	7.2	7.2	7.5	7.2	7.4	7.5	7.2	7.5	7.3	.3
June	8.0	7.6	7.5	7.5	7.5	7.6	7.5	7.5	7.5	7.3	7.4	7.3	7.5	.3
July	7.8	7.8	7.8	7.7	7.8	7.8	7.7	7.6	7.8	7.7	7.7	7.7	7.7	.2
August	7.6	7.9	7.9	7.8	7.9	7.9	7.7	8.0	8.0	7.9	7.8	8.0	7.9	.3
September	7.4	7.8	7.8	7.7	7.8	7.8	7.6	8.0	7.9	7.8	7.8	7.8	7.8	.4
October	7.2	7.9	8.0	7.8	7.9	7.9	7.7	8.0	7.9	8.0	7.9	7.9	7.9	.3
November	7.4	8.0	8.0	7.8	8.1	8.0	7.8	8.1	8.0	8.0	7.8	8.0	8.0	.3
December	7.4	7.8	7.9	7.8	7.9	7.8	7.9	7.9	7.8	7.8	7.8	7.9	7.8	.1

Table A-1. Employment status of the noninstitutional population

(Numbers in thousands)

Employment status	Not seasonally adjusted			Seasonally adjusted					
	Sept. 1976	Aug. 1977	Sept. 1977	Sept. 1976	May 1977	June 1977	July 1977	Aug. 1977	Sept. 1977
TOTAL									
Total noninstitutional population[1]	156,595	158,899	159,114	156,595	158,228	158,456	158,682	158,899	159,114
Armed Forces[1]	2,145	2,137	2,131	2,145	2,128	2,129	2,135	2,137	2,131
Civilian noninstitutional population[1]	154,451	156,761	156,982	154,451	156,101	156,327	156,547	156,761	156,982
Civilian labor force	94,975	99,073	97,684	95,242	97,158	97,641	97,305	97,697	97,868
Participation rate	61.5	63.2	62.2	61.7	62.2	62.5	62.2	62.3	62.3
Employed	87,949	92,315	91,247	87,794	90,408	90,679	90,561	90,771	91,095
Employment-population ratio[2]	56.2	58.1	57.3	56.1	57.1	57.2	57.1	57.1	57.3
Agriculture	3,396	3,682	3,326	3,278	3,386	3,338	3,213	3,252	3,215
Nonagricultural industries	84,553	88,633	87,921	84,516	87,022	87,341	87,348	87,519	87,880
Unemployed	7,026	6,757	6,437	7,448	6,750	6,962	6,744	6,926	6,773
Unemployment rate	7.4	6.8	6.6	7.8	6.9	7.1	6.9	7.1	6.9
Not in labor force	59,476	57,689	59,299	59,209	58,943	58,686	59,242	59,064	59,114
Men, 20 years and over									
Total noninstitutional population[1]	66,491	67,642	67,745	66,491	67,324	67,431	67,537	67,642	67,745
Civilian noninstitutional population[1]	64,796	65,947	66,056	64,796	65,641	65,743	65,845	65,947	66,056
Civilian labor force	51,810	52,978	52,528	51,851	52,282	52,497	52,494	52,588	52,457
Participation rate	80.0	80.3	79.5	80.0	79.6	79.9	79.7	79.7	79.4
Employed	49,172	50,513	50,374	48,701	49,531	49,859	49,794	49,854	49,884
Employment-population ratio[2]	74.0	74.7	74.4	73.2	73.6	73.9	73.7	73.7	73.6
Agriculture	2,405	2,492	2,406	2,341	2,373	2,372	2,305	2,355	2,343
Nonagricultural industries	46,766	48,021	47,969	46,360	47,158	47,487	47,489	47,499	47,541
Unemployed	2,638	2,466	2,154	3,150	2,751	2,638	2,700	2,734	2,573
Unemployment rate	5.1	4.7	4.1	6.1	5.3	5.0	5.1	5.2	4.9
Not in labor force	12,987	12,969	13,527	12,945	13,359	13,246	13,351	13,359	13,599
Women, 20 years and over									
Total noninstitutional population[1]	73,286	74,429	74,543	73,286	74,081	74,198	74,315	74,429	74,543
Civilian noninstitutional population[1]	73,196	74,332	74,444	73,196	73,987	74,101	74,217	74,332	74,444
Civilian labor force	34,728	35,188	36,382	34,540	35,634	35,675	35,667	35,723	36,201
Participation rate	47.4	47.3	48.9	47.2	48.2	48.1	48.1	48.1	48.6
Employed	31,943	32,551	33,709	31,906	33,288	33,116	33,212	33,172	33,672
Employment-population ratio[2]	43.6	43.7	45.2	43.5	44.9	44.6	44.7	44.6	45.2
Agriculture	560	612	529	520	597	564	525	515	492
Nonagricultural industries	31,383	31,939	33,180	31,386	32,691	32,552	32,687	32,657	33,180
Unemployed	2,785	2,638	2,673	2,634	2,346	2,559	2,455	2,551	2,529
Unemployment rate	8.0	7.5	7.3	7.6	6.6	7.2	6.9	7.1	7.0
Not in labor force	38,468	39,143	38,062	38,656	38,353	38,426	38,550	38,609	38,243
Both sexes, 16-19 years									
Total noninstitutional population[1]	16,819	16,828	16,825	16,819	16,823	16,827	16,830	16,828	16,825
Civilian noninstitutional population[1]	16,458	16,483	16,483	16,458	16,473	16,483	16,485	16,483	16,483
Civilian labor force	8,438	10,906	8,773	8,851	9,242	9,469	9,144	9,386	9,210
Participation rate	51.3	66.2	53.2	53.8	56.1	57.4	55.5	56.9	55.9
Employed	6,834	9,252	7,163	7,187	7,589	7,704	7,555	7,745	7,539
Employment-population ratio[2]	40.6	55.0	42.6	42.7	45.1	45.8	44.9	46.0	44.8
Agriculture	430	579	391	417	416	402	383	382	380
Nonagricultural industries	6,404	8,673	6,772	6,770	7,173	7,302	7,172	7,363	7,159
Unemployed	1,603	1,654	1,610	1,664	1,653	1,765	1,589	1,641	1,671
Unemployment rate	19.0	15.2	18.3	18.8	17.9	18.6	17.4	17.5	18.1
Not in labor force	8,021	5,576	7,710	7,607	7,231	7,014	7,341	7,097	7,273
WHITE									
Total noninstitutional population[1]	137,782	139,620	139,789	137,782	139,089	139,270	139,450	139,620	139,789
Civilian noninstitutional population[1]	136,005	137,865	138,046	136,005	137,337	137,522	137,698	137,865	138,046
Civilian labor force	84,119	87,407	86,382	84,313	85,937	86,268	85,968	86,285	86,471
Participation rate	61.8	63.4	62.6	62.0	62.6	62.7	62.4	62.6	62.6
Employed	78,452	82,278	81,394	78,276	80,603	80,813	80,752	81,010	81,214
Employment-population ratio[2]	56.9	58.9	58.2	56.8	58.0	58.0	57.9	58.0	58.1
Unemployed	5,667	5,128	4,988	6,037	5,334	5,455	5,216	5,275	5,257
Unemployment rate	6.7	5.9	5.8	7.2	6.2	6.3	6.1	6.1	6.1
Not in labor force	51,886	50,459	51,665	51,692	51,400	51,254	51,730	51,580	51,575
BLACK AND OTHER									
Total noninstitutional population[1]	18,813	19,279	19,325	18,813	19,140	19,186	19,232	19,279	19,325
Civilian noninstitutional population[1]	18,445	18,896	18,936	18,445	18,763	18,805	18,850	18,826	18,936
Civilian labor force	10,856	11,666	11,302	10,906	11,171	11,325	11,236	11,402	11,359
Participation rate	58.9	61.7	59.7	59.1	59.5	60.2	59.6	60.3	60.0
Employed	9,497	10,037	9,853	9,508	9,730	9,833	9,758	9,744	9,868
Employment-population ratio[2]	50.5	52.1	51.0	50.5	50.8	51.3	50.7	50.5	51.1
Unemployed	1,359	1,629	1,449	1,398	1,441	1,492	1,478	1,658	1,491
Unemployment rate	12.5	14.0	12.8	12.8	12.9	13.2	13.2	14.5	13.1
Not in labor force	7,589	7,230	7,634	7,539	7,592	7,480	7,614	7,494	7,577

[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

Table A-2. Major unemployment indicators, seasonally adjusted

Selected categories	Number of unemployed persons (In thousands)		Unemployment rates					
	Sept. 1976	Sept. 1977	Sept. 1976	May 1977	June 1977	July 1977	Aug. 1977	Sept. 1977
CHARACTERISTICS								
Total, 16 years and over	7,448	6,773	7.8	6.9	7.1	6.9	7.1	6.9
Men, 20 years and over	3,150	2,573	6.1	5.3	5.0	5.1	5.2	4.9
Women, 20 years and over	2,634	2,529	7.6	6.6	7.2	6.9	7.1	7.0
Both sexes, 16-19 years	1,664	1,671	18.8	17.9	18.6	17.4	17.5	18.1
White, total	6,037	5,257	7.2	6.2	6.3	6.1	6.1	6.1
Men, 20 years and over	2,645	2,015	5.7	4.7	4.5	4.6	4.5	4.3
Women, 20 years and over	2,071	1,935	6.9	5.9	6.4	6.2	6.3	6.2
Both sexes, 16-19 years	1,321	1,307	16.6	15.7	16.1	14.3	14.7	15.9
Black and other, total	1,398	1,491	12.8	12.9	13.2	13.2	14.5	13.1
Men, 20 years and over	524	565	9.8	9.9	9.6	10.1	11.7	10.4
Women, 20 years and over	531	562	11.4	11.8	11.9	10.9	12.2	11.3
Both sexes, 16-19 years	343	364	38.3	38.7	39.4	40.7	40.4	37.4
Married men, spouse present	1,803	1,344	4.5	3.6	3.4	3.4	3.5	3.4
Married women, spouse present	1,608	1,452	7.3	6.3	6.8	6.6	6.6	6.4
Women who head families	443	470	10.7	8.4	9.4	9.3	10.5	10.4
Full-time workers	6,098	5,407	7.5	6.5	6.5	6.5	6.8	6.5
Part-time workers	1,377	1,391	9.6	9.9	10.7	9.2	8.9	9.5
Unemployed 15 weeks and over[1]	2,311	1,866	2.4	1.9	1.8	1.9	1.9	1.9
Labor force time lost[2]	--	--	8.4	7.5	7.5	7.4	7.7	7.4
OCCUPATION[3]								
White-collar workers	2,100	2,014	4.6	4.3	4.2	4.0	4.2	4.2
Professional and technical	426	420	3.0	2.9	3.0	2.8	3.0	3.0
Managers and administrators, except farm	317	246	3.2	2.8	2.7	2.6	2.5	2.5
Sales workers	328	309	5.6	5.5	5.2	5.4	5.3	5.1
Clerical workers	1,029	1,039	6.2	5.7	5.7	5.4	5.8	6.0
Blue-collar workers	3,138	2,599	9.8	7.9	7.7	8.2	8.4	7.9
Craft and kindred workers	846	651	6.9	5.6	5.6	5.6	5.5	5.2
Operatives, except transport	1,274	1,165	11.5	8.9	9.4	10.1	10.0	10.2
Transport equipment operatives	284	215	8.0	6.7	5.7	7.5	7.6	5.7
Nonfarm laborers	734	568	14.6	12.5	10.9	10.7	12.6	11.1
Service workers	1,159	1,070	8.7	9.0	8.2	7.7	8.4	7.8
Farm workers	115	132	4.0	4.4	4.8	3.8	3.7	4.7
INDUSTRY[3]								
Nonagricultural private wage and salary workers[4]	5,567	4,863	8.1	7.1	6.9	6.8	7.0	6.9
Construction	694	455	15.7	13.0	12.6	12.1	11.5	10.4
Manufacturing	1,721	1,578	8.1	6.2	6.3	6.7	7.0	7.2
Durable goods	960	848	7.6	5.7	5.6	6.1	6.5	6.6
Nondurable goods	761	730	8.9	7.0	7.3	7.6	7.7	8.2
Transportation and public utilities	264	254	5.4	4.3	4.1	4.7	4.9	5.0
Wholesale and retail trade	1,580	1,377	8.9	8.3	7.9	7.7	8.3	7.6
Finance and service industries	1,264	1,174	6.4	6.6	6.0	5.7	5.6	5.7
Government workers	622	634	3.9	4.1	4.2	3.9	4.4	4.0
Agricultural wage and salary workers	165	157	11.2	11.5	11.0	9.7	9.3	10.4
VETERAN STATUS								
Male Vietnam-era veterans:[5]								
20 to 34 years	569	502	8.9	7.5	7.6	7.9	7.8	7.7
20 to 24 years	180	188	19.2	13.6	18.1	16.3	17.4	20.1
25 to 29 years	242	173	7.9	7.8	7.1	7.2	6.3	6.1
30 to 34 years	147	141	6.2	5.1	4.5	5.8	6.0	5.1
Male nonveterans:								
20 to 34 years	1,250	1,119	8.2	7.2	6.9	7.6	7.9	7.0
20 to 24 years	705	630	10.5	10.2	8.9	9.9	10.5	9.1
25 to 29 years	348	296	7.2	5.4	6.3	6.8	6.6	5.9
30 to 34 years	197	193	5.4	4.1	4.0	4.6	4.9	4.8

[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 industry covers only unemployed wage and salary workers.

[4] Includes mining, not shown separately.

[5] Vietnam-era veterans are those who served between August 5, 1964, and May 7, 1975.

Table A-3. Selected employment indicators

[In thousands]

Selected categories	Not seasonally adjusted		Seasonally adjusted					
	Sept. 1976	Sept. 1977	Sept. 1976	May 1977	June 1977	July 1977	Aug. 1977	Sept. 1977
CHARACTERISTICS								
Total employed, 16 years and over	87,949	91,247	87,794	90,408	90,679	90,561	90,771	91,095
Men	52,834	54,256	52,546	53,722	53,987	53,900	53,958	53,966
Women	35,115	36,991	35,248	36,686	36,692	36,661	36,813	37,129
Married men, spouse present	38,562	38,780	38,140	38,509	38,582	38,434	38,316	38,358
Married women, spouse present	20,659	21,423	20,470	20,962	20,831	20,846	20,814	21,232
OCCUPATION								
White-collar workers	43,950	45,361	44,023	44,766	44,798	45,105	45,114	45,437
Professional and technical	13,673	13,873	13,581	13,483	13,638	13,863	13,720	13,777
Managers and administrators, except farm	9,532	9,865	9,446	9,400	9,570	9,583	9,688	9,777
Sales workers	5,523	5,714	5,555	5,695	5,673	5,716	5,722	5,748
Clerical workers	15,223	15,909	15,441	16,188	15,917	15,943	15,984	16,135
Blue-collar workers	29,101	30,656	28,745	30,423	30,432	30,063	30,231	30,282
Craft and kindred workers	11,405	12,046	11,340	11,894	11,891	11,887	11,931	11,974
Operatives, except transport	10,018	10,415	9,820	10,530	10,378	10,270	10,242	10,211
Transport equipment operatives	3,296	3,562	3,275	3,552	3,551	3,397	3,462	3,541
Nonfarm laborers	4,382	4,633	4,310	4,447	4,612	4,509	4,596	4,556
Service workers	11,998	12,431	12,165	12,372	12,697	12,460	12,591	12,604
Farm workers	2,900	2,798	2,772	2,904	2,838	2,743	2,778	2,676
MAJOR INDUSTRY AND CLASS OF WORKER								
Agriculture:								
Wage and salary workers	1,399	1,443	1,309	1,325	1,381	1,271	1,331	1,350
Self-employed workers	1,638	1,596	1,608	1,655	1,595	1,561	1,604	1,566
Unpaid family workers	359	287	344	393	378	363	315	275
Nonagricultural industries:								
Wage and salary workers	78,435	81,364	78,440	80,429	80,814	80,738	80,951	81,341
Government	15,004	15,158	15,143	15,075	14,961	15,131	15,282	15,296
Private industries	63,432	66,205	63,297	65,354	65,853	65,607	65,669	66,045
Private households	1,397	1,406	1,400	1,305	1,388	1,445	1,401	1,409
Other industries	62,035	64,779	61,897	64,049	64,465	64,162	64,268	64,636
Self-employed workers	5,692	6,060	5,701	6,050	5,997	5,896	6,151	6,072
Unpaid family workers	427	497	433	550	518	523	469	504
PERSONS AT WORK [1]								
Nonagricultural industries	80,390	83,472	79,796	81,771	81,618	82,572	82,613	82,799
Full-time schedules	66,040	68,857	64,965	67,219	67,126	67,867	67,755	67,706
Part time for economic reasons	3,083	3,025	3,376	3,290	3,368	3,371	3,199	3,315
Usually work full time	1,277	1,155	1,378	1,314	1,341	1,440	1,196	1,246
Usually work part time	1,806	1,870	1,998	1,976	2,027	1,931	2,003	2,069
Part time for noneconomic reasons	11,267	11,590	11,455	11,262	11,124	11,334	11,659	11,778

[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]

Weeks of unemployment	Not seasonally adjusted		Seasonally adjusted					
	Sept. 1976	Sept. 1977	Sept. 1976	May 1977	June 1977	July 1977	Aug. 1977	Sept. 1977
DURATION								
Less than 5 weeks	3,170	3,101	2,852	2,782	3,058	2,830	2,870	2,789
5 to 14 weeks	1,945	1,793	2,426	2,093	2,023	1,969	2,338	2,236
15 weeks and over	1,911	1,543	2,311	1,836	1,737	1,834	1,808	1,866
15 to 26 weeks	814	691	1,118	800	798	917	966	940
27 weeks and over	1,097	852	1,193	1,036	939	917	842	926
Average (mean) duration, in weeks	14.2	13.1	15.4	14.9	14.4	14.1	13.5	14.2
PERCENT DISTRIBUTION								
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than 5 weeks	45.1	48.2	37.6	41.5	44.9	42.7	40.9	40.5
5 to 14 weeks	27.7	27.9	32.0	31.2	29.7	29.7	33.3	32.4
15 weeks and over	27.2	24.0	30.5	27.4	25.5	27.6	25.8	27.1
15 to 26 weeks	11.6	10.7	14.7	11.9	11.7	13.8	13.8	13.6
27 weeks and over	15.6	13.2	15.7	15.4	13.8	13.8	12.0	13.4

Table A-5. Reasons for unemployment

[Numbers in thousands]

Reasons	Not seasonally adjusted		Seasonally adjusted					
	Sept. 1976	Sept. 1977	Sept. 1976	May 1977	June 1977	July 1977	Aug. 1977	Sept. 1977
NUMBER OF UNEMPLOYED								
Lost last job	2,986	2,518	3,727	3,038	2,927	3,075	3,289	3,144
On layoff	783	595	1,222	749	827	919	1,018	928
Other job losers	2,204	1,923	2,505	2,289	2,100	2,156	2,271	2,216
Left last job	1,071	1,001	934	944	954	841	910	873
Reentered labor force	2,071	2,010	1,912	1,993	1,889	1,822	1,857	1,856
Seeking first job	899	908	926	893	1,077	974	1,000	935
PERCENT DISTRIBUTION								
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Job losers	42.5	39.1	49.7	44.2	42.7	45.8	46.6	46.2
On layoff	11.1	9.2	16.3	10.9	12.1	13.7	14.4	13.6
Other job losers	31.4	29.9	33.4	33.3	30.7	32.1	32.2	32.5
Job leavers	15.2	15.5	12.5	13.7	13.9	12.5	12.9	12.8
Reentrants	29.5	31.2	25.5	29.0	27.6	27.1	26.3	27.3
New entrants	12.8	14.1	12.3	13.0	15.7	14.5	14.2	13.7
UNEMPLOYED AS A PERCENT OF THE CIVILIAN LABOR FORCE								
Job losers	3.1	2.6	3.9	3.1	3.0	3.2	3.4	3.2
Job leavers	1.1	1.0	1.0	1.0	1.0	.9	.9	.9
Reentrants	2.2	2.1	2.0	2.1	1.9	1.9	1.9	1.9
New entrants	.9	.9	1.0	.9	1.1	1.0	1.0	1.0

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

Sex and age	Number of unemployed persons (in thousands)		Unemployment rates					
	Sept. 1976	Sept. 1977	Sept. 1976	May 1977	June 1977	July 1977	Aug. 1977	Sept. 1977
Total, 16 years and over	7,448	6,773	7.8	6.9	7.1	6.9	7.1	6.9
16 to 19 years	1,664	1,671	18.8	17.9	18.6	17.4	17.5	18.1
16 to 17 years	758	773	20.6	20.4	21.3	19.9	20.7	19.8
18 to 19 years	913	905	17.5	16.3	16.5	15.3	15.6	16.9
20 to 24 years	1,639	1,559	11.7	10.7	10.5	10.6	11.1	10.7
25 years and over	4,180	3,561	5.8	4.8	5.0	5.0	5.0	4.8
25 to 54 years	3,448	2,919	5.9	5.1	5.3	5.2	5.3	4.9
55 years and over	688	599	4.8	4.0	3.8	3.9	3.9	4.2
Men, 16 years and over	4,060	3,439	7.2	6.3	6.2	6.2	6.3	6.0
16 to 19 years	910	866	19.1	17.0	18.6	16.9	17.6	17.5
16 to 17 years	429	410	21.3	18.7	22.7	20.2	21.7	19.2
18 to 19 years	481	456	17.3	16.0	15.5	14.7	14.8	16.0
20 to 24 years	899	828	11.7	10.6	9.9	10.6	11.3	10.5
25 years and over	2,282	1,759	5.2	4.2	4.1	4.2	4.2	3.9
25 to 54 years	1,830	1,370	5.2	4.4	4.3	4.3	4.4	3.8
55 years and over	410	349	4.6	3.9	3.3	3.6	3.5	3.9
Women, 16 years and over	3,388	3,334	8.8	7.9	8.4	8.0	8.3	8.2
16 to 19 years	754	805	18.4	19.0	18.7	17.9	17.4	18.9
16 to 17 years	329	363	19.8	22.5	19.7	19.5	19.4	20.5
18 to 19 years	432	449	17.6	16.6	17.5	16.0	16.4	17.9
20 to 24 years	740	731	11.8	10.9	11.0	10.5	10.8	10.9
25 years and over	1,898	1,802	6.7	5.7	6.3	6.2	6.2	6.1
25 to 54 years	1,618	1,549	7.1	6.1	6.7	6.4	6.6	6.4
55 years and over	278	250	5.2	4.3	4.6	4.4	4.6	4.5

HOUSEHOLD DATA

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

[Percent]

Measures	Quarterly averages					Monthly data		
	1976		1977			1977		
	III	IV	I	II	III	July	Aug.	Sept.
U-1—Persons unemployed 15 weeks or longer as a percent of the civilian labor force	2.4	2.6	2.2	1.8	1.9	1.9	1.9	1.9
U-2—Job losers as a percent of the civilian labor force	3.9	3.9	3.4	3.1	3.2	3.2	3.4	3.2
U-3—Unemployed household heads as a percent of the household head labor force	5.3	5.3	4.8	4.4	4.5	4.3	4.6	4.5
U-4—Unemployed full-time jobseekers as a percent of the full-time labor force	7.4	7.5	6.8	6.5	6.6	6.5	6.8	6.5
U-5—Total unemployed as a percent of the civilian labor force (official measure)	7.8	7.9	7.4	7.0	7.0	6.9	7.1	6.9
U-6—Total full-time jobseekers plus ½ part-time jobseekers plus ½ total on part time for economic reasons as a percent of the civilian labor force less ½ of the part-time labor force	9.5	9.7	9.0	8.6	8.6	8.6	8.7	8.6
U-7—Total full-time jobseekers plus ½ part-time jobseekers plus ½ total on part time for economic reasons plus discouraged workers as a percent of the civilian labor force plus discouraged workers less ½ of the part-time labor force	10.3	10.7	9.9	9.7	9.7	N.A.	N.A.	N.A.

N.A. = not available.

Table A-8. Persons not in the labor force by selected characteristics, quarterly averages

[In thousands]

Characteristic	Not seasonally adjusted		Seasonally adjusted					
			1976			1977		
	III 1976	III 1977	II	III	IV	I	II	III
Total not in labor force	57,941	58,074	59,032	58,963	59,132	59,379	58,908	59,141
Do not want a job now	53,865	52,625	53,938	54,715	53,991	53,792	53,190	53,429
Want a job now	4,076	5,448	5,426	4,339	5,436	5,663	5,762	5,909
Discouraged workers	799	1,096	903	827	992	929	1,061	1,104
Job-market factors[1]	544	734	617	568	762	644	726	746
Personal factors[2]	254	363	286	259	230	285	335	358
Men	272	385	308	281	341	283	316	381
Women	526	711	595	546	651	647	745	723
White	574	736	694	601	755	665	741	746
Black and other	225	360	204	226	250	280	287	356

[1] Job market factors include "could not find job" and "thinks no job available."

[2] Personal factors include "employers think too young or old," "lacks education or training," and "other personal handicap."

Table B-1. Employees on nonagricultural payrolls, by industry

[In thousands]

Industry	Not seasonally adjusted				Seasonally adjusted					
	Sept. 1976	July 1977	Aug. 1977 p	Sept. 1977 p	Sept. 1976	May 1977	June 1977	July 1977	Aug. 1977 p	Sept. 1977 p
TOTAL	80,277	82,167	82,374	83,095	79,918	81,921	82,121	82,366	82,459	82,750
GOODS-PRODUCING	24,027	24,551	24,771	24,908	23,463	24,306	24,353	24,399	24,289	24,352
MINING	804	848	840	852	798	845	855	834	825	846
CONTRACT CONSTRUCTION	3,815	4,148	4,199	4,160	3,565	3,861	3,876	3,917	3,884	3,888
MANUFACTURING	19,408	19,555	19,732	19,896	19,100	19,600	19,622	19,648	19,580	19,618
Production workers	14,040	14,024	14,187	14,353	13,749	14,145	14,144	14,139	14,059	14,094
DURABLE GOODS	11,278	11,485	11,508	11,668	11,146	11,469	11,491	11,530	11,524	11,566
Production workers	8,092	8,202	8,218	8,375	7,975	8,233	8,240	8,261	8,246	8,284
Ordnance and accessories	156.9	156.3	156.7	155.7	156	157	157	156	156	155
Lumber and wood products	626.9	659.2	664.7	664.0	613	638	637	639	639	650
Furniture and fixtures	499.0	501.1	511.6	514.1	495	509	510	513	505	510
Stone, clay, and glass products	643.7	672.0	672.9	673.5	630	654	659	660	655	660
Primary metal industries	1,220.0	1,211.3	1,204.7	1,213.8	1,216	1,217	1,218	1,209	1,205	1,210
Fabricated metal products	1,421.3	1,444.8	1,462.7	1,483.4	1,404	1,447	1,452	1,458	1,460	1,466
Machinery, except electrical	2,110.4	2,182.0	2,190.0	2,216.0	2,115	2,165	2,168	2,202	2,212	2,220
Electrical equipment	1,866.7	1,931.2	1,946.1	1,971.0	1,848	1,931	1,933	1,941	1,952	1,951
Transportation equipment	1,782.1	1,794.3	1,746.9	1,824.2	1,737	1,802	1,809	1,810	1,803	1,810
Instruments and related products	513.7	525.3	526.1	524.8	512	526	528	527	523	523
Miscellaneous manufacturing	437.6	407.8	425.9	427.8	420	423	420	415	414	411
NONDURABLE GOODS	8,130	8,070	8,224	8,228	7,954	8,131	8,131	8,118	8,056	8,052
Production workers	5,948	5,822	5,969	5,978	5,774	5,912	5,904	5,878	5,813	5,810
Food and kindred products	1,837.1	1,757.2	1,828.0	1,825.8	1,711	1,735	1,737	1,726	1,708	1,700
Tobacco manufactures	84.8	65.8	74.1	74.7	76	71	72	72	68	67
Textile mill products	973.0	972.8	987.3	990.9	971	988	987	992	981	989
Apparel and other textile products	1,298.9	1,248.9	1,288.2	1,294.1	1,281	1,298	1,306	1,293	1,281	1,276
Paper and allied products	684.8	703.8	710.3	706.5	681	703	703	705	704	702
Printing and publishing	1,084.9	1,109.2	1,111.9	1,117.7	1,086	1,109	1,111	1,115	1,115	1,119
Chemicals and allied products	1,040.6	1,069.4	1,070.8	1,063.6	1,035	1,063	1,060	1,064	1,062	1,058
Petroleum and coal products	205.2	215.8	215.0	212.2	202	210	210	210	209	209
Rubber and plastics products, nec.	652.4	675.2	677.2	682.9	643	685	680	684	672	673
Leather and leather products	268.1	251.7	261.1	259.2	268	269	265	257	256	259
SERVICE-PRODUCING	56,250	57,616	57,603	58,187	56,455	57,615	57,768	57,967	58,170	58,398
TRANSPORTATION AND PUBLIC UTILITIES	4,560	4,604	4,610	4,622	4,528	4,586	4,579	4,572	4,583	4,590
WHOLESALE AND RETAIL TRADE	17,870	18,306	18,345	18,459	17,839	18,235	18,247	18,294	18,356	18,427
WHOLESALE TRADE	4,300	4,420	4,428	4,422	4,283	4,384	4,383	4,394	4,397	4,404
RETAIL TRADE	13,570	13,886	13,917	14,037	13,556	13,851	13,864	13,900	13,959	14,023
FINANCE, INSURANCE, AND REAL ESTATE	4,347	4,565	4,579	4,552	4,338	4,480	4,489	4,506	4,520	4,543
SERVICES	14,813	15,541	15,585	15,550	14,798	15,197	15,245	15,372	15,461	15,534
GOVERNMENT	14,660	14,600	14,484	15,004	14,952	15,117	15,208	15,223	15,250	15,304
FEDERAL	2,717	2,773	2,757	2,726	2,728	2,723	2,735	2,721	2,735	2,737
STATE AND LOCAL	11,943	11,827	11,727	12,278	12,224	12,394	12,473	12,502	12,515	12,567

p=preliminary.

Table B-2. Average weekly hours of production or nonsupervisory workers[1] on private nonagricultural payrolls, by industry

Industry	Not seasonally adjusted				Seasonally adjusted					
	Sept. 1976	July 1977	Aug. 1977[p]	Sept. 1977[p]	Sept. 1976	May 1977	June 1977	July 1977	Aug. 1977[p]	Sept. 1977[p]
TOTAL PRIVATE	36.2	36.5	36.4	36.1	36.0	36.3	36.2	36.1	36.0	35.9
MINING	43.8	44.9	44.3	46.0	43.5	44.0	44.0	44.8	44.3	45.7
CONTRACT CONSTRUCTION	36.8	37.8	37.4	37.0	35.9	37.4	36.8	36.8	36.3	36.1
MANUFACTURING	40.1	40.1	40.2	40.4	39.7	40.4	40.5	40.3	40.2	40.0
Overtime hours	3.4	3.3	3.5	3.7	3.0	3.4	3.4	3.4	3.3	3.3
DURABLE GOODS	40.6	40.6	40.8	41.0	40.2	41.1	41.2	41.0	41.0	40.7
Overtime hours	3.4	3.5	3.6	3.9	3.0	3.6	3.7	3.6	3.5	3.5
Ordnance and accessories	40.2	40.0	40.2	40.1	40.1	41.1	40.9	40.4	40.6	40.0
Lumber and wood products	40.2	40.2	40.2	39.7	39.8	40.0	39.9	40.4	39.8	39.3
Furniture and fixtures	38.6	38.5	39.4	39.7	38.0	38.7	38.8	38.9	38.9	39.1
Stone, clay, and glass products	41.4	41.6	41.9	41.1	40.9	41.7	41.7	41.4	41.5	40.7
Primary metal industries	40.8	41.0	40.7	40.7	40.3	41.6	41.6	40.9	41.2	40.2
Fabricated metal products	40.9	40.6	41.0	41.1	40.6	41.0	41.3	41.2	41.0	40.8
Machinery, except electrical	41.0	41.1	41.4	42.1	40.8	41.6	41.9	41.9	41.8	41.9
Electrical equipment	40.0	39.6	40.3	40.6	39.7	40.1	40.4	40.2	40.4	40.3
Transportation equipment	41.5	42.2	41.5	42.2	41.1	42.7	42.9	42.2	42.6	41.8
Instruments and related products	40.2	39.9	40.1	40.6	39.9	40.4	40.7	40.4	40.3	40.3
Miscellaneous manufacturing	38.4	38.3	38.9	39.2	38.2	39.0	39.2	38.7	38.9	39.0
NONDURABLE GOODS	39.4	39.3	39.4	39.5	39.0	39.5	39.6	39.3	39.1	39.0
Overtime hours	3.3	3.1	3.2	3.4	2.9	3.1	3.1	3.0	3.0	3.0
Food and kindred products	40.9	40.1	40.1	39.9	40.2	39.9	40.0	39.7	39.5	39.2
Tobacco manufactures	37.8	36.2	38.3	39.0	37.1	38.6	39.0	37.4	37.8	38.3
Textile mill products	39.4	40.1	40.3	40.4	39.0	40.7	40.5	40.4	40.0	40.0
Apparel and other textile products	35.2	35.4	35.6	35.4	34.9	35.7	35.9	35.3	35.2	35.1
Paper and allied products	42.6	42.7	42.6	43.0	42.2	43.0	43.1	42.7	42.3	42.6
Printing and publishing	37.8	37.7	37.8	38.1	37.4	37.6	37.7	37.8	37.6	37.7
Chemicals and allied products	42.0	41.6	41.6	41.7	41.9	41.7	41.9	41.7	41.8	41.6
Petroleum and coal products	42.8	43.3	42.5	43.0	42.2	42.6	43.0	42.9	42.8	42.4
Rubber and plastics products, nec	40.9	40.2	40.6	40.9	40.5	41.3	41.1	40.6	40.5	40.5
Leather and leather products	36.3	37.2	37.4	37.1	36.5	37.1	37.2	36.8	37.2	37.3
TRANSPORTATION AND PUBLIC UTILITIES	40.1	40.3	40.2	40.0	39.9	40.2	40.1	39.9	39.8	39.8
WHOLESALE AND RETAIL TRADE	33.6	34.1	34.0	33.2	33.6	33.4	33.3	33.3	33.2	33.2
WHOLESALE TRADE	38.9	39.0	39.0	38.8	38.8	38.7	38.8	38.8	38.9	38.7
RETAIL TRADE	32.1	32.7	32.6	31.6	32.1	31.9	31.7	31.7	31.6	31.6
FINANCE, INSURANCE, AND REAL ESTATE	36.6	36.7	36.7	36.6	36.7	36.7	36.6	36.6	36.6	36.7
SERVICES	33.5	33.8	33.7	33.3	33.5	33.5	33.3	33.2	33.2	33.3

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

[p] preliminary.

Table B-3. Average hourly and weekly earnings of production or nonsupervisory workers[1] on private nonagricultural payrolls, by industry

Industry	Average hourly earnings				Average weekly earnings			
	Sept. 1976	July 1977	Aug. 1977[p]	Sept. 1977[p]	Sept. 1976	July 1977	Aug. 1977[p]	Sept. 1977[p]
TOTAL PRIVATE	$4.96	$5.25	$5.26	$5.34	$179.55	$191.63	$191.46	$192.77
Seasonally adjusted	4.92	5.27	5.28	5.29	177.12	190.25	190.08	189.91
MINING	6.60	6.90	6.87	7.04	289.08	309.81	304.34	323.84
CONTRACT CONSTRUCTION	7.81	8.00	8.05	8.19	287.41	302.40	301.07	303.03
MANUFACTURING	5.31	5.65	5.65	5.73	212.93	226.57	227.13	231.49
DURABLE GOODS	5.66	6.03	6.02	6.11	229.30	244.82	245.62	250.51
Ordnance and accessories	5.85	6.24	6.33	6.36	235.17	249.60	254.47	255.04
Lumber and wood products	4.87	5.07	5.13	5.18	195.77	203.81	206.23	205.65
Furniture and fixtures	4.05	4.29	4.35	4.40	156.33	165.17	171.39	174.68
Stone, clay, and glass products	5.43	5.83	5.83	5.85	224.90	242.53	244.28	240.44
Primary metal industries	6.95	7.52	7.55	7.62	283.56	308.32	307.29	310.13
Fabricated metal products	5.54	5.84	5.86	5.93	226.59	237.10	240.26	243.72
Machinery, except electrical	5.86	6.17	6.18	6.28	240.26	253.59	255.85	264.39
Electrical equipment	5.02	5.34	5.39	5.42	200.80	211.46	217.22	220.05
Transportation equipment	6.67	7.15	7.11	7.28	276.81	301.73	295.07	307.22
Instruments and related products	4.93	5.20	5.21	5.27	198.19	207.48	208.92	213.96
Miscellaneous manufacturing	4.02	4.33	4.32	4.36	154.37	165.84	168.05	170.91
NONDURABLE GOODS	4.80	5.10	5.12	5.18	189.12	200.43	201.73	204.61
Food and kindred products	5.02	5.32	5.37	5.43	205.32	213.33	215.34	216.66
Tobacco manufactures	4.65	5.68	5.43	5.26	175.77	205.62	207.97	205.14
Textile mill products	3.78	4.02	4.05	4.07	148.93	161.20	163.22	164.43
Apparel and other textile products	3.49	3.59	3.62	3.69	122.85	127.09	128.87	130.63
Paper and allied products	5.58	5.97	6.00	6.05	237.71	254.92	255.60	260.15
Printing and publishing	5.79	6.09	6.14	6.20	218.86	229.59	232.09	236.22
Chemicals and allied products	6.04	6.44	6.45	6.55	253.68	267.90	268.32	273.14
Petroleum and coal products	7.22	7.78	7.74	7.80	309.02	336.87	328.95	335.40
Rubber and plastics products, nec	4.85	5.12	5.14	5.21	198.37	205.82	208.68	213.09
Leather and leather products	3.48	3.60	3.63	3.67	126.32	133.92	135.76	136.16
TRANSPORTATION AND PUBLIC UTILITIES	6.61	6.97	6.99	7.07	265.06	280.89	281.00	282.80
WHOLESALE AND RETAIL TRADE	4.04	4.28	4.27	4.33	135.74	145.95	145.18	143.76
WHOLESALE TRADE	5.26	5.56	5.56	5.63	204.66	216.84	216.84	218.44
RETAIL TRADE	3.61	3.84	3.82	3.87	115.88	125.57	124.53	122.29
FINANCE, INSURANCE, AND REAL ESTATE	4.39	4.59	4.60	4.62	160.67	168.45	168.82	169.09
SERVICES	4.42	4.68	4.68	4.77	148.07	158.18	157.72	158.84

[1] See footnote 1, table B-2.
[p] preliminary.

Table B-4. Hourly earnings index for production or nonsupervisory workers[1] on private nonagricultural payrolls, by industry division, seasonally adjusted

[1967=100]

Industry	Sept. 1976	Apr. 1977	May 1977	June 1977	July 1977	Aug.p 1977	Sept.p 1977	Percent change from: Sept. 1976–Sept. 1977	Percent change from: Aug. 1977–Sept. 1977
TOTAL PRIVATE NONFARM:									
Current dollars	187.5	195.3	196.5	197.5	199.3	199.9	200.6	7.0	0.4
Constant (1967) dollars	108.7	108.6	108.6	108.6	109.3	109.1	N.A.	(2)	(3)
MINING	203.8	212.1	213.1	215.4	216.9	217.5	218.4	7.2	.4
CONTRACT CONSTRUCTION	186.4	192.6	193.1	195.1	196.3	195.7	195.4	4.8	-.1
MANUFACTURING	188.1	195.4	196.8	198.5	200.5	201.0	202.2	7.5	.6
TRANSPORTATION AND PUBLIC UTILITIES	201.6	208.6	210.1	210.5	211.2	212.9	214.5	6.4	.8
WHOLESALE AND RETAIL TRADE	180.8	189.8	190.7	191.1	193.0	193.0	194.2	7.4	.6
FINANCE, INSURANCE, AND REAL ESTATE	172.0	177.4	179.0	177.2	180.3	181.3	181.0	5.2	-.2
SERVICES	190.0	199.7	200.7	201.8	203.3	205.0	204.7	7.7	-.2

[1] See footnote 1, table B-2.

[2] Percent change was 0.4 from August 1976 to August 1977, the latest month available.

[3] Percent change was - 0.2 from July 1977 to August 1977, the latest month available.

N.A. = not available.

p=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[1] on private nonagricultural payrolls, by industry, seasonally adjusted

[1967 = 100]

Industry division and group	1976				1977								
	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.p	Sept.p
TOTAL	112.2	112.2	112.8	113.3	112.3	114.2	115.2	115.6	116.1	115.8	115.7	115.4	115.8
GOODS-PRODUCING	95.9	96.0	97.2	96.9	95.2	98.3	100.0	100.9	101.7	101.8	101.4	100.3	100.2
MINING	131.7	131.1	132.6	134.0	130.7	134.6	141.5	142.2	140.2	141.8	139.9	136.5	144.0
CONTRACT CONSTRUCTION	99.4	104.2	105.7	104.3	96.4	105.9	108.1	112.0	112.7	111.3	112.7	109.7	109.1
MANUFACTURING	94.0	93.2	94.5	94.4	93.8	95.7	97.1	97.5	98.5	98.8	98.1	97.4	97.2
DURABLE GOODS	93.2	92.0	93.8	93.6	93.2	94.8	96.8	96.8	98.1	98.7	98.4	98.2	97.9
Ordnance and accessories	38.6	38.5	38.5	39.5	39.0	39.1	38.5	40.8	41.3	41.1	40.0	40.8	39.1
Lumber and wood products	98.2	99.4	100.8	101.9	101.1	103.0	103.4	104.1	104.1	103.8	105.3	103.9	104.3
Furniture and fixtures	102.4	102.2	102.8	103.5	98.5	102.7	105.3	106.0	107.4	107.7	108.2	106.4	108.2
Stone, clay, and glass products	98.9	99.7	100.2	99.1	96.1	97.1	101.5	104.1	104.7	105.7	105.1	104.4	103.1
Primary metal industries	88.8	86.2	85.7	85.0	84.8	85.5	88.5	90.0	91.1	91.1	89.7	88.5	87.4
Fabricated metal products	98.6	96.5	98.1	98.1	97.6	100.0	101.6	101.0	103.1	104.2	103.6	103.5	103.7
Machinery, except electrical	95.9	94.0	96.7	96.0	95.7	97.7	98.6	98.3	100.5	101.2	103.3	103.1	103.6
Electrical equipment and supplies	91.5	92.1	93.4	93.1	91.7	95.5	95.9	96.1	97.3	97.9	97.4	98.8	98.4
Transportation equipment	89.1	86.1	91.5	90.6	93.3	91.3	96.7	94.8	96.2	96.9	95.2	96.0	94.8
Instruments and related products	107.2	107.9	108.5	110.4	108.9	112.4	111.6	111.1	112.3	113.2	112.3	111.0	111.0
Miscellaneous manufacturing, Ind.	92.2	92.0	92.1	91.6	93.1	96.8	96.0	95.1	95.0	94.3	91.4	91.6	91.2
NONDURABLE GOODS	95.2	95.0	95.4	95.5	94.7	97.1	97.6	98.5	98.9	98.9	97.8	96.3	96.1
Food and kindred products	96.4	96.2	96.6	95.5	95.1	97.5	97.9	98.8	97.2	97.5	95.9	93.7	92.4
Tobacco manufactures	82.1	83.0	81.6	81.6	76.1	83.0	75.5	80.7	77.2	79.4	74.9	73.0	71.3
Textile mill products	95.2	95.0	95.6	96.1	95.4	97.9	99.5	99.7	101.1	100.2	100.5	98.3	99.3
Apparel and other textile products	86.2	85.7	86.1	86.3	84.1	88.0	87.9	87.3	89.4	90.4	87.6	86.4	85.9
Paper and allied products	96.5	95.7	97.0	97.2	96.2	98.0	98.3	100.8	101.0	101.3	100.3	99.4	99.9
Printing and publishing	93.1	93.4	93.6	93.7	93.0	94.8	94.3	94.9	95.4	95.3	95.6	94.7	95.1
Chemicals and allied products	100.3	99.4	100.0	100.0	100.4	101.8	102.2	103.5	103.7	103.7	103.7	103.4	102.2
Petroleum and coal products	112.2	112.5	113.1	114.7	115.0	114.7	118.7	120.5	120.2	121.3	120.2	120.6	119.6
Rubber and plastics products, nec	124.3	125.6	125.7	127.6	127.7	129.6	131.7	134.7	135.8	133.9	132.7	129.2	129.7
Leather and leather products	72.1	71.0	70.4	70.5	69.1	71.9	71.9	73.9	73.9	72.9	70.2	70.3	71.4
SERVICE-PRODUCING	123.6	123.5	123.5	124.6	124.1	125.3	125.8	125.8	126.6	125.4	125.7	125.9	126.6
TRANSPORTATION AND PUBLIC UTILITIES	102.9	102.0	103.2	105.0	102.7	104.4	104.2	103.9	104.4	104.0	103.1	103.1	103.2
WHOLESALE AND RETAIL TRADE	119.7	119.3	118.9	120.0	119.1	120.7	121.5	121.7	121.7	121.1	121.4	121.4	121.8
WHOLESALE TRADE	114.9	114.8	114.8	114.8	115.4	117.0	116.9	117.8	117.3	117.3	117.3	117.6	117.3
RETAIL TRADE	121.6	121.0	120.4	122.0	120.4	122.1	123.2	123.1	123.3	122.5	122.9	122.9	123.4
FINANCE, INSURANCE, AND REAL ESTATE	127.7	128.3	129.1	129.8	130.6	130.2	131.1	131.0	131.6	131.5	132.2	132.3	133.4
SERVICES	137.2	137.6	137.7	138.4	138.8	139.7	140.0	140.1	140.2	139.5	140.0	140.7	142.0

[1] See footnote 1, table B-2.

p=preliminary.

Table B-6. Indexes of diffusion: Percent of industries in which employment[1] increased

Year and month	Over 1-month span	Over 3-month span	Over 6-month span	Over 12-month span
1974				
January	58.7	61.6	64.8	63.1
February	55.8	55.2	56.4	59.6
March	48.0	54.7	54.7	54.9
April	54.7	52.3	51.5	50.0
May	54.7	57.0	50.3	40.1
June	54.4	50.9	44.5	28.2
July	49.1	44.2	35.8	26.7
August	42.2	36.0	32.0	22.1
September	32.6	35.5	21.8	20.6
October	35.5	26.2	15.7	18.6
November	19.8	21.8	16.0	16.6
December	19.8	12.8	13.7	14.0
1975				
January	16.9	12.5	13.7	16.3
February	16.9	14.0	12.8	17.4
March	27.3	22.7	18.9	17.2
April	44.2	34.6	29.1	20.3
May	51.2	43.6	40.7	25.6
June	39.8	47.7	59.0	40.1
July	57.3	55.5	63.4	50.3
August	72.4	75.0	66.6	61.9
September	81.4	78.8	72.4	71.5
October	64.0	70.6	78.8	75.9
November	59.6	69.2	79.4	79.1
December	69.2	75.0	77.6	81.4
1976				
January	76.7	82.0	82.8	84.6
February	74.4	84.3	83.1	82.8
March	77.9	84.9	77.0	79.4
April	77.9	81.1	77.0	73.5
May	63.4	70.6	71.5	79.7
June	47.1	57.0	70.9	79.4
July	52.9	47.4	55.2	75.3
August	49.1	65.1	55.2	74.1
September	68.9	54.9	61.9	78.2
October	39.0	59.9	70.1	76.5
November	64.2	53.8	69.8	75.0
December	68.3	75.9	76.7	74.7
1977				
January	71.5	76.7	88.4	75.9
February	61.6	84.6	86.6	74.4p
March	79.7	86.0	83.7	75.6p
April	79.1	83.7	79.4	
May	68.9	71.5	74.7p	
June	57.8	61.6	69.2p	
July	62.5	49.7p		
August	44.5p	61.0p		
September	63.7p			
October				
November				
December				

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

Senator PROXMIRE. All right, sir. Thank you, very much.

Let me follow up on the line of questioning that we were engaging in just before you completed your report.

The startling figure here is this: You say that one of the best ratios we have had overall for the number of people in our population that are working. It is very high for whites.

Mr. SHISKIN. An alltime high.

Senator PROXMIRE. And lower for blacks.

Now, it doesn't seem to me to be logical for those statistics to be working in opposite directions.

Mr. SHISKIN. But they are.

Senator PROXMIRE. The explanations that you gave me in your letter were three, as I recall. They were that so many blacks live in the inner city where employment opportunities have been diminishing. Also, blue-collar jobs, which blacks hold in greater proportion than the white-collar jobs, and white-colla jobs are increasing and blue-collar jobs are not.

It is surprising to me that you have, with more women being employed, such a massive increase in women who are also less skilled, by and large, and have less experience than the men have, why here should at the same time be coinciding with this sad and serious situation for blacks.

Mr. SHISKIN. Well, a great many of the blacks live in the wrong place, in the central cities, in terms of getting jobs.

Senator PROXMIRE. Why would that make it worse now than before, because the blacks have lived in the central cities now for a number of years, they have been in blue-collar work for a number of years, and have had lesser skills for a long time.

Why should that be aggravated now?

Mr. SHISKIN. Because the situation in the central cities is deteriorating, getting worse.

Senator PROXMIRE. In the past recoveries, hasn't there been a tendency for both races to enjoy the advances?

Certainly, since World War II, there have been tremendous increases for blacks.

Mr. SHISKIN. The recovery for marginal workers is always slower and comes later than that for the prime workers. But that pattern has been exaggerated in this recovery.

Now, starting about 3 or 4 months ago, the Bureau of Labor Statistics put out statistics on central cities. We hadn't done much on that up to that point. We put out a lot of data on that now, and Tuesday we issued a release showing data for 30 standard metropolitan statistical areas, where we show data for the central cities and the outer rings.

The situation in the inner cities is deplorable. The employment-population ratios are very low. The unemployment rates are very high, and that is particularly true of the Northeast cities.

Senator PROXMIRE. Another member of the committee, Congressman Reuss, has made an interesting proposal, one that I have considerable question about, but he proposed to move people who are unemployed to places where there is a need for employment, and do it on a massive basis.

As an economist, how do you think that might meet this problem?

Mr. SHISKIN. Well, I think it would help, but I think there are other kinds of factors involved.

For example, I attended a meeting at the Brookings Institute about a month ago at which this question came up, and Professor Gordon, the junior professor Gordon, commented on the fact that in Evanston, Ill., where he teaches and lives, there are a great many job vacancies.

You walk down any commercial street, he says, and you can find all kinds of job opportunities. There are signs in the windows of stores.

On the other hand, in central Chicago, there is a large number and large percentage of the black youngsters who are unemployed.

He also pointed out that there is a high-speed train system between Chicago and Evanston, and he asked why don't they take it to get jobs in Evanston.

Senator PROXMIRE. There is also a substantial black population in Evanston.

Mr. SHISKIN. Why don't they take the jobs?

We did a study which I commented on in this particular committee several years ago. We made a study of why black tennage girls don't get jobs, why their numbers were so high. We didn't do much original work. We assembled previous work on that question. One of the big problems is that a lot of the jobs are stereotyped jobs.

The young black girls said they don't want to be waitresses, or housemaids; that is, they don't want to do what their sisters and mothers did because they are dead-end jobs, as far as they are concerned.

I think that is part of the picture, too. The kinds of jobs that are available are not the kind of jobs that the unemployed blacks are willing to take.

Senator PROXMIRE. Is it possible that affirmative action efforts are leveling off?

Mr. SHISKIN. I don't think so. Affirmative action? I don't think so.

I have been talking periodically with Ray Marshall, the Secretary of Labor, and Ernie Green, who is Assistant Secretary in charge of the Employment and Training Administration, and you can be assured that they are making a very vigorous effort to put these black youngsters to work.

I commented here, and this looks a little hopeful, that we have had an increase from May in State and local government employment of 175,000.

I also looked at the figure just before I came here since March, and there is an increase of 261,000. From March, the number of public service employment jobs that have been funded has been 217,000.

So, it looks as if that public service employment program is beginning to hit.

Senator PROXMIRE. If the trend of layoffs in the electronics industry, the steel industry, and the television industry continue, what effect are they likely to have in the overall unemployment rate?

I mentioned the steel situation in Youngstown to begin with. That is the most spectacular, but that is not atypical. We are getting layoffs in other areas.

Do you think this may have an effect on the recovery?

Mr. SHISKIN. Yes; I do. Manufacturing is a very important sector. It has a very high multiplier, and we count on improvement in manufacturing.

I marvel at how this economy has been able to create jobs even though manufacturing has been sluggish recently. I am concerned about the sluggishness of manufacturing.

Senator PROXMIRE. How much influence have the recent layoffs in the steel industry had on the national unemployment rate?

Mr. SHISKIN. They haven't been large enough to have much effect. Here and there, you have been having layoffs——

Senator PROXMIRE. Of course, one of the troublesome things about those layoffs is that we have them at the same time we have had a recovery in construction, which provides a demand for steel. In addition, auto sales have been very strong, and yet the steel industry is in the doldrums.

What is it going to do if we have a more normal or a more average year in automobile production and construction? Doesn't that suggest that the situation might become worse?

Mr. SHISKIN. It could be more difficult. I also attended another discussion recently with an economist group, and it was pointed out there that the steel industry——

Senator PROXMIRE. What was that?

Mr. SHISKIN. I attended a meeting of business economists recently, and the steel expert pointed out that the steel industry is operating at very high levels, and he expects higher levels for the next year and the year following.

One statement he made, and I am quoting somebody else, is that the steel industry could not produce all the steel today required by American industry.

Senator PROXMIRE. I don't know what he has been reading or where he has been operating, but the Business Week statistics have indicated that steel has not been keeping pace with the rest of industry.

The actual production of steel has not been increasing with the other manufacturing elements in our society for the last 1½ or 2 years. Isn't that right?

Mr. SHISKIN. I really have said as much as I should on the steel industry. I don't know much about it.

Senator PROXMIRE. Let me ask one more question before I yield to Mr. Rousselot.

The House of Representatives and the Senate both recently passed legislation that would raise the wholesale price of natural gas.

Can you give the committee an estimate of the impact that natural gas price increases will have on the Wholesale Price Index?

The House bill, the Carter billl, and the Senate bill?

Mr. SHISKIN. I am not sure we can go into anything this morning, but we can try later.

Let me ask John Early if he could comment.

Senator PROXMIRE. Fine.

Mr. EARLY. The economic mechanisms of the House bill, the administration bill, and the bill in the Senate are really rather complex.

Obviously, any of the three will have the effect of increasing the price of natural gas.

One of the things that is in dispute is the degree to which increased prices for new gas will increase further exploration and development.

To the extent they do we will have a somewhat greater increase in the price of natural gas, because there will be a greater and greater proportion of new gas flowing.

Senator PROXMIRE. Let me pause a moment on that to point out that as late as 1965 or so, the price of natural gas was around 15 or 16 cents a cubic foot.

It is now $1.43 a cubic foot.

Mr. EARLY. For new gas only it is $146.

Senator PROXMIRE. It has increased about ninefold. There has been no significant increase in discovery, and very little increase in production.

So, the effect on production hasn't been significant with that kind of mammoth proportion of increase, and therefore how would you expect that a further increase would have a beneficial effect?

Mr. EARLY. I am offering no statement on that one way or the other.

Obviously, the bill passed by the Senate would have a greater impact than that proposed by the administration, for a number of different reasons. But, beyond that——

Senator PROXMIRE. Can you tell us this: Can you tell us the proportion of the Consumer Price Index that would be affected by an increase in natural gas, 1 percent, 1½ percent, and 2 percent? How much——

Mr. EARLY. We will have to check that for you. This would be the direct effect you are talking about?

Senator PROXMIRE. Yes.

Mr. EARLY. All right. Natural gas has a relative importance in the CPI of 1.546 percent.

Senator PROXMIRE. Congressman Rousselot.

Representative ROUSSELOT. Thank you, Mr. Chairman.

Mr. Shiskin, according to your release, the seasonally adjusted employment has risen by 3.3 million in the past year, and the employment population ratio has risen from 56.1 to 57.3 percent since September of 1976.

Can these large advances in employment be sustained for a while more—I know you have expressed some amazement it has—or are we likely to see it reach a plateau?

Mr. SHISKIN. Well, as I said, the performance of the economy in creating jobs has really been fantastic. I don't see an early end to the expansion, so I expect the job creation to continue.

Representative ROUSSELOT. You see nothing to lead you to believe that it is apt to level off?

Mr. SHISKIN. Well, "nothing" is a strong word. If you listen to the people who are concerned about the rapid rises in unit labor costs, and there are other troublesome signs here and there, you will be concerned. So I won't say there is nothing. But overall, I see no early end to the expansion, and therefore I would expect employment to keep increasing.

Representative ROUSSELOT. Now, my understanding, according to these figures, is that the civilian labor force, seasonally adjusted, has risen by 2.7 million since September of 1976.

This is a fairly heavy increase. Has most of the slack been taken up, or do you see a continued rapid rise there?

Mr. SHISKIN. A large part of the increase in the labor force has come from increased female participation. I don't think we are at the end of that. I think we are going to see more of it.

Representative ROUSSELOT. That is going to continue to expand?

Mr. SHISKIN. Yes; I think there are numerous factors involved. One is, obviously, the interest on the part of women in entering careers and participating in the economy, and that is a change in lifestyle. I don't think that has come to an end.

I think, also, there is something to what people keep saying, that young couples find it desirable to have two incomes, and they are willing to forgo a lot of leisure and put up with a lot of extra problems in order to have that.

So, my answer to you is that I don't see an end to that trend.

Representative ROUSSELOT. So, it is your judgment that one reason why the labor force rises more rapidly than it has in the past is the entry of female workers, primarily?

Mr. SHISKIN. Yes.

Representative ROUSSELOT. That is the prime expansion area?

Mr. SHISKIN. Yes.

Representative ROUSSELOT. Plus the fact that for more married couples, the woman is going to work or is continuing to work.

Mr. SHISKIN. We have also had rapid rises in the increases in numbers of teenagers, but we expect that trend to level off because of the decline in the birth rate in the 1960's.

Representative ROUSSELOT. So, you do see teenage unemployment leveling off a little more?

Mr. SHISKIN. Yes; I do.

Representative ROUSSELOT. I realize this is a policy decision, and there is a tremendous amount of appeal for Congress to find ways of putting teenagers to work, especially in work programs and that kind of thing.

Should we make, or continue to make, teenagers—we still have many programs we are working on—a major Federal target program, or do you think the necessity for that is declining?

Mr. SHISKIN. I think that is a policy question that I have tried to stay away from.

I would be willing to say this, though, that Secretary Marshall is targeting the teenage population for jobs, and I think he is on the right track.

In our conversations, I have supported that view.

Senator PROXMIRE. I guess what I am asking you is: Do we need to accelerate our interest—and we are always interested—because it is leveling off?

Mr. SHISKIN. Let me go on and make another kind of point, and then I will try to answer your question.

When we reach the early 1980's, the teenage population for whites will actually be declining. So insofar as white teenagers are a serious problem, that problem will be abated.

But, you know, the population of blacks has grown much more rapidly than that for whites, and the number of black teenagers looking for jobs will not go down.

So, there will continue to be a problem, even at that time.

Representative ROUSSELOT. Maybe we ought to target more to blacks and minorities in the teenage area?

Mr. SHISKIN. I point out the situation, and policymakers can decide what to do, but I can assure you that Secretary Marshall and Assistant Secretary Green are very familiar with these data.

I keep them abreast of all these reports, and they are on top of the situation.

Representative ROUSSELOT. Now, I know that the unemployment rate for blacks fell from 14.5 to 13.1, according to the Labor Department statement, and that most of the drop in the total unemployment was due to the calling of black workers back from layoffs.

Does that mean, then, that many blacks merely got their own jobs back and the new job opportunities for blacks are still lacking?

Mr. SHISKIN. My interpretation of those figures is that the figures for August were not accurate.

Representative ROUSSELOT. You mean as it relates to black unemployment?

Mr. SHISKIN. Yes. We think there was a slipup in those figures, so that they probably did not reflect the real activities.

So, I won't try to explain the August-September move. If you look back at earlier trends, July and June, that would give you a more accurate picture.

But let me say again what I have been saying earlier, which is that if you look at the period for the last 2 or 2½ years of the recovery, the recovery has been very heavily concentrated among whites.

Whites are doing, in many ways, very well.

As I pointed out a little while ago, the employment-population ratio, the percentage of whites employed in terms of the population, in contrast to blacks, is very high. The population ratio for blacks is very low.

It is close to an alltime low, insofar as our records go.

The blacks and whites are on two very different tracks.

Representative ROUSSELOT. You mentioned that you were satisfied that Secretary Marshall was very conversant with this problem.

Mr. SHISKIN. Yes, sir, I am sure that he is.

Representative ROUSSELOT. And that he is in fact addressing several ways to try to attack it.

Since the black unemployment clearly appears to be the most serious problem of our unemployment course, so to speak, do you have any suggestions as to ways that we could be more effective, or of programs that have been effective in reaching them?

Mr. SHISKIN. Congressman, first of all, we try to stay out of making policy recommendations.

Representative ROUSSELOT. Yes, but you clearly would be familiar with the trends—go ahead.

Mr. SHISKIN. Let me explain the reason for that.

If the BLS, the Commissioner, particularly, were to make policy recommendations or support particular policies, then when BLS figures were put out which appeared to support those policies, people might very well question those figures.

They might wonder whether the figures are somehow interpreted or adjusted to support policy positions.

So, for that reason, we are very scrupulous about staying out of policy recommendations in public discussions.

Now, I can only tell you that I sit in on conferences with Secretary Marshall and talk to Assistant Secretary Green, and I applaud their efforts.

Representative ROUSSELOT. Mr. Chairman, my time is up.

Senator PROXMIRE. Go ahead.

Representative ROUSSELOT. No, go ahead.

Senator PROXMIRE. Mr. Shiskin, looking at table A–7 and comparing the third quarter to the second quarter, and sometimes I think it is better to compare quarters because the change in the month is too transitory, brief, and erratic. But comparing the third quarter, that is, July, August, and September, with the preceding 3 months, the unemployment situation has remained absolutely flat, and it really makes no difference what measure you use. Would you agree with that assessment?

Mr. SHISKIN. Yes.

Senator PROXMIRE. What do you think we have to do to make some real progress here or can we make progress?

Are we in a situation here where we just have so many people pouring into the labor force that no matter what we do we are going to stay at a level close to 7 percent unemployment?

Mr. SHISKIN. You are getting very close to policy issues, and, again, I am being a little cautious, but the problems are in the black population.

It is fairly evident. We have to make efforts to put them to work, and I think those efforts are underway. We are running just to stand still here, because the black population is growing rapidly, too.

Senator PROXMIRE. Let me give you an excerpt from a fascinating article in the latest Business Week. They say that the Conference Board's index of help wanted advertising rose to 122 in August and 121 in July.

That, compared to a recession low of 74 in the spring of 1974, is now close to the peak of July 1973 when it reached its alltime peak.

They say that while hundreds of thousands of jobs go begging and labor shortages threaten to cause inflationary bottlenecks in certain areas, the national unemployment rate stays stuck in the 7-percent range reached last April.

Economist Goldstein says, "We are getting back to where we were in labor market demand in 1973 when unemployment was below 5 percent.

Now, we have that demand. There are jobs out there and there are also a lot of people looking for work. The labor force has grown faster than the economy.

Herb Stein had a recent, almost tongue-in-cheek, article in the Wall Street Journal that said we ought to recognize the 7-percent figure as full employment. That was shocking to many of us to read, but at the same time he is suggesting that some of these labor market figures might indicate that is the case.

If we are in a situation where the bottlenecks are so clear at 7 percent unemployment, and if we expand the economy and get it down to 6 percent, would we have a very powerful inflationary push even at that relatively high level of unemployment compared to what it has been in the past——

Mr. SHISKIN. Well, I read that article over carefully, and there is a paragraph in there that somehow got overlooked by many people that raises a different kind of question, one I discussed here earlier.

The question that is being raised in many quarters these days is this, and I think it was raised implicitly and explicitly in that paragraph.

That question is: Is the unemployment rate today comparable with the unemployment rate 20 years ago?

Senator PROXMIRE. Right.

Mr. SHISKIN. That is the question.

There are numerous articles that have been written on this. One was written recently by Phil Cagan and it appeared in a new book put out by the American Enterprise Institute. The Hudson Institute, which is a reputable research organization as well, also put out a report on this subject, and there are a lot of estimates around about this from other sources.

Let me cite as I did in an earlier session here what the elements of noncomparability are.

First, there has been a big change in the compositional mix, with more women and teenagers in the labor market than there were in 1956.

Second, many people believe that the unemployment compensation program with its increased benefits is providing unemployed workers with more "elbow room," that is, more time to find suitable jobs.

They are more selective now, so they can wait longer to get a job.

Third, the fact that there are many more multiearner families also provides persons who lose their jobs with more time to find a suitable job.

There is also the argument that was advanced by the two professors from Florida, Clarkson and Meiners, in which they say the requirement that AFDC and food stamp recipients register with the employment security offices has raised the unemployment rate.

There is probably something to these points. The argument is that all these factors together have resulted in an unemployment rate that is higher than we would have under otherwise comparable conditions 20 years ago.

What do we have on the other side of that?

First, public service jobs. I don't know how that all comes out. We haven't been able to make a quantitative estimate of the net effect. It is too early for us to report any judgments on this work. But I think that is the argument that is being made.

I think what Mr. Stein was arguing was not that 7 percent is full employment in this sense, but that the unemployment rate for 1956—the unemployment rate today rather, that is comparable to 1956—is not 7 percent, but something substantially lower.

Senator PROXMIRE. Let me suggest some things we might think about here, because I think that we do have a situation that seems very puzzling, but we can take some action to solve it.

Let me suggest what we can do.

In the first place, the article says that in Connecticut and California, the U.S. Employment Service states that employers are desperate for tool and diemakers, nurses, engineers, experienced miners, and a host of other occupations requiring technical backgrounds, and so forth.

Similar vacancies are found in low-wage categories, such as cooks, security guards, and sales clerks.

The dilemma is summed up in the St. Louis division. There, job lisitings are running ahead of a year ago. It is 43 percent in this case but placements run well below vacancies. Two comments are nost commonly regarded for unfilled applications.

Either the applicant does not meet employer specification or he has above-average qualifications and refuses the job because of low pay.

I don't want to curl John Rousselot's hair.

Representative ROUSSELOT. Go ahead and try.

Senator PROXMIRE. I say maybe the answer to providing more jobs or more people in jobs is to pass the minimum wage.

I don't blame people for not wanting to work at a low wage, dead-end job, and it is true that welfare payments are reasonable enough so that people can exist, but if we had a minimum wage that was more substantial than it is, and people therefore were paid more for being a cook or a dishwasher or a menial job, more of them would be willing to take it.

Furthermore, if we emphasize technical training and provide vocational training, then people would have more skills.

In our State, Wisconsin, unemployment is below 5 percent, and it has been steadily below the national average even though we are in a part of the country where unemployment is pretty high, because we strongly stress technical and vocational education.

Without getting into policy areas, isn't it true, as a matter of fact, that if the wage is higher, people are more likely to take a job that has been considered menial in the past, and if you had people skilled, or given an oportunity to get the skill, that they would get the work?

Mr. SHISKIN. It sounds reasonable. I think we have a structural unemployment problem. We don't have the balanced mix of job vacancies on the one hand and unemployment on the other.

You know what you need to answer that question accurately, Senator Proxmire? A job vacancy survey.

Senator PROXMIRE. Well, we sure need that. We all hear that if you raise the minimum wage you are going to increase unemployment because the jobs are going to disappear and you are not going to get the jobs for the kids and so forth.

But, I think you put your finger on the point earlier, when you said that your study, your careful scientific study of black teenaged females indicated that in many cases they just didn't want a dead-end job that paid very little.

They are human beings. I don't blame them. Most of us would feel the same way.

My time is up.

Mr. SHISKIN. Senator, may I add a comment?

Senator PROXMIRE. Yes.

Mr. SHISKIN. There is money in our budget this year for a job vacancy survey. In fact, there was more money than we were able to use.

There was a question of whether we would get any money for it until after the conference committee, and then we got $1 million, and we haven't been able to use all that.

But I want you to know that we are talking with the Conference Board about their index. We have asked them to do some more research on that index, and we have offered to put up the money on a contract basis through these funds we just got.

One of the things we asked them to do was to see if they could get some occupational information which is associated with the job vacancies in the newspapers.

One of the theories is that most of the help-wanted ads are for highly skilled technicians, of which there is a shortage in supply.

So, in a sense, that index is not a good index of overall demand for labor, but we are working on that.

It does seem today in the light of all this discussion and our research that this is a structural unemployment problem.

Senator PROXMIRE. My time is up.

Representative ROUSSELOT. To follow up on what the Senator was inquiring about, and what you have now stated you have requested in the way of funding to look at this, what would the job vacancy survey entail?

Could you describe for us what are the elements that you would be looking for?

What would you want to find out about it?

Mr. SHISKIN. Well, there are two different purposes for getting the job vacancy data. One purpose is to place people in jobs. If you have appropriate, comprehensive lists of job vacancies, when people came to the employment security offices and to private concerns that find jobs for people, they could go to this listing and find suitable jobs.

But the other purpose——

Representative ROUSSELOT. Where would that information be available, in the State employment office?

Mr. SHISKIN. There are job banks being set up in these offices.

The trouble is that the employment security office today, as we understand it, doesn't get requests from employers for skilled employees.

They usually get requests for relatively unskilled jobs, which people don't seem to want because of the wages or because they are stereotyped.

But the main purpose of the kind of survey we would take, and it would be a sample survey, would be to make a judgment on the reason that unemployment is so high, on whether it is due to a shortage of aggregate demand, that is, by stimulating the economy we could get the people into jobs, or if we have a structural problem.

In order to answer that question, you have to have two kinds of information.

You have to have job vacancy data for occupations, and you have to have detailed unemployment data by occupation.

These data also have to be set up by fairly small geographical regions in the country——

Representative ROUSSELOT. Were you thinking of regional areas?

Mr. SHISKIN. Well, what we are going to use some of the money for is to study this problem to see if a survey of the kind I am talking about will pay off, and over the next year that is what we will be doing.

The kind of survey I am talking about, even the sample survey, which requires occupational data by regions and comparable unemployment data by occupation and region, would be very expensive.

We have to be able to report reliable regional occupational data. When I say very expensive, it may not be in your terms.

For example, whenever I talk to Congressmen who are concerned with the allocation of $16 billion a year as is now being done on the basis of our unemployment rates, they don't think $50 million to collect good data is that much money.

But if you look at our budget, which is about $85 million for this year, $50 million is an awful lot.

Many of the budget people, people who review our budgets, are always looking at our budget and considering how much it should be increased. When they see something like an increase of $25 or $50 million, it shakes them up.

On the other hand, some Congressmen may feel there is so much at stake here that these expenses are worthwhile.

Anyway, that is the dilemma.

Representative ROUSSELOT. Would you look at the classified ads as one measure of where jobs are?

I know you stated something about that.

Mr. SHISKIN. As I said, we are carrying on discussions with the conference board, which puts out that index. We offered to put up money out of these funds on a contract basis to them if they will go out and try to get the answers to some questions we asked them, such as, what kind of occupational breakdowns can they get?

Representative ROUSSELOT. Many employers are advertising for skilled or semi-skilled or more menial jobs. They constantly say that even in the publications in which they get the best response, for instance, in my area, the Los Angeles Times and several of the surrounding daily publications, they have very extensive classified ad sections every day for employment, and they are not all skilled jobs.

It breaks out pretty evenly, and they say they get a fairly good response, but they still have trouble filling some of those jobs, especially the so-called menial jobs and the highly skilled jobs.

Now, is it your hope to judge whether those types of classified ad sections really in fact are an indicator of jobs that are available?

Mr. SHISKIN. We know they are indicators of jobs that are available, but the question is: Are the help-wanted advertisements that appear in the newspapers and that the conference board uses in their survey a representative sample of all jobs available? That is what we don't know.

Representative ROUSSELOT. Right. Because, you know, we get a lot of complaints that there are an awful lot of employers who want to hire, but they have problems in matching up people who are willing to work, and as the Senator said, sometimes people come in to apply for a job and find out it is not as high paying as they thought—I am not convinced minimum wages mandated by the Federal Government is the way to go, especially for minorities and others, and we produced the Maryland report by Mr. Williams. I just wonder if what you are saying to us is that part of the ability to judge where the jobs are might be an extensive job vacancy survey.

I mean, if we are talking about a million bucks, we spill that much on the floor every day easily——

Mr. SHISKIN. Unfortunately, you don't spill it on me.

Representative ROUSSELOT. I am sure the Senator and I could join and make sure you got that, if the end result of that survey will really help us know how to get a handle on where the jobs are and how you match up the person with the job.

Senator PROXMIRE. Would you yield on that?

We have exactly that kind of situation in Wisconsin. I spent a day up in Superior, Wis., which traditionally has very high unemployment.

Southeastern Wisconsin has a lower rate. We have statewide, every single night, sent out all over the State to a very large number of

employment offices in Wisconsin, every single available open job in the State.

Representative ROUSSELOT. In the total State.

Senator PROXMIRE. Furthermore, every employer in the State is told how many people there are looking for work, and it is not unusual at all for someone to travel 300 miles from Superior down to Milwaukee to get a job.

They know, and that is one of the reasons why unemployment has dropped and has been kept down as much as it has been in the State.

I don't see why we can't do this nationally, so that the employers will know who is available and the people looking for work will know what is available.

We have the computers and electronic technology that can be done relatively inexpensively.

The State doesn't have anything like the budget that the Federal Government has.

Representative ROUSSELOT. They are doing it in several other States, too.

Senator PROXMIRE. They are, indeed, but it hasn't caught on nationally.

Representative ROUSSELOT. Maybe we should fund the States.

Senator PROXMIRE. Maybe we should do what we can to make it a national program.

Mr. SHISKIN. Right now if we got a lot of money for a job vacancy survey, we would not spend it effectively.

Representative ROUSSELOT. That is an unusual admission.

Mr. SHISKIN. Not for us. We wouldn't know how to spend the funds effectively and we are not asking for any more money for a job vacancy survey now.

We want to continue the study with the conference board, and we expect to be making similar arrangements with other organizations, and then we will be in a better position to know about the others.

Representative ROUSSELOT. You mentioned you are in the process of a very detailed analysis of the quality of the unemployed people in this country.

Is that study still going on?

Mr. SHISKIN. Mr. Stein will respond.

Mr. STEIN. If you are speaking about the survey of the job search activities of the unemployed, we will have a report coming out on that in November in the Monthly Labor Review.

It will be the first report on the major findings.

Representative ROUSSELOT. Will you have it ready when you come up to report?

Mr. SHISKIN. Next month?

Mr. STEIN. We could report on some of the major findings at that meeting.

Representative ROUSSELOT. I think that would be helpful.

Mr. SHISKIN. We can do that. The study is complete.

Representative ROUSSELOT. What do you call that survey?

Mr. STEIN. It is called the job search activities of the unemployed.

Representative ROUSSELOT. Job search activities of the unemployed?

Mr. STEIN. Yes, how they went about looking for work, how much time they spent, what their expectations were in terms of salaries and occupations, and so forth.

Representative ROUSSELOT. Right.

I am sure you read, as we did, the series that appeared in the Wall Street Journal. They took some very isolated cases, but that was kind of shocking, in some ways, that some people had just totally given up, and yet with all the technology we have today, it is amazing to me that they would find it so easy to give up; if in fact all these jobs are available.

I hope it isn't all due to the minimum wage situation.

We will look forward to seeing that.

Senator PROXMIRE. I want to congratulate Congressman Rousselot. You know, it is refreshing to have the Republicans where they wear a uniform to work. He has a tie with dollar signs on it.

We ought maybe to make our Democratic uniform a tie with bleeding hearts on it.

Representative ROUSSELOT. This is held over from the Banking and Urban Affairs Committee. We dealt in big dollars there.

Senator PROXMIRE. Mr. Shiskin, Sar Levitan, the Chairman of the National Commission on Unemployment Statistics has said, "What Congress has been doing is allocating billions of dollars to programs to aid the unemployed, but not one dollar to bureaucrats to give them a better job of collecting better information on where the unemployed are.

"That leaves it up to the bureaucrats to make policy decisions by default."

Levitan suggests that Congress should give enough money to triple the sample size of 55,000.

How much money would such an expansion of the survey cost, and in your estimation would the cost be worth what we would get out of it?

Mr. SHISKIN. Let me answer that question in this way: I think, first of all, that Sar, whose support we are very happy to have, exaggerated that situation, because I believe it was 2 years ago that Congress added—the House, and the Senate approved it—added $5 million to our budget that we did not ask for. That money is now in our base.

Let me say first.

So, the Congress has taken some initiative here.

We are putting that money to very good use. Some months ago, several Congressmen asked me about the desirability of expanding the sample, and I really was not in a position to answer the question, because the Department had not taken a position on it.

But recently Congressman Flood did write to Secretary Marshall and ask what his plans were for the expanding of the unemployment survey so that we could get better data for local areas.

In his reply the Secretary said that we have a program for a substantial expansion of the sample. It would more than double it.

That program has been approved by the Department.

Senator PROXMIRE. Just one other follow-up question on that.

As you know, we passed the CETA program, the Comprehensive Employment Training Act, that required your agency to produce State and local unemployment data, even though it was hard to produce fully reliable data, especially in the smaller States.

Now we are looking at the issue of welfare reform. The chairman has it on his agenda, and we expect to act on some kind of welfare reform legislation.

What new procedures and statistics will you have to have for policymakers to monitor and evaluate the success or failure of welfare reform legislation?

Have you had a chance to take a look at that?

Mr. SHISKIN. I really can't answer that particular question, but I have participated in serveral discussions on the welfare program.

At the beginning, the President suggested there should be geographic differentials in welfare payments, and then he dropped that.

We looked into the problems there, and concluded we would have had to make up a family bukget program for various areas of the country. That would have been very expensive, but we could have done it.

Apparently, the administration has dropped that idea so we are biding our time.

Senator PROXMIRE. Would you take a look at the welfare reform program, and in the next month or so give us a letter indicating how it appears that your agency may be affected by the requirements for additional statistics?

Mr. SHISKIN. That is a good question, and we will certainly do it.

I just want to say that the welfare program has been an extremely complex program, and it hasn't been shaken down.

I gave one example. If we have geographic differentials for welfare, it will impose an enormous job on the BLS because we will have to get geographic data on family budgets which are much better than the data we have today.

I would assume that the family budget data would be adjusted every year by the CPI, so we might need better regional data for the CPI.

So it could have a tremendous impact. At the present time the early proposals do not have geographic differentials in the program.

Senator PROXMIRE. You have been very helpful.

Senator Kennedy.

Senator KENNEDY. Thank you very much.

Mr. Shiskin, I want to welcome you back to the committee, and I regret I wasn't here earlier.

I would like to have your reaction to the comment that, even though we have seen some reduction to 6.9 percent, the fact of the matter is that over the period of the past 5 months unemployment has hovered at 7 percent. Though the current drop might indicate a hopeful sign, the background of the past 5 or 6 months suggests it doesn't. In the past 2 years, we have had the most profound continuing unemployment since the end of World War II. Can we really take any satisfaction from today's development?

I suppose the critical question is whether it is necessary at this time for the Congress tc be thinking about some additional steps in terms of economic stimulus to try to deal with these problems.

I don't think any of us are immune from the enormously high human impact that these continuing unemployment figures reflect. As we saw in the past week when President Carter was in the south Bronx, viewing the destroyed buildings and talking to the people, one clear comment that was reiterated time and time again was that what people wanted in those areas were jobs.

I wonder, given where we have been, where we are and what the prospects in terms of economic growth are going to be, whether we should be giving consideration to new economic stimulus at this time.

Mr. SHISKIN. I hope others will forgive me, because I am going to repeat some of the things I said a little earlier.

I think we are experiencing a very respectable, sound economic recovery.

However, that recovery is proceeding on two different tracks.

Insofar as the white population is concerned, it is very good. For example, the employment-population ratio, the percentage of the white population that is working, is at an alltime high.

It has never been higher.

On the other hand, the percentage of the black population that is working is close to an alltime low. That is as far as we have reported.

So, the economy is proceeding on two separate tracks. So, as far as the whites are concerned, things are going quite well.

As far as the blacks are concerned, they are not doing well.

Another way of putting this is to say that the situation in the central cities, and especially the central cities in the Northeast, is terrible.

The unemployment rates are very high there. The employment-population ratios in the central cities are very low.

Now, my reaction to your question, Senator Kennedy, is in the light of that analysis, what you need in programs is to be directed toward the central cities.

We put out a release on Wednesday, which shows statistics for 30 central cities and their outer rings.

In the Northeast, the central cities situation is terrible, and perhaps a policy should be directed at solving the problems of the central cities.

Senator KENNEDY. Are you suggesting, then, in terms of reaching that goal, that we need a greater effort in job programs and economic stimulus programs in those areas?

Mr. SHISKIN. What I have said earlier, and I am glad to repeat it, is that I have been participating in some discussions with Secretary Marshall and Assistant Secretary Green on those programs, and I think they are on the right track.

Senator KENNEDY. You don't think that in the effort to deal with the problems of inflation, the whole economic program is tilted too much toward dealing with inflation and not enough toward dealing with the problems of unemployment?

Mr. SHISKIN. Well, I am not ready to comment on that, but let me say again that I think the problem in the central cities, particularly those in the Northeast, problems of the black populations in those cities is a terrible problem, and we have to address ourselves to that.

I think that is a very high priority.

In terms of economic policy, there is another kind of question which is this:

The recovery has proceeded for 30 months, and some people think that it may peter out soon.

In my judgment there are no significant signs today that the recovery is petering out.

There may be some slowdown. That is normal in the advanced stages of an expansion, and if the Congress and the administration thinks the rate of growth should be a little faster, that is another question.

They may decide to do something about that.

As far as I can see, the recovery is not petering out. There are no substantial signs of that, and the figures for this month, I think, are quite encouraging, rather than the reverse.

There is a lot of information in the data we put out in the last 3 days, including the data for the central cities, and there are bad things in those data.

May I make just one other comment, and then I would like to summarize what I think I said in answer to your questions, Senator Kennedy.

The number of jobs, particularly the jobs created in nonfarm industry, is very high. We have two estimates of it, and both estimates are very high compared to anything in recent months.

So I think in terms of jobs, the September report is quite good.

Now, it is not all good. The situation in the central cities is no better. The situation for blacks is no better, not really, but overall, the situation is good.

I don't see an early end to this recovery. That is part of it.

The other part is that there are terrible problems in the central cities and especially with the black population.

Senator KENNEDY. The point you made earlier, as I understand it, was that if this plateau is going to continue, it ought to be a source of some discouragement.

"A source of some discouragement or we ought to be concerned," I guess, were the words that you used earlier in your testimony?

Mr. SHISKIN. Yes.

Senator KENNEDY. In your testimony here last month, you indicated that if this continued, that we ought to be concerned.

Mr. SHISKIN. That is right.

Senator KENNEDY. I suppose, given the background of the past 5 months, it is time to be concerned now. Given the continued persistence of unemployment, we ought to be concerned now and more effective steps ought to be taken in terms of reducing it.

I think this has to be the consideration. I agree with you about the problems we are facing in the Northeast, but the statistics themselves are not entirely reflective of the unemployment situation and the underemployment situation. Millions of people have lost any sense of hope of gaining jobs. Millions of Americans are underemployed, which is a very critical factor in many of the older areas.

We are not just talking about blacks, but about whites and others in our society.

As high unemployment continues, we see millions of Americans who have given up hope of gaining employment. The statistics, I don't believe, really tell the whole story.

I think we have to ask ourselves, as we hear your somewhat encouraging comments, and as we remember the track record of the past several months, whether enough is being done to deal effectively with these problems.

Mr. SHISKIN. What I said last month is that if the trend continues, we will have a very serious problem.

Now, I was referring to the rise in unemployment, but especially to the very small rise in employment. Employment had a very small rise last month, but we have had a very big rise in September—a very small rise in August and a very big rise in employment in September.

So I say the situation appears to have improved. On one month's data you cannot be too sure of this, but overall the situation has improved.

However, it has not improved for the black population, and that is where I see the problem today.

Senator KENNEDY. The fact of the matter is that we are stuck on a 7-percent plateau, and we have been for a number of months.

Mr. SHISKIN. Five months.

Senator KENNEDY. And there is very little, from what you indicated here today, to give us much hope for the next several months.

As a matter of fact, it would seem from the projections that we will be stuck at that plateau for some time. The question is, what new steps should we try to take to deal effectively with these employment problems.

Even given the situation in terms of blacks and the inner city, there is still a significant problem for others in finding jobs in these labor market areas. The problem is critical in the cities, but it is more broadly based as well; 80 percent of the American people are living in the cities or in the immediate proximity of the cities. When you talk about unemployment in the cities, you are talking about unemployment generally in the country. We have to ask ourselves what can be done, what should be done, and when can it be done in order to try to deal with this issue.

Senator PROXMIRE. Before I yield to Congressman Rousselot, let me call Senator Kennedy's attention to this. There is a concluding short paragraph in the Business Week article which pointed out that there are all kinds of jobs seeking people, at the same time we have heavy unemployment.

The article refers to Massachusetts.

> Boston economist, Peter Doring, said that jobs go unfilled in textile and apparel factories in Massachusetts because of poor working conditions, low wages, and lack of fringe benefits.

He said:

> These jobs are competing with welfare and hustling.

That is why I keep repeating the fact that if you get strong unions and a higher minimum wage, it doesn't necessarily mean you are going to have less work. It means you are going to have more work, especially if it is national, because jobs won't leave your section to go to the other parts of the country.

People don't work in some cases because the job is a disgrace. The wages are terribly low, the prospects of getting anywhere are dim, and I think we can look at it from that standpoint as well as the standpoint that you can obviously get the minimum wages too high and the union wages too high.

Congressman Rousselot, would you like to add anything?

Representative ROUSSELOT. Yes, that was good. The competition from welfare and hustling.

Senator PROXMIRE. That is right.

Representative ROUSSELOT. Maybe I should ask for a definition of hustling.

You mentioned that the inner city is where much of this problem is as it relates to unemployment.

Mr. SHISKIN. Especially in the Northeast.

Representative ROUSSELOT. That is what I was going to say, because in Los Angeles last month, not only did our employed force go up, but unemployment went down more substantially than the national figures.

Can you identify for us where most of those inner cities are?

Mr. SHISKIN. I cannot today, but we issued a release on Wednesday showing for 30 central cities.

Representative ROUSSELOT. Thirty central cities?

Mr. SHISKIN. Yes, and we have more detail for the bigger cities and less for the smaller ones. But those areas are——

Representative ROUSSELOT. Most of those are in the Northeast?

Mr. SHISKIN. Most of the ones that have very high unemployment rates, and very low employment-population ratios are in the Northeast, and also Chicago.

Representative ROUSSELOT. Yes, and our discussions about the problem of black unemployment and your comments that Secretary Marshall was addressing himself very aggressively to this problem.

Mr. SHISKIN. Yes, he is.

Representative ROUSSELOT. Or is attempting to.

Mr. SHISKIN. Yes, he is. I might add one bit of information. One-third of the total black unemployed are in these 30 cities.

Representative ROUSSELOT. So the real target as it relates to the general topic of unemployment and black unemployment is in these 30 central cities?

Mr. SHISKIN. I would say so.

Representative ROUSSELOT. How much of the total 6.9 or 7 percent unemployment would we reach if we agressively put those people back to work?

Mr. SHISKIN. Well, I cannot give you a figure, but we could get one for the record. Isn't that right, Mr. Stein?

Mr. STEIN. Yes.

Mr. SHISKIN. We can estimate it for the record.

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

In 1976, the 30 largest central cities had an unemployment rate of 10 percent, compared with the overall national rate of 7.7 percent. If the central cities' rate were brought down to that of the balance of the country, the national rate would have been four-tenths lower, that is, 7.3 percent. An even greater reduction in their unemployment would, of course, produce a slightly larger national decline.

Mr. SHISKIN. There is another interesting figure in our report which I want to call to your attention. There is a great deal of concern with black teenage unemployment.

Well, the total number of black teenage unemployed is 364,000.

Representative ROUSSELOT. 364,000.

Mr. SHISKIN. That is not a very big number, you know, in an economy of this size, and so that seems to me, in terms of numbers, to be a solvable problem.

How to get those people into suitable jobs is another question.

Representative ROUSSELOT. Or ones, as the Senator indicated, that they would stay with, or be satisfied, or feel that the wage is high enough.

Mr. SHISKIN. The number in that category is not high. The total number of white teenage unemployment is 1,307,000. But the attention is directed heavily toward the black teenage unemployed, and

that number is not that great a number. However, when you translate it into a rate, it becomes close to 40 percent.

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

The labor force in the central cities of the 30 largest metropolitan areas totaled 13,527,000 on average in 1976, or just over 14 percent of the U.S. total. The unemployment level was 1,347,000, or 18.5 percent of the total, and the unemployment rate averaged 10 percent, compared with the national average of 7.7 percent.

Representative ROUSSELOT. I would be very interested to know if a matter of concentrating on the 30 inner cities—by the way, do most of those 30 inner-city areas have what we would call federally good welfare payments, or income maintenance programs?

Mr. SHISKIN. Some of the central cities are doing well. If you go to Dallas or Houston, you find a good situation. It is the Northeast central cities in the United States that have been hard hit by unemployment.

Representative ROUSSELOT. Senator, I think this is going to be a very interesting thing because, evidently, a very substantial portion of this number is in these 30 inner cities. What proportion of the 7 percent or 6.9 percent is actually in these 30 cities?

Maybe we could better target to those cities, and it would substantially solve the problem of unemployment, and impact the whole figure.

Senator PROXMIRE. It would be very, very helpful. Could you also give us enlightenment on the Reuss proposal of moving labor to where the jobs are?

Mr. SHISKIN. I don't quite know how to approach that one, Senator Proxmire.

Senator PROXMIRE. Well, you say that a big part of the problem is that people are located where there are no jobs, and, after all, it is hard for most people. People in the inner cities don't have cars, most of them, and transportation is poor.

It may be possible for them to go out to the suburbs and get a job, but it is impossible in most cases for them to go to another State to get a job. They are very poor.

Congressman Reuss' proposal is to see what we can do about getting people to move, and the Government helping them move. If there are jobs in Houston, Tex., and they are unemployed in New York, the Reuss proposal would fund their moving.

Representative ROUSSELOT. Busing for unemployment.

Senator PROXMIRE. All right.

Mr. SHISKIN. What would you like for BLS to do? It seems quite obvious, if you are willing to spend the money, that is fine.

Senator PROXMIRE. You can give us the unemployment in the inner cities.

Mr. SHISKIN. That we have.

Senator PROXMIRE. And we have had this for some time. The prospects are that we are going to have it for a long, long time in the future, and we are not going to solve the problem except by enormous expenditures.

Well, incidentally, I had my administrative assistant do a study on the money we spend in the cities. We spent $13 billion in 5 years on the Marshall plan. We spent 28 times that much over the last 5 years on American cities, correcting for inflation in real terms; we

spent 10 times as much on cities in this country as we spent in 5 years of the Marshall plan.

So, it is not that we haven't spent money. We haven't spent it wisely and intelligently. We haven't used our heads. I think that we can meet this problem, but we cannot meet it just by passing legislation with big appropriations.

Senator KENNEDY. We passed last year the jobs tax credit for small businesses. I wonder to what extent that has been effective or not effective in terms of encouraging employment in the area of small business?

Mr. SHISKIN. I don't know.

Senator KENNEDY. Would you take a look at the effect since the time of the implementation of that program? Has there been any increase in the employment situation among small business?

Mr. SHISKIN. I think we can do that; yes, sir.

Senator KENNEDY. I think that would be helpful. They now have both an investment credit and a jobs credit. The jobs credit program was heavily discussed both in the Ways and Means Committee and in the Finance Committee as an instrument for creation of jobs.

I would be interested in your evaluation of the statistics. Has there been any noticeable increase in small business employment since the implementation of this program.

Mr. SHISKIN. Fine. As we all know now, the economy has been creating jobs at a fabulous rate. Last year alone, it created over 3 million jobs. At the same time, we have had a rapidly increasing labor force.

Then you have the structural problem of unemployment in the central cities.

So, we will take a look at that, but I think we will find that the number of jobs in business, created by business, is very great.

[The following was subsequently supplied for the record:]

After investigating this issue, we find that we have insufficient data with which to measure the impact of this program. The program was set up in such a way as to have its greatest impact upon small businesses, but we have no way to isolate recent employment changes for small firms on a current basis. It may take nearly, 2 more years, when we have changes between the first quarters of 1977 and 1978 for us to discern any changes on small business employment.

Senator PROXMIRE. Well, unless there are more questions, we thank you very much, Mr. Shiskin.

You have given us a far better understanding of what the 6.9 unemployment figure this month means. What it means is that, as I understand it, the situation for adult white males in this country is good.

Their unemployment level is at 4.3 percent. It is remarkably good for women in view of the enormous increase of women in the work force. But for blacks and for teenagers, especially for blacks, it is bad, no improvement. It is as bad as it was a year ago. It isn't improving, and in the cities it is extremely bad, and this is where we should focus our attention.

Mr. SHISKIN. That sounds right to me, Senator Proxmire.

Senator PROXMIRE. Thank you very much. The committee will stand adjourned.

[Whereupon, at 11:35 a.m., the committee adjourned, subject to the call of the Chair.]

EMPLOYMENT-UNEMPLOYMENT

FRIDAY, NOVEMBER 4, 1977

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

The committee met, pursuant to notice, at 10 a.m., in room 5302, Dirksen Senate Office Building, Hon. William Proxmire (member of the committee) presiding.

Present: Senators Proxmire and Javits; and Representative Pike.

Also present: Richard F. Kaufman, general counsel; G. Thomas Cator, William A. Cox, L. Douglas Lee, and Gladys Uhl, professional staff members; Mark Borchelt, administrative assistant; and Charles H. Bradford and M. Catherine Miller, minority professional staff members.

OPENING STATEMENT OF SENATOR PROXMIRE

Senator PROXMIRE. This morning the Joint Economic Committee is meeting to review and analyze the October employment and unemployment figures and the October wholesale price situation. Commissioner Shiskin, we welcome your comments on these subjects.

The committee today will also be reviewing a variety of Federal statistical programs and procedures. We are very pleased to have Courtenay Slater, Chief Economist, Department of Commerce, here to help us examine these programs.

The Commerce Department has recently gained new statistical policy authority as the Office of Statistical Policy was transferred from OMB to Commerce. It will soon be releasing the Creamer report which is an authoritative review of the GNP data base. In addition, the Department is working on setting long-range statistical priorities and is making progress toward completing the project, originally requested by this committee, for price deflators for Federal defense purchases.

Mrs. Slater, we welcome your comments on these subjects.

Yesterday's Wholesale Price Index release showed that wholesale prices increased across the board in October. Both the WPI and the finished goods index increased by 0.8 percent in October, the largest increase in each index since April. October was also the third consecutive month that both indexes have increased at an increasing rate.

But last month's soaring price increases were not limited to the WPI or the finished goods index. Producers finished goods increased 1.5 percent, finished goods excluding food jumped 0.9 percent, and farm products increased 2.4 percent. The only good news apparent in

yesterday's release was the small decline in the rate of increase among industrial commodities to 0.6 percent.

The employment and unemployment figures released this morning contain mixed news. The good news is that teenage employment increased by 175,000 and that increase combined with a strong increase in employment among adult men helped offset a 200,000 employment decrease among adult women. Teenage unemployment, which is very volatile, decreased by 0.8 percent. The overall October gain in employment of 135,000 was fairly widespread as employment increased in 63.1 percent of the industries.

The bad news is that unemployment increased to 7 percent and there has been no real improvement in that situation since April. Black unemployment, which is also very volatile, jumped from 13.1 percent in September to 13.9 percent in October. The jobless rate for blacks has shown no improvement over the last year while joblessness for whites has declined by more than a percentage point. The October increase in unemployment again hit hardest at blacks although the rate among adult men also increased appreciably from 4.9 percent in September to 5.3 percent in October.

Commissioner Shiskin and Mrs. Slater, again we welcome you. Commissioner, please proceed with your statement, and Mrs. Slater, you will immediately follow Commissioner Shiskin.

STATEMENT OF HON. JULIUS SHISKIN, 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

Mr. SHISKIN. Thank you, Mr. Chairman.

I would like to point out again that I have Mr. Stein with me today.

Senator PROXMIRE. I am sorry to interrupt, Mr. Shiskin. This is a most unfortunate thing. There is a rollcall on the floor, I will have to go and we will have to suspend the hearings for about 10 minutes. I will be back right away.

[A recess was taken for rollcall.]

Senator PROXMIRE. Unfortunately, there is another vote. We will be back when we can.

Representative PIKE. We are having a record vote on the floor. That is the way the cookie crumbles. We will be back shortly.

[A recess was taken for rollcall.]

Senator JAVITS. The committee will come to order. At the direction of the Chair, the hearing is herewith continued.

Would you proceed, Mr. Shiskin.

Mr. SHISKIN. Thank you, Senator Javits.

Just before Senator Proxmire left, I was pointing out that Robert Stein——

Senator JAVITS. We don't hear you, sir.

Mr. SHISKIN. Robert Stein is here to support me on questions relating to unemployment and employment, and John Layng to my immediate left is here to support me on questions relating to prices. I have a statement as usual, and with your permission, I will read it.

I wish to offer the Joint Economic Committee a few brief comments to supplement our press release, "The Employment Situation," issued this morning at 9 a.m.

In October, the labor force rose by 234,000, total employment rose by 135,000, and unemployment rose by 99,000. The unemployment rate was 7 percent and has been hovering at about this rate since April.

Senator JAVITS. What was it last time?

Mr. SHISKIN. 6.9 percent last month.

The labor markets continued to improve, as the economy completed its 31st month of economic recovery in October. Over the last 6 months, however, the improvement has not been strong enough to reduce the unemployment rate.

The increase in total employment was smaller than in September and also smaller than during the early part of this year. The employment-population ratio (employment related to the working age population) continued close to the alltime high level.

I have a brief table and I do not intend to read it. I will try to summarize it in the following paragraph.

While the improvement in employment is sluggish, it is substantially stronger than the improvement that took place in the economic pause in 1976, as can be seen in the text table. In this context, it is to be noted that aggregate hours, the most comprehensive measure of labor market activity, reached a new high. When I commented 2 months ago about the relative magnitude of improvement in employment and unemployment this year compared to the economic pause during 1976, aggregate hours were noted as an exception.

As a result of the improvements in September and October, however, the pattern of aggregate hours now conforms to that of other labor force measures.

The unemployment rate has now been level for 6 months at about 7 percent, an unprecedented high level for an economic expansion period. The unemployment rate for whites has been 6.1 percent for 4 consecutive months. For white adult males, 20 and over, the unemployment rate has also been about stable in recent months, after declining earlier in the year. However, the black unemployment rate, and particularly the rate for black adult males, seems to be rising.

The employment-population ratio for whites rose to a new alltime high, while the black ratio continues to fluctuate at historically low levels.

That goes back to many references I have made about the economy being on two different tracks, one track for whites and an entirley different track for blacks. While the job loser rate has been fairly stable over the last 4 months, the trend in layoffs has been inching up.

Total payroll employment continued to rise and has shown strong gains over the past 12 months. However, manufacturing employment remains sluggish with little or no growth since May. The BLS diffusion indexes for 172 industries, computed for various spans, all remained at high levels, well over 50, the point at which one-half of the industries are increasing and one-half are decreasing their employment.

State and local government employment advanced for the eighth consecutive month. The increase since March 1977, when the new public service employment program got underway, was 334,000. This compares with an increase in jobs funded through public service

employment programs of 235,000 jobs since March. Most of these jobs are funded through State and local governments.

The average workweek for the total private economy rose slightly, as did average weekly hours in manufacturing. As a result of the rises in both employment and the workweek, aggregate hours rose for the third consecutive month to a new high level.

As I indicated last month, price increases during the third quarter were quite moderate. The Consumer Price Index rose at an annual rate of 4.2 percent, and the finished goods price index rose at an annual rate of 1.8 percent.

Although we should be cautious in interpreting a single month's data, it seems necessary to observe that the October indexes for prices received by producers do not continue the same trend. Thus, the October finished goods price index increased 0.8 percent from September. One major factor in the third quarter moderation had been declining prices for farm products and processed foods. In October, producers' prices for consumer foods rose following 4 months of decline. Crude and intermediate food materials' prices also turned upward.

Another factor in October's larger price rise was the largest monthly increase in prices for producers' finished goods in nearly 3 years. Steep rises in prices for trucks, aircraft, plastic and rubber industry equipment, generators and generator sets, and construction machinery were the major influences.

Prices for nonfood consumer goods have risen about 0.6 percent in both October and September—a return to the higher rate of increase that prevailed at the beginning of the year. Increases for jewelry, passenger cars and gasoline led the October advance.

To summarize, labor market activity, which had been vigorous during the first quarter of this year, continued to improve but at a much slower rate. Producers' prices show signs of accelerating inflation.

My colleagues and I shall now try to answer your questions.

[The tables attached to Mr. Shiskin's statement, together with the press release referred to, follow:]

CHANGES IN MAJOR EMPLOYMENT INDICATORS OVER VARIOUS STAGES OF THE CURRENT ECONOMIC EXPANSION

[In thousands]

	Average monthly change		
	April–October 1977	October 1976–April 1977	May–October 1976
Household survey:			
Civilian labor force	224	243	150
Total employment	201	381	20
Nonaggregate employment	(199)	(390)	(24)
Unemployment	23	−138	131
Payroll survey:			
Total nonaggregate employment	207	311	100
Manufacturing employment	18	98	−12
Average weekly hours in manufacturing	0	0.07	−0.08
Index of aggregate hours (private nonaggregate payrolls)	0.10	0.57	0.04

UNEMPLOYMENT RATES BY ALTERNATE SEASONAL ADJUSTMENT METHODS

Month	Unadjusted rate (1)	Official adjusted rate (2)	Alternative age-sex procedures: All multiplicative (3)	All additive (4)	Year ahead (5)	Concurrent (6)	Stable 67–73 (7)	Other aggregations (all multiplicative): Duration (8)	Reasons (9)	Total (10)	Residual (11)	Direct adjustment rate (12)	Composite (13)	Range (cols. 2 to 13) (14)
1975														
January	9.0	7.9	7.9	8.2	8.2	8.0	8.1	8.0	7.9	8.0	8.4	8.1	8.1	0.5
February	9.1	8.0	8.1	8.3	8.2	8.0	8.1	7.9	7.9	8.1	8.3	8.0	8.1	.4
March	9.1	8.5	8.5	8.7	8.6	8.6	8.4	8.4	8.3	8.5	8.7	8.5	8.5	.4
April	8.6	8.6	8.7	8.7	8.9	8.8	8.8	8.6	8.6	8.7	8.6	8.7	8.7	.2
May	8.3	9.0	9.0	8.7	9.2	9.0	9.2	8.9	9.1	9.2	8.8	9.3	9.0	.5
June	9.1	8.7	8.6	8.7	8.6	8.7	8.6	8.7	8.8	8.3	8.6	8.3	8.6	.5
July	8.7	8.7	8.6	8.6	8.4	8.7	8.6	8.5	8.7	8.5	8.5	8.6	8.6	.2
August	8.2	8.5	8.5	8.4	8.4	8.5	8.3	8.6	8.7	8.5	8.4	8.6	8.5	.4
September	8.1	8.6	8.6	8.4	8.3	8.6	8.3	8.8	8.8	8.5	8.4	8.5	8.5	.5
October	7.8	8.6	8.7	8.4	8.6	8.7	8.3	8.7	8.7	8.6	8.5	8.6	8.6	.4
November	7.8	8.4	8.4	8.2	8.3	8.5	8.2	8.6	8.4	8.4	8.2	8.4	8.4	.4
December	7.8	8.3	8.4	8.2	8.3	8.3	8.3	8.5	8.2	8.3	8.2	8.4	8.3	.2
1976														
January	8.8	7.8	7.8	8.0	7.8	7.8	8.1	8.0	7.8	7.8	8.2	7.9	7.9	.4
February	8.7	7.6	7.6	7.8	7.6	7.6	7.7	7.5	7.5	7.6	7.7	7.6	7.6	.3
March	8.1	7.5	7.5	7.6	7.5	7.5	7.7	7.3	7.4	7.5	7.6	7.5	7.5	.4
April	7.4	7.5	7.5	7.5	7.4	7.4	7.6	7.4	7.5	7.5	7.4	7.5	7.5	.2
May	6.7	7.3	7.4	7.2	7.2	7.2	7.5	7.2	7.4	7.5	7.2	7.5	7.4	.3
June	8.0	7.6	7.5	7.5	7.5	7.6	7.5	7.5	7.5	7.3	7.4	7.3	7.5	.3
July	7.8	7.8	7.8	7.7	7.8	7.8	7.7	7.6	7.8	7.7	7.7	7.7	7.7	.2
August	7.6	7.9	7.9	7.8	7.9	7.9	7.7	8.0	8.0	7.9	7.8	8.0	7.9	.3
September	7.4	7.8	7.8	7.7	7.8	7.8	7.6	8.0	7.9	7.8	7.8	7.8	7.8	.4
October	7.2	7.9	8.0	7.8	7.9	7.9	7.7	8.0	7.9	8.0	7.9	7.9	7.9	.3
November	7.4	8.0	8.0	7.8	8.1	8.0	7.8	8.1	8.0	8.0	7.8	8.0	7.9	.3
December	7.4	7.8	7.9	7.8	7.9	7.8	7.9	7.9	7.8	7.8	7.8	7.9	7.8	.1
1977														
January	8.3	7.3	7.3	7.5	7.3	7.4	7.5	7.4	7.4	7.4	7.6	7.4	7.4	.3
February	8.5	7.5	7.5	7.7	7.5	7.5	7.6	7.4	7.4	7.5	7.6	7.5	7.5	.3
March	7.9	7.3	7.3	7.4	7.3	7.3	7.5	7.3	7.3	7.3	7.3	7.4	7.3	.2
April	6.9	7.0	7.0	7.0	7.0	7.0	7.1	7.0	7.0	7.0	6.9	7.0	7.0	.2
May	6.4	6.9	7.0	6.8	6.9	7.0	7.1	7.0	7.1	7.1	7.0	7.1	7.0	.3
June	7.5	7.1	7.0	7.1	7.1	7.1	7.0	7.0	7.0	6.9	7.0	6.8	7.0	.3
July	7.0	6.9	6.9	6.9	6.9	6.9	6.8	6.8	6.9	6.9	6.8	6.9	6.9	.1
August	6.8	7.1	7.1	7.1	7.1	7.0	6.9	7.2	7.2	7.1	7.1	7.1	7.1	.3
September	6.6	6.9	6.9	6.9	6.9	6.9	6.7	7.0	7.0	7.0	7.0	7.0	6.9	.3
October	6.3	7.0	7.0	7.0	7.0	6.9	6.8	7.1	6.9	7.0	7.1	7.0	7.0	.3
November														
December														

See footnote on next page.

An explanation of cols. 1 to 13 follows:

(1) Unemployment rate not seasonally adjusted.

(2) Official rate: This is the published seasonally adjusted rate. Each of 4 unemployed age-sex components—males and females, 16 to 19 and 20 years of age and over—is independently adjusted. The teenage unemployment components are adjusted using the additive procedure of the X–11 method, while adults are adjusted using the X–11 multiplicative option. The rate is calculated by aggregating the 4 and dividing them by 12 summed labor force components—these 4 plus 8 employment components, which are the 4 age-sex groups in agriculture and nonagricultural industries. This employment total is also used in the calculation of the labor force base in columns (3) to (9).

The current "implicit" factors for the total unemployment rate are as follows:

January	113.8	July	100.2
February	113.7	August	96.1
March	108.1	September	94.6
April	98.7	October	90.1
May	92.2	November	93.0
June	105.2	December	93.8

(3) Multiplicative rate: The 4 basic unemployed age-sex groups—males and females, 16 to 19 and 20 years and over—are adjusted by the X–11 multiplicative procedure. This procedure was used to adjust unemployment data in 1975 and previous years.

(4) Additive rate: The 4 basic unemployed age-sex groups—males and females, 16 to 19 and 20 years and over—are adjusted by the X–11 additive procedure.

(5) Year-ahead factors: The official seasonal adjustment procedure for each of the components is followed through computation of the factors for the last years of data. A projected factor—the factor for the last year plus ½ of the difference from the previous year—is then computed for each of the components, and the rate is calculated. The rates are as first calculated and are not subject to revision.

(6) Concurrent adjustment through current month: The official procedure is followed with data reseasonally adjusted incorporating the experience through the current month; that is, the rate for March 1976 is based on adjustment of data for the period, January 1967–March 1976. The rates are as first calculated and are not subject to revision.

(7) Stable seasonals (January 1967–December 1973): The stable seasonal option in the X–11 program uses an unweighted average of all available seasonal-irregular ratios to compute final seasonal factors. In essence, it assumes that seasonal patterns are relatively constant from year to year. A cutoff of input data as of December 1973 was selected to avoid the impact of cyclical changes in the 1974–75 period.

(8) Duration: Unemployment total is aggregated from 3 independently adjusted unemployment by duration groups (0 to 4, 5 to 14, 15 plus).

(9) Reasons: Unemployment total is aggregated from 4 independently seasonally adjusted unemployment levels by reasons for unemployment—job losers, job leavers, new entrants, and reentrants.

(10) Unemployment and labor force levels adjusted directly.

(11) Labor force and employment levels adjusted directly; unemployment as a residual and rate then calculated.

(12) Unemployment rate adjusted directly.

(13) Average of columns 2 to 12.

Note: The X–11 method, developed by Julius Shiskin at the Bureau of the Census over the period 1955–65, was used in computing all the seasonally adjusted series described above.

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United States Department of Labor
Bureau of Labor Statistics Washington, D.C. 20212

Contact: J. Bregger (202) 523-1944
523-1371
K. Hoyle (202) 523-1913
523-1208
home: 333-1384

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THE EMPLOYMENT SITUATION: OCTOBER 1977

The overall employment situation was little changed in October, it was reported today by the Bureau of Labor Statistics of the U. S. Department of Labor. The unemployment rate was 7.0 percent, thus remaining within the 6.9 to 7.1 percent range that has prevailed since April.

Total employment--as measured by the monthly survey of households--edged up by 135,000 to 91.2 million in October. Over the past 12 months, employment has grown by 3.5 million. Nonfarm payroll employment--as measured by the monthly survey of establishments--also rose slightly (by 120,000) over the month to 82.9 million. Payroll jobs have increased by 3.1 million since October 1976.

Unemployment

There were 6.9 million unemployed persons in October, after seasonal adjustment, about the same number as in the previous month. (See table A-1.) The unemployment rate was 7.0 percent, the level around which it fluctuated narrowly during the prior 6 months. Strong downward movements early in the year, however, account for an 11-month decline of a full percentage point.

While the overall number of persons unemployed was little changed in October, there was an increase among men 25 years old and over; their 4.4-percent jobless rate marked an 8-month high. Partly offsetting this movement were marginal declines in the rates for most other age-sex groups. The jobless rate for blacks, which tends to fluctuate much more from month to month than the rate for whites, edged up from 13.1 to 13.9 percent in October. Unemployment of white workers, on the other hand, has held at 6.1 percent for 4 straight months. Over the past year, the black rate has shown no improvement, while joblessness for whites has declined by more than a percentage point. (See tables A-2 and A-6.)

Over the October 1976-77 period, total unemployment has fallen by more than 600,000, with four-fifths of the decline occurring among job losers. The average (mean) duration of unemployment edged down in October to 13.8 weeks and was 1.5 weeks lower than a year earlier. (See tables A-4 and A-5.)

Total Employment and the Labor Force

Total employment continued its post-recession expansion with a small rise in October. There were over-the-month increases among teenagers of 175,000 and adult men of 160,000. These outweighed a decline of 200,000 among adult women, which followed an advance of 500,000 in the previous month. Total employment has risen by 3.5 million over the past 12 months, and, in contrast with the September-October developments, almost half of the

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

Selected categories	Quarterly averages					Monthly data		
	1976		1977			1977		
	III	IV	I	II	III	Aug.	Sept.	Oct.
HOUSEHOLD DATA	Thousands of persons							
Civilian labor force	95,261	95,711	96,067	97,186	97,623	97,697	97,868	98,102
Total employment	87,804	88,133	88,998	90,370	90,809	90,771	91,095	91.230
Unemployment	7,457	7,578	7,068	6,816	6,814	6,926	6,773	6,872
Not in labor force	58,963	59,132	59,379	58,908	59,140	59,064	59,114	59,099
Discouraged workers	827	992	929	1,061	1,104	N.A.	N.A.	N.A.
	Percent of labor force							
Unemployment rates:								
All workers	7.8	7.9	7.4	7.0	7.0	7.1	6.9	7.0
Adult men	6.0	6.2	5.6	5.1	5.1	5.2	4.9	5.3
Adult women	7.7	7.6	7.1	6.9	7.0	7.1	7.0	6.8
Teenagers	18.8	19.1	18.6	18.1	17.7	17.5	18.1	17.3
White	7.1	7.2	6.7	6.3	6.1	6.1	6.1	6.1
Black and other	13.1	13.4	12.8	12.8	13.6	14.5	13.1	13.9
Full-time workers	7.4	7.5	6.8	6.5	6.6	6.8	6.5	6.6
ESTABLISHMENT DATA	Thousands of jobs							
Nonfarm payroll employment	79,683	80,090	80,927	81,909	82,551p	82,480	82,807p	82,926p
Goods-producing industries	23,372	23,440	23,765	24,292	24,372p	24,316	24,400p	24,432p
Service-producing industries	56,311	56,650	57,162	57,617	58,179p	58,164	58,407p	58,494p
	Hours of work							
Average weekly hours:								
Total private nonfarm	36.1	36.2	36.1	36.2	36.0p	36.0	36.0p	36.1p
Manufacturing	39.9	40.0	40.1	40.4	40.3p	40.3	40.2p	40.3p
Manufacturing overtime	3.0	3.1	3.1	3.4	3.3p	3.3	3.3p	3.5p

p=preliminary. N.A.=not available.

total increase was among adult women. Their ranks swelled by 1.7 million, while employment of adult men was up 1.4 million and teenage employment grew by nearly 500,000.

The employment-population ratio--the proportion of the total noninstitutional population that is employed--held steady over the month at 57.3 percent, a tenth of a point below the record high last reached in March 1974.

An October increase brought the civilian labor force to 98.1 million, 2.9 million more than a year earlier. The labor force participation rate--the proportion of the civilian noninstitutional population either working or seeking work--was 62.4 percent in October, a tenth of a point above the September rate and a tenth below the alltime high recorded in June. (See table A-1.)

Industry Payroll Employment

Total nonagricultural payroll employment rose a modest 120,000 in October to a level of 82.9 million, seasonally adjusted. There were employment gains in 63 percent of the 172 industries that make up the BLS diffusion index of private nonagricultural payroll employment. Virtually all of the net job growth occurred in contract construction, services, and finance, insurance, and real estate. Since October of last year, nonfarm payrolls have expanded by 3.1 million jobs. (See tables B-1 and B-6.)

Other than the gains in services (45,000) and finance, insurance, and real estate (25,000), there was little employment activity elsewhere in the service-producing industries. Employment in this sector has grown by about 2.0 million over the year.

In the goods-producing sector, the employment increase in contract construction offset losses in manufacturing. Construction employment grew by almost 45,000, re-establishing, at least temporarily, the growth pattern that started at the beginning of the year. Manufacturing employment edged down in October, resulting in part from sharply increased strike activity. (Workers who are on strike for an entire reference period are not counted as employed in the payroll survey.) Declines were concentrated in durable goods, particularly in the transportation equipment industry, where strike activity was heaviest (mostly aircraft and parts), and in primary metals, where there have been recent layoffs among steel workers. Mining employment was unchanged over

the month.

Hours

The average workweek for production or nonsupervisory workers on private nonagricultural payrolls edged up by a tenth of an hour in October, the first increase in 4 months. The workweek averaged 36.1 hours in October, seasonally adjusted. The manufacturing workweek also rose by 0.1 hour to 40.3 hours, the same level as in July and August. Factory overtime rose by two-tenths of an hour to 3.5 hours. (See table B-2.)

The index of aggregate weekly hours of production or nonsupervisory workers on private nonagricultural payrolls rose 0.2 percent to an alltime high of 116.2 (1967=100) in October. The total index thus showed strength for the second month in a row, after declining in June, July, and August. Both the goods- and service-producing sectors' indices posted gains over the month. The overall index has risen 3.6 percent since October 1976. (See table B-5.)

Hourly and Weekly Earnings

Average hourly earnings of production or nonsupervisory workers on private nonfarm payrolls rose 1.3 percent, seasonally adjusted, in October. This gain, combined with the slight increase in average weekly hours, resulted in a 1.6-percent increase in average weekly earnings. Hourly and weekly earnings stood 8.7 percent above their levels of a year earlier.

Before adjustment for seasonality, average hourly earnings rose a nickel from September to $5.41, which, in turn, was 43 cents above the October 1976 level. Average weekly earnings rose $1.27 over the month to $195.30 and were up $15.02 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 203.1 (1967=100) in October, 1.0 percent higher than in September. The index was 7.8 percent above October a year ago. During the 12-month period ended in September, the Hourly Earnings Index in dollars of constant purchasing power rose 0.6 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 conducted by the Bureau of the Census for the Bureau of Labor Statistics. The sample consists of about 47,000 households selected to represent the U.S. civilian noninstitutional population 16 years of age 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 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 population 16 years of age and over, without duplication, since each person is classified as employed, unemployed, or not in the labor force.

The payroll survey relates only to paid wage and salary employees (regardless of age) on the payrolls of nonagricultural establishments. The household survey counts employed persons in both agriculture and in nonagricultural industries and, in addition to wage and salary workers (including private household workers), includes the self-employed, unpaid family workers, and persons "with a job but not at work" and not paid for the period absent. 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) 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).

To meet the extensive needs of data users, the Bureau regularly publishes data on a wide variety of labor market indicators—see, for example, the demographic, occupational, and industry detail in tables A-2 and A-3. 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, extending 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, school vacations, 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 90 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, current seasonal adjustment factors for unemployment and other labor force series are calculated taking into account the prior year's experience, and revised data are introduced in the release containing January data.

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 unemployment (the sum of four seasonally-adjusted age-sex components) by the civilian labor force (the sum of 12 seasonally-adjusted age-sex components). Several alternative methods for seasonally adjusting the overall unemployment rate are also used on a regular basis in order to illustrate the degree of uncertainty that arises because of the seasonal adjustment procedure. Among these alternative methods are five different age-sex adjustments,

including a concurrent adjustment and one based on stable factors and four based on other unemployment aggregations. Alternative rates for 1976 are shown in the table at the end of this note. (Current alternative rates and an explanation of the methods may be obtained from BLS upon request.)

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 revised annually, usually in conjunction with the annual benchmark adjustments (comprehensive counts of employment).

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 questionnaire and procedures. The standard error is the measure of sampling variability, that is, the variations that might occur by chance because only a sample of the population is surveyed. Tables A-E in the "Explanatory Notes" of *Employment and Earnings* provide standard errors for unemployment and other labor force categories.

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. Moreover, since the estimating procedures employ 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, usually annually. 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 1974 benchmark levels. Measures of reliability for employment estimates are provided in the "Explanatory Notes" of *Employment and Earnings*, as are the actual amounts of revisions due to benchmark adjustments (tables G-L).

Unemployment rate by alternative seasonal adjustment methods

Month	Unadjusted rate	Official Adjusted Rate	Alternative age-sex procedures					Other aggregations (all multiplicative)				Direct adjustment	Composite	Range (cols. 2-13)
			All multiplicative	All additive	Year-ahead	Concurrent	Stable 1967-73	Duration	Reasons	Total	Residual			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1976														
January	8.8	7.8	7.8	8.0	7.8	7.8	8.1	8.0	7.8	7.8	8.2	7.9	7.9	0.4
February	8.7	7.6	7.6	7.8	7.6	7.6	7.7	7.5	7.5	7.6	7.7	7.6	7.6	.3
March	8.1	7.5	7.5	7.6	7.5	7.5	7.7	7.3	7.4	7.5	7.6	7.5	7.5	.4
April	7.4	7.5	7.5	7.5	7.4	7.4	7.6	7.4	7.5	7.5	7.4	7.5	7.5	.2
May	6.7	7.3	7.4	7.2	7.2	7.2	7.5	7.2	7.4	7.5	7.2	7.5	7.3	.3
June	8.0	7.6	7.5	7.5	7.5	7.6	7.5	7.5	7.5	7.3	7.4	7.3	7.5	.3
July	7.8	7.8	7.8	7.7	7.8	7.8	7.7	7.6	7.8	7.7	7.7	7.7	7.7	.2
August	7.6	7.9	7.9	7.8	7.9	7.9	7.7	8.0	8.0	7.9	7.8	8.0	7.9	.3
September	7.4	7.8	7.8	7.7	7.8	7.8	7.6	8.0	7.9	7.8	7.8	7.8	7.8	.4
October	7.2	7.9	8.0	7.8	7.9	7.9	7.7	8.0	7.9	8.0	7.9	7.9	7.9	.3
November	7.4	8.0	8.0	7.8	8.1	8.0	7.8	8.1	8.0	8.0	7.8	8.0	8.0	.3
December	7.4	7.8	7.9	7.8	7.9	7.8	7.9	7.9	7.8	7.8	7.8	7.9	7.8	.1

Table A-1. Employment status of the noninstitutional population

[Numbers in thousands]

Employment status	Not seasonally adjusted			Seasonally adjusted					
	Oct. 1976	Sept. 1977	Oct. 1977	Oct. 1976	June 1977	July 1977	Aug. 1977	Sept. 1977	Oct. 1977
TOTAL									
Total noninstitutional population[1]	156,788	159,114	159,334	156,788	158,456	158,682	158,899	159,114	159,334
Armed Forces[1]	2,147	2,131	2,134	2,147	2,129	2,135	2,137	2,131	2,134
Civilian noninstitutional population[1]	154,642	156,982	157,201	154,642	156,327	156,547	156,761	156,982	157,201
Civilian labor force	95,530	97,684	98,451	95,302	97,641	97,305	97,697	97,868	98,102
Participation rate	61.8	62.2	62.6	61.6	62.5	62.2	62.3	62.3	62.4
Employed	88,697	91,247	92,230	87,738	90,679	90,561	90,771	91,095	91,230
Employment-population ratio[2]	56.6	57.3	57.9	56.0	57.2	57.1	57.1	57.3	57.3
Agriculture	3,447	3,326	3,408	3,310	3,338	3,213	3,252	3,215	3,272
Nonagricultural industries	85,250	87,921	88,822	84,428	87,341	87,348	87,519	87,880	87,958
Unemployed	6,833	6,437	6,221	7,564	6,962	6,744	6,926	6,773	6,872
Unemployment rate	7.2	6.6	6.3	7.9	7.1	6.9	7.1	6.9	7.0
Not in labor force	59,112	59,299	58,750	59,340	58,686	59,242	59,064	59,114	59,099
Men, 20 years and over									
Total noninstitutional population[1]	66,598	67,745	67,852	66,598	67,431	67,537	67,642	67,745	67,852
Civilian noninstitutional population[1]	64,902	66,056	66,161	64,902	65,743	65,845	65,947	66,056	66,161
Civilian labor force	51,864	52,528	52,910	51,912	52,497	52,494	52,588	52,457	52,844
Participation rate	80.0	79.5	80.0	80.0	79.9	79.7	79.7	79.4	79.9
Employed	49,215	50,374	50,610	48,684	49,859	49,794	49,854	49,884	50,043
Employment-population ratio[2]	75.8	74.4	74.6	73.1	73.9	73.7	73.7	73.6	73.8
Agriculture	2,424	2,406	2,427	2,334	2,372	2,305	2,355	2,343	2,338
Nonagricultural industries	46,791	47,969	48,182	46,350	47,487	47,489	47,499	47,541	47,705
Unemployed	2,649	2,154	2,300	3,228	2,638	2,700	2,734	2,573	2,801
Unemployment rate	5.1	4.1	4.3	6.2	5.0	5.1	5.2	4.9	5.3
Not in labor force	13,038	13,527	13,251	12,990	13,246	13,531	13,359	13,599	13,317
Women, 20 years and over									
Total noninstitutional population[1]	73,378	74,543	74,660	73,378	74,198	74,315	74,429	74,543	74,660
Civilian noninstitutional population[1]	73,288	74,444	74,561	73,288	74,101	74,217	74,332	74,444	74,561
Civilian labor force	35,046	36,382	36,549	34,444	35,675	35,667	35,723	36,201	35,931
Participation rate	47.8	48.9	49.0	47.0	48.1	48.1	48.1	48.6	48.2
Employed	32,430	33,709	34,109	31,811	33,116	33,212	33,172	33,672	33,474
Employment-population ratio[2]	43.6	45.2	45.7	43.4	44.6	44.7	44.6	45.2	44.8
Agriculture	631	529	617	553	564	525	515	492	541
Nonagricultural industries	31,799	33,180	33,493	31,258	32,552	32,687	32,657	33,180	32,933
Unemployed	2,615	2,673	2,440	2,633	2,559	2,455	2,551	2,529	2,457
Unemployment rate	7.5	7.3	6.7	7.6	7.2	6.9	7.1	7.0	6.8
Not in labor force	38,243	38,062	38,012	38,844	38,426	38,550	38,609	38,243	38,630
Both sexes, 16-19 years									
Total noninstitutional population[1]	16,812	16,825	16,822	16,812	16,827	16,830	16,828	16,825	16,822
Civilian noninstitutional population[1]	16,452	16,483	16,480	16,452	16,483	16,485	16,483	16,483	16,480
Civilian labor force	8,621	8,773	8,992	8,946	9,469	9,144	9,386	9,210	9,327
Participation rate	52.4	53.2	54.6	54.4	57.4	55.5	56.9	55.9	56.6
Employed	7,052	7,163	7,511	7,243	7,704	7,555	7,745	7,539	7,713
Employment-population ratio[2]	43.1	42.6	44.6	43.1	45.8	44.9	46.0	44.8	45.9
Agriculture	393	391	364	423	402	383	382	380	393
Nonagricultural industries	6,660	6,772	7,147	6,820	7,302	7,172	7,363	7,159	7,320
Unemployed	1,569	1,610	1,480	1,703	1,765	1,589	1,641	1,671	1,614
Unemployment rate	18.2	18.3	16.5	19.0	18.6	17.4	17.5	18.1	17.3
Not in labor force	7,831	7,710	7,488	7,506	7,014	7,341	7,097	7,273	7,153
WHITE									
Total noninstitutional population[1]	137,944	139,789	139,962	137,944	139,270	139,450	139,620	139,789	139,962
Civilian noninstitutional population[1]	136,165	138,046	138,218	136,165	137,522	137,698	137,865	138,046	138,218
Civilian labor force	84,619	86,382	87,081	84,511	86,268	85,968	86,285	86,471	86,861
Participation rate	62.1	62.6	63.0	62.1	62.7	62.4	62.6	62.6	62.8
Employed	79,133	81,394	82,307	78,384	80,813	80,752	81,010	81,214	81,540
Employment-population ratio[2]	56.6	58.2	58.8	56.8	58.0	57.9	58.0	58.1	58.3
Unemployed	5,486	4,988	4,774	6,127	5,455	5,216	5,275	5,257	5,321
Unemployment rate	6.5	5.8	5.5	7.2	6.3	6.1	6.1	6.1	6.1
Not in labor force	51,546	51,665	51,137	51,654	51,254	51,730	51,580	51,575	51,357
BLACK AND OTHER									
Total noninstitutional population[1]	18,844	19,325	19,760	18,844	19,186	19,232	19,279	19,325	19,760
Civilian noninstitutional population[1]	18,476	18,936	18,983	18,476	18,805	18,850	18,826	18,936	18,983
Civilian labor force	10,911	11,302	11,370	10,910	11,325	11,236	11,402	11,359	11,375
Participation rate	59.1	59.7	59.9	59.0	60.2	59.6	60.3	60.0	59.9
Employed	9,564	9,853	9,923	9,444	9,833	9,758	9,744	9,868	9,799
Employment-population ratio[2]	50.0	51.0	50.2	50.1	51.3	50.7	50.5	51.1	49.6
Unemployed	1,347	1,449	1,447	1,466	1,492	1,478	1,685	1,491	1,576
Unemployment rate	12.3	12.8	12.7	13.4	13.2	13.2	14.5	13.1	13.9
Not in labor force	7,565	7,634	7,613	7,566	7,480	7,614	7,494	7,577	7,608

[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).

Table A-2. Major unemployment indicators, seasonally adjusted

Selected categories	Number of unemployed persons (in thousands)		Unemployment rates					
	Oct. 1976	Oct. 1977	Oct. 1976	June 1977	July 1977	Aug. 1977	Sept. 1977	Oct. 1977
CHARACTERISTICS								
Total, 16 years and over	7,564	6,872	7.9	7.1	6.9	7.1	6.9	7.0
Men, 20 years and over	3,228	2,801	6.2	5.0	5.1	5.2	4.9	5.3
Women, 20 years and over	2,633	2,457	7.6	7.2	6.9	7.1	7.0	6.8
Both sexes, 16-19 years	1,703	1,614	19.0	18.6	17.4	17.5	18.1	17.3
White, total	6,127	5,321	7.2	6.3	6.1	6.1	6.1	6.1
Men, 20 years and over	2,635	2,148	5.7	4.5	4.6	4.5	4.3	4.5
Women, 20 years and over	2,139	1,937	7.2	6.4	6.2	6.3	6.2	6.2
Both sexes, 16-19 years	1,353	1,236	16.8	16.1	14.3	14.7	15.9	14.8
Black and other, total	1,466	1,576	13.4	13.2	13.2	14.5	13.1	13.9
Men, 20 years and over	586	644	10.9	9.6	10.1	11.7	10.4	11.7
Women, 20 years and over	530	553	11.5	11.9	10.9	12.2	11.3	11.4
Both sexes, 16-19 years	350	379	38.0	39.4	40.7	40.4	37.4	37.9
Married men, spouse present	1,756	1,487	4.4	3.4	3.4	3.5	3.4	3.7
Married women, spouse present	1,605	1,422	7.3	6.8	6.6	6.6	6.4	6.3
Women who head families	457	437	10.7	9.4	9.3	10.5	10.4	9.6
Full-time workers	6,162	5,500	7.6	6.5	6.5	6.8	6.5	6.6
Part-time workers	1,449	1,416	10.3	10.7	9.2	8.9	9.5	9.7
Unemployed 15 weeks and over[1]	2,360	1,862	2.5	1.8	1.9	1.9	1.9	1.9
Labor force time lost[2]	--	--	8.6	7.5	7.4	7.7	7.4	7.5
OCCUPATION[3]								
White-collar workers	2,108	1,994	4.6	4.2	4.0	4.2	4.2	4.1
Professional and technical	445	436	3.2	3.0	2.8	3.0	3.0	3.0
Managers and administrators, except farm	295	267	3.0	2.7	2.6	2.5	2.5	2.6
Sales workers	319	300	5.4	5.2	5.4	5.3	5.1	5.0
Clerical workers	1,049	991	6.2	5.7	5.4	5.8	6.0	5.7
Blue-collar workers	3,147	2,736	9.8	7.7	8.2	8.4	7.9	8.3
Craft and kindred workers	834	690	6.8	5.6	5.6	5.5	5.2	5.5
Operatives, except transport	1,300	1,162	11.6	9.4	10.1	10.0	10.2	10.2
Transport equipment operatives	300	240	8.3	5.7	7.5	7.6	5.7	6.5
Nonfarm laborers	713	644	14.0	10.9	10.7	12.6	11.1	12.2
Service workers	1,240	1,122	9.4	8.2	7.7	8.4	7.8	8.3
Farm workers	125	125	4.2	4.8	3.8	3.7	4.7	4.3
INDUSTRY[3]								
Nonagricultural private wage and salary workers[4]	5,649	5,050	8.2	6.9	6.8	7.0	6.9	7.1
Construction	669	549	15.1	12.6	12.1	11.5	10.4	12.2
Manufacturing	1,749	1,528	8.2	6.3	6.7	7.0	7.2	7.0
Durable goods	1,014	803	8.0	5.6	6.1	6.5	6.6	6.3
Nondurable goods	735	725	8.5	7.3	7.6	7.7	8.2	8.1
Transportation and public utilities	276	259	5.6	4.1	4.7	4.9	5.0	5.0
Wholesale and retail trade	1,582	1,473	8.9	7.9	7.7	8.3	7.6	8.1
Finance and service industries	1,322	1,217	6.7	6.0	5.7	5.6	5.7	5.9
Government workers	695	658	4.4	4.2	3.9	4.4	4.0	4.1
Agricultural wage and salary workers	170	163	11.5	11.0	9.7	9.3	10.4	10.4
VETERAN STATUS								
Male Vietnam-era veterans:[5]								
20 to 34 years	557	491	8.7	7.6	7.9	7.8	7.7	7.5
20 to 24 years	181	148	19.0	18.1	16.3	17.4	20.1	16.0
25 to 29 years	239	194	7.9	7.1	7.2	6.3	6.1	6.9
30 to 34 years	137	149	5.7	4.5	5.8	6.0	5.1	5.3
Male nonveterans:								
20 to 34 years	1,368	1,213	8.9	6.9	7.6	7.9	7.0	7.5
20 to 24 years	809	659	11.9	8.9	9.9	10.5	9.1	9.4
25 to 29 years	373	348	7.6	6.3	6.8	6.6	5.9	6.8
30 to 34 years	186	206	5.1	4.0	4.6	4.9	4.8	5.2

[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 industry covers only unemployed wage and salary workers.

[4] Includes mining, not shown separately.

[5] Vietnam-era veterans are those who served between August 5, 1964, and May 7, 1975.

Table A-3. Selected employment indicators

[In thousands]

Selected categories	Not seasonally adjusted		Seasonally adjusted					
	Oct. 1976	Oct. 1977	Oct. 1976	June 1977	July 1977	Aug. 1977	Sept. 1977	Oct. 1977
CHARACTERISTICS								
Total employed, 16 years and over	88,698	92,230	87,738	90,679	90,561	90,771	91,095	91,230
Men	52,971	54,685	52,576	53,987	53,900	53,958	53,966	54,266
Women	35,727	37,545	35,162	36,692	36,661	36,813	37,129	36,964
Married men, spouse present	38,426	38,808	37,989	38,582	38,434	38,316	38,358	38,386
Married women, spouse present	20,993	21,730	20,384	20,831	20,846	20,814	21,232	21,097
OCCUPATION								
White-collar workers	44,388	46,332	44,207	44,798	45,105	45,114	45,437	46,147
Professional and technical	13,612	14,251	13,427	13,638	13,863	13,720	13,777	14,054
Managers and administrators, except farm	9,463	9,981	9,436	9,570	9,583	9,688	9,777	9,951
Sales workers	5,592	5,727	5,551	5,673	5,716	5,722	5,748	5,687
Clerical workers	15,721	16,373	15,793	15,917	15,943	15,984	16,135	16,455
Blue-collar workers	29,355	30,536	28,921	30,432	30,063	30,231	30,282	30,084
Craft and kindred workers	11,486	11,969	11,352	11,891	11,887	11,931	11,974	11,827
Operatives, except transport	10,131	10,459	9,885	10,378	10,270	10,242	10,211	10,204
Transport equipment operatives	3,362	3,499	3,297	3,551	3,397	3,462	3,541	3,430
Nonfarm laborers	4,376	4,609	4,387	4,612	4,509	4,596	4,556	4,623
Service workers	12,031	12,485	11,972	12,697	12,460	12,591	12,604	12,420
Farm workers	2,925	2,878	2,829	2,838	2,743	2,778	2,676	2,783
MAJOR INDUSTRY AND CLASS OF WORKER								
Agriculture:								
Wage and salary workers	1,370	1,465	1,310	1,381	1,271	1,331	1,350	1,402
Self-employed workers	1,698	1,609	1,671	1,595	1,561	1,604	1,566	1,584
Unpaid family workers	379	334	343	378	363	315	275	303
Nonagricultural industries:								
Wage and salary workers	79,147	82,309	78,498	80,814	80,738	80,951	81,341	81,651
Government	15,063	15,556	14,998	14,961	15,131	15,282	15,296	15,494
Private industries	64,084	66,753	63,500	65,853	65,607	65,669	66,045	66,157
Private households	1,423	1,397	1,377	1,388	1,445	1,401	1,409	1,352
Other industries	62,661	65,356	62,123	64,465	64,162	64,268	64,636	64,805
Self-employed workers	5,658	6,069	5,632	5,997	5,896	6,151	6,072	6,039
Unpaid family workers	445	444	448	518	523	469	504	448
PERSONS AT WORK [1]								
Nonagricultural industries	81,460	84,744	79,469	81,618	82,572	82,613	82,799	82,626
Full-time schedules	66,378	70,282	64,955	67,126	67,867	67,755	67,706	67,646
Part time for economic reasons	3,105	2,970	3,448	3,368	3,371	3,199	3,315	3,298
Usually work full time	1,229	1,148	1,339	1,341	1,440	1,196	1,246	1,251
Usually work part time	1,876	1,822	2,109	2,027	1,931	2,003	2,069	2,047
Part time for noneconomic reasons	11,977	12,640	11,066	11,124	11,334	11,659	11,778	11,682

[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]

Weeks of unemployment	Not seasonally adjusted		Seasonally adjusted					
	Oct. 1976	Oct. 1977	Oct. 1976	June 1977	July 1977	Aug. 1977	Sept. 1977	Oct. 1977
DURATION								
Less than 5 weeks	2,796	2,737	2,952	3,058	2,830	2,870	2,789	2,890
5 to 14 weeks	2,075	1,936	2,367	2,023	1,969	2,338	2,236	2,208
15 weeks and over	1,962	1,547	2,360	1,737	1,834	1,808	1,866	1,862
15 to 26 weeks	866	729	1,094	798	917	966	940	916
27 weeks and over	1,096	818	1,266	939	917	842	926	946
Average (mean) duration, in weeks	14.7	13.3	15.3	14.4	14.1	13.5	14.2	13.8
PERCENT DISTRIBUTION								
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than 5 weeks	40.9	44.0	38.4	44.9	42.7	40.9	40.5	41.5
5 to 14 weeks	30.4	31.1	30.8	29.7	29.7	33.3	32.4	31.7
15 weeks and over	28.7	24.9	30.7	25.5	27.6	25.8	27.1	26.8
15 to 26 weeks	12.7	11.7	14.2	11.7	13.8	13.8	13.6	13.2
27 weeks and over	16.0	13.2	16.5	13.8	13.8	12.0	13.4	13.6

Table A-5. Reasons for unemployment

[Numbers in thousands]

Reasons	Not seasonally adjusted		Seasonally adjusted					
	Oct. 1976	Oct. 1977	Oct. 1976	June 1977	July 1977	Aug. 1977	Sept. 1977	Oct. 1977
NUMBER OF UNEMPLOYED								
Lost last job	3,015	2,521	3,756	2,927	3,075	3,289	3,144	3,139
On layoff	706	604	1,107	827	919	1,018	928	947
Other job losers	2,309	1,917	2,649	2,100	2,156	2,271	2,216	2,192
Left last job	1,005	952	936	954	841	910	873	886
Reentered labor force	1,952	1,940	1,927	1,889	1,822	1,857	1,856	1,915
Seeking first job	861	807	894	1,077	974	1,000	935	840
PERCENT DISTRIBUTION								
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Job losers	44.1	40.5	50.0	42.7	45.8	46.6	46.2	46.3
On layoff	10.3	9.7	14.7	12.1	13.7	14.4	13.6	14.0
Other job losers	33.8	30.8	35.3	30.7	32.1	32.2	32.5	32.3
Job leavers	14.7	15.3	12.5	13.9	12.5	12.9	12.8	13.1
Reentrants	28.6	31.2	25.6	27.6	27.1	26.3	27.3	28.2
New entrants	12.6	13.0	11.9	15.7	14.5	14.2	13.7	12.4
UNEMPLOYED AS A PERCENT OF THE CIVILIAN LABOR FORCE								
Job losers	3.1	2.5	3.9	3.0	3.2	3.4	3.2	3.2
Job leavers	1.1	1.0	1.0	1.0	.9	.9	.9	.9
Reentrants	2.0	2.0	2.0	1.9	1.9	1.9	1.9	2.0
New entrants	.9	.8	.9	1.1	1.0	1.0	1.0	.9

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

Sex and age	Number of unemployed persons (in thousands)		Unemployment rates					
	Oct. 1976	Oct. 1977	Oct. 1976	June 1977	July 1977	Aug. 1977	Sept. 1977	Oct. 1977
Total, 16 years and over	7,564	6,872	7.9	7.1	6.9	7.1	6.9	7.0
16 to 19 years	1,703	1,614	19.0	18.6	17.4	17.5	18.1	17.3
16 to 17 years	776	732	21.3	21.3	19.9	20.7	19.8	18.8
18 to 19 years	930	886	17.5	16.5	15.3	15.6	16.9	16.3
20 to 24 years	1,767	1,541	12.6	10.5	10.6	11.1	10.7	10.6
25 years and over	4,106	3,731	5.7	5.0	5.0	5.0	4.8	5.0
25 to 54 years	3,470	3,123	6.0	5.3	5.2	5.3	4.9	5.2
55 years and over	652	617	4.6	3.8	3.9	3.9	4.2	4.2
Men, 16 years and over	4,178	3,647	7.4	6.2	6.2	6.3	6.0	6.3
16 to 19 years	950	846	19.6	18.6	16.9	17.6	17.5	16.7
16 to 17 years	455	411	22.3	22.7	20.2	21.7	19.2	18.8
18 to 19 years	496	437	17.7	15.5	14.7	14.8	16.0	15.1
20 to 24 years	990	807	12.7	9.9	10.6	11.3	10.5	10.2
25 years and over	2,236	1,995	5.1	4.1	4.2	4.2	3.9	4.4
25 to 54 years	1,862	1,627	5.3	4.3	4.3	4.4	3.8	4.5
55 years and over	385	373	4.4	3.3	3.6	3.5	3.9	4.1
Women, 16 years and over	3,386	3,225	8.8	8.4	8.0	8.3	8.2	8.0
16 to 19 years	753	768	18.3	18.7	17.9	17.4	18.9	18.0
16 to 17 years	321	321	20.1	19.7	19.5	19.4	20.5	18.7
18 to 19 years	434	449	17.3	17.5	16.0	16.4	17.9	17.6
20 to 24 years	777	734	12.4	11.0	10.5	10.8	10.9	11.2
25 years and over	1,870	1,736	6.6	6.3	6.2	6.2	6.1	5.9
25 to 54 years	1,608	1,496	7.1	6.7	6.4	6.6	6.4	6.3
55 years and over	267	244	4.9	4.6	4.4	4.6	4.5	4.4

HOUSEHOLD DATA

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

[Percent]

Measures	Quarterly averages					Monthly data		
	1976		1977			1977		
	III	IV	I	II	III	Aug.	Sept.	Oct.
U-1—Persons unemployed 15 weeks or longer as a percent of the civilian labor force	2.4	2.6	2.2	1.8	1.9	1.9	1.9	1.9
U-2—Job losers as a percent of the civilian labor force	3.9	3.9	3.4	3.1	3.2	3.4	3.2	3.2
U-3—Unemployed household heads as a percent of the household head labor force	5.3	5.3	4.8	4.4	4.5	4.6	4.5	4.6
U-4—Unemployed full-time jobseekers as a percent of the full-time labor force	7.4	7.5	6.8	6.5	6.6	6.8	6.5	6.6
U-5—Total unemployed as a percent of the civilian labor force (official measure)	7.8	7.9	7.4	7.0	7.0	7.1	6.9	7.0
U-6—Total full-time jobseekers plus ½ part-time jobseekers plus ½ total on part time for economic reasons as a percent of the civilian labor force less ½ of the part-time labor force	9.5	9.7	9.0	8.6	8.6	8.7	8.6	8.7
U-7—Total full-time jobseekers plus ½ part-time jobseekers plus ½ total on part time for economic reasons plus discouraged workers as a percent of the civilian labor force plus discouraged workers less ½ of the part-time labor force	10.3	10.7	9.9	9.7	9.7	N.A.	N.A.	N.A.

N.A.= not available.

Table B-1. Employees on nonagricultural payrolls, by industry

[In thousands]

Industry	Not seasonally adjusted				Seasonally adjusted					
	Oct. 1976	Aug. 1977	Sept. 1977[p]	Oct. 1977[p]	Oct. 1976	June 1977	July 1977	Aug. 1977	Sept. 1977[p]	Oct. 1977[p]
TOTAL	80,572	82,397	83,158	83,711	79,819	82,121	82,366	82,480	82,807	82,926
GOODS-PRODUCING	23,804	24,800	24,964	24,938	23,323	24,353	24,399	24,316	24,400	24,432
MINING	804	833	857	858	800	855	834	818	851	854
CONTRACT CONSTRUCTION	3,815	4,204	4,169	4,196	3,582	3,876	3,917	3,889	3,896	3,940
MANUFACTURING	19,185	19,763	19,938	19,884	18,941	19,622	19,648	19,609	19,653	19,638
Production workers	13,807	14,217	14,397	14,327	13,575	14,144	14,139	14,088	14,131	14,092
DURABLE GOODS	11,131	11,522	11,688	11,677	11,018	11,491	11,530	11,536	11,577	11,561
Production workers	7,941	8,230	8,392	8,368	7,833	8,240	8,261	8,258	8,295	8,256
Ordnance and accessories	156.0	155.9	155.8	151.4	155	157	156	155	155	151
Lumber and wood products	622.5	666.7	664.7	661.5	613	637	639	641	650	651
Furniture and fixtures	498.4	513.2	518.3	524.7	491	510	513	507	514	516
Stone, clay, and glass products	641.8	673.5	673.0	672.1	630	659	660	656	659	660
Primary metal industries	1,192.6	1,206.3	1,213.9	1,196.8	1,194	1,218	1,209	1,206	1,210	1,198
Fabricated metal products	1,406.5	1,464.0	1,482.4	1,494.2	1,387	1,452	1,458	1,461	1,465	1,474
Machinery, except electrical	2,072.2	2,192.7	2,219.3	2,226.8	2,078	2,168	2,202	2,215	2,224	2,234
Electrical equipment	1,868.9	1,947.2	1,972.4	1,979.2	1,849	1,933	1,941	1,953	1,953	1,958
Transportation equipment	1,722.1	1,749.4	1,829.9	1,809.1	1,695	1,809	1,810	1,802	1,808	1,781
Instruments and related products	514.0	527.6	530.5	531.9	511	528	527	525	528	529
Miscellaneous manufacturing	435.8	425.8	427.6	428.9	415	420	415	414	411	409
NONDURABLE GOODS	8,054	8,241	8,250	8,207	7,923	8,131	8,118	8,073	8,076	8,077
Production workers	5,866	5,987	6,005	5,959	5,742	5,904	5,878	5,830	5,836	5,836
Food and kindred products	1,777.9	1,830.0	1,836.5	1,775.3	1,706	1,737	1,726	1,710	1,710	1,704
Tobacco manufactures	84.2	73.7	75.8	76.8	76	72	72	68	68	69
Textile mill products	964.8	990.0	988.7	991.1	961	987	992	984	987	987
Apparel and other textile products	1,295.7	1,295.2	1,303.9	1,309.0	1,273	1,306	1,293	1,287	1,286	1,286
Paper and allied products	681.9	711.0	707.6	708.0	677	703	705	705	703	703
Printing and publishing	1,090.4	1,112.0	1,116.6	1,122.2	1,087	1,111	1,115	1,115	1,118	1,119
Chemicals and allied products	1,037.5	1,070.6	1,061.8	1,057.3	1,032	1,060	1,064	1,062	1,057	1,052
Petroleum and coal products	204.6	215.0	213.3	214.4	202	210	210	209	210	212
Rubber and plastics products, nec.	652.6	678.3	683.2	685.9	645	680	684	673	674	678
Leather and leather products	264.2	265.6	262.8	266.6	264	265	257	260	263	267
SERVICE-PRODUCING	56,768	57,597	58,194	58,773	56,496	57,768	57,967	58,164	58,407	58,494
TRANSPORTATION AND PUBLIC UTILITIES	4,538	4,604	4,645	4,642	4,506	4,579	4,572	4,577	4,613	4,610
WHOLESALE AND RETAIL TRADE	17,922	18,352	18,457	18,530	17,824	18,247	18,294	18,363	18,425	18,429
WHOLESALE TRADE	4,322	4,429	4,421	4,440	4,292	4,383	4,394	4,398	4,403	4,409
RETAIL TRADE	13,600	13,923	14,036	14,090	13,532	13,864	13,900	13,965	14,022	14,020
FINANCE, INSURANCE, AND REAL ESTATE	4,355	4,578	4,550	4,559	4,359	4,489	4,506	4,519	4,541	4,564
SERVICES	14,849	15,587	15,492	15,554	14,819	15,245	15,372	15,463	15,477	15,523
GOVERNMENT	15,104	14,476	15,050	15,488	14,988	14,208	15,223	15,242	15,351	15,368
FEDERAL	2,711	2,757	2,717	2,709	2,730	2,735	2,721	2,735	2,728	2,728
STATE AND LOCAL	12,393	11,719	12,333	12,779	12,258	12,473	12,502	12,507	12,623	12,640

[p]preliminary.

Table B-2. Average weekly hours of production or nonsupervisory workers[1] on private nonagricultural payrolls, by industry

Industry	Not seasonally adjusted				Seasonally adjusted					
	Oct. 1976	Aug. 1977	Sept. 1977[p]	Oct. 1977[p]	Oct. 1976	June 1977	July 1977	Aug. 1977	Sept. 1977[p]	Oct. 1977[p]
TOTAL PRIVATE	36.2	36.5	36.2	36.1	36.1	36.2	36.1	36.0	36.0	36.1
MINING	43.8	44.2	45.2	45.9	43.3	44.0	44.8	44.2	44.9	45.4
CONTRACT CONSTRUCTION	38.2	37.4	37.1	37.4	37.3	36.8	36.8	36.3	36.2	36.6
MANUFACTURING	40.0	40.3	40.5	40.5	39.9	40.5	40.3	40.3	40.2	40.3
Overtime hours	3.2	3.5	3.7	3.7	2.9	3.4	3.4	3.3	3.3	3.5
DURABLE GOODS	40.6	40.8	41.2	41.2	40.5	41.2	41.0	41.0	40.9	41.0
Overtime hours	3.2	3.6	3.9	3.9	3.0	3.7	3.6	3.5	3.5	3.7
Ordnance and accessories	40.6	39.8	40.6	40.2	40.6	40.9	40.4	40.2	40.5	40.2
Lumber and wood products	40.6	40.1	40.3	40.4	40.3	39.9	40.4	39.7	39.9	40.1
Furniture and fixtures	38.8	39.5	39.7	40.0	38.4	38.8	38.9	39.0	39.1	39.6
Stone, clay, and glass products	41.8	41.8	41.4	41.2	41.4	41.7	41.4	41.4	40.9	40.8
Primary metal industries	40.1	40.8	41.3	41.2	40.2	41.6	40.9	41.1	40.8	41.3
Fabricated metal products	40.6	41.0	41.3	41.2	40.4	41.3	41.0	41.0	41.0	41.0
Machinery, except electrical	41.2	41.5	42.0	41.9	41.2	41.9	41.9	41.9	41.8	41.9
Electrical equipment	40.2	40.2	40.5	40.4	40.0	40.4	40.2	40.3	40.2	40.2
Transportation equipment	41.4	41.4	42.5	42.5	41.2	42.9	42.2	42.5	42.1	42.3
Instruments and related products	40.3	40.1	40.6	40.6	40.3	40.7	40.4	40.3	40.3	40.6
Miscellaneous manufacturing	38.9	38.8	39.2	39.3	38.7	39.2	38.7	38.8	39.0	39.1
NONDURABLE GOODS	39.2	39.5	39.6	39.5	39.1	39.6	39.3	39.2	39.2	39.3
Overtime hours	3.0	3.3	3.4	3.3	2.8	3.1	3.0	3.1	3.0	3.1
Food and kindred products	40.4	40.3	40.2	39.3	40.3	40.0	39.7	39.7	39.5	39.2
Tobacco manufactures	38.7	38.1	39.4	39.7	37.5	39.0	37.4	37.6	38.7	38.4
Textile mill products	39.5	40.4	40.6	40.6	39.4	40.5	40.4	40.1	40.2	40.5
Apparel and other textile products	35.3	35.8	35.4	35.8	35.0	35.9	35.3	35.4	35.1	35.5
Paper and allied products	42.3	42.7	43.0	42.8	42.1	43.1	42.7	42.4	42.6	42.6
Printing and publishing	37.6	37.9	38.3	38.0	37.5	37.7	37.8	37.7	37.9	37.9
Chemicals and allied products	41.6	41.6	41.7	41.8	41.6	41.9	41.7	41.8	41.6	41.8
Petroleum and coal products	42.5	42.7	43.4	43.5	42.0	43.0	42.9	42.8	42.8	43.0
Rubber and plastics products, nec	44.1	40.7	41.0	41.0	41.1	41.1	40.6	40.6	40.6	41.0
Leather and leather products	36.3	37.4	37.3	37.9	36.4	37.2	36.8	37.2	37.5	38.1
TRANSPORTATION AND PUBLIC UTILITIES	40.0	40.4	40.2	40.0	39.8	40.1	39.9	40.0	40.0	39.8
WHOLESALE AND RETAIL TRADE	33.3	34.0	33.2	33.0	33.5	33.3	33.3	33.2	33.2	33.2
WHOLESALE TRADE	38.7	38.9	38.9	39.0	38.7	38.8	38.8	38.8	38.8	39.0
RETAIL TRADE	31.8	32.6	31.6	31.3	32.0	31.7	31.7	31.6	31.6	31.5
FINANCE, INSURANCE, AND REAL ESTATE	36.7	36.8	36.6	36.7	36.7	36.6	36.6	36.7	36.7	36.7
SERVICES	33.5	33.7	33.3	33.3	33.6	33.3	33.2	33.2	33.3	33.4

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

[p] preliminary.

Table B-3. Average hourly and weekly earnings of production or nonsupervisory workers[1] on private nonagricultural payrolls, by industry

Industry	Average hourly earnings				Average weekly earnings			
	Oct. 1976	Aug. 1977	Sept. 1977[p]	Oct. 1977[p]	Oct. 1976	Aug. 1977	Sept. 1977[p]	Oct. 1977[p]
TOTAL PRIVATE	$4.98	$5.26	$5.36	$5.41	$180.28	$191.99	$194.03	$195.30
Seasonally adjusted	4.95	5.28	5.31	5.38	178.70	190.08	191.16	194.22
MINING	6.56	6.86	7.06	7.11	287.33	303.21	319.11	326.35
CONTRACT CONSTRUCTION	7.85	8.06	8.20	8.22	299.87	301.44	304.22	307.43
MANUFACTURING	5.28	5.65	5.74	5.78	211.20	227.70	232.47	234.09
DURABLE GOODS	5.62	6.03	6.14	6.19	228.17	246.02	252.97	255.03
Ordnance and accessories	5.89	6.30	6.38	6.29	239.13	250.74	259.03	252.86
Lumber and wood products	4.87	5.13	5.20	5.19	197.72	205.71	209.56	209.68
Furniture and fixtures	4.06	4.35	4.39	4.40	157.53	171.83	174.28	176.00
Stone, clay, and glass products	5.43	5.84	5.87	5.89	226.97	244.11	243.02	242.67
Primary metal industries	6.90	7.60	7.71	7.75	276.69	310.08	318.42	319.30
Fabricated metal products	5.49	5.87	5.95	6.00	222.89	240.67	245.74	247.20
Machinery, except electrical	5.83	6.21	6.33	6.40	240.20	257.72	265.86	268.16
Electrical equipment	5.03	5.40	5.46	5.47	202.21	217.08	221.13	220.99
Transportation equipment	6.58	7.11	7.27	7.46	272.41	294.35	308.98	317.05
Instruments and related products	4.95	5.21	5.28	5.27	199.49	208.92	214.37	213.96
Miscellaneous manufacturing	4.06	4.33	4.38	4.40	157.93	168.00	171.70	172.92
NONDURABLE GOODS	4.80	5.11	5.17	5.18	188.16	201.85	204.73	204.61
Food and kindred products	5.04	5.36	5.42	5.45	203.62	216.01	217.88	214.19
Tobacco manufactures	4.69	5.43	5.35	5.25	181.50	206.88	210.79	208.43
Textile mill products	3.79	4.05	4.08	4.08	149.71	163.62	165.65	165.65
Apparel and other textile products	3.49	3.62	3.68	3.71	123.20	129.60	130.27	132.82
Paper and allied products	5.57	6.00	6.06	6.08	235.61	256.20	260.58	260.22
Printing and publishing	5.77	6.15	6.20	6.20	216.95	233.09	237.46	235.60
Chemicals and allied products	6.04	6.45	6.52	6.56	251.26	268.32	271.88	274.21
Petroleum and coal products	7.20	7.73	7.77	7.79	306.00	330.07	337.22	338.87
Rubber and plastics products, nec	4.86	5.14	5.18	5.21	199.75	209.20	212.38	213.61
Leather and leather products	3.47	3.62	3.67	3.68	125.96	135.39	136.89	139.47
TRANSPORTATION AND PUBLIC UTILITIES	6.63	6.99	7.10	7.15	265.20	282.40	285.42	286.00
WHOLESALE AND RETAIL TRADE	4.06	4.28	4.34	4.39	135.20	145.52	144.09	144.87
WHOLESALE TRADE	5.28	5.56	5.64	5.71	204.34	216.28	219.40	222.69
RETAIL TRADE	3.63	3.83	3.88	3.91	115.43	124.86	122.61	122.38
FINANCE, INSURANCE, AND REAL ESTATE	4.41	4.60	4.63	4.71	161.85	169.28	169.46	172.86
SERVICES	4.44	4.68	4.79	4.85	148.74	157.72	159.51	161.51

[1] See footnote 1, table B-2.
[p] preliminary.

ESTABLISHMENT DATA

Table B-4. Hourly earnings index for production or nonsupervisory workers[1] on private nonagricultural payrolls, by industry division, seasonally adjusted

[1967=100]

Industry	Oct. 1976	May 1977	June 1977	July 1977	Aug. 1977	Sept. P 1977	Oct. P 1977	Percent change from	
								Oct. 1976-Oct. 1977	Sept. 1977-Oct. 1977
TOTAL PRIVATE NONFARM:									
Current dollars	188.4	196.5	197.5	199.5	200.0	201.0	203.1	7.8	1.0
Constant (1967) dollars	108.9	108.6	108.6	109.3	109.2	109.4	N.A.	(2)	(3)
MINING	205.5	213.1	215.4	216.9	217.7	219.1	222.4	8.2	1.5
CONTRACT CONSTRUCTION	187.9	193.1	195.1	196.3	195.8	195.7	196.9	4.8	.6
MANUFACTURING	188.4	196.8	198.5	200.5	201.4	202.7	204.2	8.4	.7
TRANSPORTATION AND PUBLIC UTILITIES	202.4	210.1	210.5	214.2	212.8	215.2	216.8	7.1	.7
WHOLESALE AND RETAIL TRADE	182.1	190.7	191.1	193.0	193.2	194.4	196.4	7.9	1.1
FINANCE, INSURANCE, AND REAL ESTATE	173.5	179.0	177.2	180.3	180.9	181.3	185.0	6.6	2.0
SERVICES	191.3	200.7	201.8	203.3	204.8	205.1	208.7	9.1	1.8

[1] See footnote 1, table B-2.

2 Percent change was 0.6 from September 1976 to September 1977, the latest month available.

3 Percent change was 0.2 from August 1977 to September 1977, the latest month available.

N.A. = not available.

P=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 man-hours of production or nonsupervisory workers[1] on private nonagricultural payrolls, by industry, seasonally adjusted

[1967 = 100]

Industry division and group	1976			1977									
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.P	Oct.P
TOTAL	112.2	112.8	113.3	112.3	114.2	115.2	115.6	116.1	115.8	115.7	115.6	116.0	116.2
GOODS-PRODUCING	96.0	97.2	96.9	95.2	98.3	100.0	100.9	101.7	101.8	101.4	100.6	100.9	101.4
MINING	131.1	132.6	134.0	130.7	134.6	141.5	142.2	140.2	141.8	139.9	134.7	143.5	145.1
CONTRACT CONSTRUCTION	104.2	105.7	104.3	96.4	105.9	108.1	112.0	112.7	111.3	112.7	110.1	110.1	112.6
MANUFACTURING	93.2	94.5	94.4	93.8	95.7	97.1	97.5	98.5	98.8	98.1	97.7	97.8	97.9
DURABLE GOODS	92.0	93.8	93.6	93.2	94.8	96.8	96.8	98.1	98.7	98.3	98.3	98.5	98.3
Ordnance and accessories	38.5	38.5	39.5	39.0	39.1	38.5	40.8	41.3	41.1	40.0	39.8	39.0	36.0
Lumber and wood products	99.4	100.8	101.9	101.1	103.0	103.4	104.1	104.1	103.8	105.3	103.9	105.9	106.4
Furniture and fixtures	102.2	102.8	103.5	98.5	102.7	105.3	106.0	107.4	107.7	108.2	106.9	109.3	110.9
Stone, clay, and glass products	99.7	100.2	99.1	96.1	97.1	101.5	104.1	104.7	105.7	105.1	104.1	103.4	103.0
Primary metal industries	86.2	85.7	85.0	84.8	85.5	88.5	90.0	91.1	91.1	89.0	88.9	88.8	88.5
Fabricated metal products	96.5	98.1	98.1	97.6	100.0	101.6	101.0	103.1	104.2	103.6	103.6	104.0	105.0
Machinery, except electrical	94.0	96.7	96.0	95.7	97.7	98.6	98.3	100.5	101.2	103.3	103.9	104.1	104.4
Electrical equipment and supplies	92.1	93.4	93.1	91.7	95.5	95.9	96.1	97.3	97.9	97.4	98.5	98.0	98.4
Transportation equipment	86.1	91.5	90.6	93.3	91.3	96.7	94.8	96.2	96.9	95.2	95.8	95.3	93.3
Instruments and related products	107.9	108.5	110.4	108.9	112.4	111.6	111.1	112.3	113.2	112.3	111.0	112.0	113.2
Miscellaneous manufacturing, Ind.	92.0	92.1	91.6	93.1	96.8	96.0	95.1	95.0	94.3	91.4	91.0	91.2	90.3
NONDURABLE GOODS	95.0	95.4	95.5	94.7	97.1	97.6	98.5	98.9	98.9	97.8	96.9	96.9	97.2
Food and kindred products	96.2	96.6	95.5	95.1	97.5	97.9	98.8	97.2	97.5	95.9	94.5	94.0	93.0
Tobacco manufactures	83.0	81.6	81.6	76.1	83.0	75.5	80.7	77.2	79.4	74.9	72.6	74.8	75.5
Textile mill products	95.0	95.6	96.1	95.4	97.9	99.5	99.7	101.1	100.2	100.5	98.8	99.5	100.2
Apparel and other textile products	85.7	86.1	86.3	84.1	88.0	87.9	87.3	89.4	90.4	87.6	87.6	86.8	87.7
Paper and allied products	95.7	97.0	97.2	96.2	98.0	98.3	100.8	101.0	101.3	100.3	99.4	100.1	99.9
Printing and publishing	93.4	93.6	93.7	93.0	94.8	94.3	94.9	95.4	95.3	95.6	95.1	95.6	96.0
Chemicals and allied products	99.4	100.0	100.0	100.4	101.8	102.2	103.5	103.7	103.7	103.7	103.6	102.4	102.4
Petroleum and coal products	112.5	113.1	114.7	115.0	114.7	118.7	120.5	120.2	121.3	120.2	120.4	120.8	123.1
Rubber and plastics products, nec	125.6	125.7	127.6	127.7	129.6	131.7	134.7	135.8	133.9	132.7	129.5	130.0	131.5
Leather and leather products	71.0	70.4	70.5	69.1	71.9	71.9	73.9	73.9	72.9	70.2	71.3	72.5	74.6
SERVICE-PRODUCING	123.5	123.5	124.6	124.1	125.3	125.8	125.8	126.6	125.4	125.7	126.0	126.0	126.5
TRANSPORTATION AND PUBLIC UTILITIES	102.0	103.2	105.0	102.7	104.4	104.2	103.9	104.4	104.0	103.1	103.4	103.8	103.1
WHOLESALE AND RETAIL TRADE	119.3	118.9	120.0	119.1	120.7	121.5	121.7	121.7	121.1	121.4	121.4	121.8	121.7
WHOLESALE TRADE	114.8	114.8	114.8	115.4	117.0	116.9	117.8	117.3	117.3	117.3	117.4	117.6	118.3
RETAIL TRADE	121.0	120.4	122.0	120.4	122.1	123.2	123.1	123.3	122.5	122.9	122.9	123.3	123.0
FINANCE, INSURANCE, AND REAL ESTATE	128.3	129.1	129.8	130.6	130.2	131.1	131.1	131.6	131.5	132.2	132.6	133.4	133.9
SERVICES	137.6	137.7	138.4	138.8	139.7	140.0	140.1	140.2	139.5	140.0	140.6	141.2	141.8

[1] See footnote 1, table B-2.

P=preliminary.

Table B-6. Indexes of diffusion: Percent of industries in which employment[1] increased

Year and month	Over 1-month span	Over 3-month span	Over 6-month span	Over 12-month span
1974				
January	58.7	61.6	64.8	63.1
February	55.8	55.2	56.4	59.6
March	48.0	54.7	54.7	54.9
April	54.7	52.3	51.5	50.0
May	54.7	57.0	50.3	40.1
June	54.4	50.9	44.5	28.2
July	49.1	44.2	35.8	26.7
August	42.2	36.0	32.0	22.1
September	32.6	35.5	21.8	20.6
October	35.5	26.2	15.7	18.6
November	19.8	21.8	16.0	16.6
December	19.8	12.8	13.7	14.0
1975				
January	16.9	12.5	13.7	16.3
February	16.9	14.0	12.8	17.4
March	27.3	22.7	18.9	17.2
April	44.2	34.6	29.1	20.3
May	51.2	43.6	40.7	25.6
June	39.8	47.7	59.0	40.1
July	57.3	55.5	63.4	50.3
August	72.4	75.0	66.6	61.9
September	81.4	78.8	72.4	71.5
October	64.0	70.6	78.8	75.9
November	59.6	69.2	79.4	79.1
December	69.2	75.0	77.6	81.4
1976				
January	76.7	82.0	82.8	84.6
February	74.4	84.3	83.1	82.8
March	77.9	84.9	77.0	79.4
April	77.9	81.1	77.0	73.5
May	63.4	70.6	71.5	79.7
June	47.1	57.0	70.9	79.4
July	52.9	47.4	55.2	75.3
August	49.1	65.1	55.2	74.1
September	68.9	54.9	61.9	78.2
October	39.0	59.9	70.1	76.5
November	64.2	53.8	69.8	75.0
December	68.3	75.9	76.7	74.7
1977				
January	71.5	76.7	88.4	75.9
February	61.6	84.6	86.6	75.6
March	79.7	86.0	83.7	76.7p
April	79.1	83.7	79.4	81.1p
May	68.9	71.5	74.1	
June	57.8	61.6	68.3p	
July	62.5	52.0	65.1p	
August	48.0	59.6p		
September	62.8p	62.5p		
October	63.1p			
November				
December				

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

Senator PROXMIRE. Thank you very much, Commissioner Shiskin. Mrs. Slater.

STATEMENT OF COURTENAY M. SLATER, CHIEF ECONOMIST, DEPARTMENT OF COMMERCE, ACCOMPANIED BY NORMAN FRUMKIN, ECONOMIST, BUREAU OF ECONOMIC ANALYSIS

Mrs. SLATER. Thank you very much. I am very pleased to be here. I have with me Mr. Norman Frumkin from the Bureau of Economic Analysis. Mr. Frumkin has been closely involved in preparing the Creamer report, which is one of the things we are going to discuss. I have a rather long prepared statement.

Senator PROXMIRE. We would appreciate it if you would summarize it if possible, and we will have your entire prepared statement printed in full in the record.

Mrs. SLATER. I am pleased to be here this morning to make whatever contribution I can to your continuing examination of Federal statistical programs. Over the years, the Joint Economic Committee has played a crucial role inthe evolution of the statistical system. It is most important that you continue to do so.

I chose the word "evolution" very carefully. The statistical system cannot simply be "created," "organized," or "reorganized," and then left to function routinely. Our social and economic data base must respond continuously to changing public needs.

The present moment is one at which especially rapid response is being demanded of the statistical system. The demand for local area data to be used for determining the allocation of Federal funds is the most obvious and often discussed of these current needs. It may well be the most important. But demands for better price data, data on corporate activity by line of business, energy data, inventory data, export data and numerous other data improvements are pressing and refuse to be ignored.

These demands must be met within the constraints of the needs to rigorously protect the confidentiality of individual responses and to minimize paperwork and respondent burden, not to mention the necessity to stay within the limits of available budgetary resources.

This committee, with its unique ability to take a broad overview, can be of great help in determining priorities for the statistical programs and in advising us on how to meet those priorities in a timely and efficient manner.

ORGANIZATIONAL CHANGES

Congressman Bolling's letter asked me to discuss the transfer of statistical policy functions from the Office of Management and Budget to the Department of Commerce. I am pleased to do so since I believe this transfer will have a constructive impact on the development of a more integrated Federal statistical program.

The chief statutory basis for statistical policy development is section 103 of the Budget and Accounting Procedures Act of 1950, which authorizes and directs the President "to develop programs and to issue regulations and orders for the improved gathering, compiling, analyzing, publishing, and disseminating of statistical information for any purpose by the various agencies in the executive branch of the

Government." By Executive Order 12013, President Carter has now vested these responsibilities in the Secretary of Commerce. The transfer became effective October 9.

To carry out the responsibilities which have been assigned to the Commerce Department, the Secretary has established a new office of Federal Statistical Policy and Standards. The responsibilities of this office include:

1. Planning and coordinating Federal statistical programs.
2. Reviewing statistical budgets and priorities.
3. Serving as staff to the Statistical Policy Coordination Committee—a committee including all Cabinet members, the Director of the Office of Management and Budget, the Chairman of the Council of Economic Advisers, and the Chairman of the Board of Governors of the Federal Reserve System.
4. Reviewing legislation with statistical implications.
5. Serving as focal point for international statistical liaison.
6. Establishing standards to be adhered to by statistical agencies.

Several other organizational changes affecting statistical activities recently have taken place:

1. The National Center for Health Statistics has been transferred from the Health Resources Administration to the Office of the Secretary for Health. This move elevates the role of the National Center for Health Statistics so that it can more effectively serve the many agencies requiring health statistics.
2. The U.S. Department of Agriculture has recently combined the Economic Research Service with the Statistical Reporting Service and two other agencies to create the Economics and Statistical Service.

The objective of this reorganization is to streamline the statistical activities in the Department of Agriculture and to assure closer coordination between the collection and analysis functions.

3. Establishment of the Department of Energy on October 1, 1977, provides for a National Center for Energy Information.

Thus, the creation of the Office of Federal Statistical Policy and Standards is simply one of several steps which are being undertaken to improve the statistical system.

In addition to these specific activities, the President's Reorganization Project has a project on statistical organization. In its October 19, 1977, Reorganization Progress Report, this project is described as designed "to eliminate unnecessary collection of statistical data and reduce the number of collection points." Issue papers designed to highlight the focus of this project are presently being developed.

THE FRAMEWORK FOR PLANNING FEDERAL STATISTICS

The new Office of Federal Statistical Policy and Standards will continue the effort begun at OMB to develop "A Framework for Planning U.S. Federal Statistics, 1978–89." The draft version of this framework, which has been circulated for comment, is intended as a vehicle for establishing statistical priorities.

Comment and reaction by all segments of the data user community is necessary to the success of this effort. Copies of the draft framework have been made available to this committee, and we would welcome the opportunity to review this material with you and with the committee staff.

IMPROVING THE GNP DATA

I have been asked to discuss our efforts to improve the national economic accounts. Because a monumental report by an advisory committee for improving the quality of the GNP estimates has just been completed, I will concentrate on this report.

The Advisory Committee on GNP Data Improvement—perhaps better known as the Creamer Committee—was established in response to the difficulties created for the economic policymakers in inaccuracies in the preliminary GNP figures during the early 1970's.

The revisions that occurred in July 1971 and 6 months later in January 1972 gave a somewhat different picture of the State of the economy during the recession of 1969–70 and recovery of 1971 than was portrayed in the preliminary figures which were available when fiscal, monetary, and incomes policies were being formulated. In general, the revised estimates showed that the recession of 1969–70 had a heavier impact on business incomes and that the recovery of of 1971 was not as buoyant as the earlier figures indicated.

The committee's purpose was to identify the major weaknesses in the underlying data that are used to prepare the GNP estimates and to develop specific recommendations for improvement that feasibly could be implemented by the statistical agencies of the Federal Government over a 6-year planning framework.

The result was a 4½-year study, known as the GNP data improvement project, which was completed in September 1977. It is the most comprehensive and systematic evaluation of the GNP data base ever undertaken. The report is now being printed and should be available in about 2 months. The summary chapter appeared in the Statistical Reporter of September 1977 and is attached to my prepared statement.

Over 150 specific recommendations have been scheduled in a system of priorities for each year during the 1978–83 period. Some of the recommended improvements require additional funding and others do not. The total additional cost for implementing these recommendations is very roughly estimated at $25 million in 1976 prices. This amounts to 4 percent of the cost of the principal statistical programs of the Federal Government in fiscal year 1976.

The recommendations are keyed to the various time sequences and elements that comprise the national economic accounts: current GNP estimates that are prepared every quarter; annual GNP revisions each July; quinquennial benchmarks and input-output tables; all components of the product and income sides of the accounts, including intensive study of farm income and international transactions; GNP in constant dollars, that is, GNP deflated for price change; and a more summary review of the flow of funds accounts.

The recommendations cover the statistical survey and administrative record programs of a wide range of agencies: Bureau of the Census; Bureau of Labor Statistics; Internal Revenue Service; Federal Trade Commission; Bureau of Economic Analysis; Department of Agriculture; Department of Defense; Department of Health, Education, and Welfare; and others.

In addition, because of the close tie between the data base and the methodology employed by the Bureau of Economic Analysis in processing these data into the GNP estimates, recommendations are

made for improving the methodology used in preparing the accounst as well as for the underlying data.

The new Office of Federal Statistical Policy and Standards of the Department of Commerce will oversee the implementation of the recommendations. That Office will obtain an evaluation and plan for implementation the recommended improvements from every agency for which a recommendation has been made.

Where an agency's views differ from the recommendations of the advisory committee or with the priorities of the Office of Federal Statistical Policy and Standards, this will form the basis for further discussion in the process of establishing statistical priorities. Because the study extended over 4 years, some of the early recommendations of the committee have been implemented. Most notable of these is the substantial overhaul and expansion of the 1977 quinquennial economic censuses, data for which will be collected early next year.

The Creamer report is an advisory report. The Government does not have to accept the recommendations. However, the breadth and depth of the report, the professionalism with which the study was conducted, and the vital importance of the GNP estimates insure that this report will be taken seriously.

The estimated $25 million implementation costs will go for improvements in economic information and anslyses that are used in making fiscal, monetary, incomes, and other economic policy decisions that affect billions of dollars of the Nation's output and the related jobs and purchasing power.

It is noteworthy, too, that the recommendations, if implemented, would have wider uses than the development of economic policy, important as that is. For example, they would result in more accurate information for foreign military sales, banking regulation, farm production and income, and tariff negotiations.

It is the GNP measures, however, which provide the most comprehensive framework for analyzing the interrelationships of the private and public sectors of the economy and projecting the implications of alternative economic policies. Implementations of the recommendations of the GNP data improvement project will substantially strengthen the reliability of the single most important analytic tool used in the continuing effort to achieve the employment and purchasing power goals of the Employment Act of 1946.

This is not to say, of course, that we will achieve perfection if these recommendations are implemented. The effort to achieve accurate, reliable, and comprehensive economic accounts has been a continuing one for many years, and it must continue to be so in the future.

I do have a detailed description of the defense price index project. I will not read it, but I hope you will find time to read it and will realize that it was a major project, and that is why it took several years.

We went to the Defense Department records and broke down the defense purchases into thousands of components and priced those and added it all back up. It has been a major research project and a matter of developing new concepts, not just collecting data.

In addition, it will be used as a model for other countries and helpful for developing better deflators for nondefense purchases. We are pleased to be able to report that the developmental phase of this project is being brought to an end.

We are in the process of preparing the reports. Current plans are for publishing deflated numbers for defense purchases beginning with the July 1978 revisions of the GNP, at which time the plans are to publish the historical data and also beginning at that time to publish regular quarterly estimates.

In its developmental phase, this project has been funded by agencies outside the Department of Commerce. The Department does have in its fiscal 1979 budget request allowance for picking up this program in the Commerce Department budget as part of the regular ongoing statistical program.

Plans for implementing this obviously depends on having the budget approved.

That covers the items that I have included in my prepared statement. It by no means covers the interesting things that are going on in the statistical system. I am fascinated by all of these things and wish I could tell you all about them, about our efforts to improve the coverage of the 1980 census, about our new and revitalized effort to develop social indicators and many others.

Time does not permit, obviously, but I do hope I have managed to convey some sense of the growth, change, and activity which is occurring in the statistical programs and spark your interest. Thank you.

[The prepared statement, with attachments, of Mrs. Slater follows:]

PREPARED STATEMENT OF COURTENAY M. SLATER

I am pleased to be here this morning to make whatever contribution I can to your continuing examination of Federal statistical programs. Over the years the Joint Economic Committee has played a crucial role in the evolution of the statistical system. It is most important that you continue to do so.

I chose the word *evolution* carefully. The statistical system cannot simply be "created", "organized", or "reorganized" and then left fo function routinely. Our social and economic data base must respond continuously to changing public needs.

The present moment is one at which especially rapid response is being demanded of the statistical system. The demand for local area data to be used for determining the allocation of Federal funds is the most obvious and often discussed of these current needs. It may well be the most important. But demands for better price data, data on corporate activity by line of business, energy data, inventory data, export data and numerous other data improvements are pressing and refuse to be ignored.

These demands must be met within the constraints of the needs to rigorously protect the confidentially of individual responses and to minimize paperwork and respondent burden, not to mention the necessity to stay within the limits of available budgetary resources.

Faced with more than its share of activity and challenge, the statistical community is an exciting place to be. This Committee, with its unique ability to take a broad overview, can be of great help in determining priorities for the statistical programs and in advising us on how to meet those priorities in a timely and efficient manner.

As evidence of some of the lively activity within the statistical system, I will offer you shortly a progress report on some of the particular activities about which Congressman Bolling inquired in his letter of invitation. First, however, a word about recent organizational changes.

ORGANIZATIONAL CHANGES

Mr. Bolling's letter asked me to discuss the transfer of statistical functions policy from the Office of Management and Budget to the Department of Commerce. I am pleased to do so since I believe this transfer will have a constructive impact on the development of a more integrated Federal statistical program.

The chief statutory basis for statistical policy development is Section 103 of the Budget and Accounting Procedures Act of 1950, which authorizes and directs

the President "to develop programs and to issue regulations and orders for the improved gathering, compiling, analyzing, publishing and disseminating of statistical information for any purpose by the various agencies in the Executive Branch of the Government." By Executive Order 12013, President Carter has now vested these responsibilities in the Secretary of Commerce. The transfer became effective October 9.

Details of the current Executive Order and of earlier Executive Orders dealing with statistical policy have been reprinted in the October 1977 issue of *Statistical Reporter* which I am attaching to my statement for your record.

To carry out the responsibilities which have been assigned to the Commerce Department, the Secretary has established a new office of Federal Statistical Policy and Standards. The responsibilities of this office include:

1. Planning and coordinating Federal statistical programs.
2. Reviewing statistical budgets and priorities.
3. Serving as staff to the Statistical Policy Coordination Committee—a Committee including all Cabinet members, the Director of the Office of Management and Budget, the Chairman of the Council of Economic Advisers, and the Chairman of the Board of Governors of the Federal Reserve System.
4. Reviewing legislation with statistical implications.
5. Serving as focal point for international statistical liaison.
6. Establishing standards to be adhered to by statistical agencies.

This office is headed by Dr. Joseph W. Duncan, who has transferred from the Office of Management and Budget for this purpose. It will operate under the general oversight of the Department's Chief Economist.

Several other organizational changes affecting statistical activities recently have taken place.

1. The National Center for Health Statistics has been transferred from the Health Resources Administration to the Office of the Secretary for Health. This move elevates the role of the National Center for Health Statistics so that it can more effectively serve the many agencies requiring health statistics.

2. The U.S. Department of Agriculture has recently combined the Economic Research Service with the Statistical Reporting Service and two other agencies to create the Economics and Statistics Service. The objective of this reorganization is to streamline the statistical activities in the Department of Agriculture and to assure closer coordination between the collection and analysis functions.

3. Establishment of the Department of Energy on October 1, 1977 provides for a National Center for Energy Information. It is anticipated that the staff of this new agency within the Department of Energy will be drawn from the Federal Energy Administration, the Bureau of Mines, and the Federal Power Commission. The broad authorities of this new Center include substantial data collection and analysis activities. The new Energy Information Center is destined to become one of the major statistical agencies of the Federal Government.

Thus, the creation of the Office of Federal Statistical Policy and Standards is simply one of several steps which are being undertaken to improve the statistical system.

In addition to these specific activities, the President's Reorganization Project has a project on statistical organization. In its October 19, 1977 Reorganization Progress Report, this project is described as designed "to eliminate unnecessary collection of statistical data and reduce the number of collection points." Issue papers designed to highlight the focus of this project are presently being developed, and I expect that the new Office of Federal Statistical Policy and Standards will be an active participant in the overall study as it proceeds.

THE FRAMEWORK FOR PLANNING FEDERAL STATISTICS

The new Office of Federal Statistical Policy and Standards will continue the effort begun at OMB to develop "A Framework for Planning U.S. Federal Statistics, 1978–1989." The draft version of this Framework, which has been circulated for comment, is intended as a vehicle for establishing statistical priorities. Comment and reaction by all segments of the data user community is necessary to the success of this effort. Copies of the draft Framework have been made available to this Committee, and we would welcome the opportunity to review this material with you and with the Committee staff. We want to work with this Committee and others in the Congress to assure that Congressional needs are fully considered in the setting of longer range statistical priorities.

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I have been asked to discuss our efforts to improve the national economic accounts. Because a monumental report by an advisory committee for improving the quality of the GNP estimates has just been completed, I will concentrate on this report.

The Advisory Committee on GNP Data Improvement—perhaps better known as the Creamer Committee—was established in response to the difficulties created for economic policymakers by inaccuracies in the preliminary GNP figures during the early 1970's. The revisions that occurred in July 1971 and six months later in January 1972 gave a somewhat different picture of the state of the economy during the recession of 1969–70 and recovery of 1971 than was portrayed in the preliminary figures which were available when fiscal, monetary and incomes policies were being formulated. In general, the revised estimates showed that the recession of 1969–70 had a heavier impact on business incomes and that the recovery of 1971 was not as buoyant as the earlier figures indicated.

The examination of the causes of these revisions (there have been other revisions before and since that also have had policy implications), and the need for policymakers and the public to have confidence in these figures led the Statistical Policy Division of OMB to set up the Advisory Committee to provide an independent review by nongovernmental experts. Dr. Daniel Creamer of The Conference Board was the Chairman of the Committee and headed the working staff. The Committee's purpose was to identify the major weaknesses in the underlying data that are used to prepare the GNP estimates and to develop specific recommendations for improvement that feasibly could be implemented by the statistical agencies of the Federal Government over a six-year planning framework.

The result was a 4½ year study, known as the GNP Data Improvement Project, which was completed in September 1977. It is the most comprehensive and systematic evaluation of the GNP data base ever undertaken. The report is now being printed and should be available in about two months. The summary chapter appeared in the *Statistical Reporter* of September 1977 and is attached to my statement.

Over 150 specific recommendations have been scheduled in a system of priorities for each year during the 1978–83 period. Some of the recommended improvements require additional funding and others do not. The total additional cost for implementing these recommendations is very roughly estimated at $25 million in 1976 prices. This amount to 4 percent of the cost of the principal statistical programs of the Federal Government in FY 1976.

The recommendations are keyed to the various time sequences and elements that comprise the national economic accounts: current GNP estimates that are prepared every quarter; annual GNP revisions each July; quinquennial benchmarks and input-output tables; all components of the product and income sides of the accounts, including intensive study of farm income and international transactions; GNP in constant dollars, i.e. GNP deflated for price change; and a more summary review of the flow of funds accounts. The recommendations cover the statistical survey and administrative record programs of a wide range of agencies: Bureau of the Census; Bureau of Labor Statistics; Internal Revenue Service; Federal Trade Commission; Bureau of Economic Analysis; Departments of Agriculture, Defense, Health, Education, and Welfare and others. In addition, because of the close tie between the data base and the methodology employed by the Bureau of Economic Analysis in processing these data into the GNP estimates, recommendations are made for improving the methodology used in preparing the accounts as well as for the underlying data.

The analysis of data weaknesses and recommended improvements was based on extensive consultants with these agencies. Weaknesses arising from all sources were evaluated, including those suggested by disturbing revisions, series in which the revised data have basic inadequacies, and those components for which no early data series are available.

The new Office of Federal Statistical Policy and Standards of the Department of Commerce will oversee the implementation of the recommendations. That Office will obtain an evaluation and plan for implementing the recommended improvements from every agency for which a recommendation had been made. Where an agency's views differ from the recommendations of the Advisory Committee or with the priorities of the Office of Federal Statlstical Policy and Standards, this will form the basis for further discussion in the process of establishing statistical priorities. Because the study extended over 4 years, some of the early

recommendations of the Committee have been implemented. Most notable of these is the substantial overhaul and expansion of the 1977 quinquennial economic censuses, data for which will be collected early next year.

The Creamer Report is an *advisory* report. The Government does not have to accept the recommendations, However, the breadth and depth of the report, the professionalism with which the study was conducted and the vital importance of the GNP estimates insure that this report will be taken seriously. The estimated $25 million implementation costs will go for improvements in economic information and analyses that are use in making fiscal, monetary, incomes and other economic policy decisions that affect billions of dollars of the Nation's output and the related jobs and purchasing power.

It is noteworthy too that the recommendations, if implemented, would have wider uses than the development of economic policy, important as that is. For example, they would result in more accurate information for Foreign Military Sales, banking regulation, farm production and income, and tariff negotiations.

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THE DEFENSE PRICE INDEX PROJECT

Moving from the general to the particular, I would like to discuss, as the Committee has requested, the status of the Bureau of Economic Analysis' project to develop price deflators for Federal defense purchases. This is an area in which solid progress can be reported, The support of the Joint Economic Committee throughout the development phase of this project has been of great help.

Deflation of government purchases has long been one of the weakest areas in the calculation of constant dollar GNP. A large portion of these purchases, about $100 billion currently, is for defense. No satisfactory proxy measure of price change for defense purchases has been available since existing price indices, such as the Consumer Price Index and the Wholesale Price Index, exclude these purchases by definition. In addition, no detailed data on the composition of purchases by the Department of Defense have been readily accessible.

Much of the groundwork for the development of actual measures of price change for defense purchases was contained in a report—financed by the Arms Control and Disarmament Agency—*Measuring Price Changes of Military Expenditures*, completed by the Bureau of Economic Analysis in FY 1975. As a result of the recommendations of this report and at the urging of the Joint Economic Committee, the Bureau of Economic Analysis undertook a two-year study beginning in FY 1976 to develop appropriate price measures for defense purchases. The primary objective of the project was to provide the basis for measuring quarterly purchases of the Department of Defense in constant prices within the framework of the national income and product accounts and to publish an official defense deflator. This project also sought to provide the Department of Defense with the basis for measuring and forecasting inflation rates; emphasis was to be given to budget appropriation categories and weapons systems. Finally, the study was to serve as a pilot effort for the development of deflators for other Federal agencies, State and local governments, and other nations.

During the development phase, FY 1976–1977, the project was fully funded by the Office of the Secretary of the Defense/Comptroller. The Department of Defense also furnished staff assistance during this phase. During FY 1978, it is being jointly funded by the Department of Defense and the Department of Commerce. The Department of Commerce has included funds in its FY 1979 budget request to fully fund the ongoing phase of the project.

During the initial two-year period, the project staff—12 to 16 people—developed quarterly current and constant dollar series and implicit price deflators for Defense Department purchases for the period FY 1974–1976. Development of these data involved the following:

Classification of all Defense Department purchases of goods and services into 22 major categories.

Stratification of these categories into hundreds of pricing components.

Identification of the universe and derivation of expenditures for each component.

Use of statistically acceptable sampling procedures to select the thousands of specifications to be priced.

Development of a price series for each specification and the adjustment of these price data for quality changes to reflect only price change.

This process required the collection of data from each military service as well as many of the Defense Agencies. About 15,000 price series were collected and indexed during this phase of the project.

On September 30, 1977, a brief, preliminary report, *Price Changes of Defense Purchases of the United States*, was transmitted to the Assistant Secretary of Defense, Comptroller. This summary report contained preliminary implicit price deflators for total Department of Defense purchases and for the major GNP categories of compensation, structures, durable goods, nondurable goods, and services. In addition, the report contained a brief explanation of the concepts employed, an analysis of the preliminary deflators, and an evaluation of the work completed to date.

At this time, project staff are completing work on the full report of the project. This report will contain implicit price deflators at a finer level of detail than the summary report as well as complete technical documentation of the project. In addition, project staff are completing arrangements for continuing a quarterly reporting system for most of the major categories of Defense Department purchases.

For the remainder of FY 1978, the staff will be involved primarily in the preparation of the data for integration into the national income and product accounts. Current plans call for these data to be published in the *Survey of Current Business* at the time of the annual revisions of the GNP in July 1978. In addition, historical series will be prepared using proxy price indices. Data will be prepared annually for the period 1929–1945 and quarterly from 1946 through FY 1973. Also, it will be necessary to further reinforce some of the detailed data for FY 1974–1976, to update the series through 1977, and to reexamine all components in light of the experience gained to this point. Finally, as resources permit, the staff will attempt to develop implicit price deflators for each military service appropriation category.

Mr. Chairman, as lengthy as my prepared statement is, I have only touched the surface of a few of the many current efforts to improve the statistical programs. I know that Mr. Shiskin already has acquainted you with the efforts to update the Consumer Price Index, expand the Current Population Survey, and improve the Wholesale Price data. I wish that we also had time to discuss numerous other items: the planned new HEW-Census Survey of Income and Program Participation; our efforts to achieve improved coverage in the 1980 Decennial Census; our revitalized effort to develop Social Indicators. Time does not permit, but I do hope that I have managed to convey a sense of the growth and change and vitality with which—as a newcomer to the statistical programs—I am myself continually impressed.

Attachments.

[From the Statistical Reporter, October 1977]

THE ESTABLISHMENT OF THE OFFICE OF FEDERAL STATISTICAL POLICY AND STANDARDS

RUTH BELL *

Intern, Office of Federal Statistical Policy and Standards

The Department of Commerce seal on the cover of this issue of *Statistical Reporter* reflects the transfer by President Carter of Federal statistical policy functions from the Office of Management and Budget to the U.S. Department of Commerce effective October 9. Undoubtedly, the statistical community shares significant interest in this particular phase of governmental reorganization. This article aims to inform readers of *Statistical Reporter* about such issues as the reason for the transfer, the means by which it was executed, and the delegation of statistical policy responsibilities to the new Office of Federal Statistical Policy and Standards.

On July 15, 1977, President Carter announced Reorganization Plan Number 1. Designed to streamline the Executive Office of the President, the Plan included the proposal that certain statistical policy responsibilities be assigned to the Department of Commerce, rather than the Office of Management and Budget. This transfer was deemed to be compatible with Presidential plans for overall governmental reorganization, as well as with the traditional role of the Commerce Department in the Federal statistical system. In her statement to the American Statistical Association on August 14, 1977, Secretary of Commerce Juanita M. Kreps enthusiastically accepted this new assignment:

> "...I welcome the new responsibilities which the President has asked me to assume. These new responsibilities for statistical policy development are consistent with the Department of Commerce's longstanding contribution to the Federal Statistical System. I intend to see that they are carried out in a manner which will preserve and strengthen the Federal Statistical System."

In order to implement the relevant provisions of Reorganization Plan Number 1, President Carter signed on October 7, 1977 Executive Order No. 12013, entitled "Relating to the Transfer of Certain Statistical Policy Functions." (The details of the Executive order can be found on pages 6 and 7. It appeared in the *Federal Register* for October 12, 1977, Vol. 42, No. 197.)

The statutory basis for Commerce's new authority is contained in Section 103 of the Budget and Accounting Procedures Act of 1950. Section 103 authorizes and directs the President

> "...to develop programs and to issue regulations and orders for the improved gathering, compiling, analyzing, publishing, and disseminating of statistical information for any purpose by the various agencies in the executive branch of the Government. Such regulations and orders shall be adhered to by such agencies."

By virtue of his power of redelegation, the President has thus vested these responsibilities in the Secretary of Commerce who will act on his behalf.

Within the Department of Commerce the statistical policy function will be carried out by the new Office of Federal Statistical Policy and Standards. The Office will be headed by Joseph W. Duncan, who served as Deputy Associate Director of the Office of Management and Budget for Statistical Policy. His new title will be Chief Statistician and Director, Office of Federal

*Currently enrolled in the graduate program in public administration at the University of Massachusetts at Amherst.

Statistical Policy and Standards. The Office will report to Courtenay M. Slater, Chief Economist for the Department of Commerce.

The government-wide and objective nature of the statistical policy function to be exercised by the new Office was underscored by Secretary Kreps in her statement to the American Statistical Association in August 1977:

> "In establishing this new office, I intend to make it clear that it is expected to retain an independent status *vis-a-vis* all Federal statistical agencies. Its goal will be to provide objective analyses of needed improvements in individual statistical programs so that these programs will make more significant contributions to the full set of governmental and non-governmental needs. Under the authority which will be delegated to me, I will instruct this office to undertake objective analyses of cooperative arrangements of all government agencies, including those within the Department of Commerce. Guidelines will be established to make it clear that the Federal statistical policy function, even though located in the Commerce Department, will review Commerce statistical initiatives in the same fashion as it would review those of any other statistical agency."

The Office of Federal Statistical Policy and Standards will be responsible for assuring the integrity, accuracy, and timeliness of Federal statistics. As indicated by its title, the Office will be concerned with the development and coordination of statistical policy and the development and implementation of statistical standards and guidelines. The statistical policy function includes the determination of present and future statistical requirements; the establishment of methodologies and the definition of concepts to satisfy statistical needs; an examination of the feasibility of alternative methodological approaches; a scrutinization of priorities to balance needs and demands; and the coordination, implementation, and evaluation of plans.

The development and enforcement of statistical standards and guidelines ensures that statistical data are uniform and comparable. This role is especially significant given the decentralized nature of the Federal statistical system and the diversification of user needs. Soon to be issued by the new Office is the *Standard Occupational Classification Manual,* which contains a current set of occupational definitions. The Manual is designed to coordinate and standardize the definitions to census statistics and manpower planning programs. In late 1977, the Office also plans to issue a Supplement to the 1972 *Standard Industrial Classification Manual.* Additional standards and guidelines will be issued as the need arises.

The Office of Federal Statistical Policy and Standards will supervise procedures for the timely release of statistical information to the public (Circular No. A-91). The new Office also has responsibility for providing U.S. data to international organizations such as the United Nations, the Economic Commission for Europe, and the Organization for Economic Cooperation and Development. The authority for this liaison function on statistical matters is derived from Executive Order No. 10033, signed in February 1949. (See appendix for the text of this order.)

The core staff of the Office of Federal Statistical Policy and Standards are former members of the Statistical Policy Division of the Office of Management and Budget. The staff is geographically located at 2001 S Street, N.W. The mailing address is

Office of Federal Statistical Policy
and Standards
U.S. Department of Commerce
Washington, D.C. 20230

The names and business phone numbers of the staff are listed below:

Name	*Telephone Number*
Darling, Elisabeth J.	673-7959
Duncan, Joseph W.	673-7959
Edmonds, Margie V.	673-7956
Evinger, Suzann K.	673-7962
Gonzalez, Maria E.	673-7953
Haber, Lawrence D.	673-7953
Hall, George E.	673-7950
Johnston, Denis F.	673-7953
Lowry, Helen	673-7965
Lynn, Margaret D.	673-7953
Peterson, Milo O.	673-7956
Rodgers, Gilbert M.	673-7962
Sunderhauf, Milo B.	673-7950
Wallman, Katherine K.	673-7950
Worden, Gaylord E.	673-7956

In the immediate future, the first priority of the staff of the Office of Federal Statistical Policy and Standards will be the completion and preparation for publication of "A Framework for Planning U.S. Federal Statistics, 1978–1989," a document which is familiar to readers of *Statistical Reporter*. With regard to the framework, Secretary Kreps stated: "My staff has reviewed this project, and I will ask the new Office to give priority to completing this project so that it can serve as the foundation for subsequent planning and decisionmaking." By functional area, the assignments of the staff in relation to the topics in the Framework are as follows:

General

Organization of U.S. Federal Statistics	Duncan
Nature of Statistical Programs in a Dynamic, Complex Society	Duncan/Hall /Worden

Functional Areas

Agricultural statistics	Worden
Construction statistics	Rodgers
Criminal justice statistics	Hall
Education statistics	Wallman
Energy statistics	Rodgers
Environmental statistics	Rodgers
Financial statistics	Worden
Health statistics	Haber
Housing and community development	Haber
Income maintenance and welfare statistics	Sunderhauf
Income, wealth, and consumption	Sunderhauf
Labor statistics	Johnston
National economic accounts	Worden
Population statistics	Hall
Price statistics	Johnston
Production and distribution statistics	Peterson
Science and technology	Johnston
Transportation	Worden

Crosscutting Issues

Civil rights data	Wallman
Confidentiality	Haber
Federal-State cooperative systems of data collection	Wallman
Interagency (reimbursable) funding	Sunderhauf
International statistics and technical assistance	Duncan
Longitudinal surveys	Hall
Longrun growth models	Duncan
Multipurpose sample vehicles	Hall
Professional staff training	Wallman
Program of standards development	Peterson
Reporting burden	Duncan
Social indicators and social accounts	Johnston
Standard Industrial Directory	Peterson
Statistical methodology	Gonzalez
User access—data banks	Worden

October 1977

The Office of Federal Statistical Policy and Standards has established and now chairs several interagency committees. Their cooperative efforts will contribute to progress in such areas as standards development and the design of integrated statistical programs. The committees also serve as forums for the exchange of and feedback of technical and substantive information. The reciprocity practiced by the interagency committees is conducive to the resolution of conflicts between and among agencies and the attainment of consensus among member agencies. The present committees chaired by the Office of Federal Statistical Policy and Standards are:

Federal Agency Council on the 1980 Census
Federal Committee on International Statistics
Federal Committee on Standard Metropolitan Statistical Areas
Federal Committee on Statistical Methodology
Federal Interagency Council on Energy Information
Interagency Committee on Balance of Payments Statistics
Interagency Committee on Commodity Classification
Interagency Committee on Financial Statistics
Interagency Committee on GNP Statistics
Interagency Committee on Housing Statistics
Interagency Committee on Income Distribution
Interagency Committee on Labor Statistics
Interagency Committee on Land Use Data
Interagency Committee on Price Statistics
International Committee on Transportation Statistics
Technical Committee on Industrial Classification
Technical Committee on Occupational Classification
Technical Committee on Standard Industrial Directory

Ad Hoc Committee on Toxic Substance Data

All of the above are chartered committees subject to annual review by the Office of Federal Statistical Policy and Standards.

An unprecedented attempt to formally coordinate statistical policy efforts at the Cabinet level is exemplified in the Statistical Policy

Coordination Committee (SPCC). Chaired by the Secretary of Commerce, the SPCC is instructed by the Executive order to ". . .advise and assist the President with respect to the improvement, development, and coordination of Federal and other statistical services. . . ." Secretary Kreps has voiced her firm belief that the process of developing statistical policy will be strengthened by such consultation at two levels.

Many standards and guidelines were implemented by the Statistical Policy Division through the circular process. Having been transferred intact to the Department of Commerce, these circulars constitute the subject matter of the OFSPS Statistical Policy Handbook. Statistical policies and procedures will in this way be communicated to those affected by them and additions will be incorporated in the handbook upon their promulgation. The titles of the circulars to be initially included in the handbook are:

Circular No. A-39, "Providing of Statistical Information to Intergovernmental Organizations"
Circular No. A-46, "Standards and Guidelines for Federal Statistics"
Circular No. A-91, "Prompt Compilation and Release of Statistical Information."

The responsibility for reviewing paperwork burdens in connection with statistical programs and clearing of forms under the Federal Reports Act of 1942 remain with the Office of Management and Budget.

Appendix

Reprinted below is the text of Executive Order Nos. 10253 and 10033. The responsibilities and authorities contained in these orders have been delegated to the Secretary of Commerce along with the transfer of the statistical policy function to the Department of Commerce. Executive Order No. 10253 of June 11, 1951 implements Section 103 of the Budget and Accounting Procedures Act of 1950 and specifies the objectives to be sought. Executive Order No. 10033 of February 8, 1949 sets forth the regulations whereby the Office of Federal Statistical Policy and Standards will handle requests from international organizations for U.S. data. The text of these Executive orders follows.

EXECUTIVE ORDER NO. 10253
As Amended by Executive Order No. 12013

Providing for the Improvement of the Work of Federal Executive Agencies With Respect to Statistical Information

By virtue of the authority vested in me by Section 103 of the Budget and Accounting Procedures Act of 1950 (31 U.S.C. 18b), and as President of the United States, and in order to carry out the purposes of said section, it is hereby ordered as follows:

Section 1. The Secretary of Commerce (hereinafter referred to as the Secretary) shall develop programs, and issue regulations and orders, for the improved gathering, compiling, analyzing, publishing and disseminating of statistical information for any purpose by the various agencies in the executive branch of the Federal Government.

Sec. 2. In order to carry out the provisions of Section 1 of this order, the Secretary shall maintain a continuing study for the improvement of the statistical work of the agencies in the executive branch of the Federal Government with a view to obtaining the maximum benefit from the funds and facilities available for such work, giving due consideration to the constantly changing character of the various needs for statistical information both within and without the Government and, where the statistical work is primarily concerned with operating programs, giving due consideration to administrative needs, statutory requirements, and the needs involved in the development of administrative and legislative recommendations. The Secretary, either upon his own initiative or upon the request of any such agency, shall (a) provide for the interchange of information calculated to improve statistical work, (b) make appropriate arrangements for improving statistical work involving relationships between two or more agencies, and (c) assist the agencies, by other means, to improve their statistical work.

Sec. 3. The following shall be included among the objectives sought in carrying out the provisions of Section 1 hereof:

(a) To achieve an adequate program of statistical work in the agencies of the executive branch, in relation to over-all needs for statistical information, including the filling of gaps and overcoming of weaknesses in presently available statistical information.

(b) To achieve the most effective use of resources available for statistical work by the agencies, in relation to over-all needs.

(c) To minimize the burden upon those furnishing statistical data needed by the various Federal agencies.

(d) To improve the reliability and timeliness of statistical information.

Editor's Note.—The Department of Agriculture and the National Center for Health Statistics have announced a reorganization. The newly established Department of Energy will have a statistical office. Details on these reorganizations will appear in the next issue.

Statistical Reporter

(e) To achieve maximum comparability among the several statistical series and studies.

(f) To improve the presentation of statistical information and of explanations regarding these sources and reliability of such information, and regarding the limitations on the uses that can appropriately be made of it.

Sec. 4. Regulations and orders issued pursuant to Section 1 hereof shall be signed by the Secretary. When so signed, such regulations and orders shall require no further approval and shall be adhered to by all agencies in the executive branch. Any such regulation or order may pertain to a single agency, a group of agencies, or all agencies in the executive branch.

Sec. 5. In the development of programs and the preparation of regulations and orders for issuance pursuant to Section 1 hereof, the Secretary shall consult Federal agencies whose activities will be substantially affected, and may consult non-Federal groups to the extent he finds it necessary to carry out the purposes of this order.

Sec. 6. The authority outlined in this order is in addition to and not in substitution for the existing authority of the Secretary, or of the Department of Commerce, with respect to statistical and reporting activities. To the extent, however, that this order conflicts with any previous Executive order affecting statistical or reporting activities, the provisions of this order shall control.

Sec. 7. Nothing in this Executive order shall be construed to apply to the obtaining or releasing of information by the Bureau of Internal Revenue, the Comptroller of the Currency, the Bureau of the Public Debt, the Bureau of Accounts, and the Division of Foreign Assets Control of the Treasury Department, or to the obtaining of any Federal bank supervisory agency of reports and information from banks as provided or authorized by law and in the proper performance of such agency's functions in its supervisory capacity.

Sec. 8. The performance of the functions vested in the Secretary by this Order shall be subject to any authority or responsibility vested in the Director of the Office of Management and Budget, including Chapter 35 of Title 44 of the United States Code (the Federal Reports Act).

EXECUTIVE ORDER NO. 10033
As Amended by Executive Order No. 12013

Regulations Governing the Providing of Statistical Information to Intergovernmental Organizations

WHEREAS the United Nations and other intergovernmental organizations of which the United States is a member have need for statistical information which can be supplied by the Government of the United States; and

WHEREAS the burden imposed on this Government in connection with providing such information to such organizations should be the minimum compatible with adequacy of information; and

WHEREAS a systematic procedure for furnishing such information will conserve effort and improve the quality and comparability of the data furnished:

NOW, THEREFORE, by virtue of the authority vested in me by the Constitution and the statutes, including section 8 of the Bretton Woods Agreements Act (59 Stat. 515; 22 U.S.C. 286f), and as President of the United States, it is hereby ordered as follows:

Section 1. Except as provided in section 2 hereof, the Secretary of Commerce, hereinafter referred to as the Secretary, (a) shall determine, with the concurrence of the Secretary of State, what statistical information shall be provided in response to official requests received by the United States Government from any intergovernmental organization of which this country is a member, and (b) shall determine which Federal executive agency or agencies shall prepare the statistical information thus to be provided. The statistical information so prepared shall be transmitted to the requesting intergovernmental organization through established channels by the Secretary of State or by any Federal executive agency now or hereafter authorized by the Secretary of State to transmit such information.

Sec. 2. (a) The National Advisory Council on International Monetary and Financial Problems, hereinafter referred to as the National Advisory Council, shall determine, after consultation with the Secretary, what information is essential in order that the United States Government may comply with official requests for information received from the International Monetary Fund or the International Bank for Reconstruction and Development.

(b) The Secretary shall determine which Federal executive agency or agencies shall collect or make available information found essential under section 2 (a) hereof.

(c) In the collection of information pursuant to a determination made by the Secretary under section 2 (b) hereof in response to a request under Article VIII, section 5, of the Articles of Agreement of the International Monetary Fund, the authority conferred on the President by section 8 of the Bretton Woods Agreements Act to require any person to furnish such information, by subpoena or otherwise, may be exercised by each of the following-named agencies

Department of Agriculture
Department of Commerce
Department of the Interior
Department of Labor
Department of the Treasury
Board of Governors of the Federal Reserve System
Federal Communications Commission
Federal Deposit Insurance Corporation
Federal Power Commission
Federal Trade Commission
Interstate Commerce Commission
Securities and Exchange Commission
United States Maritime Commission
United States Tariff Commission

(d) The information collected or made available under section 2 of this order shall be submitted to the National Advisory Council for review and for presentation to the said Fund or Bank.

(e) As used in this order, the word "person" means an individual, partnership, corporation, or association.

Sec. 3. The Secretary's determination of any matter under section 1 or section 2 (b) of this order shall be made after consulting appropriate Federal executive agencies and giving due consideration to any responsibility now exercised by any of them in relation to an intergovernmental organization.

Sec. 4. This order shall not be construed to authorize the Director or the National Advisory Council to provide, or to require any Federal executive agency to provide, to an intergovernmental organization (a) information during any period of time when the agency having primary responsibility for security of the specified information declares that it must be withheld from the intergovernmental organization in the interest of military security, or (b) information which any Federal executive agency is required by law to maintain on a confidential basis.

Sec. 5. The Secretary and the National Advisory Council are authorized to prescribe such regulations as may be necessary to carry out their respective responsibilities under this order.

Sec. 6. To the extent that this order conflicts with any previous Executive order, the provisions of this order shall control.

Sec. 7. The performance of the functions vested in the Secretary by this Order shall be subject to any authority or responsibility vested in the Director of the Office of Management and Budget, including Chapter 35 of Title 44 of the United States Code (the Federal Reports Act).

On October 7, 1977, President Carter signed Executive Order No. 12013 which transfers responsibility for the setting of statistical policy from the Director of the Office of Management and Budget to the Secretary of Commerce. The following paragraphs describe, in general terms, the impact of the various sections of the Executive order. The actual Executive order is reprinted at the conclusion of the general discussion.

Section 1—The basic authority for establishing statistical policy is Section 103 of the Budget and Accounting Procedures Act of 1950 which directs the President to:

". . . develop programs and to issue regulations and orders for the improved gathering, compiling, analyzing, publishing, and disseminating of statistical information for any purpose by the various agencies in the executive branch of the Government. Such regulations and orders shall be adhered to by such agencies."

In 1970, when the Office of Management and Budget was established, this authority was delegated to the Director of the Office. Section 1 of this Executive Order terminates that delegation.

Section 2—The provisions of Section 103 were implemented by Executive Order No. 10253 on June 11, 1951. This section transfers the delegations to the Secretary of Commerce. Further, it provides that the Federal Reports Act authority remains with the Office of Management and Budget.

Section 3—Under previous authorities, the statistical policy functions have included responsibility for coordinating with international agencies. Executive Order No. 10033, which was first issued on February 8, 1949, is redelegated to the Secretary of Commerce.

Section 4—In 1976, the International Investment Survey Act required certain activities, including some tasks of interagency statistical coordination. These statistical policy functions have been transferred to the Secretary of Commerce.

Section 5—This section provides for the transfer of funds and staff to carry out the assigned functions.

Section 6—This section provides procedures for the above transfers.

Section 7—The previous functions of the Statistical Policy Division of the Office of Management and Budget in reviewing statistical budgets and priorities have been transferred to the Secretary of Commerce.

Section 8—The President has established the Statistical Policy Coordination Committee which includes all Cabinet members, the Director of the Office of Management and Budget, the Chairman of the Council of Economic Advisers and the Chairman of the Board of Governors of the Federal Reserve System. The Secretary of Commerce is designated as the Chairman of the Committee. All agencies are requested to provide assistance and information to this Committee which has overall oversight responsibilities for Federal statistics.

Section 9—This section transfers existing circulars and regulations concerning statistical policy from the Office of Management and Budget to the Department of Commerce.

EXECUTIVE ORDER NO. 12013

Relating to the Transfer of Certain Statistical Policy Functions

By virtue of the authority vested in me by the Constitution and statutes of the United States of America, including Reorganization Plan No. 2 of 1970 (5 U.S.C. App. II), Section 202 of the Budget and Accounting Procedures Act of 1950 (31 U.S.C. 581c), and Section 301 of Title 3 of the United States Code, and as President of the United States of America, in order to transfer certain functions from the Director of the Office of Management and Budget to the Secretary of Commerce and for other purposes, it is hereby ordered as follows:

Section 1. Section 1 of Executive Order No. 11541 of July 1, 1970, is amended by adding thereto the following new subsection:

"(c) The delegation to the Director of the Office of Management and Budget, pursuant to subsection (a) of this Section, of the functions vested in the Director of the Bureau of the Budget by Section 103 of the Budget and Accounting Procedures Act of 1950 (31 U.S.C. 18b) and subsequently transferred to the President by Part I of Reorganization Plan No. 2 of 1970 (5 U.S.C. App. II), is terminated on October 9, 1977."

Sec. 2. Executive Order No. 10253 of June 11, 1951, is amended as follows:

(a) "Director of the Bureau of the Budget" is deleted in Section 1 and "Secretary of Commerce" is substituted.

(b) "Director" is deleted wherever it appears in Sections 1, 2, 4, 5, and 6, and "Secretary" is substituted therefor.

(c) "Bureau of the Budget" is deleted in Section 6 and "Department of Commerce" is substituted.

(d) A new Section 8 is added as follows:

"Sec. 8. The performance of the functions vested in the Secretary by this Order shall be subject to any authority or responsibility vested in the Director of the Office of Management and Budget, including Chapter 35 of Title 44 of the United States Code (the Federal Reports Act).".

Sec. 3. Executive Order No. 10033, as amended, is further amended as follows:

(a) "Director of the Bureau of the Budget" is deleted in Section 1 and "Secretary of Commerce" is substituted.

(b) "Director" is deleted wherever it appears in Sections 1, 2(a), 2(b), 2(c), 3, 4, and 5 and "Secretary" is substituted therefor.

(c) A new Section 7 is added as follows:

"Sec. 7. The performance of the functions vested in the Secretary by this Order shall be subject to any authority or responsibility vested in the Director of the Office of Management and Budget, including Chapter 35 of Title 44 of the United States Code (the Federal Reports Act).".

Sec. 4. Section 4 of Executive Order No. 11961 of January 19, 1977, is amended by deleting—

"the Council on International Economic Policy shall perform the function of making periodic reports to the Committees of the Congress as set forth in Section 4 (a) (3) of the Act"

and substituting therefor—

"the Secretary of Commerce shall perform the functions set forth in Sections 4 (a) (3) and 5 (c) of the Act".

Sec. 5. The records, property, personnel, and unexpended balances of appropriations, available or to be made available, which relate to the functions transferred or reassigned from the Director of the Office of Management and Budget to the Secretary of Commerce by the delegations made in this Order, are hereby transferred to the Secretary of Commerce.

Sec. 6. The Director of the Office of Management and Budget shall make such determinations, issue such orders, and take all steps necessary or appropriate to ensure or effectuate the transfer or reassignments provided by this Order, including the transfer of funds, records, property, and personnel.

Sec. 7. The Secretary of Commerce shall provide advice to the Director of the Office of Management and Budget with respect to the review and preparation of that portion of the annual Budget of the U.S. Government dealing with the gathering, interpreting, and disseminating of statistics and statistical information.

Sec. 8. (a) There is hereby established the Statistical Policy Coordination Committee, hereinafter referred to as the Committee, which shall be composed of the following members, and such other heads of Executive agencies as the President may designate:

(1) The Secretary of Commerce, who shall be the Chairman.

(2) The Secretary of State.

(3) The Secretary of the Treasury.

(4) The Secretary of Defense.

(5) The Attorney General.

(6) The Secretary of the Interior.

(7) The Secretary of Agriculture.

(8) The Secretary of Labor.

(9) The Secretary of Health, Education, and Welfare.

(10) The Secretary of Housing and Urban Development.

(11) The Secretary of Transportation.

(12) The Secretary of Energy.

(13) The Chairman, Council of Economic Advisers.

(14) The Director of the Office of Management and Budget.

(15) The Chairman, Board of Governors of the Federal Reserve System is invited to be a member.

(b) The Chairman may designate any other member to act as Chairman during the absence of the Chairman. Each member of the Committee may designate an alternate to serve whenever the regular member is unable to attend any meeting. The Chairman may invite the heads of other Executive agencies or their alternates to participate in Committee deliberations whenever matters which affect the interests of such agencies are to be considered.

(c) The Committee shall advise and assist the President with respect to the improvement, development, and coordination of Federal and other statistical services, and shall perform such other related duties as the President may prescribe.

(d) The Secretary of Commerce, to the extent permitted by law, shall provide such administrative support and such funds as may be necessary to support the functions of the Committee.

(e) Executive agencies shall, to the extent permitted by law, provide such information and assistance as the Committee or the Chairman may request to assist in carrying out the functions of the Committee.

Sec. 9. Any rules, regulations, orders, directives, circulars, or other actions taken pursuant to the functions transferred or reassigned from the Director of the Office of Management and Budget to the Secretary of Commerce by the delegations made in this Order, shall remain in effect until amended, modified, or revoked pursuant to the delegations made in this Order.

Sec. 10. This Order shall be effective October 9, 1977.

JIMMY CARTER

THE WHITE HOUSE
October 7, 1977

[From the Statistical Reporter, September 1977]

This report by the Advisory Committee on Gross National Product Data Improvement has been officially received by the Statistical Policy Division. We have already been involved in implementing the recommendation made for 1977 and 1978, but much more needs to be done in terms of setting priorities for future improvements. This evaluation task will be undertaken by the newly established Office of Federal Statistical Policy and Standards in the U.S. Department of Commerce which assumes the statistical policy functions formerly assigned to the Office of Management and Budget.

The Committee officially expired on March 31, 1976. The staff under the general direction of Dr. Creamer was responsible for preparing the final report.

We offer special commendation to the members of the Advisory Committee who gave so freely of their time and knowledge to make this significant report possible. In recognition of their significant contribution to the Federal statistical system, the Committee members have been awarded the Certificate of Distinguished Service by the Statistical Policy Division, Office of Management and Budget.

Joseph W. Duncan,
Deputy Associate Director for Statistical Policy.

Gross National Product Data Improvement Project Report

Summary Chapter

The Advisory Committee on GNP Data Improvement was established by the Statistical Policy Division (SPD) of the Office of Management and Budget (OMB) in 1973 to evaluate the quality and timeliness of the underlying data used in preparing the national economic accounts, and to recommend specific improvements to the data. The most widely known measure of the national accounts is the gross national product (GNP). The Committee was composed of six nongovernmental experts in the economic accounts. This report presents their findings. The major recommendations are summarized in the last part of this chapter.

Events Leading to the Formation of the Committee

The study was sparked by the concern of economic policymakers in the early 1970's about successive revisions of provisional (preliminary) figures released on the quarterly movements of the GNP. Two revisions of substantial magnitude that occurred in a period of 6 months (July 1971 and January 1972) caused uncertainty with the measures of the state of the economy.

There have been other instances of revisions in the economic accounts that gave somewhat different pictures of the state of the economy, including one after the Committee started its work in 1974. Early information is of necessity based on smaller survey samples, incomplete company records of business activity, estimates to fill data gaps, errors in tabulations, etc. Although the tentativeness of the provisional estimates is known, policymakers on occasion have claimed they were misled by the early information: "If we knew then what we know now, different fiscal, monetary, incomes, etc. policies would have been prescribed for managing the economy."

The uneasiness caused by the revisions in 1971 and 1972 led the SPD to question the con-

Note.—The final report of the Advisory Committee on Gross National Product Data Improvement is in preparation and will not be issued until about the end of the year. The report will be a sales document available through the U.S. Government Printing Office. Its availability and ordering information will be announced in *Statistical Reporter*. Reprinted here is the chapter containing a summary of the Committee's recommendations.

tent, accuracy and timeliness of the underlying data used in constructing the economic accounts. These data come mainly from survey and administrative statistics provided by a wide range of Federal agencies—Bureau of the Census, Bureau of Labor Statistics, Federal Trade Commission, Internal Revenue Service, Department of Agriculture, etc. The data are often collected for purposes other than GNP measurement, and thus do not always conform to the ideal statistical concepts or timing of the GNP estimates.

The Bureau of Economic Analysis (BEA) of the Department of Commerce processes these data—including some of its own survey information—into the GNP estimates. The secondary sources are used because they are the best available data and least costly method of obtaining the necessary information.

Although BEA has in the past identified weaknesses in the GNP data base, SPD wanted an outside evaluation of which data problems were most pressing along with a feasible program of remedies. This was the reason the Committee was formed.

Approach and Scope of the Study

In its work on the GNP Data Improvement Project (DIP), the project staff consulted BEA on identifying the major data gaps, and with the various data producing agencies on the technical feasibility and additional costs of dealing with the problem areas. Assessments of the major data gaps and feasible remedial measures initially made by the project staff were revised on the basis of the Committee's review. Drafts of the report were circulated to BEA and other agencies for comment, but the findings and recommendations reflect the independent research and assessments of the Committee.

The DIP study focused on data needs for the quarterly GNP estimates, the annual revisions made every July, the quinquennial benchmarks associated with the input-output tables, and the preparation of constant-dollar "real" GNP estimates that adjust the dollar values for price changes. The components on both the product and income sides of the accounts were covered in this evaluation: on the product side, consumer expenditures, private investment, government purchases, and net exports; on the income side, employee compensation, proprietors' income, corporate profits, net interest, rental income, capital consumption allowances, and indirect business taxes.

Since the BEA estimating methodology is closely linked to data problems, an understanding of the basic measurement concepts and estimating techniques was necessary. The consequent review of the methodology led to recommendations concerning the preparation of the accounts as well as improvements for the underlyinig data.

Because the Federal Reserve Board's flow of funds accounts are integrated with the national economic accounts, the Committee included an assessment of the flow of funds data base in the DIP study. This appraisal of the flow of funds is far more summary than that for the economic accounts, and should be followed by a more comprehensive and intensive evaluation in a separate study.

Other aspects of the economic accounts—wealth estimates of capital stocks, personal income size distributions, and State and local area regional accounts—were not included in the DIP study on the pragmatic grounds of limiting the scope of the study to what the staff of four part-time persons could realistically handle.

This was the first outside review of the national economic accounts by an advisory committee in 20 years. The previous assessment was made in 1957 by the National Accounts Review Committee. It concentrated on the needs for a further conceptual development of the accounts, with a limited examination of the quality of the underlying data. By contrast, the DIP study is an intensive analysis of data needs for the existing concepts of the accounts, with limited attention to needs for supplementary analytic measures (and the associated data) of the accounts.

Multi-Year Implementation of the Committee's Recommendations

The Committee has made over 150 specific recommendations. A broad order of magnitude of their total cost (in 1976 prices) spread over 6 years is roughly $25 million.[1] This accounts for

[1] This total is based on very summary estimating techniques, including considerable reliance on rules of thumb. For some of the recommended improvements, no cost estimates were provided by the data producing agencies. Thus,

about 4% of the principal statistical programs of the Federal Government in FY 1976. The recommendations cover very complex issues (e.g., survey methodology, content and reporting) which often first require research and feasibility studies, as well as problems that can be dealt with by existing capabilities (e.g., instituting a revised quarterly GNP estimate 75 days after the reference quarter). Some improvements require additional funding while others do not.

The recommended improvements can only be implemented over a period of several years. The Committee has developed a schedule for implementing the recommendations in each of the 6 years of the 1978-83 period. This schedule was intended as a longrun framework for SPD in setting priorities in the annual budget cycle and in overseeing the ongoing statistical programs. (This responsibility will now belong to the newly created Office of Federal Statistical Policy and Standards within the Department of Commerce. Therefore, all recommendations in this report designated for implementation by the Statiatical Policy Division of the Office of Management and Budget now refer to OFSPS.) Although work on the improvements would be started in the coming 6 years, in some cases it would continue in later years of the 1980's. In fact, one improvement is recommended for implementation in the 1987 economic censuses.

The Committee hopes this schedule of improvements will make a substantial contribution to the planning of a broad-based program to increase the realiability of the national economic accounts. It should be updated for each year's annual budget cycle in light of the accomplishments and research findings of the previous year, newly emerging problems, etc.

Next Audit of the National Economic Accounts

Consideration should be given to the need for a periodic outside assessment of the reliability and content of the national economic accounts. Because of their importance in economic policymaking, the next such review probably should take place within 10 years. That appraisal naturally would be shaped by the measurement and analytical issues of the late 1980's. It also could use as one point of departure the progress made over the decade on the recommendations of the DIP study.

Other Issues in the Committee's Work

As noted earlier, the Committee was formed in response to revisions in the accounts that disturbed economic policymakers. A Committee analysis of the revisions resulting from the quinquennial GNP benchmarks published in 1976 revealed different confidence levels, depending on the component detail at the time of the final benchmarking. The broadest aggregates in the quarterly and annual accounts (e.g., consumer expenditures, private investment) were reliable, although some of the smaller components of analytic importance were less firmly based, and many of the detailed elements were not reliable. This suggested that errors in the component detail tended to be offsetting at the higher level of aggregation.

Revisions, however, are only one indicator of data problems. For example, although revised data are considered more accurate than preliminary data, even the later information can have deficiencies of sample representativeness, reporting, item coverage and definitions, timeliness, etc. There also are series that are revised only in a very limited sense (more survey respondents are included or previous tabulating errors are corrected but no new data from the survey respondents are added.) In addition, for some series there are no preliminary data, in which case the early GNP estimates are based on historical relationships and other judgmental factors.

The Committee examined data weaknesses arising from all of these sources. That is, problems signaled by the appearance of revisions, those inherent in the data irrespective of the size or frequency of revisions, and those reflecting a lack of data were all scrutinized.

Because the study extended over 4 years, some of the recommendations that were discussed with the agencies in earlier stages of the Committee's work are now being implemented. Prominent among these are experimental work by the Census Bureau for improving some of its monthly economic surveys, concrete suggestions

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when agencies prepare actual fiscal budgets for funding the improvements in coming years, the costs for individual programs (other than increases for inflation) could very substantially either upward or downward. To allow for the likelihood of underestimation, the cost estimates provided to the Committee were raised by 50 percent to arrive at the figure cited in the text.

for planning for a substantially expanded industry and item coverage of the forthcoming 1977 economic censuses, and an agreement between BEA and the Department of Agriculture for a more flexible policy of revising the quarterly estimates of farm income during the year.

Major Recommendations

In this summary, only major recommendations of the Committee are presented as drawn from the chapters of the report. A listing of all of the recommendations is given in Chapter 10, together with an indication of the Committee's order of priority for implementing them. The principal criteria used for setting priorities are:

a. Size of the dollar transactions and effect on the level of the data item.

b. Impact on the quarterly and annual movements—i.e., period-to-period changes in the dollar transactions of the data item.

c. Feasibility of implementing the recommendation, including the technical difficulty and burden on survey respondents.

Generally, the most important projects are scheduled for the early part of the 1978-83 period, but modified as necessary to reflect the feasibility of implementing them. For example, those projects which are relatively easy to implement but which are not among the major problem areas are scheduled for the early part of the 6-year period.

The summary of major recommendations is organized under five categories. Recommendations concerning estimates of specific components are presented under the first four categories, distinguishing the various time frames and the constant-dollar estimates of the national economic accounts, namely:

1. Current quarterly GNP and monthly personal income estimates
2. Annual GNP revisions each July
3. Quinquennial GNP benchmarks
4. GNP in constant dollars.

The fifth category deals with general recommendations without reference to specific component estimates. Within each of these categories, the recommendations are grouped by the Federal agency responsible for the statistical program forming the core of the recommendation. The recommendations are not accompanied by explanation or rationale which is given in the subject chapters. This summary excludes programs for which significant work has begun, or those that are recommended for early implementation mainly because they are relatively easy to implement.

The nature of the data requirements changes with respect to timeliness, sample coverage, and item detail as the GNP estimates move from the current releases every quarter (15 and 45 days after the reference quarter) to the successive revisions in following years. The emphasis in the current quarterly estimates is on obtaining very timely monthly and quarterly information for broad aggregates. As the estimates are subsequently revised annually each July and then in the quinquennial benchmarking, the focus shifts to obtaining data from larger samples of reporting units and in more item detail. The Committee's recommendations for data improvement follow this same pattern.[2]

The Committee's official assignment was to focus on the statistical shortcomings of the GNP estimates. This should not be read as denigrating the general high quality of the estimates. The objective of the recommendations is to make good estimates still better at an acceptable cost. For example, the cost of the recommended improvements is only a small fraction of the $1 billion cost of constructing an atomic submarine. Considering that the GNP accounts provide the dominant framework used by economic policymakers in making decisions that affect many billions of dollars of the Nation's output and the associated jobs, purchasing power, and allocation of resources to meet our social and defense needs, the benefits of implementing the recommendations should have a high payoff relative to their cost.

It is important to recognize the need to spend more money to develop more reliable measures of the GNP. Improvements resulting from more efficient management of statistical programs should be encouraged, but the potential from such gains in productivity cannot provide the

[2] This summary presents the current quarterly GNP estimates first because of the interest in these figures for economic policymaking. In the detailed discussion, the quinquennial and annual chapters appear first because the quarterly figures are extrapolations of the annual and quinquennial measures.

additional resources necessary for fundamental improvements.

1. CURRENT QUARTERLY GNP AND MONTHLY PERSONAL INCOME ESTIMATES

Personal consumption expenditures

Goods:

For the monthly survey of retail sales, study the feasibility of collecting revised data on sales for the preceding month from the same group of reporting firms in 2 successive months. (Bureau of the Census)

Services:

For the monthly survey of selected services receipts, study the feasibility of collecting revised data on receipts for the preceding month from the same group of reporting firms in 2 successive months. (Bureau of the Census)

Gross private domestic investment

Structures:

1. For the monthly survey of private single-family residential construction, update every 5 years the coverge, valuation, and adjustment factors applied to building permit data and the construction progress patterns. (Bureau of the Census)
2. For the monthly survey of private nonresidential building construction, update the coverage factors of the F.W. Dodge contract award series. (Bureau of the Census)

Producer's durable equipment:

1. For the monthly survey of manufacturers' shipments, institute the following:
   a. Introduce a full probability sample covering firms of all size classes
   b. Conduct a feasibility study for collecting revised data on shipments for the previous month
   c. Collect shipments on the uniform basis for all defense-oriented industries. (Bureau of the Census)
2. For the quarterly survey of plant and equipment expenditures, conduct a comprehensive evaluation of the sampling procedures and statistical methodology, with particular emphasis on the feasibility of improving the methodologies by the following:
   a. Developing a full probability sample
   b. Updating the sample for births and deaths of firms
   c. Redrawing the complete sample periodically
   d. Collecting revised actual expenditures for the previous quarter
   e. Introducing comprehensive and systematic validation procedures
   f. Implementing a benchmark revision at regular intervals. (Bureau of Economic Analysis)

Change in business inventories: Nonfarm

1. For the monthly survey of retailers' inventories, study the feasibility of using a screened sample of retail firms that report inventories from actual records. (Bureau of the Census)
2. For the monthly survey of manufacturers' inventories, introduce full probability sampling and study the feasibility of obtaining revised monthly inventory data as indicated above under producers' durable equipment for manufacturers' shipments; and collect inventory data on military hardware by stage of fabrication. (Bureau of the Census)

Change in business inventories: Farm

1. In the quarterly surveys of farm crop inventories, collect data on the ownership of crops stored in off-farm facilities. (Department of Agriculture)
2. Supplement the existing semiannual livestock survey with quarterly national inventory data for cattle and calves. (Department of Agriculture)

Government purchases of goods and services

Federal:

Speed up the tabulation of data on progress payments made to companies working on Federal Government contracts to provide these figures by 60 to 65 days after the reference quarter. (Department of Defense)

State and local:

The Committee endorses the FY 1978 Budget request to Congress for funds to

collect quarterly data on expenditures and nontax revenues of State and local governments. (Bureau of the Census)

Net exports of goods and services

Goods:

1. For the monthly survey of merchandise exports, study the quality of reporting on the Shippers' Export Declaration form, and based on the findings, modify the form and accompanying instructions; and establish a monitoring program to maintain and improve the coverage and quality of the reporting. (Bureau of the Census)
2. For the monthly survey of merchandise imports, tabulate monthly the value of transportation freight charges separately from insurance and other handling charges for merchandise imports by country of the operator of the transporting vessel. (Bureau of the Census)
3. Restore the joint project between the United States and Canada for reconciling quarterly bilateral merchandise trade export and import data. (Bureau of the Census)

Services:

Institute a research program to collect direct quarterly measures of international income transactions from portfolio and other nondirect foreign investments. (Department of the Treasury)

Compensation of employees

Wages and salaries:

For the monthly survey of establishment payrolls, conduct a broad-based research and development program for strengthening the wage and salary data, including feasibility studies for improving the methodologies in the following ways:

a. Increasing response rates of the sampled firms
b. Systematically introducing new firms starting up in business into the sample during the year
c. Collecting total wage and salary payments for the calendar month or nearest pay periods corresponding to the entire month—including pay of supervisory workers, retroactive pay, and irregular bonuses—on a revised monthly basis
d. Periodically drawing a complete new sample of reporting establishments, and implementing a full probability sample
e. Developing additional quality control methods for processing the reported data and for implementing the sample design
f. Refining the collection of data on teachers' salaries from State and local governments to develop uniform national estimates of these salaries for the school year and the summer vacation months. (Bureau of Labor Statistics)

Wages and salaries and personal tax payments:

For tabulations of quarterly employer tax returns, speed up and provide better editing of selected wage and related tax data by 70 days after the reference quarter by using a probability sample of tax returns. (Internal Revenue Service)

Supplements to wages and salaries:

In the Quarterly Financial Report, collect separate data on employer contributions to private pension, health and welfare benefit plans. (Federal Trade Commission)

Proprietors' income

Nonfarm:

For the prospective quarterly survey of household incomes, explore the collection of data on nonfarm self-employment income to provide national totals by 65 days after the reference quarter. (Department of Health, Education, and Welfare)

Farm:

1. Speed up the collection of data on the movement of crops to market for soybeans, corn, wheat, cotton, and sorghum to a system of quarterly reports available 60 to 65 days after the reference quarter. (Department of Agriculture)
2. Collect quarterly data on interstate sales and purchases of stocker and feeder cattle to be tabulated 60 to 65 days after the reference quarter. (Department of Agriculture)

3. Institute a survey to collect quarterly data on farm production expenses for major cost items to be tabulated 60 to 65 days after the reference quarter. (Department of Agriculture)

2. ANNUAL GNP REVISIONS EACH JULY

Personal consumption expenditures

Goods:

For the annual survey of retail sales, institute the following:

a. Speed up the tabulations of data on sales to provide these figures by mid-May following the reference year.

b. Collect broad product detail on the sales of new car dealers (new cars, used cars, and repair services) and department stores (e.g., apparel, furniture, appliances) to be available for use in the second July GNP estimates. (Bureau of the Census)

Gross private domestic investment

Change in business inventories:

For the annual surveys of retailers' and wholesalers' inventories, tabulate yearend data by mid-May following the reference period in order that the date be available for the first July revision. (Bureau of the Census)

Government purchases of goods and services

State and local:

For the annual survey of governmental finances, speed up the tabulations of data on State and local government fiscal transactions to provide these figures by the second July revision. (Bureau of the Census)

Net exports of goods and services

1. Institute an annual program for reconciling U.S. merchandise export and import statistics on a bilateral basis with Mexico, our major trading partners in the Common Market countries, and Japan. (Bureau of the Census)

2. Institute a program for reconciling U.S. balance of payments statistics on a bilateral basis with comparable statistics of the same countries as in 1 above for international service and income transactions. (Bureau of the Economic Analysis)

Compensation of employees

Wages and salaries:

For the unemployment insurance reporting system, speed up the collection of fourth quarter (October-December) data on wage payments obtained from the State governments to mid-May following the reference year. (Bureau of Labor Statistics)

Supplements to wages and salaries:

Tabulate the data collected under the Employee Retirement Income Security Act to provide national industry aggregates of income and expenditures for retirement, welfare, health, and thrift savings plans by mid-May for the plan year covering the previous July 1-June 30 period. (Internal Revenue Service and Department of Labor)

Corporate profits

1. As a supplement to the Quarterly Financial Report, conduct an annual survey of audited corporate profits together with other selected items of the income statement and balance sheet for a representative sample of corporations in manufacturing, mining, wholesale trade and retail trade to be tabulated by mid-May following the reference year.(Federal Trade Commission)

2. Tabulate Schedule M accompanying corporate tax returns that reconciles taxable profits and balance sheets with stockholder reports. (Internal Revenue Service)

Farm income

For corporations and partnerships associated with farm enterprises, specify and tabulate business expenses associated with farm business receipts comparable to that for Schedule F accompanying sole proprietor tax returns. (Internal Revenue Service)

Annual input-output tables and GNP by industry

1. For the annual survey of manufactures, tabulate industry-product shipments data to distinguish between primary and secondary products produced in each industry. (Bureau of the Census)

2. Tabulate annual data on industry sales obtained from the industrial directory program. In addition, collect through a broad-based survey program of all

nonagricultural industries the following data items:

a. Aggregate costs of goods and services purchased from other firms

b. Supplements to wages and salaries

c. Depreciation allowances

d. Yearend inventories by method of valuation

e. Capital expenditures separately for plant and equipment. (Bureau of the Census)

3. QUINQUENNIAL GNP BENCHMARKS

Benchmark input-output tables

Existing quinquennial economic censuses (Bureau of the Census):

1. Collect data in all economic censuses on purchased services in total and for major component items.

2. Refine the reporting in all economic censuses of wages and salaries to eliminate underreporting.

3. Collect in all economic censuses except governments, data on depreciation charges for firms of all size classes.

4. Collect in the census of construction industries data on purchases of major materials and supplies.

5. Tabulate in the commodity transportation survey the dollar value of shipments between shipping and receiving industries.

6. Collect in the census of retail trade data on gross margins and operating expenses by kind of business, comparable to those in the census of wholesale trade.

7. Conduct a feasibility study in the census of governments for collecting itemized data on purchased goods and services from a sample of State and local governments.

8. Collect in the censuses of manufactures, wholesale trade, and retail trade data on the commodity composition of inventories by turnover period.

New industry coverage for quinquennial economic censuses (Bureau of the Census):

1. Expand the coverage of services to include all for-profit and not-for-profit activities.

2. Conduct a census of transportation industries.

3. Conduct a census of real estate industries.

Special studies of new construction:

In the studies of labor and materials requirements for new construction, increase the types of construction covered and conduct the studies on a recurring 5-year cycle. (Bureau of Labor Statistics)

4. GNP IN CONSTANT DOLLARS

Gross private domestic investment

Structures:

Develop price indexes for the construction of multi-family housing and nonresidential buildings comparable to those for single family housing. (Bureau of the Census)

Government purchases of goods and services

1. Establish the existing developmental project for preparing quarterly measures of defense purchases in constant prices as part of the regular ongoing program. (Bureau of Economic Analysis)

2. Reconsider possible introduction of productivity measures for deflating Federal Government employee compensation. (Bureau of Economic Analysis)[3]

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[3] Dissenting comment by Edward F. Denison:

I dissent from the recommendation which was not examined by the Committee as a group, that in deflating government purchases BEA should reconsider the use of productivity measures for Federal Government operations

Government is now treated as a final consumer of the goods and services it buys. Insofar as possible, specification pricing is used to deflate government purchases—whether of goods, labor, or other services—just as it is to deflate other components of GNP. A conceptual alternative would treat government purchases as intermediate, and as a final product substitute some estimate of the value of the goods and services that flow from government to the rest of the economy. Unless it were simply valued by purchases such an estimate would require independent measures in constant prices of the quanity of national security provided, the quantity of education provided, and quantities of a host of smaller items many of which defy not only measurement but even definition.

No actual or prospective series for government productivity fits either of these concepts. Unless some preferable third concept into which they do fit can be stated, such series simply are not pertinent to national product meas-

Net exports of goods and services

1. Use partial Bureau of Labor Statistics' data on merchandise trade export and import prices before complete international price data become available. (Bureau of Economic Analysis)
2. Conduct basic research for developing more direct price measures to deflate the service and income components. (Bureau of Economic Analysis)

General improvement in price data

The Committee supports the planned multi-year program to provide better wholesale, industrial, and international price data. (Bureau of Labor Statistics and Bureau of Economic Analysis)

5. FLOW OF FUNDS

1. Collect quarterly data on cash and security holdings of State and local governments. (Bureau of the Census)
2. Provide quarterly measures of fixed capital outlays, stocks, and capital consumption charges by sector and by type of capital as part of the NIPA estimates. (Bureau of Economic Analysis)
3. Explore feasibility of tabulating the quarterly and annual reports filed by all registered large nonfinancial corporations to provide an integrated statement of income, balance sheets and sources of financing. (Securitites and Exchange Commission)

6. GENERAL RECOMMENDATIONS

1. There is an overriding need for the preparation and publication of a handbook on the GNP accounts detailing concepts, sources of data, estimating methodology, and their limitations. An updating of the comparable effort of 1954 with a more complete coverage on the quarterly GNP estimates and deflation is long overdue. Although the BEA has been conscientious in describing major revisions and additions to accounts by articles in the *Survey of Current Business*, the practice does not fulfill its obligations to the many professional users of the GNP estimates who are now frustrated whenever they need to know the actual procedures. The provision of a handbook should be given the highest priority. (Bureau of Economic Analysis)
2. Institute the preparation of a revised quarterly GNP estimate 75 days after the reference quarter. (Bureau of Economic Analysis)
3. Provide a more complete and timely statement of the major judgments used and their economic and/or statistical rationale associated with the preparation of the GNP estimate released 15 days after the reference quarter. (Bureau of Economic Analysis)
4. Extend the presently published monthly estimates of personal income to encompass the broad aggregates of the disposition of personal income—personal taxes, consumer expenditures, and personal saving.[4] (Bureau of Economic Analysis)
5. Provide quarterly GNP estimates for the proposed 75-day release (see 2 above) unadjusted for seasonal variation for as many of the product and income components as feasible. (Bureau of Economic Analysis)
6. Expand the application of the quinquennial input-output tables to directly cross-check more of the product and income components. (Bureau of Economic Analysis)
7. Incorporate the quinquennial benchmarks into the annual and quarterly GNP time series 1 year after the relevant input-output table has been completed. (Bureau of Economic Analysis)
8. Review the detailed components that are presently published to assess if they meet the reliability standards appropriate for

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urement. A recommendation for a conceptual change is in any case outside the scope of the Committee's charge.

This note expresses no opinion as to the usefulness of BLS research in this area for other purposes.

[4] Dissenting comment by Edward F. Denison:

Annual estimates of personal saving in the most recent periods are subject to regrettably large errors and quarterly estimates to still larger ones. Monthly estimates would be much less reliable still, and probably too erratic to interpret unless they were arbitrarily smoothed. I am not convinced that a monthly series sufficiently accurate to contribute to economic analysis can be constructed.

Advisory Committee on Gross National Product Data Improvement

MEMBERS

Daniel Creamer, *Chairman*
Economist, The Conference Board

Rosanne E. Cole
Economist, IBM Corporation

Edward F. Denison
Economist, The Brookings Institution

Alan Greenspan*
President of Townsend-Greenspan and Company

Raymond W. Goldsmith
National Bureau of Economic Research and Professor Emeritus at Yale University

John W. Kendrick
Professor of Economics, George Washington University

STAFF

LaVerne V. Collins
Statistical Policy Division, Office of Management and Budget

Norman Frumkin
Bureau of Economic Analysis, Department of Commerce

Louis Weiner *(retired)*
Federal Reserve Board

*Mr. Greenspan withdrew from the Committee in the summer of 1974 when he became Chairman of the President's Council of Economic Advisers.

publication and for the detailed components that are published provide an indication of the recent errors of estimation.

(Bureau of Economic Analysis)

9. Create a fiscal capacity in the Federal statistical system for carrying out quick surveys on short notice. This capacity is required whenever unexpected changes in the economic climate and in business behavior create the need for information that is not being collected. (Statistical Policy Division)

10. The problems of seasonal adjustment should be studied on a continuing basis, including the behavior of seasonals during different stages of the business cycle, in the major Federal statistical agencies. (Statistical Policy Division)

11. Continuing efforts should be made by the major Federal statistical agencies to prevent deterioration in the quality of existing data, such as has occurred in the samples used in some surveys. The improvements recommended in this report will not be nearly as valuable if the improved data are not maintained at a high quality.

12. Selected Federal statistical agencies should have continued access to Internal Revenue Service tax returns for statistical purposes as enumerated in the Tax Reform Act of 1976. This reduces the reporting burden of small enterprises, provides needed cross-checks, and enables the integration of establishment and company statistics.

Representative PIKE. Thank you, Mrs. Slater. I know I don't have to apologize for the absence of the other members. I know all of you are familiar with the workings to know that like Pavlov's dogs, when the bell rings, something has to happen.

We had a situation not in my State but right across Long Island Sound from my district in New London, Conn., recently in which the Electric Boat Co., which is a major defense contractor, announced the layoff of 3,000 workers, largely white-collar workers, but at the same time they also announced that for weeks and I think months they had been advertising for welders and steamfitters, and said they could lay on 1,000 welders and steamfitters, about 500 of each, at any time.

Is there anything in the statistical data which is available to us which allows us to differentiate instead between industries and between types of labor?

How can we know what the unemployment is in what I will refer to as hard manual labor?

Mr. SHISKIN. We do have some data in the unemployment survey on unemployment by occupation. I think that is what you are getting at.

The unemployment survey sample itself is not sufficiently large to get detailed data showing unemployment by occupation that is statistically reliable for most occupational groups on a monthly basis. So, what we do report by that category is fairly limited. This would get at, I think, the problem that you are referring to.

In addition, there has been a great deal of pressure on us and others to prepare data on job vacancies. Last year Congress actually made available for the Bureau of Labor Statistics $1 million to investigate the subject of job vacancies.

We have been thinking a lot about that. We had a survey some years ago which we discontinued because it was not producing satisfactory information. We have now started a new effort using some of the funds made available by Congress.

I use that expression because these were not funds that were requested in the President's budget. So we are starting a new effort now to prepare a job vacancy survey. The reason that is relevant is that the important thing, it seems to me, in the context of your question, is to compile data on job vacancies and to match them against unemployment data by occupation.

So we have initiated new efforts to provide information of that nature.

Representative PIKE. I will let my own prejudices and hangups hang out. Personally, I am of the opinion that there is not as much unemployment in the country as we talk about, that there are jobs available but that they tend to be in hard, manual labor or that people are not all that eager to train in, for example, that, perhaps, our manpower training programs are not training people for the right jobs.

I don't know how we are going to know this unless we have some statistics that tell us where the jobs are and the areas in which we have jobs available.

Mrs. Slater, if there were one thing which would guide me in my legislative career more than anything else, it would be the knowledge of what motivates people, what makes people want to do things.

Do we have in any of our ongoing statistics or in our future statistical goals anything which can try to approach this problem? Believe me, I recognize the difficulty of it.

Every year I have to appoint or I am delighted to appoint people to West Point and Annapolis and the Air Force Academy, and I have always said, if I could measure motivation that is what I would use, but I cannot measure motivation so I have to use some other things.

What do we have—what can we get which will help us approach the problem of motivation to work?

Mrs. SLATER. Congressman Pike, I am, as you know, rather new in my present employment.

Representative PIKE. You are new in your present slot, but you have been around this area for long enough to be very expert.

Mrs. SLATER. Despite that fact, I, every day, learn of programs that are new to me that I did not know that we have had before. I will look into this and, perhaps, supply additional information to you.

Certainly, we do have some types of information that would enable you to study this and analyze it and draw at least hypotheses about people's motivation in employment.

In the employment survey, for example, and Mr. Shiskin can tell you more about this, and Mr. Stein, when these interviewers come across people who are not working, they do attempt to find out why not.

They do not say, are you in the labor force or aren't you, because people would not know how to answer that. They ask questions designed to find out whether these people are students or housewives or whether they have done something active to look for a job.

You do have statistics on a regular basis as to the number of people not participating in the labor force broken down as to reasons why they are not and as to whether they would be available for a job if a job were available.

So we do have some information that would give you clues as to motivation.

Representative PIKE. I don't know which of you can best answer this question. Do we have any ongoing monthly statistics which indicate to us the amount by which a person's either income or standard of living has been reduced by virtue of his unemployment?

Mr. SHISKIN. I cannot answer that question.

Mr. Stein, can you?

Mr. STEIN. I think that is one of the major gaps in our statistical system. It is something that we have not been able to really do. We would have to know how much people would earn if they were employed.

Representative PIKE. You also have to know how much they are receiving; I won't use the word "earning," as being unemployed.

Is there any correlation between our unemployment statistics and the benefits that are flowing to the unemployed?

Mr. STEIN. Congressman Pike, these are two pretty much entirely separate statistical systems. One is an administrative body of data and the other is based on a household survey, and it is really very difficult to interrelate the two correctly.

We don't know how many people who are unemployed as we measure it in the monthly survey are receiving unemployment benefits or how much.

Representative PIKE. Do we ask?

Mr. STEIN. It is kind of a touchy question that we have been reluctant to ask.

Representative PIKE. I agree with you that it is a touchy question. I am aware of the political unpopularity of raising it. But it gets me back to my motivation question. Does it hurt to be unemployed?

Mrs. SLATER. Congressman Pike, there are several things I would like to mention if you will give me an opportunity to go into it. Once a year in March we do collect information about work experience during the year, and about income, and you can draw from that some conclusions about the relationship between work and income.

But the data on income are not nearly as good as we would all like them to be. For that reason we have under development, as a joint project of HEW and the Census Bureau, with the developmental work having been done primarily at HEW and the Census Bureau being brought in to prepare for the field survey, a new survey called the Survey of Income and Program Participation.

It will still be some 2 or 3 years yet before we have a full field survey in operation with data coming back but when this survey is in operation we will be getting data on income in some considerable detail with a lot of emphasis on the kinds of income that people receive from specific transfer programs. This is one of HEW's great interests: Who is getting money from what transfer programs; who are the eligible population that may not be getting it; how would the program costs and benefits change if the criteria were changed, and so forth.

That is one major reason for going forward with this survey which will yield a great deal of information that will be useful for the kind of questions you are asking.

Mr. SHISKIN. May I make a comment on that?

First of all, I would like to say——

Representative PIKE. In the first place, since I am alone up here I hope you will protract your answers as much as possible in the hope that relief will be coming in the door any moment.

Mr. SHISKIN. I would like to say we are aware of the survey Mrs. Slater referred to, and we strongly support that survey. We have been working with the HEW staff and the Census staff to develop some labor force questions that need to be asked in that survey.

I think that survey does have the makings of one that would provide more information to answer the questions you have raised.

In addition, I would like to mention the fact that we took a survey last year, May 1976, through the Census Bureau on the jobseeking activities of the unemployed. In that survey, we asked a sample of the unemployed a number of questions, including what methods they used to look for work.

We also asked them questions such as, "Did you get any job offers which you did not take?" There were questions about how far from home the jobseekers were going to look for work and how far they are willing to commute to work, because we want to know if people were unwilling to take a job because it was too far from where they live. There was another series of questions, which I think has great economic significance, based on earnings of the last job and earnings wanted.

It seems to me that is an essential point to get at in considering the kinds of questions you are asking.

Representative PIKE. Of course, it has to be compared with the unemployment benefits which are flowing in as a result of the present programs we have.

I would just like to ask one more question, Senator Proxmire, and then I will happily yield.

Recently we cut back the period in which the Federal Government would fund supplemental unemployment benefits. Did the end of unemployment benefits—do we have any statistics which can tell us about what end of unemployment benefits did to unemployment in the areas where they ended?

Mr. SHISKIN. I don't think we have that yet. What we have are studies of the impact on the unemployment area exerted by increasing unemployment insurance benefits, which is the other side of the question you are asking.

Those studies were not made by Government officials so far as I know. They were made by academic people. In general, those who have made these studies agreed that the extension of unemployment benefits has yielded an unemployment rate that is higher than it otherwise would be.

However, there is a great deal of difference in the estimates of how much lower the rate would be. They range between a small figure like three-tenths of a percentage point and a much higher one like eight-tenths of a point in the unemployment rate. So the argument is that if you had not increased the unemployment benefits, and also the period during which people could collect the unemployment insurance—these are estimates made by academicians and not by us—the unemployment rate would be somewhere between an estimated three-tenths and eight-tenths of a percentage point lower.

Representative PIKE. I have no further questions, Senator Proxmire.

I would like to say that I am not sure that a person who was getting unemployment compensation would be highly motivated to give you anything but a self-serving reason as to why he or she did not take the job which was offered to him.

Obviously, they are not going to say I didn't want to take a job because I didn't want the job. There is always going to be another reason.

Mr. SHISKIN. In a survey we made of the intensity of job-seeking efforts by the unemployed, the conclusion was that the unemployed were vigorously seeking jobs. That is what they told us.

Representative PIKE. I am sure that is what they told you.

Senator PROXMIRE. First, I want to say this is a kind of unprecedented meeting of the Joint Economic Committee on this occasion. Usually we just have Mr. Shiskin and today we have the two top people on statistics in the Government.

Now that Courtenay Slater has her new responsibility, I think she along with you is one of the two most important responsible officials for our statistics. There is no question in my mind that our economic policy is greatly determined by the quality of our statistics.

Economic policy can be wrong if the statistics are wrong and although there are good intentions behind them, they are often that.

First, for this unemployment situation and inflation situation that confronts us, it looks, Mr. Shiskin, as if we are kind of stalled on a dreary plateau. Since April, we have had unemployment at approximately the same level, 7.1, 7. It hasn't changed at all and it is 7 this

month. That is an extremely high figure. Almost 7 million Americans are out of work, 6.9 million in October.

As you point out in your statement, the unemployment for blacks is once again very disturbing, 13.9 percent, twice as high as it is for—more than twice as high as for whites.

You also argue, however, that the employment situation continues to improve. How significant is that 135,000 and has the employment improvement slowed down some in the last 3 or 4 months?

Mr. SHISKIN. If you look at the first table attached to my statement, I think you will find it helpful in answering your question. If you take the average of the last 6 months, you will find that employment has risen somewhere in the neighborhood of 200,000 per month. There are several different measures of it and they show the same thing.

That increase, however, is not enough to reduce unemployment. So what you have is an expanding economy but at a rate that isn't strong enough to reduce unemployment. Unemployment has stagnated.

This is in sharp contrast with the situation between October and April of 1977 when employment was rising at about twice the recent clip. So the situation today is you have continuing expansion but at a pace insufficient to reduce unemployment.

Senator PROXMIRE. Do you have any kinds of reliable projections which will suggest whether you are going to be able to overcome this? Is this a temporary increase in the labor force that we can expect to moderate, and could we expect that unemployment figures would be likely to improve?

I know I am asking for some kind of a forecast, but I just want to know what you would expect.

Mr. SHISKIN. Courtenay is much more skillful in forecasting than I. Let me answer, first. I think this is a pause in the expansion. It is not as serious a pause as the one which took place a year ago during the period before the election when the employment increases were much smaller and unemployment was actually rising. But it is a pause.

My own best guess is that the economy will grow stronger. I don't think there is any significant evidence that the expansion is coming to an end. As we know from looking at historical data, the GNP or any other comprehensive measure you want to take is very erratic from quarter to quarter.

We have good quarters and bad quarters; and now the economy has slowed down in the third quarter. My own expectation is that in the coming months we will resume a more vigorous rate of growth.

Senator PROXMIRE. Mrs. Slater.

Mrs. SLATER. I am certainly no more skilled as a forecaster than Mr. Shiskin, but unfortunately, I don't enjoy the same immunity from sticking my neck out.

The general shape of my forecasts, and I think it is consistent with many others, is that in the very short run there could well be some pickup in the growth rate and that we will see some further modest reduction in unemployment.

Part of our reason for thinking this is the continued buildup in the job-creating programs that were enacted last spring and that are now in operation on a growing scale. Also, this forecast assumes there will be some pickup in consumer purchases from the third quarter. We

cannot guarantee that obviously, but October automobile sales were quite good and the October department store sales apparently were good. So there are some grains of hope that this sector is picking up.

Looking ahead toward the latter half of next year, the special job-creating programs will have that time peaked and be decling in terms of overall spending. We will have some increases in social security taxes next year, and this will have some restrictive effects on the economy; any tax increase does.

This, as I am sure you are aware, has led to some considerable discussion about the possible need for further actions as next year progresses to keep the growth rate high enough to bring unemployment down.

Senator PROXMIRE. Isn't there also an element here of reliance on consumer spending that may not be justified?

I notice the savings rate dropped sharply in 1976 and went from 6.3 in the first quarter down to 4.6 and 4.1 in the first quarter of 1977, historically very low, very low savings rate particularly on the basis of what it has been since 1968.

But it started to rise and it now is in the third quarter, it was 5.5 percent. As that goes up it means people are saving more, spending less of their income, and there is a little indication that I can see that real weekly earnings are rising so that I would think that this would suggest that we may be in a situation where consumers would be spending less in the next year and for that reason the recovery might not be so strong.

Mrs. SLATER. Certainly, we cannot expect consumers to spend faster than their income is growing. You cannot expect the savings rate to go down again.

So, what you think about the consumer sector depends on what you think about the outlook for growth of disposable income. The only point I could add to what you have said is that disposable income depends not only on what people are earning but on the tax system and how much is being subtracted form their spendable income through various kinds of taxes.

Senator PROXMIRE. As you know, the administration has been talking about a tax reduction as many other people have as stiumlators to the economy. If Mr. Shiskin is right and the economy is going to recover, that tax decrease may not be necessary or wise.

Mr. SHISKIN. I was not thinking as far ahead as Mrs. Slater. My timespan was 6 months ahead.

Mrs. SLATER. I think one would not expect a major tax change to be enacted in the next 6 months for obvious procedural reasons. You are as familiar as I am with the kind of effect that continuing inflation has on people's effective tax rate, pushing them into higher tax brackets. It would seem desirable and indeed inevitable that at some time in the next several years, tax reductions will be needed to keep people even in real terms.

I think the question before us now is what is the best time. We could make a case that some time during the course of next year would be the time.

Senator PROXMIRE. We now have a situation of 7 percent unemployment; very few skills that I know that are in short supply, maybe

a few, but very few. We have an industry operating at well below capacity.

So we do have enough slack in the economy so we can stimulate the economy without that particular factor likely to exacerbate inflation. So it would seem on the basis of the available resources we have, the available manpower that we have, the wisest course would be to stimulate the economy, and we can do so responsibly without the feeling that it is likely to result in inflation.

Would you agree with that, Mr. Shiskin?

Mr. SHISKIN. Not fully. To begin with, the capacity rate is about 83 or 84 percent, as I recall it. What my memory indicates is that you usually have serious problems of capacity shortages when it reaches about 80 percent. Eighty-eight percent is the point at which there is usually a spurt of new investment.

Furthermore, looking at the average capacity figures is not enough. You have to also look at the distribution of capacity within industries.

Some work that was done by the Bureau of Economic Analysis, Department of Commerce, a year or two ago indicates that the rate of capacity utilization in the large companies was much higher than in the smaller ones. So I don't think I would make policy on the basis of these averages.

I would suspect that some industries at the present time are operating at full capacity. One obvious example is the aluminum industry, where I understand you cannot get on the books to get a pound of aluminum until some time early in the spring of next year.

I just give that as an example. I think that as the expansion continues, you will find more and more of these situations; and if the expansion continues another year, I think we will have serious capacity problems.

Mrs. SLATER. I would agree with Mr. Shiskin, it is necessary to look at the capacity question in some detail. We do have some industries, aluminum being an obvious one, insulation being another, certain types of building materials where there may be capacity problems.

But generally speaking, I think I certainly would agree with your earlier statement that we can take steps to try to have the economy growing at, say, the 5-percent rate which would achieve gradual reductions in unemployment and this should not have unfavorable consequences on the price side.

Senator PROXMIRE. You say that total employment in the past 12 months has increased by 3½ million. How much of that is Government and how much private sector?

Mr. SHISKIN. I have a figure here for State and local areas. The increase in State and local government employment was 386,000. I don't remember the figures before that, but my impression is that this category was quite stable.

Federal Government employment has been stable over the past year.

Senator PROXMIRE. It is valid to conclude that once the recovery gets underway, most of it will be in the private sector. This suggests that in the last 12 months it has been in the private sector, only about

10 percent in the public sector, although there may have been some increase in the public sector.

Representative PIKE. Is a CETA worker classified as Federal, State, and local, or what?

Mr. SHISKIN. State and local. If he is on a job he is classified as employed. But if he is in training, some kind of a training school, which can also happen, and that applies to the overall CETA program, then he would not be classified as employed.

What I have here for this discussion are the latest figures on the number of jobs funded for public service employment, and that figure is 235,000. So the net increase in State and local government employment over and above the public services is about 100,000 in that period.

Senator PROXMIRE. Mr. Shiskin, one area of economic activity that is particularly susceptible to Government policy is the construction industry and housing, especially. I notice that after steady progress, the unemployment rate for construction workers rose in October.

Is that an indication in your judgment that construction which has helped lead the way to recovery is beginning to weaken?

Mr. SHISKIN. Those figures bounce around a lot. Since June, the unemployment rates for construction workers have been 12.6, 12.1, 11.5, 10.4, and 12.2, and I would say there is not much change over that period.

Senator PROXMIRE. That is not very encouraging in a recovery. It does indicate a very high level of unemployment. If we cannot——

Mr. SHISKIN. Looking at the construction employment figures, there appears to be a rise. In the last year we have had a very big rise, a rise from less than 3.6 million to over 3.9 million. In recent months it has fluctuated unevenly also.

Senator PROXMIRE. As you recall last month, I asked you about the steel industry and I had with me statistics I didn't use and I want to use them now. It indicates here is an industry which does have very, very serious unemployment problems.

I want to call your attention to the fact that although if you compare the production, not in terms of dollars but in terms of volume, actual physical volume of production between 1967 and 1977, you find a remarkable change in the areas.

Automobiles, for instance, in 1967, 142,000, the latest week, 216,000; trucks, 30,000 in 1967, and now 74,000; electric power, 23,000 million kilowatt hours in 1967, up to 38,000; you find bituminous coal from 10,000 up to 15,000; paper boards from 438 to 577, and so forth.

Steel in 1967, the thousands of net tons, 2,440,000 net tons in 1967, 2,348,000 in 1977, a decline. In a growing country when one of the principal customer of steel is automobiles that have expanded so rapidly, when you have virtually every other component that would demand steel rising as it has, and, yet, steel is stagnant and people thrown out of work in Youngstown and elsewhere in the country, what do you conclude about that industry and what, if anything, do you feel public policy might be able to do to meet that?

I am not asking about whether we ought to put on tariffs or anything of that kind.

Mr. SHISKIN. I can answer the first part of that question without hesitation. The steel industry is declining, and it is declining especially in terms of employment.

Employment in the steel industry has been declining for about 10 years at about 2 percent a year. So there are very serious employment problems. Productivity in the steel industry is low; it happens to be rising at only about 2 percent, which is a very low rate of productivity compared to earlier periods.

The increase in productivity in the steel industry in other countries, like Japan, is much greater. So, the U.S. steel industry is in serious trouble.

Senator PROXMIRE. My time is up, but if Congressman Pike would permit, I would like to ask one further question.

It has been suggested recently, a letter in the New York Times suggested we ought to use some imagination and initiative in putting those people to work who are in the steel industry.

In a place like Youngstown, they have people who want to work, they are used to good hard tough physical work, they will take whatever job they can get that will give them reasonable pay.

It has been suggested they be put to work developing environmental equipment or mass transit equipment or whatever, but it would take considerable capital supplied at first, perhaps, by the Federal Government, or it would take retraining programs and a move of these people to other areas.

Do you feel that there is anything the Federal Government can or should do under these circumstances?

Mrs. SLATER. Yes, sir. Perhaps the record should show I did not plant that question nor did it occur to me that it might come up. But we do have underway at the Commerce Department a rather intensive effort to analyze the impact of steel plant closings on individual communities. When we look at the entire economy, it is so large the impact of the decline of a particular industry is scarcely overwhelming.

But, in terms of the community, the impact can be quite serious, and we are trying to estimate what this impact may be on the local business activity generally on the State and local government receipts and so forth and also to look at what programs the Department has available which could be helpful in terms of opening up new job opportunities, retraining or whatever would be most sensible for a particular community.

The Economic Development Administration does have the authority to do this kind of thing and the resources to help communities which are in distress. We think this is a very important part of economic policy at the present time because the steel industry is not the only industry in which employment will be declining and plants will be shut down.

Any economy has shifts in the composition by sector. So, this is a very important effort we are taking here and probably at some point we will be coming before Congress suggesting that spending for these types of programs be increased.

Senator PROXMIRE. How soon do you think it would be before a program of that kind can be put into effect?

Mrs. SLATER. Some things can be done right away. The Department has been in touch directly, I know, with local officials and briefed them on the programs that are available on an immediate basis and what might be available in the way of job training, loans, what have you. I can supply more detail on that for the record.

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

The Economic Development Administration (EDA) has funds in grants and loans that are available immediately to the distressed communities. For example, the title IX of the Public Works and Economic Development Act authorizes EDA to provide economic development and adjustment assistance to help States and local areas meet needs arising from actual or threatened severe unemployment. EDA has already funded several Title IX projects related to the problems being experienced by the steel industry. Among them are projects in the Mahoning Valley (Niles, Ohio), Gary, Ind., and Lackawanna, N.Y. Immediate assistance is also available under EDA's more traditional program tools (titles I, II, and III). Under title I, EDA can provide financial assistance to build, rebuild or expand vital public facilities in distressed communities. Title II authorizes EDA to make long-term, low interest loans to business for constructing, expanding or improving facilities in job-producing manufacturing or service industries in areas of economic stress. Title III provides communities with technical assistance in dealing with economic problems and trains the unemployed and underemployed for new and higher paying jobs.

In addition to those immediate assistance programs, the Department has addressed some longer term economic development plans. For example, the Office of Science and Technology has been analyzing the potential for alternative uses for abandoned or obsolete steelmaking plants as alternative productive facilities for the communities severely impacted by steel plant shutdowns. In this regard, two longer term possibilities have been identified; namely, coal degasification, and resource recovery.

Senator PROXMIRE. As you know, there has been a bitter reaction to what people in Youngstown and other areas feel is an inadequate response on the part of the Federal Government and the feeling that it takes more than severance pay or workmen's compensation or some retraining program.

They want jobs and they want them soon.

Mrs. SLATER. This is a difficult question in terms of the impact on any particular community. We probably do not have an adequate response, but we do have some response now.

Senator PROXMIRE. Mr. Shiskin, the inflation situation is puzzling. Consumer prices have grown at a moderate rate and apparently stable rate. Wholesale prices have shot up at a 10-percent annual rate in October, and in addition the change in the finished goods index over 12 months ago shows a steady rise in the inflation rate.

Does that situation suggest that we are in for more difficulty here? I have a feeling that rate of inflation was greatly moderated by the fall in farm prices that now seems to be about over or may be over.

If that is the case, is it likely that we are going to have a new inflation rate of maybe 6, 7, 8 percent?

Mr. SHISKIN. As I have said many times here, is it customary during a period of recovery for prices to rise as the recovery continues.

I think that the situation has been quite unusual in this recovery because we have not seen much of that characteristic rise. If the expansion thus continues to next year, I would expect to see shortages of capacity here and there.

I would expect to see shortages of certain kinds of personnel, and price rises to go along with that. The price situation has been very favorable except in the first quarter of this year. We only have 1 month of the rise, and you cannot make too much of 1 month, I think when we see changes going from zero in July for the finished goods index to 0.1, 0.4, and one-eighth, that is troublesome.

Senator PROXMIRE. You have all commodities up eight-tenths of a percent, but you have farm products up 2.4 percent and industrial commodities up 0.6 percent.

How is it that that can result in only a 0.8-percent rise. You must have a very heavy weight on industrial commodities and a very light weight on farm products.

Mr. LAYNG. Did you say farm products and industrials?

Senator PROXMIRE. Yes; I am looking at the farm price index on the front page of the release that came out yesterday. It says 2.4 percent in 1 month, and it shows industrial commodities up six-tenths of a percent, and it shows all commodities together, which I take it is a combination of the two, up 0.8 percent.

Mr. LAYNG. You did not include processed foods and feeds. It is true that industrial commodities account for about 75 percent of all commodities index.

Senator PROXMIRE. Even at 75 percent, you ought to get a bigger increase than eight-tenths of a percent.

Mr. LAYNG. Industrial commodities accounted for 78 percent in terms of relative importance in December of last year, farm products was about 8 percent, and processed foods and feeds was about 14 percent.

It is possible to get a tenth or two rounding difference at the most, but that would tend to push the number closer to the industrials than closer to the farm and foods.

Senator PROXMIRE. Congressman Pike.

Representative PIKE. Thank you, Senator Proxmire.

Mr. Shiskin, we have about three white-collar workers in the country for every two blue-collar workers at the present time. How has this statistic changed in the last decade or in the last generation?

What is our trend ongoing from blue collar to white collar?

Mr. SHISKIN. I am sorry. I don't know the answer to that.

Mr. STEIN. Congressman Pike, there has been a persistent and steady long-term increase in white-collar employment relative to blue-collar employment.

Representative PIKE. Is this a worldwide phenomenon or an American phenomenon?

Mr. STEIN. I am afraid I could not answer that question.

Representative PIKE. Our steel problems are a worldwide phenomenon, we know. There is no country in the world, I think, that is not having trouble with excess steel capacity. I wonder if we have studied the extent to which the depression in the steel industry and the success in the aluminum industry are interrelated.

Are we building lighter everything? Are we building lighter automobiles? Are we building lighter washing machines? Do we have any statistics on this?

Mr. SHISKIN. I am sure there are statistics, but I don't know enough about these two industries.

Representative PIKE. Sometimes I feel that when we see an industry in trouble, we jump to relieve something which is in every table. It is not going to be cured by Government action.

If we are trying to build, for example, better mileage automobiles and we want to keep them big, they will have to be lighter. I honestly don't know what is happening in Detroit, but I have a hunch that one of the reasons the aluminum industry is doing so well and the steel industry is doing so badly, may just have something to do with it.

Mr. SHISKIN. I will make two comments on that. The first is that the steel industry is a very much bigger industry than the aluminum industry. So a relatively minor substitution of aluminum for steel could have a great impact on the aluminum industry but not much on the steel industry.

Mr. Layng just reminded me that we have been making an intensive review of the automobile prices because we make an adjustment for quality each year. We decide each year how much of the price increase in automobiles is a price increase alone and how much is the result of a quality change.

In doing that, we have learned that some automobiles were reduced in weight in 1976 by about 600 pounds and that it was accomplished——

Representative PIKE. A reduction in the weight of an automobile by 600 pounds is going to mean an awful lot less steel.

Mr. SHISKIN. And a lot more aluminum and plastic.

Senator PROXMIRE. So from that I have to draw some conclusions on what we ought to do, if anything, to bail out the steel industry. I am really torn on it. I am concerned obviously at the unemployment in Youngstown, but I wonder if we won't do better instead of bailing out the steel industry to build up the aluminum industry.

Mr. SHISKIN. Or some other industry.

Representative Pike. I share your feeling as to the fact that there are other industries which are doing very well. As another example, in a soft industry as opposed to a hard one, try to get an elderly person into a nursing home these days and it is not easy.

There is a shortage. We talk about an excess of hospital beds in America, there may well be, but there is a shortage of nursing home beds in America.

The Government of Iraq has recently stated that they felt that they ought to have a 23 percent increase in the price of oil because they have had an inflation of 23 percent in the last year and they are going to take that position to the OPEC meeting.

I don't believe that is going to happen, but what would a 10 percent increase in the price of imported oil do to our inflation rate in America?

Mr. LAYNG. We would have to supply that for the record. We have done it before in connection with the OPEC price increase last year. So we will supply that for the record in terms of the effect on both the wholesale price index and the consumer price index.

In addition to that, we have looked at the comparative position of the United States with respect to OPEC countries. We completed a study last year which was used as a basis for determining in some way what level of price increase, the amount of the price increase that might be justified in that situation. We will supply that for the record in terms of the impact.

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

[From the Office of Prices and Living Conditions, Bureau of Labor Statistics, Nov. 30, 1976]

Effects of OPEC Price Increases on the WPI and CPI

If OPEC were to raise its crude petroleum prices, there would be four potential price effects: (1) a change in the price of imported crude petroleum, (2) a change in the price of domestic crude petroleum, (3) a change in the price of refined petroleum products and (4) a change in the price of other products which rely on petroleum as an energy source or as a basic raw material.

Since imported crude petroleum prices are not currently collected for the WPI, there will be no direct effect of the price increase on the WPI. However, the average price of all imported crude oil can have an effect on both domestic crude oil and refined petroleum products, which are priced for the WPI. The latest average imported crude oil price available from FEA is for August 1976—$13.67 per barrel. By raising that price by various assumed OPEC price increases (5, 10, 15 and 20 percent), one can estimate the average price of imported crude oil under each assumption.

As already mentioned, an increase in imported crude oil prices may produce a direct increase in the price of domestic crude oil. The regulation of crude domestic oil provides for three tiers, each with a different price: upper, lower and stripper. The stripper price is set equal to the imported price less the import fee. Consequently, unless there is a change in FEA policy, the price of stripper oil will rise one cent for every one cent rise in the price of the imported oil. If one assumes that stripper oil continues to constitute 14 percent of domestic production, as it did in August 1976, then it is possible to estimate the impact of alternative OPEC price increases on the average price of all domestic crude oil.

If one assumes that imported oil continues to constitute 46 percent of all crude oil consumed in the U.S., as it did in August 1976, then one can estimate the average price of all crude oil consumed for each assumed OPEC increase. The consequent price increases for all crude oil are presented in the attached table.

If one takes the increase in the average price of all crude oil per barrel and divides it by the number of gallons per barrel (42), the result is the average price per gallon increase in the raw materials used to produce refined petroleum products. In order to use these numbers to estimate the price changes for refined petroleum products at both the producer and retail levels, it is necessary to make three important assumptions: (1) that the increase in raw material prices is evenly apread among all refined products—thus, an increase of $1.00 per barrel would result in a 2.4 cent ($1.00/42=$0.024) per gallon increase in the prices for gasoline, fuel oil, jet fuel, lubricating oil and all other refined petroleum products; (2) that there are no other changes in price arising from other cost factors such as labor cost, profit or retail mark-ups; and (3) that consumers will pay the higher price without any change in the amount demanded.

The average price increases per gallon of refined petroleum product are given as the last row in the attached table for each assumed OPEC increase. These price increases were added to the average October 1976 prices for each refined product to produce the estimated price levels under the above assumptions.

The percent changes for prices in gasoline and No. 2 fuel oil calculated under the above procedure are presented in the attached table at both the producer (WPI) and consumer (CPI) levels. In addition to these two products, price changes for all other refined petroleum products in the WPI were also calculated, except for greases and waxes which are not sold on a per-gallon basis. The effects of all these products on the refined petroleum products price index are presented in the attached table. The combined effects of the refined products and domestic crude oil price changes on the All Commodities and Industrials WPI are given in the table. The effects of the OPEC increases on the CPI All Items index include only the increases in gasoline and fuel oil; motor oil is not included.

It is important to note that the estimated effects on the WPI and CPI of various OPEC price increases include only the direct effects of higher prices for the specific crude and refined petroleum products. They do not include secondary effects such as those which increased fuel costs will have on goods and services and which increased feed stock prices will have on chemicals and plastics.

Attachments:

THE EFFECTS OF OPEC INCREASES IN CRUDE PETROLEUM PRICES ON THE WPI AND CPI, UNDER STATIC ASSUMPTIONS

	Assumed OPEC percent price increase			
	5 percent	10 percent	15 percent	20 percent
	Percent change			
Crude petroleum	3.4	6.8	10.1	13.5
Imported [1]	5.0	10.0	15.0	20.0
Domestic	1.1	2.3	3.4	4.5
Wholesale Price Index:				
All commodities	.14	.28	.41	.55
Industrials	.18	.35	.53	.70
Domestic crude petroleum	1.1	2.3	3.4	4.5
Refined petroleum products [2]	2.4	4.9	7.3	9.7
Gasoline	2.2	4.4	6.6	8.8
Fuel oil No. 2	2.7	5.5	8.2	11.0
onsumer Price Index: All items	.07	.13	.20	.26
Gasoline	1.4	2.8	4.2	5.7
Fuel oil No. 2	2.1	4.1	6.2	8.2
	Dollars			
Change in average price per gallon of all refined products	0.0087	0.0174	0.0261	0.0349

[1] No prices for this item collected for the WPI.
[2] Includes effects of other refined petroleum products not shown separately.

DIRECT EFFECT OF HIGHER PETROLEUM PRICES ON THE CPI [1]

Change in price	Gasoline	Motor oil	Fuel oil	All petroleum products in CPI
	(1)	(2)	(3)	(4)
10 percent	0.324	0.022	0.095	0.441
20 percent	.648	.043	.190	.881
30 percent	.973	.065	.285	1.322
40 percent	1.297	.087	.380	1.763
50 percent	1.621	.108	.474	2.204
60 percent	1.945	.130	.569	2.644
70 percent	2.269	.152	.664	3.085
80 percent	2.593	.173	.759	3.526
90 percent	2.918	.195	.854	3.967
100 percent	3.242	.217	.949	4.407
200 percent	6.484	.433	1.898	8.815

[1] Effect of alternative price changes for each product are shown in cols. 1, 2, and 3. For example, a 10 percent increase in gasoline prices would result in an increase of 0.324 percent in the CPI. A 40 percent increase would have an effect of 1.297 percent.

Note: The direct impact of higher prices for all petroleum products is shown in col. 4. The direct impact of different price increases for each type of petroleum product can be determined by adding across the row. For example, the impact of a 10 percent change in gasoline, a 30-percent change in fuel oil, and a 20-percent change in motor oil would be 0.652 percent.

Source: U.S. Department of Labor, Bureau of Labor Statistics, Office of Prices and Living Conditions, Dec. 14, 1976.

Trends in U.S. export prices and OPEC oil prices

Indexes covering principal categories of U.S.–OPEC trade between January 1974 and June 1975 indicate U.S. export prices have not risen relative to OPEC revenue per barrel of crude oil

EDWARD E. MURPHY AND JORGE F. PEREZ-LOPEZ

MUCH ATTENTION in recent months has centered on the question of inflation in the industrial countries and its impact on the purchasing power of oil revenues received by members of the Organization of Petroleum Exporting Countries (OPEC).[1] It had been argued by some that because of inflation in the industrial countries since January 1974, it would be necessary for OPEC to increase the price of oil to compensate for a decline in purchasing power of the revenues of its members.[2] [OPEC increased the posted price of crude oil an additional 10 percent as of October 1, 1975.] Others had argued that in view of the price increases in 1973 and 1974, the purchasing power of OPEC revenues had been greatly increased.[3]

The purpose of this analysis is to estimate from the available data on U.S. export prices and OPEC pricing policy the trend of purchasing power of OPEC revenue per barrel of oil vis-a-vis exports from the United States. To do this, it was necessary to construct both an index of OPEC revenue per barrel of crude oil and an index of U.S. export prices for the types and classes of nonmilitary products imported by the OPEC countries from the United States.[4] The main findings of the study are:

1. During 1974 and the first half of 1975, OPEC revenue per barrel of oil did not suffer losses in purchasing power vis-a-vis the United States. The available evidence suggests, in fact, that OPEC revenue per barrel may have gained with respect to the export prices of U.S. goods. Specifically, during these 18 months, export prices of the principal categories of U.S. nonmilitary goods of the types and amounts purchased by OPEC countries increased by between 7.2 percent and 9.7 percent, depending on which of two different calculations is used.[5] During the same period, however, OPEC increased its revenue per barrel of crude oil by 9.6 percent by raising the royalty rates and tax rates levied on oil exports.

2. If the period examined is extended 6 months to cover the 24 months from June 1973 to June 1975, then it is clear there has been a dramatic increase in the purchasing power of OPEC revenue per barrel of oil.[6] Specifically, between June 1973 and June 1975, OPEC revenue per barrel increased by 499 percent, while U.S. export prices increased by 31.1 percent.[7]

U.S. trade with OPEC countries

U.S. nonmilitary exports to OPEC countries for 1973, the last year for which complete and disaggregated data are available, amounted to slightly over $3.3 billion, which is about 22 percent of total value of Organization for Economic Cooperation and Development (OECD) exports to OPEC for that year.[8] The members of the OECD referred to here are the principal industrial countries of Western Europe plus the United States, Canada, and Japan.

The bulk of U.S. nonmilitary exports to OPEC for 1973 were concentrated in manufactured goods and food. Table 1 shows the distribution of the value of U.S. nonmilitary exports to OPEC by broad categories of the Standard International Trade Classification scheme (SITC) of the United Nations.[9]

An examination of table 1 shows that machinery and transport equipment (SITC 7) and food (SITC 0) accounted for nearly 70 percent of the value of U.S. exports of nonmilitary goods to OPEC for 1973. Manufactured goods classified chiefly by material (SITC 6) and chemicals (SITC 5) accounted for about 18 percent of total value. Of less significance were crude materials (SITC 2), miscellaneous manufactured articles, not elsewhere classified (SITC 8), and beverages and tobacco (SITC 1). Mineral fuels, lubricants, and related materials (SITC 3) were almost negligible. Commodities and transactions not

Edward E. Murphy is chief of the Division of International Prices, Bureau of Labor Statistics, and Jorge F. Perez-Lopez is an economist in the Division.

U.S. DEPARTMENT OF LABOR
Bureau of Labor Statistics

Table 1. U.S. exports of nonmilitary products to OPEC countries during 1973 by SITC section

SITC section	Description	U.S. exports to OPEC, all categories		Value of U.S. exports to OPEC covered by U.S. export prices to the world	
		Value (in dollars)	Percent	Value (in dollars)	Percent [1]
	Total	3,334,973,423	100.00	2,011,620,616	60.32
0	Food and live animals	589,766,770	17.68	448,238,106	[2] 13.44
1	Beverages and tobacco	49,329,433	1.48	0	0
2	Crude materials, inedible, except fuels	122,532,361	3.67	446,282	0.01
3	Mineral fuels, lubricants, and related materials	19,137,834	.57	1,443,106	0.04
4	Oils and fats, animal and vegetable	53,065,094	1.59	0	0
5	Chemicals	243,446,386	7.30	22,978,260	0.69
6	Manufactured goods classified chiefly by material	370,463,370	11.11	84,552,230	2.54
7	Machinery and transport equipment	1,698,676,502	50.94	1,406,772,627	42.18
8	Miscellaneous manufactured articles, not elsewhere classified	138,287,874	4.15	47,190,005	1.42
9	Commodities and transactions not classified according to kind	50,267,799	1.51	0	0

[1] Each element of the third column as percent of total U.S. exports to OPEC ($3,334,973,423).

[2] Includes domestic wholesale prices for milled rice and dried leguminous vegetables.

SOURCE: U.S. Exports—Schedule B Commodity by Country, Report FT-410, December 1973 (Bureau of the Census, 1974).

classified according to kind (SITC 9), a general category that groups shipments valued under $250 regardless of commodity, zoo animals, value of repairs on imported items to be exported, and so on, accounted for about 1.5 percent of the total value of U.S. exports to OPEC.

Prices of U.S. export commodities

The price data used in this investigation have been brought together from three different sources. Price data for manufactured products were obtained from the U.S. export price index program of the Bureau of Labor Statistics. The BLS prices are export prices to the world collected from U.S. exporting firms, whether or not U.S.-owned, for specific and important U.S. exports. Complete specifications are obtained for each product priced. In addition to physical descriptions, the specifications include class of buyer, size of transaction, applicable discounts, currency, mode of transport, port, and packing.

The products selected are classified by Schedule B, the principal scheme for classifying and recording the type, value, number, and destination of U.S. exports.[10] Adjustments are made in reported prices for quality change. The prices are collected directly from the firms in each reference month. For the period 1964–73, the reference month is June of each year. Beginning with 1974, the reference month is the last month of each quarter.

This procedure for obtaining specification prices means that within an index or a category within an index, the specification priced for one firm most likely will be different from the specification priced for another firm. The advantage of this procedure is that specification prices are used in the indexes and, at the same time, the products most representative of each firm's export sales are included in the indexes. The potential problem thus avoided is that a single national or regional specification for the United States may not accommodate product differences among firms, and indeed may be unrepresentative of the bulk of transactions in a product for all firms.[11]

The composite price behavior of the items selected and priced for each Schedule B category has been considered as representative of the other nonpriced items in the same seven-digit class.[12] The sample of products and price trends reported may thus be taken to represent U.S. exports to the world, and will be applicable to any country or group of countries *except to the extent their experience diverges from the average for all countries.* The price trends will correspond more closely to the trend of prices paid for U.S. products by any buying country or group of countries as the number and variety of products covered is increased in categories which correspond

Table 2. Export price index for all covered U.S. nonmilitary commodities bought by OPEC countries, 1964–75

[June 1967 = 100]

Date	Commodities
June 1964	97.1
June 1965	96.2
June 1966	96.9
June 1967	100.0
June 1968	102.1
June 1969	105.0
June 1970	106.8
June 1971	114.0
June 1972	116.0
June 1973	132.0
January 1974	[1] 161.5
March 1974	161.8
June 1974	159.1
September 1974	169.7
December 1974	179.0
March 1975	174.8
June 1975	173.1

[1] Manufactures interpolated using wholesale price index rate of change for all manufactures for the period January 1974 to March 1974.

Table 3. Changes in variables determining Saudi Arabian oil revenues, 1974–75

Date	Posted price (dollars per barrel)	Royalty rate (percent)	Tax rate (percent)	Production cost (cents per barrel)	Buy-back percentage of posted price
1974:					
January	11.651	12.50	55	10	93.00
March	11.651	12.50	55	10	93.00
June	11.651	12.50	55	10	93.00
September	11.651	14.50	55	10	94.86
December	11.251	20.00	85	12	94.80
1975:					
March	11.251	20.00	85	12	93.00
June	11.251	20.00	85	12	93.00

to those purchased by the group of countries. More than 530 Schedule B categories were included in this analysis. They account for 60.3 percent of the value of U.S. exports to OPEC. Because of space limitations, the Schedule B numbers are not reproduced here. However, table 1 shows the distribution of total value of U.S. exports to OPEC according to SITC sections and the total value of exports that correspond to categories for which U.S. export prices to the world are available.

The products for which export prices are collected by BLS are concentrated in manufactured goods—SITC 6, manufactured articles classified chiefly by material; SITC 7, machinery and transport equipment; and SITC 8, miscellaneous manufactured articles.[13] As may be seen from table 1, these three categories accounted for nearly two-thirds of U.S. exports to OPEC in 1973.[14] Export price series corresponding to categories covering about 70 percent of the value of the manufactures in SITC 6, 7, and 8 were used in the investigation.

An adjustment was necessary because U.S. export prices for manufactured goods are not available for January 1974, the beginning of the principal period being examined. Quarterly collection of U.S. export prices began in March 1974. Prior to that date, export prices were collected in June of each year beginning with 1964. Thus, actual U.S. export price data for manufactured goods are available for June 1973 and March 1974, but they are not available for January 1974. However, it is possible to estimate the level of U.S. export prices to OPEC countries for manufactures in January 1974 by interpolating the export price index time series using the change in U.S. domestic manufactures prices between January 1974 and March 1974. The U.S. wholesale price index rate of change between January and March 1974 was calculated for the all manufactured commodities category and applied to U.S. export prices for manufactures for March 1974 to estimate the level of the export prices for manufactured commodities for January 1974.

At the present time, BLS does not collect export prices for agricultural commodities. Therefore, in order to cover this important category, which accounts for 17 percent of U.S. exports to OPEC, it was necessary to obtain price data from two sources. Export prices for wheat and corn were obtained from the U.S. Department of Agriculture.[15] For milled rice and dried leguminous vegetables, domestic U.S. wholesale prices from the Wholesale Price Index were used as a proxy, for export price indexes.[16] These four agricultural products account for about 76 percent of the value of agricultural commodities exported from the United States to OPEC and 13.4 percent of the value of all U.S. nonmilitary exports to OPEC.

The price index of U.S. exports to OPEC countries calculated here is a weighted average of changes of individual prices of U.S. export products. The weights used are the value of U.S. exports to OPEC countries calculated at the most detailed product level for 1973.

The export price index (XPI) is of the Laspeyres form, so that at time t

$$XPI_t = \sum_j \sum_{i=1}^{n_j} \frac{1}{n_j} \cdot \frac{P_{ie_j,t}}{P_{ie_j,t-1}} \cdot w_j$$

where j = seven digit Schedule B commodity
n_j = number of price relatives within each j
w_j = share of value of U.S. exports to OPEC for each j in 1973
$\frac{P_{ie_j,t}}{P_{ie_j,t-1}}$ = price relative of ie_j (the i^{th} item within j)

and where

$$w_j = \frac{V_j}{\sum_j V_j}$$

and V_j = value of U.S. exports to OPEC in 1973 for each j.[17]

In cases where BLS has already published an export price index for an SITC subgroup, that index was entered in the above formula and assigned a weight equal to the share of that subgroup in the value of U.S. exports to OPEC.[18]

The index as calculated thus assigns an importance to each product which is proportionate to its importance in U.S. sales to OPEC in the base period.

Price trends for U.S. goods bought by OPEC

Using the price data described above, an index was prepared for the kinds of U.S. goods exported to OPEC. The prices have been weighted by the relative value of U.S. exports to OPEC of each of the detailed commodities for which U.S. export prices to the world were available. The export categories covered contain slightly over 60 percent of the total value of U.S. exports to OPEC.[19] The index shows an increase of 73.1 percent between June 1967 and June 1975. (See table 2.)

The change of U.S. prices over the period January 1974 to June 1975, measured in table 2, for all the types of commodities exported to OPEC countries which we have covered is estimated to be 7.2 percent. Calculations which include certain domestic U.S. prices for the commodities for which directly collected export prices are not available raise this estimate to 9.7 percent.[20]

OPEC revenue per barrel of oil

The discussion of the purchasing power of OPEC oil exports has been couched in terms of the purchasing power per unit of oil exports. In the case of oil, the published prices (called posted prices) are not the actual transaction prices; that is, the posted prices are not the prices paid by the buyers and they are not the prices received by the sellers. To examine the trend of selling prices of oil, it is necessary to make a special calculation of the revenues received by the OPEC sellers of oil on a unit basis.

Table 4. Changes in posted prices and government revenue on equity oil for Arabian light crude, 1964–75

[Dollars per barrel]

Date	Posted price	Government revenues from royalties and taxes
June 1964	1.800	0.990
June 1965	1.800	.990
June 1966	1.800	.990
June 1967	1.800	.990
June 1968	1.800	.990
June 1969	1.800	.990
June 1970	1.800	.990
June 1971	2.285	1.325
June 1972	2.479	1.448
June 1973	2.898	1.702
January 1974	11.651	7.008
March 1974	11.651	7.008
June 1974	11.651	7.008
September 1974	11.651	7.113
December 1974	11.251	9.799
March 1975	11.251	9.799
June 1975	11.251	9.799

Table 5. Buy-back prices for Saudi Arabian light crude, 1974–75

[Dollars per barrel]

Date	Posted price	Buy-back (percent)	Buy-back price
1974:			
January	11.651	93.00	10.835
March	11.651	93.00	10.835
June	11.651	93.00	10.835
September	11.651	94.86	11.052
December	11.251	94.80	10.666
1975:			
March	11.251	93.00	10.463
June	11.251	93.00	10.463

As sellers of crude oil, the OPEC countries derive their revenues from a combination of two principal sources: (1) taxes and royalties per barrel paid by oil companies that have an equity investment in the country for the extraction of oil, and/or (2) sale of state-owned crude by the OPEC country to the oil companies.[21] The first source of revenue is generally referred to as taxes and revenues on "equity" oil, while the second corresponds to receipts for "buy-back" oil (that is, state-owned oil).

The posted price is an artificial price set by OPEC, which is used as a base to calculate the amount of royalties and taxes and to determine the level of the buy-back price. Therefore, given any posted price, other variables such as the royalty rates, the tax rates, and the buy-back rates determine the revenue received per barrel by the OPEC governments.[22]

The series for OPEC revenues per barrel of crude oil presented here is based on revenues from sale of light crude oil received by Saudi Arabia, the world's largest crude oil exporter. Arabian light crude, 34° API, f.o.b. Ras Tanura, is used as the pricing standard for crude oil by OPEC countries. Adjustments of price for other crude oils are made for deviations in density, sulphur content, and differentials in transportation costs. Since most pricing decisions by OPEC are based on Arabian light crude, and OPEC has generally followed the leadership of Saudi Arabia in determining the level of government revenues per barrel, Saudi Arabian revenue per barrel of light crude oil can validly be used to indicate trends in OPEC revenue per barrel.

The revenue per barrel is the weighted average of the revenue per barrel from equity oil and the revenue per barrel from buy-back oil. It is calculated by a

formula which incorporates the various tax and royalty rates, buy-back rates, production costs, and the posted price.

Revenue per barrel =
(royalty per barrel + tax per barrel) (share of equity oil in production) + (buy-back price per barrel) (share of buy-back oil in production)

where:

Royalty per barrel = (posted price per barrel) (royalty rate)
Tax per barrel = [posted price per barrel–(royalty per barrel + production cost per barrel)] (tax rate)
Buy-back price per barrel = (posted price per barrel) (buy-back rate)

The revenue per barrel of Saudi Arabia for Arabian light crude was calculated by substituting in the formula the relevant Saudi Arabian values for royalty rates, tax rates, production shares, and so forth. (See tables 3, 4, and 5 for values used.) The results of these calculations are shown in table 6, where it may be seen that revenue per barrel remained at $0.99 until after June 1970, when it began to increase. It reached a level of $10.32 in December 1974 and decreased to $10.198 in March 1975. There was no change between March 1975 and June 1975. This series, showing Saudi Arabian revenue per barrel, has been used here as the proxy for all OPEC revenue per barrel. The series was converted to index number form and is shown in table 7.

Table 6. Saudi Arabian revenue per barrel of crude oil, 1964–75

[Dollars per barrel]

Date	Revenue per barrel from—		Revenue per barrel [1]
	Equity oil	Buy-back oil	
June 1964	0.990	(2)	0.990
June 1965	.990	(2)	.990
June 1966	.990	(2)	.990
June 1967	.990	(2)	.990
June 1968	.990	(2)	.990
June 1969	.990	(2)	.990
June 1970	.990	(2)	.990
June 1971	1.325	(2)	1.325
June 1972	1.448	(2)	1.448
June 1973	1.702	(2)	1.702
January 1974	7.008	10.835	9.304
March 1974	7.008	10.835	9.304
June 1974	7.008	10.835	9.304
September 1974	7.113	11.052	9.476
December 1974	9.799	10.666	10.320
March 1975	9.799	10.463	10.198
June 1975	9.799	10.463	10.198

[1] Weighted average of government revenues from equity oil and buy-back oil. Calculated based on total sales of 95 percent of all crude—40 percent equity oil and 60 percent buy-back oil.

[2] From June 1964 to June 1973, the buy-back price is not available since during this period almost all oil was equity oil. Changes in participation agreements that gave rise to the differential price treatment of the two oils occurred in late 1973.

Table 7. Comparison of export price index for U.S. goods bought by OPEC countries and index of OPEC revenue per barrel of crude oil, 1964–75

[June 1967 = 100]

Date	U.S. export price index to OPEC	Index of OPEC revenue per barrel
June 1964	97.1	100.0
June 1965	96.2	100.0
June 1966	96.9	100.0
June 1967	100.0	100.0
June 1968	102.1	100.0
June 1969	105.0	100.0
June 1970	106.8	100.0
June 1971	114.0	133.8
June 1972	116.0	146.3
June 1973	132.0	171.9
January 1974	161.5	939.8
March 1974	161.8	939.8
June 1974	159.1	939.8
September 1974	169.7	957.2
December 1974	179.0	1,042.4
March 1975	174.8	1,030.1
June 1975	173.1	1,030.1

Comparison of trends

It is interesting to compare the U.S. export price index for the types of goods exported to OPEC and an index which shows the growth of OPEC government revenue per barrel of crude oil.

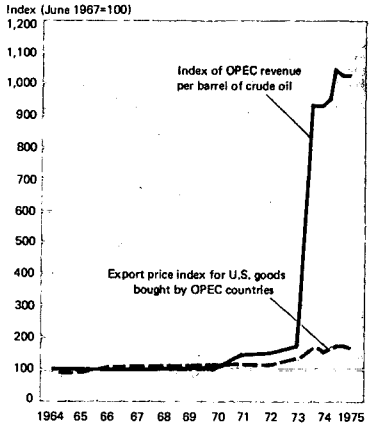
June 1967–June 1975. A comparison of these two series for the period June 1967 to June 1975 shows that gains in OPEC revenue per barrel far outweighed increases in U.S. export prices, resulting in large increases in the purchasing power of OPEC revenue per barrel. Indeed, while U.S. export prices to OPEC countries as measured here increased by about 73 percent between June 1967 and June 1975, OPEC revenue per barrel of crude oil rose by 930 percent. (See table 7 and chart 1.)

January 1974–June 1975. An examination of trends in the period following the dramatic oil price increases late in 1973 reveals there has been no decline in purchasing power of OPEC revenue per barrel vis-a-vis U.S. export prices. During 1974, the U.S. export price index developed here increased by approximately 11 percent. OPEC revenue per barrel of crude oil also increased by approximately 11 percent during 1974.[23] During the first half of 1975, U.S. export prices to OPEC countries declined by about 3.3

percent from their level at the end of the fourth quarter 1974. Over the same period, OPEC revenue per barrel decreased by 1.2 percent. Thus, for the six consecutive quarters from January 1974 through June 1975, U.S. export prices to OPEC rose by about 7.2 percent, while OPEC revenue per barrel increased by approximately 9.6 percent.

Chart 1.

Export price index for U. S. goods bought by OPEC countries and index of OPEC revenue per barrel of crude oil, 1964-75



Summary

This investigation has provided measures of the trend of U.S. export prices for the types of goods exported to the OPEC countries. The measures use U.S. prices to the world weighted by U.S. trade with OPEC. The U.S. export price index calculated here, when compared with OPEC revenue per barrel, shows that OPEC has experienced large gains in the purchasing power of its per barrel revenue.

During 1974, U.S. export price increases were matched by increases in OPEC revenue per barrel. During 1975, U.S. export prices to OPEC decreased while OPEC revenue per barrel of oil remained unchanged. From January 1974 to June 1975, the 7.2-percent price increase which has occurred for U.S. exports has been exceeded by the 9.6-percent increase in the revenue per barrel of oil charged by OPEC. (For an alternative calculation, see the appendix.) It appears, therefore, that OPEC's purchasing power per barrel of oil has not decreased between January 1974 and June 1975 with respect to U.S. products of the nonmilitary types purchased by OPEC. □

FOOTNOTES

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[1] Current members of OPEC, which was created in 1960, are Algeria, Ecuador, Gabon, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, United Arab Emirates, and Venezuela. Ecuador was admitted as a full member in November 1973 and Gabon was admitted as a full member in June 1975.

[2] For example, a communique issued at the conclusion of the June 1975 Ministerial Meeting of OPEC in Gabon, published in *The New York Times*, June 12, 1975, p. 57, reported, among other things, that:

> . . . in view of increasing inflation, the depreciation of the value of the dollar and the consequent erosion of the real value of the oil revenue of member countries, the conference decided to readjust crude oil prices as from October 1, 1975.

Specific reference to the period Jan. 1, 1974, to September 1975, was made by an official of one OPEC member government in an advertisement in *The New York Times*, June 5, 1975, p. 23 and *The Washington Post* of the same date in which he states:

> An early upward revision of petroleum price by OPEC members has become an economic necessity in view of the persistent rise in import prices of oil exporting nations from the industrial nations. . . . It has been reported that according to OECD estimates the export prices of OECD countries to OPEC members had increased by 25 percent during 1974 and a further increase of 10 to 15 percent is anticipated until the end of September 1975—i.e., the expiration date of OPEC oil price freeze. Thus the oil exporting nations will be losing after allowing for some adjustments during 1974 between 30 and 35 percent of the

purchasing power of their dollar earnings from oil exports between January 1974 and September 1975.

[3] For example, see *World Oil Price Increases and the Inflation in OPEC's Import Costs* (New York, Petroleum Industry Research Foundation, Inc., 1975), p. 2. Mimeographed.

[4] The price data are not specifically for any one buying country, but rather refer to the world market for U.S. products. The weights used are the value of U.S. export shipments to OPEC in 1973. See the discussion of these points in the section on prices of U.S. export commodities.

[5] The former figure refers to product categories for which direct pricing of exports is available and accounts for 60.3 percent of the value of U.S. exports to OPEC. U.S. domestic wholesale price trends for the remaining products, but excluding direct energy products, combined with the price trends of the directly priced exports, yields the latter figure. See the appendix for discussion of the 9.7 percent figure. The lower figure is discussed in the text.

[6] This was due to the large increases in oil prices in October 1973 and January 1974. In fact, oil prices began rising faster than U.S. export prices between 1970 and 1971 and continued to do so, with only minor interruptions, as can be seen from table 7.

[7] The remarkable effect of a slight alteration in the base period dramatizes the significance of the choice of a base period. Much of the analysis of this paper refers to 1974 and the first half of 1975, because the recent OPEC statements on the purchasing power of its revenue refer to price changes in 1974 and 1975. The reader can calculate the trend of the purchasing power of OPEC revenue per barrel vis-a-vis the United States from any of several possible base periods by using the data in table 7.

[8] Data on military exports are not available. After the analysis here was completed, the trade data for 1974 became available, and showed that the value of U.S. exports to OPEC were approximately twice the level of 1973. However, for purposes of price index construction, the distribution of value by product (that is, the weights) is important; the absolute value of trade is not important in this context. We calculated the correlation coefficient between the detailed weight structures for 1973 and 1974; it is .955. Thus the structure of U.S. trade with OPEC in 1974 was almost the same as that of 1973 even though the dollar value of trade had doubled. The use of 1974 weights thus cannot be expected to change significantly the indexes calculated here.

[9] For a full explanation of the SITC, see *Standard International Trade Classification, Revised* (New York, United Nations, 1961), Statistical Papers Series M, No. 34.

[10] *Schedule B, Statistical Classification of Domestic and Foreign Commodities Exported from the United States*, Jan. 1, 1971, and annual revisions (Bureau of the Census).

[11] The use of actual prices instead of unit values results in indexes that measure pure price change. That is, they do not also incorporate movements due to shifts in the composition of products within categories, and adjustments can be made for changes in quality or other specifications. For a description of the problems of unit-value indexes, see Irving Kravis and Robert E. Lipsey, "International Prices and Price Proxies," in Nancy E. Ruggles and others, *The Role of the Computer in Economic and Social Research in Latin America* (New York, National Bureau of Economic Research, 1974).

[12] Schedule B is the most detailed classification scheme available for classifying U.S. export products.

[13] Coverage is being extended to include all U.S. exports in the next few years.

[14] The same coverage holds for 1974, though the dollar amounts are larger.

[15] *Grain Market News* (U.S. Department of Agriculture), various issues.

[16] *Wholesale Prices and Price Indexes* (Bureau of Labor Statistics), various issues. In general, domestic wholesale prices have proved to be good proxies for export prices only in a limited number of cases. In the case of these two products, it has not been possible to examine quantitatively how well the proxy relation holds. However, both products are important export items and, since the lifting of export subsidies in 1972, domestic U.S. wholesale prices are probably a good mirror of the world price. For a discussion of the proxy relation of wholesale prices to export prices, see Kravis and Lipsey, "International Prices."

[17] Calculated from *U.S. Exports—Schedule B Commodity by Country*, Report FT-410, annual 1973, and errata (Bureau of the Census, 1974).

[18] For export price index series published by the Bureau of Labor Statistics, see *U.S. Export Price Indexes, First Quarter 1975* (USDL-75-270).

[19] See table 1. The weights used in the index were calculated at varying levels of disaggregation: the 4- and 7-digit product categories of Schedule B. Schedule B is the principal scheme for recording the value, description, and destination of U.S. exports. See, for example, *Schedule B, Statistical Classification of Domestic and Foreign Commodities Exported from the United States.*

[20] The latter calculation excludes fuels, lubricants, petroleum-related chemicals and fertilizers which together account for 4.5 percent of the value of U.S. exports to OPEC. This and other aspects of the noncovered commodities are discussed in the appendix.

[21] State-owned oil sold at auction accounts for less than 5 percent of production. It has not been included in the calculations made here.

[22] Since October 1973, the OPEC countries have unilaterally determined the level of all these variables.

[23] OPEC revenue per barrel rose over this period, although posted prices for crude oil remained stable and even decreased from November 1974 through the first quarter 1975. The revenue increase was accomplished by raising the royalty and tax rates. (See table 3.)

APPENDIX: Price trends of commodities not covered by the export price indexes

Categories which account for 39.7 percent of U.S. exports to OPEC are not *directly covered* by the export price index calculated above. Of the 39.7 percent not directly covered, 4.2 percentage points are in SITC 0 (food) and 8.8 percentage points are in SITC 7 (machinery and transport equipment). The price coverage in these two SITC sections is very high, 76 percent and 83 percent, respectively. The price trend of the covered categories has been imputed to the noncovered categories in each of these two sections, and attention is focused on the noncovered categories in the remaining SITC sections.

The U.S. domestic wholesale price movements during 1974 and 1975 of the remaining noncovered sections, that is, SITC 1, 2, 4, 5, 6, and 8, were examined to determine to what extent they have diverged from the export price trend calculated above.[1] The U.S. wholesale price indexes for the subcategories not covered in the export price index were rearranged to correspond to sections of the SITC. The indexes were rebased to January 1974 and percentage changes were calculated for the period January 1974 to June 1975 using internal wholesale price index relative importances. An average percentage change for all the noncovered SITC categories was computed by weighting the percentage changes for the SITC sections by their respective U.S. export value weights to OPEC for 1973:

SITC section	Selected goods	Percentage change
	All categories	16.6
1	Beverages and tobacco	25.9
2	Crude materials, inedible, except fuels	−8.0
4	Oils and fats, animal and vegetable	4.4
5	Chemicals (selected items only)	30.8
6	Manufactured goods classified chiefly by material	22.7
8	Miscellaneous manufactured articles, not elsewhere classified	11.7

The result of this calculation indicates that domestic prices for the noncovered categories increased by 16.6 percent during 1974 and the first half of 1975. If this figure is taken as representative of export price changes in the noncovered categories, it can be combined with the 7.2-percent change calculated for the covered categories to give an estimated increase of 9.7 percent for export prices to OPEC of all nonmilitary U.S. commodities during 1974 and the first half of 1975.[2]

Selected other WPI subcategories have been excluded from the calculation of price changes for the noncovered categories in the tabulation. They are the subcategories containing fuels and fuel products such as mineral fuels, lubricants, and related products (SITC 3 in its entirety), and subcategories which contain petroleum-based products such as selected industrial chemical compounds, synthetic resins and plastic materials, and agricultural chemicals and fertilizers (components of SITC 5).[3] These have been excluded because to include them would be to assume that changes in the purchasing power of OPEC revenue ought to be independent of the effect of OPEC oil price policy on the prices of all other products. In effect, this excludes from the export price index a part of that increase in U.S. prices which is attributable to OPEC oil price policy. If the above energy products are included with all other products, the estimated increase of U.S. export prices to OPEC would be raised to 12.8 percent.

Whether the 7.2 percent figure discussed in the text above or the 9.7 percent estimate computed in this appendix is accepted, the overall conclusion, that the purchasing power of OPEC revenue per barrel did not decline vis-a-vis the United States during 1974 and the first half of 1975, is not affected.

[1] SITC 9 was not examined since it is a catchall category and its product composition is not known in detail. The export price index for all commodities includes some items in SITC 2, 3, 5, 6, and 8. Although some export price data for these products have been included in the calculation of the export price index, domestic prices for these SITC sections are examined here since the export price coverage in these sections is low, as shown in table 1.

[2] Problems associated with the use of domestic wholesale prices as proxies for export prices have been noted above. In addition to those problems it has not been possible to exclude from the WPI data those products which are imported and those which are not exported. In spite of the limitations of this calculation, it has been shown here as a possible alternate indicator of the behavior of U.S. export prices to OPEC during 1974 and the first half of 1975.

[3] The prices of other products have undoubtedly been affected by the OPEC price rises. The authors have not estimated these effects because of the complexity of the relationships involved. To the extent that these price effects are included, the U.S. export price index calculated above overstates the contribution by the United States to increases in prices paid for U.S. goods by OPEC.

Representative PIKE. Mr. Shiskin, I would like to get back to the automobiles for a minute. These 600-pound lighter cars this year are going to cost more money than they did last year.

I don't know why they are going to cost more money. I expect aluminum is more expensive to build and work than steel is. But the automobile manufacturers always say that there are quality improvements in the product.

How do you measure and crank in a quality change, say, in a passenger car into your price indexing?

Mr. SHISKIN. Let me only say, and then I will refer again to Mr. Layng who has just completed a study of the quality changes in the 1978 automobiles, that each year we do make such a study and we are continuously making similar studies for all industries because our price indexes are intended to show true price changes on the assumption that quality is constant.

I can also provide one other bit of information before I turn this over to Mr. Layng, which I hope he will allow me to do. That is, of the price increase in automobiles this year, only about 12 percent of the increase was due to quality changes.

I believe that is a fairly small number compared to other years, isn't it?

Mr. LAYNG. Yes.

Representative PIKE. What is the increase in the quality between a Model A Ford and this year's model?

Mr. LAYNG. That is a very difficult question to answer and it epitomizes the problem we face every year. Indeally what you would like to do is have a consumer evaluate two products side by side in the market and the price differential and the market would determine whether the price differential was worth it to the consumer and if not, the consumer would not buy it.

We don't have that experiment. That does not exist with respect to automobiles because one model dissappears and another model appears. One is a 1977 and another is a 1978 and they are different. We have to approximate that process.

When changes are relatively slight or small in an automobile, we look at the physical changes in the automobiles to determine whether a specification change has occurred or not, we then determine whether that physical change or specification change is a quality improvement or a quality disimprovement, and, if we find that we are able to determine that, identify a specific quality change with a specific physical change, and we then have to get the production cost of that change and that is the value we place on that.

Generally speaking, as I say, when quality changes are relatively small in size and scope, that process works relatively well. When we have massive adjustments in the automobile market such as occurred in 1977 and, again in 1978, when we had manufacturers downsizing major product lines across the board.

That process does not work well because we cannot associate specific physical changes with specific performance characteristics or specific quality characteristics. So in those cases, what we have done in the last 2 years is to use the price changes from those cars and those size classes which did not undergo downsizing.

For example, in 1977, Ford Motor Co. did not downsize the full-size cars and General Motors did, Chrysler did not. We used an

estimate from Chrysler and Ford on the quality adjustment to approximate that of General Motors.

Last year and this year, the results of that process was that most of the price changes that took place with respect to those cars which were downsized was treated as price change in the Consumer Price Index and the Wholesale Price Index and not quality change.

As the Commissioner said, about 10 percent or about one-tenth of the 5½ percent increase in new car prices this year is due to quality changes.

Representative PIKE. I think I understand you but I am not sure. Is an increase in mileage a quality criterion which you attempt to measure?

Mr. LAYNG. If we can associate it with a specific physical change, such as a change in the carburetor. If we can identify that and get a production cost for that change, then we could deal with that as a quality improvement.

Many times changes are so complex that you cannot do that.

Representative PIKE. If you take out the automatic clutch and put in a manual clutch and you get better mileage, that is a physical change. Is that a better quality car?

Mr. LAYNG. In terms of improved fuel economy.

Representative PIKE. It gets better mileage, always, any time you take out the automatic and put in the manual clutch you get better mileage. Is it in your criteria a better quality automobile?

Mr. LAYNG. I would say if you could associate a production cost with it you could probably treat that as a quality improvement.

Representative PIKE. I think the American consumer might disagree with you.

Mr. LAYNG. You have some convenience factors that are very difficult to value. That is why I emphasize this process is not perfect. It is an attempt to recognize that this takes place in the market and do the best we can but it is an estimation process and it is not a perfect one.

Mr. SHISKIN. Congressman Pike, may I make this observation? After a few years at BLS, I decided to look into the quality adjustments in automobiles in detail. I asked Mr. Layng to provide me with a list of the changes that had been made in automobiles each year and the amount allowed for as a part of the overall price increase.

I must say I was greatly surprised by the very large number of improvements that are made in automobiles every year. It surprised me because, somehow, people always talk about that fact that 20 years ago, things were better. But I was absolutely amazed by the very large number of improvements.

Until very recently, I have been driving a 1969 automobile. I thought that was a terrific automobile and still do. I still have it. But I had to get another one, and I bought a 1977 car comparable to it. I now realize that I just didn't appreciate the improvements in quality that have been made in automobiles over the last 8 years. They are tremendous.

Representative PIKE. Not having had my tenure just enlarged as yours has been, Mr. Shiskin, I can only say I am still driving a 1969 automobile, and isn't it possible that you are comparing not the quality of two different cars but an 8-year-old car with a brand new car?

Mr. SHISKIN. There may be something to that point, there probably is, but I don't think that is the main point to consider. There have been so many improvements. For example, and I might be drifting far afield here——

Representative PIKE. I was just going to say exactly that. I think we are getting pretty will off the track.

How soon do you expect the October wholesale food price increases to show up in the supermarket?

Mr. SHISKIN. They will be showing up fairly soon—in the next month or two.

Representative PIKE. What proportion of them will show up? Will it be less than 100 percent or more than 100 percent?

Mr. SHISKIN. I would say less than 100 percent, and there is always some slippage in general. The consumer prices fluctuate less than wholesale prices, so when there is a rise in wholesale prices, there usually will be a less——

Representative PIKE. Are you saying these much maligned middlemen are in fact associating some of the price increase?

Mr. SHISKIN. I am describing what the statistics show, and they show much greater volatility in the wholesale price changes than in the retail price changes.

Representative PIKE. Can you give us a percentage of what will show up?

Mr. SHISKIN. No; I could not do that. It is too loose a calculation. Some will show up in 1 month, and a little more in another month. Some will be absorbed. So I don't think a figure like that would be reliable, Congressman Pike.

Representative PIKE. Last month you reported that employment among adult women increased by 500,000. This month you report that employment among adult women decreased by 200,000. Why are these figures so volatile?

Mr. SHISKIN. Because we have a relatively small sample, and because of the small sample, we get a lot of erratic movements. We have had a similar situation in the case of black employment, where we went from, I believe, 13.2 percent to 14.5 and then dropped back to 13.1 and then up to 13.9.

I think most of those changes for components of the CPS arise because of the size of the sample. There are two ways to deal with that. One way is to expand the sample and we do have in the mill a program which would more than double the sampling. Another way is to publish the figures less frequently, quarterly, let's say, and I am of the opinion that many of the figures that we publish monthly should be published quarterly. Monthly changes sometimes arouse concern. For example, sometimes after a rise in female unemployment, I will get calls from various women's groups asking questions about it. A great part of the time the change is not a trend.

In these cases, it would have been much better if we had been able to average these figures.

Representative PIKE. Thank you. Senator Proxmire, I will say in your absence I have been working on Mr. Shiskin fairly hard; Mrs. Slater has had a free ride.

Senator PROXMIRE. We will end that right now.

Mrs. Slater, I think it is more significant and helpful that we have this, in 4½ years I am told the most fundamental revision of Federal

statistics ever published and it will come out in 2 months, $25 million to put into effect.

As you know, we sometimes have difficulty up here on the Hill getting money for statistical. programs even though they are so vital and we spend tens of billions of dollars as a result of statistical programs.

In order to get some notion of how this might affect policy, let me ask you these questions. In your testimony, you allude to inaccuracies in the GNP figures released in the 1970's.

It is my understanding that profits were overestimated by $7 billion in 1969. And by $6 billion in 1970, a very, very big percentage mistake. In addition, the real growth rate for the second quarter of 1971 which was originally estimated at 4.8 percent, was revised at 3.4 percent, one-third less.

The real growth rate for 1971 was to be 3.9 percent and was revised to 2.7 percent, again a decline of about a third.

In your opinion, how would fiscal, monetary, income policies have differed if accurate GNP data had been available on a timely basis?

Mrs. SLATER. That, of course, is something that can never be definitely answered. I would not want to leave the impression that any problems we may have had were due primarily to poor GNP data, but on the other hand, there is no question that we would at least have the potential for making better economic policy decisions if we had more accurate data in the first instance.

Senator PROXMIRE. Is there any possibility that we will do better if we don't know?

I remember there was a Chancellor of the British Exchequer who came over here a few years ago and was asked why the British had no balance-of-payment problems in the 19th century and his answer was they had no balance-of-payments statistics.

With more accurate statistics, are we going to get in deeper trouble?

Mrs. SLATER. I might supplement that by adding our statistics which we used to call the balance of payments we now call a statement of international transactions. I have been well instructed in my present job not to speak about the balance of payments because we do not think the emphasis should be put on the deficit or the surplus, so we call them international transactions.

I, perhaps, could identify some other statistics that I am not sure on balance are constructive—but I think I had better not. In terms of the GNP accounts, I think we really would be lost if we didn't have them. This is the fundamental picture of where the economy is and where we are going and it is very important that they be improved.

Another instance in which I think policies suffered from poor initial figures was in the 1974 period when we were getting into the 1974–75 recession and somewhat tardy in realizing what was happening. One of the problems was that we didn't realize the extent of the inventory buildup. I think that is a case where response to what was happening could have been more rapid if the initial figures had been more accurate.

Senator PROXMIRE. Sometimes I wonder if there are any kinds of figures that would persuade Mr. Burns to deliberately follow a stimulative monetary policy. I think accidentally he did it the last 6 months, as a result of a series of blunders we have about the right amounts of monetary policy.

They won't admit that they have done it to stimulate the economy. I wonder if the statistics are really that important. Again, I am on your side, but I want to get as much of a record as I can to justify a $25 million expenditure.

Mrs. SLATER. Statistics are no substitute for good judgment and study of the economy and understanding of the political realities of a situation, but they are a helpful starting point. I think that applies to monetary statistics as well as GNP. We have quite serious problems with the——

Senator PROXMIRE. What are the estimates of the GNP, how far off can those GNP estimates be?

Mrs. SLATER. In terms of the estimate that comes out 45 days after the end of the quarter, the range of error tells you that what we really know is that in 9 cases out of 10 the revisions fall within a range of minus 1.6 percentage points to plus 1.9 percentage points.

Senator PROXMIRE. That can be an enormous mistake?

Mrs. SLATER. Yes; it is large. If your GNP growth rate is initially estimated at 4 percent, it would be somewhere between 2.4 and 5.9. The subsequent July revision is not the final revision.

Senator PROXMIRE. What were the major weaknesses found by the Creamer committee and the underlying GNP figures?

Mrs. SLATER. I think the weaknesses perhaps are ones of which people were already aware. The contribution of the Creamer report is making specific recommendations as to what it would be possible to do about these weaknesses and laying it out quite definitely in terms of time and cost.

Some of the sectors of the accounts for which we don't get good quarterly estimates are the noncorporate parts of the business sector, farm income, an important fraction of State and local government spending, and business inventories; these are the sectors that could be significantly improved by initiating new surveys or improving the technique of existing surveys or improving the methodology.

Senator PROXMIRE. How much more accurate would these statistics be if you made these improvements?

Mrs. SLATER. I don't think we can come up with that kind of estimate. After the fact we will know because we will be able to look back and see how accurate the numbers are.

Senator PROXMIRE. Is it possible you might be able to cut your margin in half, cut it by a third, by two-thirds?

I am asking if it is possible.

Mrs. SLATER. Anything could be possible, but, of course, what you find here is if you deal with the problems about which you are aware, you get better data and then other sectors of the economy change and you need better data there. Data improvement needs to be a continuous process.

Senator PROXMIRE. One of the disadvantages you have as a statistical agency that Mr. Shiskin does not have—he has the advantage of not being a policy agency, and therefore he can speak without any feeling that he might be trying to support a policy position he is taking.

You don't have that advantage.

You could have major problems along the line of people saying that you are reflecting a departmental bias or supporting the Secretary's prejudices or predilections.

After all, the Department of Commerce, a major producer of statistics, is now placed in the position where maybe she may be a party and the arbitrator of the dispute.

It is like giving Egypt the duty of arbitrating a Middle East Conference or Israel.

Mrs. SLATER. I think you can make a distinction here between statistical policy and economic policy. With respect to statistical policy, Mr. Shiskin is no more constrained than I am.

If you were to ask a question such as: do you think the size of the current population survey should be doubled, he would feel as free to have an opinion on that as I do, and he would have a much more informed one than I do.

Senator PROXMIRE. I realize you don't have the unemployment statistics, but let's assume the agency, the Bureau of Labor Statistics, had the responsibilities for recommending policy with respect to putting people to work, and they took strong positions in that regard, then we would be saying that their findings with respect to unemployment were biased by their position.

In other words, they selected a figure that would support their policy.

Mrs. SLATER. The statistical agencies in the Commerce Department don't have the responsibility for recommending policies to put people to work or to do anything else except improve statistics. The Census Bureau, the Bureau of Economic Analysis, and now the Statistical Policy Office: none of these agencies feel it is within their mandate to make recommendations on economic policy or any other kind of public policy other than purely statistical questions, and they are very careful about that.

The Bureau of Economic Analysis is headed by a career professional employee of great distinction, as you are aware; the Statistical Policy Office is headed by a career Federal employee; the Census Bureau is very, very careful about what its role is. So, I don't think that is a problem.

Now, where there is a potential problem, and where we are aware of it and will do everything we can to avoid it, is where we will have disagreements among agencies on statistical questions. Take again the example of the question of expanding the current population survey. I am using only a hypothetical example; this is not a case in fact, in which we necessarily disagree, but suppose that Mr. Shiskin would feel strongly that the current population survey should be expanded in such-and-such a way and the Census Bureau, which actually takes the survey, feels it should not be done or was not feasible or something, then you would have a disagreement among two statistical agencies which someone would have to resolve and one of these agencies is in the Commerce Department and the other is not.

The way we can deal with this is to emphasize the fact that the statistical policy coordinating function which has been transferred from OMB will operate independently of the statistical agencies in the Department of Commerce.

We have established a separate office, and these are the same people who are being transferred from OMB to do this job, and we perceive that they will be able to look objectively at the issues which confront the various statistical agencies whether or not they are in the Department of Commerce.

The other thing I would add is this Executive order also established a Cabinet level committee on statistical policy, the Statistical Policy Coordination Committee. Where issues are of significant importance or where there are issues that can't be resolved, that committee will be the forum for those problems, and we will have Cabinet level attention.

Senator PROXMIRE. I think you understand why I am asking these questions and why I am concerned. The reason we are having a meeting here this morning, the reason Mr. Shiskin has come up every month for the last 3 or 4 years, is because some years ago the President and Secretary of Labor decided they would not let the head of the Bureau of Labor Statistics have a press conference to explain to the press the significance of the unemployment figures.

We decided we would have them come up here and testify instead in order that the statistical expert could tell us and the press through us what their interpretation of the unemployment figures and other figures were.

I regarded that attitude on the part of the administration at that time as being one of wanting to put their own imprint on and their own interpretation, obviously, a biased interpretation, and while there is nothing wrong with that, it is a biased interpretation on the statistics, and that is why I thought the statisticians should speak out.

Mr. Shiskin, during the period when the policy functions were being considered, were you asked to comment on the possible transfer and if you did, what did you say?

Mr. SHISKIN. I was not asked to comment. I had numerous discussions with Mr. Duncan about this, and he and I were of one mind, obviously in complete agreement, but I was not asked to comment formally at that time.

Later, when the Executive order was prepared making the actual transfer, the Department of Labor received a copy of it for comment. It was referred to me, and I did comment. The position I personally took was against the change.

Senator PROXMIRE. Against the shift from OMB to Commerce?

Mr. SHISKIN. Yes.

Shortly after I had written the Secretary a memo about that, 60 days had gone by. Under the law, the change takes place if Congress hasn't objected within 60 days. So it was too late for the Secretary to follow through on my comments, assuming he would agree. Of course, I cannot speak for the Department of Labor on this issue.

So, I didn't have an opportunity to comment except informally, and later, when I did comment, it was too late.

Senator PROXMIRE. Why did you oppose this shift?

Mr. SHISKIN. There are two reasons. As you know very well, I spent many years in different statistical agencies, the Census Bureau, Department of Commerce for more than 20 years; I have been in BLS more than 4 years. There are two reasons why I opposed the change.

The first reason is that regardless of what the law says, what Government regulations say, what Executive orders say, it is very difficult to make changes in the Government, and that applies also to the statistical agencies.

Now the law, the Budget and Accounting Procedures Act, has been on the books, as I recall it, since the middle 1940's, but the

Statistical Policy Division in OMB had very great difficulty enforcing their orders.

This difficulty prevailed despite the fact that the Office of Statistical Policy had two very powerful weapons, one is the budget. Before I took over as head of that Statistical Policy Division, I consulted with the then head of the OMB and I pointed out this problem to him.

They told me they would support me in budget review and for the first time in many, many years, the Statistical Policy Division had a major role in the budget process.

I also had complete control or nearly complete control on approval of report forms. Every time a statistical agency wants to take a survey the report form for that survey has to be approved by OMB.

That control was very helpful, but there were numerous occasions where there were disputes on statistics that could only be resolved if the Director of OMB personally intervened.

The Office in Commerce now has authority over these functions but it only nominal.

Senator PROXMIRE. Who has the effective authority?

Mr. SHISKIN. I think OMB. Let me give you some examples.

Despite the fact that the Director of OMB had given me direct authority over statistical budgets in a memo, there was a great deal of opposition for some time to our decisions from other parts of OMB.

In the end the budget divisions of OMB made up the budget for each department. So, you need an awful lot of support and you need to be on the premises to be effective in the budget process. The final budget decisions can be made in a few days.

Senator PROXMIRE. Are you saying that the reorganization of OMB by this administration has been a mistake as far as the statistical agencies are concerned?

Mr. SHISKIN. That is what my personal view is, yes, sir.

Senator PROXMIRE. I will ask Mrs. Slater to comment on that.

Mr. SHISKIN. I didn't give my second reason.

Senator PROXMIRE. The OMB still has effective control over these statistics and only nominal control was passed to the Department of Commerce?

Mr. SHISKIN. Right.

I have said that when I was at OMB and had the direct authority from the OMB Director in writing and his actual support, it was difficult often to carry out the recommendations successfully.

I didn't come to my other reason for opposing it which is that it seems to me that the whole principle everywhere in the world is to have neutral judges.

That prevails all over, Now, this situation has been created—no matter how much authority or how much separation you try to establish between the heads of the present statistical policy commission and Mrs. Slater, they work for the same Secretary and there are other high officials in the Department of Commerce——

Senator PROXMIRE. But you work for Secretary Marshall?

Mr. SHISKIN. Yes.

We have tried to have a distinction between the BLS and the Secretary of Labor. The whole relationhsip is a very tenuous one, and as you pointed out very well, it broke down completely during the Nixon administration and could happen again.

I think the country would be better served if the central statistical office were in some neutral place.

The President apparently did not want to have it located in OMB. When I was at OMB, I realized that our position was vulnerable. The size of our staff went from about 90 to somewhere in the neighborhood of 35 by the time I left in 1973.

It is a very vulnerable situation at OMB because there is always great pressure to reduce OMB's staff. It appeared to the budget examiners and people who make the major judgments on organization and personnel, and to the director of OMB, that the Statistical Policy Division has a relatively minor role. So I consider it vulnerable.

Many times the question has come up as to where else a central statistical office can be placed, and I think there are other places.

If we didn't have the constraints on the size at OMB, it would be the best. There are neutral agencies of Government who don't have statistical activities, who don't get to be parties to disputes, such as GSA.

When Roy Ash came into the OMB, he had similar pressures to reduce the size of the OMB staff——

Senator PROXMIRE. I am told the GSA was about the most politicized agency of Government.

Mr. SHISKIN. It may be. I am just giving an example.

There are other ways to do it. Another way is to set up some statistical authority, such as the one that is contemplated, that is a separate entity but reports to the Director of OMB just the way the Civil Service Commission does.

I recognize the problem and I have been aware of it for many years, but I personally don't think the right solution is to put it in one of the Departments that is a party to all the difficult disputes that come up.

Senator PROXMIRE. Mrs. Slater.

Mrs. SLATER. The hour is late but I hope I am going to get equal time to spell out my view on some of these things.

First, with respect to the political integrity of our statistical system and the kind of pressures that occurred in 1971 and led to the establishment of this series of hearings, the Statistical Office was in OMB at that time and was unable to protect the Bureau of Labor Statistics from the political pressures to the satisfaction of this committee.

OMB is every bit as much a political agency as the Department of Commerce, it is headed by a political appointee and if anything, the Director of OMB is much closer to the President and much more a determiner of policy than almost anyone else in the Government.

The difficulty of protecting the political integrity of the statistics, which is always a difficulty, will be no more difficult from the Department of Commerce than OMB.

Senator PROXMIRE. There is one difference. You make an excellent point but there is one difference inasmuch as OMB does not represent labor, does not represent business, does not represent a particular interest group the way Labor, Agriculture, and Commerce tend to.

That may not be in most cases significant, but in some cases it could be.

Mrs. SLATER. That is true, of course, but I don't think it will be difficult to protect the Statistical Policy Office from any special pleadings of the business community.

I don't think the Census Bureau or the Bureau of Economic Analysis is subject to pressures from that business community. They deal with them in terms of how you gather information and do so quite skillfully.

Beyond that, I think I should also put on record here, not only my very own strong determination as to preserve the political integrity of the statistical system but the fact that at no time has there been any political pressure on me by the administration to alter my remarks or take any action whatsoever to present the data in a way that might be favorable to the administration.

That is not today a current problem in this administration. It is a problem which could emerge in different circumstances.

Senator PROXMIRE. There is some difference. Now you know what great admiration and respect I have for you, but you are a political appointee of the Carter administration and, of course, Mr. Shiskin was also reappointed by the Carter administration.

There has been a long tradition of people in Mr. Shiskin's position (a) of being isolated from policy; (b) of carrying over.

You know, we could have somebody serving under Republicans and Democrats, and that long position does provide a degree of insulation from partisan views or from the views of a particular administration that you would not get in a depth of the same stand.

Mrs. SLATER. It is the same tradition as the head of the Bureau of Economic Analysis and the Director of the Bureau of the Census. They are not regarded as a political policy spokesman.

There is no reason for that to change. In OMB the head of the statistical office reported to an associate director, now they will report to me and to the Secretary of Commerce, who are political appointees.

I find it hard to conceive of any place where such an office would not in some sense report to one of the President's political appointees, even if you created a central statistical agency, which incidentally has not been a popular suggestion in the past, it would still have to be headed by someone appointed by the President.

Senator PROXMIRE. The only distinction I would make is that you have a man or a woman who is head of statistics in an office that doesn't have any policy responsibility, as you have in the Department of Commerce, and as others have.

The Labor Department, heaven knows, they have clear policy functions; at the same time as Mr. Shiskin has pointed out, there is a distinction that has grown up over the years of insulating the Bureau of Statistics from the Secretary of Labor.

We are all very familiar with the one instance in which that was violated.

Let me get on.

As you say, the hour is late. Mr. Burns, in his October 26 speech in Seattle, criticized Government estimates of business profits.

He says that raw profit numbers have become virtually meaningless as a guide to corporate affairs because of the way inflation distorts the calculation of profits.

Business or replacement costs in 1976 were understated by $50 billion and thus true corporate earnings were vastly understated.

As Commerce is responsible for business profit statistics would you respond to these allegations?

Mrs. SLATER. Mr. Burns did not in that speech, I think, intend to be criticizing our Commerce Department.

Senator PROXMIRE. I should have said profits were overstated.

Mrs. SLATER. I have looked at it rather carefully, and what he is saying is that the Commerce Department in preparing its estimates of profits makes certain adjustments in the raw data in order to reach an economic concept of profits. He points out the adjustments we made in 1976 for inventory valuation adjustment, and capital consumption allowance. We make those adjustments routinely.

The line which is featured in the GNP accounts and if you have your Economic Indicators you can see it is in the profits tables, is a line which incorporates those adjustments that Mr. Burns was talking about.

Senator PROXMIRE. So, what Mr. Burns said would not be true, Mr. Burns would be in error if you were talking about the figures that are reported by the Department of Commerce and appear in the Economic Indicators, what page?

Page 9, corporate profits?

Mrs. SLATER. Page 4 of the Economic Indicators, the table called national income.

One component of that national income total is what we call corporate profits with inventory valuation and capital consumption adjustments or what is sometimes referred to as operating profits which is perhaps an easier thing to understand.

You can see that the adjustments——

Senator PROXMIRE. I have the table in front of me on page 4 and it is in the second segment of that, corporate profits with inventory evaluation and capital consumption adjustments, a total increase from $99 billion in 1975 to $128 billion in 1976, and the latest figure for the second quarter of 1977 it is $140 billion.

Mrs. SLATER. That is right. It does have incorporated in it the——

Senator PROXMIRE. Mr. Burns was talking about how dismal this profits picture is.

Mrs. SLATER. He did make a further adjustment which was to take this series in current dollars and deflate it.

This is a very simple calculation, which can be made from the national income accounts.

We don't publish that deflated series because we feel there is some question about the conceptual validity of deflating profits, but if you want to get a rough shorthand estimate of what profits would be, you can make that calculation very quickly.

Senator PROXMIRE. That indicates before inflation adjustment a 30-percent increase in profits between 1976 and 1975, and then an increase in 1975—1976 and 1977 of another 9 percent, so that even allowing for inflation you had a very, very big increase in 1976 and a reasonable increase in 1977, but his conclusion was that it is a dismal performance.

Mrs. SLATER. That was Mr. Burns' conclusion which I would not want to appear to be endorsing.

He did delve further into the figures. The only point I want to stress here is that all of these numbers are available in the national income accounts.

Senator PROXMIRE. One final question.

Is the transfer of the statistics authority from OMB to the Department of Commerce—I forgot to ask you, you shook your head when Mr. Shiskin said that Commerce only has nominal authority and the actual power is still with OMB.

Did I understand that to be a disclaimer?

Mrs. SLATER. I think I did have a difference of emphasis there.

The legal official authority is with the Department of Commerce by Executive order, which the President clearly has the authority on his own initiative to do, which he did.

He didn't consult me when he did it. It was a Presidential decision. As to who has effective authority, we will find that out in practice.

We do have an understanding with OMB that the Statistical Policy Office will continue to participate in the review of statistical budgets, they will also continue to review legislative proposals with statistical implications, and carry on the same activities that they carried on at OMB.

As Mr. Shiskin pointed out, the views of the Statistical Policy Office on the budget did not always prevail when they were at OMB, and I don't suppose they will always prevail at Commerce.

The budget is the President's budget. But, so far as giving advice on the budget, participating in budget discussions and budget reviews, we expect that will continue.

I think also I would point out the fact that location in Commerce—itself a statistical agency in part—does create some problems, but it also means that this is a department that is used to dealing with the statistical programs; it has professional expertise and understands how important these issues are.

We are also fortunate to have a Secretary of Commerce who by the professional training is aware of these things.

This is an argument that persuades people this office should not be placed in GSA because the functions of GSA are not such that they have developed any expertise in this area.

Senator PROXMIRE. The staff insists that I ask one more question.

The hour is late. I will ask this one question: Would you explain for the record what the practical value of the defense deflator will be?

We have been very concerned about that, as you know. We have always had arguments with the defense people when they come up and talk about their spending; we feel they are understating it and they say if anything, they are overstating it.

Will it affect the price of weapons costs from other factors that increase weapons costs?

Mrs. SLATER. I think the committee understands this very well.

We will have estimates of defense purchases in constant dollars, the very best estimates that we can provide. We will have that broken down in some detail. It will be a very valuable piece of information as to what is happening to defense purchases.

Senator PROXMIRE. At long last they won't be able to come up and say that we have an overrun of $2 billion, but it was practically all inflation.

Mrs. SLATER. If it were all inflation, they would have information on it.

These numbers will have additional practical value in terms of the people who have done this having learned a good deal about techniques of deflating Government numbers. We hope now to do as good a job in deflating civilian purchase numbers as well.

There has been interest expressed in other countries about our techniques. So, this will have consequences that go beyond its immediate purpose.

Senator PROXMIRE. I want to thank both of you very, very much. It has been most helpful.

Unfortunately, it looks as though the economy is not moving ahead as vigorously as we would like it to. We have had a flat, no-progress picture as far as employment is concerned. It continues reasonably good, but we still have that nagging 7-percent unemployment, and it is a disgracefully high figure, particularly outrageous for blacks.

Thank you very much. The committee will stand adjourned.

[Whereupon, at 12:35 p.m., the committee adjourned, subject to the call of the Chair.]

[The following questions and answers were subsequently supplied for the record:]

RESPONSE OF COURTENAY M. SLATER TO ADDITIONAL WRITTEN QUESTIONS POSED BY SENATOR PROXMIRE

Question 1. The data made available in the Personal Income release provides a good estimate of the wage and salary component of personal income. The other components are not so good—especially the farm income estimate. This is the result of a dispute between the Department of Agriculture and the Bureau of Economic Analysis on how to estimate farm income. BEA would like monthly data; the Department of Agriculture claims that it is available on an annual basis only. One the the consequences of these not-so-good farm figures is that the savings rate can move sharply if agricultural income changes. For this reason, the JEC believes that we need better estimates of the non-wage and salary components of personal income. Would you comment on this? Why can't the Bureau of Economic Analysis and the Department of Agriculture get together to improve the farm income estimates?

Answer. The data on farm incomes are in need of improvement. This is particularly true of farm production expenses, which are now collected on an annual basis. The reliability of farm income statistics is addressed in the Report of the Advisory Committee on GNP Data Improvement (Creamer Report). One of the specific recommendations is to initiate a quarterly survey of farm production expenses. We are hopeful that this and other programs to upgrade Federal statistics can be authorized and funded in the near future.

Question 2. I understand that the Bureau of the Census has received $175,000 to begin making a quarterly survey of State and local government expenditures. This Committee has taken periodic note of the fact that the State and local sector of the national income accounts is: First, a growing proportion of the total economy and second, much more volatile in its behavior than it was twenty or even ten years ago. But, the data base for State-local government estimates is probably weaker than that of any other sector. What progress is Census making in implementing the new survey?

Answer. In its FY 1978 budget request, the Bureau of the Census requested $250,000 to initiate a quarterly survey of State and local government expenditures. The Congress approved only $125,000. This funding was felt to be insufficient to conduct a survey meeting acceptable standards of accuracy and, as a result, the Census Bureau has requested that these funds be reprogrammed to augment the existing Survey of Residential Alterations and Repairs. We continue to believe that more accurate estimates of State and local expenditures are required and hope that additional funding can be provided in the future for this purpose.

Questions 3 and 4. When will Commerce begin producing a defense price index on a current and continuing basis? Finally, I note in your statement that Commerce plans to take over full funding of the project in the next fiscal year. This is good news because for obvious reasons, Commerce shall not have to go to the Defense Department for funds to finance the defense deflator. How much will this project cost annually?

Answer. The defense price index is now expected to be fully integrated into the national income and product accounts in the July 1978 revision. The annual cost for this project will be approximately $435 thousand.

EMPLOYMENT-UNEMPLOYMENT

FRIDAY, DECEMBER 2, 1977

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

The committee met, pursuant to notice, at 11:30 a.m., in room 5302, Dirksen Senate Office Building, Hon. William Proxmire (member of the committee) presiding.

Present: Senator Proxmire.

Also present: Louis C. Krauthoff II, assistant director; G. Thomas Cator, Thomas F. Dernburg, and Kent H. Hughes, professional staff members; Mark Borchelt, administrative assistant; and Charles H. Bradford, minority professional staff member.

OPENING STATEMENT OF SENATOR PROXMIRE

Senator PROXMIRE. The committee will come to order.

This morning the Joint Economic Committee is meeting to discuss the November employment situation. Commissioner Shiskin, we welcome you, as always.

Today's press release indicates unusual labor market activity occurred in November. Employment rose by 950,000, and the labor force grew by nearly 900,000. The reported November boom in employment was the second largest increase ever recorded, and you say that we now have a higher percentage of our population working than ever before since we started having these statistics.

It is an astonishing thing, and encouraging news in this way, but I am not sure we can accept it on that basis, because neither the 310,000 increase in payroll employment nor a tabulation of the November increase in employment based on occupational groups—that is, white-collar, blue-collar, service workers, and farmworkers—support the reported increase.

Employment measured by these occupational groups grew by about 550,000, only a little more than half of what the household survey indicates. That is an enormous discrepancy, and one we are going to ask you to explain for us.

Nevertheless, I don't think we ought to lose sight of the fact that that is a healthy increase. There is a large increase in jobs this year, which, again, is a record. It is a phenomenal reflection of the growth and expansion of our economy, and it is encouraging.

At the same time, there is still this very nagging, discouraging continuation in the unemployment level, with no real improvement. The November rate was 6.9 percent, the eighth month of a narrow fluctuation. Adult men decreased from 5.3 percent in October to 4.9

percent in November. That is just the same unemployment rate that that group had in September.

In all probability, the stagnating unemployment problem will receive little attention, because it is hard to get attention when you have a situation remaining the same. There may be quite a bit of attention on the increase in employment, as I think there should be, because I think it is important, and an exciting development.

Nevertheless, it is sad and unfortunate that the continuing high unemployment is not the subject that it was 11 or 12 months ago. Somehow, I think we have lost our sense of outrage and have accepted a kind of complacency about the fact that unemployment has stayed at this very high level for so very long.

Because the continuation of that unemployment is a human tragedy for many people, nearly 7 million Americans—it is costing the Federal Government, according to some calculations, some $54 to $60 billion annually.

That is, if we were operating at 4 percent unemployment, the cost would be that much less because of lower unemployment compensation and welfare payments, and increased tax receipts.

So, Mr. Shiskin, we have a lot to discuss this morning; just go right ahead.

STATEMENT OF HON. JULIUS SHISKIN, 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

Mr. SHISKIN. I have a statement to read, but I would like to preface it by saying that everything is very confusing today.

For instance, this hearing is being held at a different time than usual. Usually, Mr. Stein sits on my right and Mr. Layng on my left, and they are in the opposite seats today. Most important, the figures are very puzzling.

It is very hard for us to cope with the problems that have surfaced this month in our routine release, and we don't do a very good job in that sense, but I have tried to face up to all of this in the statement I have prepared this morning. While I won't say that I can answer many of the questions, at least, I think you will admit after the discussion that I have faced up to them.

Because of all that, my statement is a little longer than usual, and I have more exhibits than usual. With your permission, I would like to read it.

Senator PROXMIRE. Very good.

Mr. SHISKIN. Mr. Chairman, I wish to offer the Joint Economic Committee a few brief comments to supplement our press release.

In November, the civilian labor force increased by 896,000; total employment increased by 950,000; and unemployment declined by 54,000.

The unemployment rate was 6.9 percent in November as compared to 7 percent a month ago. The rate has fluctuated around the 7-percent mark since April of this year. While there was little change in the overall unemployment rate from October to November, the

unemployment rate for males decreased substantially, while the rate for women increased. The unemployment rate for blacks and whites showed little change over the month.

The rise in total employment—which includes agricultural and private household workers, the self-employed and unpaid family workers, as well as nonfarm wage and salary workers—was unusually large for a single month. The rise was widespread among major demographic groups—about 450,000 adult women, 380,000 adult men, and 125,000 teenagers were added to the employed total between October and November. It should be noted, however, that the total employment series from the household survey is fairly volatile, and that large changes in a single month are often followed by much smaller movements, and sometimes declines, in the following month.

The increase of 860,000 in nonagricultural employment as reported by the household survey was not matched by the increase reported by our nonfarm payroll employment series which went up by about 310,000. The payroll data, which are derived from establishment reports, are less comprehensive but generally more stable over the short run.

However, the difference between the two survey results was exceptionally large last month, and we do not have a good explanation for it. A partial reconciliation is shown in exhibit 1, which compares the figures from the two surveys over the last 5 months; unfortunately, the unexplained residual cannot be quantified.

Let me interrupt my text to say that we have had many requests for a table such as exhibit 1. We have released it periodically. We have already made plans to publish it at the beginning of each year, but I thought in view of the large discrepancy in November that we ought to show it in this statement. One reason we haven't been publishing it is that there is a very large unexplained difference between the figures of the two surveys.

We know some of the factors that go into that difference, but we can't quantify them. But here is the table, and maybe others can find a more effective way to use it than we can.

Although the magnitude of the October–November increase in total employment may have been somewhat exaggerated by measurement problems—the early survey week, sampling variability, and seasonal adjustment—the increase over the past 12 months—3.9 million—has been very impressive. I would like to focus our attention on that for a while. This is a record, and that, of course, is very impressive.

This annual increase compares with an increase in total employment of 3 million between November 1975 and November 1976. The employment-population ratio reached a new alltime high of 57.8 in November 1977; the previous record had been 57.4 in March 1974 and in a few other months.

The increase in total employment over the past year was accompanied by an unusually large increase in the civilian labor force—3.2 million. Annual increases in the labor force in recent years have averaged a little over 2 million. Most of the increase over the last 12 months has been among women 20 years and over—1.7 million, compared to 1 million among adult men, and nearly 500,000 among teen-

agers. The labor force growth for women and teenagers was considerably larger than the population growth, while the growth for men was more in line with population growth.

The ratio of persons not in the labor force to the civilian population of working age declined from 37.6 percent in October to 37.1 percent in November, as the total outside the labor force declined by 700,000 to a level of 58.4 million.

The not-in-labor-force/civilian-population ratio, which has been trending downward since the mid-1960's, declined to a post World War II low in November. As is well recognized, there are a great many people on the margin of the labor force who will, when opportunities present themselves, take available jobs. This movement appears to have been quite substantial between October and November.

The movement from outside the labor force into jobs between October and November was more pronounced among women and teenagers than among adult men, and relatively stronger among blacks than among whites. The shift from outside the labor force was fairly heterogeneous, and included semiretired persons, the voluntarily idle, and seasonal workers.

I would like to direct your attention to a new chart we prepared for this hearing. It is identified as exhibit 2.

It has measures that many of us aren't familiar with. We ourselves have been using these measures internally for some months. We didn't want to present them until we had more experience with them, but I think they are very helpful in explaining the present situation.

Exhibit 2 depicts trends in employment, unemployment, and persons not in the labor force.

The advantage of this presentation is that it integrates all three measures on the same basis—the sum of the three adds to 100 percent—thus facilitating interpretation of the long term trends. The chart illustrates the point made earlier in my statement that the employment-population ratio has moved to a new alltime high. Thus, as a percentage of the working-age population, more Americans hold jobs than ever before in the Nation's history.

The chart also depicts the sharp rise in unemployment during 1974–75 recession and the rather slow improvement since that time. The unemployment-population ratio is a supplementary measure designed for consistency with the other measures in this chart and should not be confused with the official unemployment rate.

Perhaps the most striking feature of the chart is the gradual but persistent decline since the mid-1960's in the proportion of the population outside the labor force. In other words, a larger proportion of the working-age population has been participating in the labor force each year. This trend appears to have accelerated sharply in 1977.

Let me depart for a minute from my prepared text, Senator Proxmire, and put the matter in these terms: If you look at the bottom line on that chart, "not in the labor force," as a percentage of the population, you will see that year after year since 1964 or 1965 the percent of people not in the labor force has been declining. That is, more and more people are working or seeking work.

I think almost everybody would say that is a very good thing. In those terms, the performance of the economy is very good. There is a greater and greater percentage of our population in work.

The way this shows up, and I go to the next two lines above, is that many of the people are taking jobs and many of them have not yet found a job. I think that explains why you simultaneously have such a large employment figure—a large number of people employed—and such a large number of people unemployed.

We see that large numbers of people are moving from "not in the labor force" to "into the labor force." That has been going on for 13 years, and it is a very significant development. I think most people would conclude that that is a very good development. But it doesn't show up as a low unemployment rate.

OK, let me go back to my statement.

The rise in nonagricultural employment, as measured in the payroll survey, was the largest in 5 months and above the average for the current expansion period. The Bureau of Labor Statistics diffusion index, which shows the percentage of industries with the over-the-month employment gains, was 70 in November, the third consecutive index above 50, and the highest level since early this year.

Again, let me interrupt my text to say that the economy has performed better in this current expansion in terms of employment, even without the figures that we just released this morning, than in any previous recent economic expansion.

In terms of growth in GNP, real GNP, it has been doing as well as the average post-World War II expansion.

However, unemployment, and I come back now to my text, stands at a level well above that of previous expansions at this stage.

That is, all other measures of economic performance in this expansion are doing very well. This expansion is the best in history in some respects and as good as the average in other respects.

There is a major exception to that, and that is the performance of unemployment.

Well, the rest of this statement consists of some technical points, and I will let people read that themselves. I am ready to take the questions.

[The prepared statement of Mr. Shiskin, together with the press release referred to, follows:]

PREPARED STATEMENT OF HON. JULIUS SHISKIN

Mr. Chairman and members of the committee: I wish to offer the Joint Economic Committee a few brief comments to supplement our press release, The Employment Situation, issued this morning at 9 a.m.

In November, the civilian labor force increased by 896,000, total employment increased by 950,000, and unemployment declined by 54,000.

The unemployment rate was 6.9 percent in November, compared to 7.0 percent a month ago. The rate has fluctuated around the 7-percent mark since April of this year. While there was little change in the overall unemployment rate from October to November, the unemployment rate for males decreased substantially, while the rate for women increased. The unemployment rate for blacks and whites showed little change over the month.

The rise in total employment (which includes agricultrual and private household workers, the self-employed and unpaid family workers, as well as nonfarm wage and salary workers) was unusually large for a single month. The rise was widespread among major demographic groups—about 450,000 adult women,

380,000 adult men, and 125,000 teenagers were added to the employed total between October and November. It should be noted, however, that the total employment series from the household survey is fairly volatile and that large changes in a single month are often followed by much smaller movements (and sometimes declines) in the following month. The increase of 860,000 in nonagricultural employment, as reported by the household survey, was not matched by the increase reported by our nonfarm payroll employment series which went up by about 310,000. The payroll data, which are derived from establishment reports, are less comprehensive but generally more stable over the short run. However, the difference between the two survey results was exceptionally large last month, and we do not have a good explanation for it. A partial reconciliation is shown in Exhibit 1, which compares the figures from the two surveys over the last five months; unfortunately, the unexplained residual cannot be quantified.

Although the magnitude of the October–November increase in total employment may have been somewhat exaggerated by measurement problems (the early survey week, sampling variability, and seansonal adjustment), the increase over the past 12 months—3.9 million—has been very impressive. This compares with an increase in employment of 3.0 million between November 1975 and November 1976. The employment-population ratio reached a new all-time high of 57.8 in November 1977; the previous record had been 57.4 in March 1974; and a few other months.

The increase in total employment over the year was accompanied by an unusually large increase in the civilian labor force—3.2 million. Annual increases in recent years have averaged a little over 2 million. Most of the increase in the labor force over the last 12 months has been among women 20 years and over—1.7 million, compared to 1.0 million among adult men, and nearly 500,000 among teenagers. The labor force growth for women and teenagers was considerably larger than the population growth, while the growth for men was more in line with population growth.

The ratio of persons not in the labor force to the civilian population of working age declined from 37.6 percent in October to 37.1 percent in November, as the total outside the labor force declined by 700,000 to 58.4 million. The not-in-labor-force ratio, which has been trending downward since the mid-1960's, declined to a post-World War II low in November. As is well recognized, there are a great many people on the margin of the labor force who will, when opportunities present themselves, take available jobs. This movement appears to have been quite substantial between October and November. The movement from outside the labor force into jobs between October and November was more pronounced among women and teenagers than among adult men, and relatively stronger among blacks than among whites. The shift from outside the labor force was fairly heterogeneous, and included semiretired persons, the voluntarily idle, and seasonal workers.

Exhibit 2 depicts trends in employment, unemployment, and persons not in the labor force as a percent of the civilian noninstitutional population from January 1960 to the present. The advantage of this presentation is that it integrates all three measures on the same basis (the sum of the three adds to 100 percent) thus facilitating interpretation of the long-term trends. The chart illustrates the point made earlier in my statement that the employment-population ratio has moved to a new all-time high. Thus, as a percentage of the working age population, more Americans hold jobs than ever before in the Nation's history. The chart also depicts the sharp rise in unemployment during the 1974–75 recession and the rather slow improvement since that time. (The unemployment-population ratio is a supplementary measure designed for consistency with the other measures in this chart, and should not be confused with the official unemployment rate.) Perhaps the most striking feature of the chart is the gradual but persistent decline since the mid-1960's in the proportion outside the labor force. In other words, a larger proportion of the working age population has been participating in the labor force each year. This trend appears to have accelerated sharply in 1977.

The rise in nonagricultural employment, as measured in the payroll survey, was the largest in five months and above the average for the current expansion period. The BLS diffusion index, which shows the percentage of industries with over-the-month employment gains, was 70 in November, the third consecutive index above 50, and the highest level since early this year. Aggregate hours rose for the third consecutive month and reached a new high level in November, following an upward revision of the October figures.

Thus the labor markets continued to improve in November, the 32d month of the current economic expansion. As a whole, the economy now stands well above the previous cyclical peak level for nearly all major measures of economic performance. These measures include total and nonfarm employment, the employment-population ratio, industrial production and real GNP. Unemployment, however, stands at a level well above that at the previous business cycle peak (see Exhibit 3, column 3).

EXHIBIT 1

COMPARISON OF NONAGRICULTURAL EMPLOYMENT DATA FROM THE HOUSEHOLD AND ESTABLISHMENT SURVEYS, JULY–NOVEMBER 1977, SEASONALLY ADJUSTED

[In thousands]

Item	1977				
	July	August	September	October	November
Payroll series, as published	82,407	82,474	82,763	[1] 82,905	[1] 83,217
Household series, as published	87,348	87,519	87,880	87,958	88,818
Less—					
Self-employed	5,896	6,151	6,072	6,039	6,074
Unpaid family workers	523	469	504	448	471
Private household workers	1,445	1,401	1,409	1,352	1,415
Unpaid absences	2,134	2,128	2,071	2,027	2,046
Equals nonagricultural wage and salary less private households and upaid absences	77,305	77,370	77,824	78,092	78,812
Plus—					
14 to 15-yr-olds	694	674	614	641	695
Agricultural services	285	291	280	312	316
Equals household series adjusted to payroll concepts	78,329	78,335	78,718	79,045	79,823
Difference, payroll series less adjusted household series	4,078	4,139	4,045	3,860	3,394

[1] Preliminary.

Source: U.S. Department of Labor, Bureau of Labor Statistics, Dec. 2, 1977.

Factors that help explain this 3.4–4.1 million differential, but which are difficult to measure precisely, are:

1. *Multiple job counting in establishment data.*—The are numerous types of multiple counting, only one of which (the major one) is measurable in the household survey (CPS): persons working on their second job as a nonagricultural wage and salary worker. In May 1977, there were 2,923,000 such people.

2. *Census undercount.*—There was a population undercount in the 1970 Census of about 3 percent. Because the CPS is controlled to population estimates updated from the Census, current employment estimates may be affected to some degree as well.

3. *Survey coverage.*—Various workers such as foreigners, Armed Forces personnel who also have other civilian jobs, and institutional inmates are excluded from the CPS but would be on nonagricultural payroll jobs.

STATISTICAL NOTES

1. A routine updating of seasonal factors for the various series based on the establishment survey (the "B" tables in the monthly release, The Employment Situation) was made this month, and some back data were revised.

2. Because of the way the calendar falls, wholesale prices were collected for the week following the employment data. As a result, they will be released next week and I have not included comments on prices in this statement.

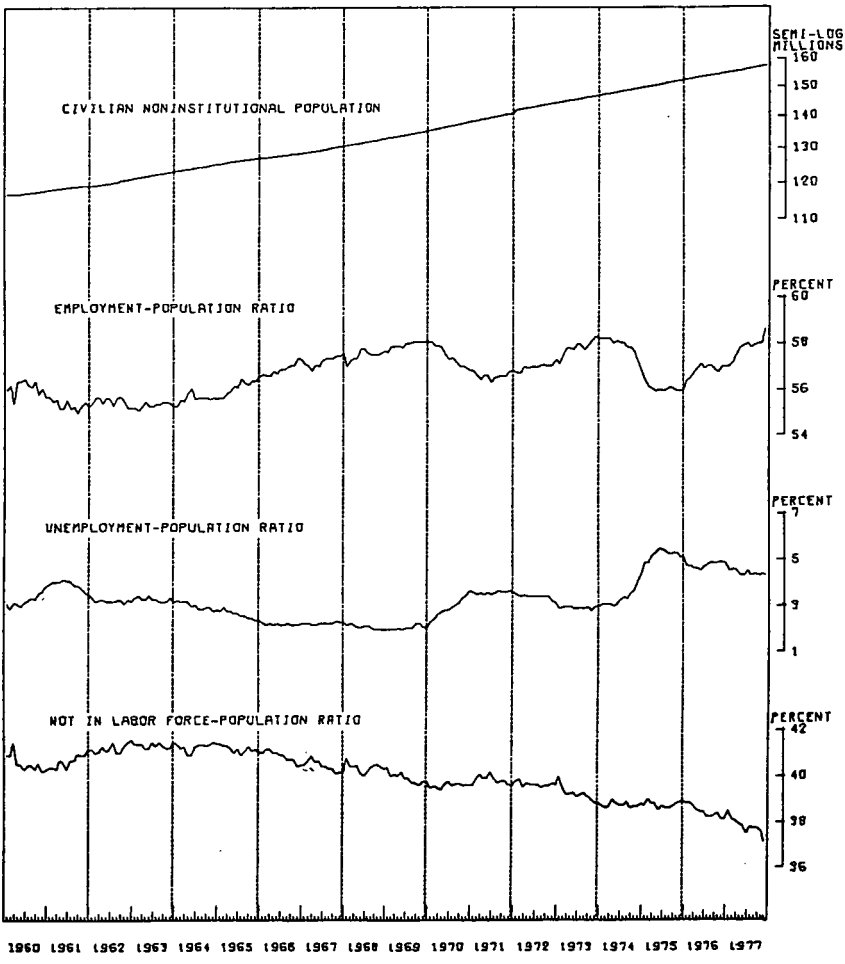
My colleagues and I shall now try to answer your questions.

Exhibits follow:

1. Comparison of nonagricultural employment data from the household and establishment surveys, July–November 1977, seasonally adjusted.
2. Civilian noninstitutional population and population ratios, 1960–77.
3. Measures of progress toward previous cyclical peak level during current economic recovery.
4. Unemployment rates by alternate seasonal adjustment methods.

EXHIBIT 2

Civilian noninstitutional population and population ratios, 1960-77



U.S. DEPARTMENT OF LABOR
Bureau of Labor Statistics

December 2, 1977

EXHIBIT 3

MEASURES OF PROGRESS TOWARD PREVIOUS CYCLICAL PEAK LEVEL DURING CURRENT ECONOMIC RECOVERY

[In percent]

Series (with latest month available) (1)	Decline during 1973–75 recession (2)	Recession decline recovered, trough to date (3)	Previous peak level (4)	Change from trough (5)
I. Leading indicators:				
Leading indicator index (October)	−20.6	100.4	100.1	+26.0
Average workweek (November) [1]	−4.9	75.0	98.8	+3.9
New orders, 1972 dollar (October.) [1]	−26.4	82.7	95.4	+29.7
Contracts and orders, 1972 dollar (October.) [1]	−30.7	80.2	92.9	+35.6
Housing starts (October) [1]	−59.2	78.6	87.3	+114.1
Stock prices (October)	−43.4	51.9	79.2	+39.8
Corporate profits after taxes, 1972 dollar (3d quarter, 1977)	−29.6	114.8	104.4	+48.2
II. Indicators of economic performance:				
Total civilian employment (November)	−2.3	402.9	106.9	+9.4
Nonagricultural payroll employment (November)	−3.0	290.7	105.6	+8.9
Aggregate hours, nonagricultural establishments (October)	−4.7	179.8	103.8	+8.9
Employment-population ratio (November)	−3.9	118.7	100.7	+4.8
Unemployment level (November) [2]	+99.7	36.0	163.8	−18.0
GNP, 1972 dollar (3d quarter, 1977)	−5.9	242.2	108.3	+15.1
Personal income less transfer payments, 1972 dollar (October)	−6.2	220.3	107.4	+14.5
Industrial production (October)	−15.3	135.6	105.5	+24.5
Retail sales, 1972 dollar (October) [3]	−9.7	127.0	102.6	+13.7

[1] 3-mo., averages have been used for the calculations for this series; for example, the averages of the specific trough month, the previous and following months were compared with the average for the latest 3 mo. available to obtain the entries in cols. (3)–(5). For other series single months have been used.

[2] The unemployment series tends to move counter to movements in general business activity; that is, the unemployment level tends to rise during recessions and decline during expansions. Col. 3 shows the percent of the increase in unemployment that has been offset.

[3] Estimates.

Source: U.S. Department of Labor, Bureau of Labor Statistics, Dec. 2, 1977.

EXHIBIT 4

UNEMPLOYMENT RATES BY ALTERNATE SEASONAL ADJUSTMENT METHODS

Month	Unadjusted rate	Official adjusted rate	Alternative age-sex procedures					Other aggregations (all multiplicative)				Direct adjustment rate	Composite	Range (cols. 2–13)
			All multiplicative	All additive	Year ahead	Concurrent	Stable 1967–73	Duration	Reasons	Total	Residual			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1975														
January	9.0	7.9	7.9	8.2	8.2	8.0	8.1	8.0	7.9	8.0	8.4	8.1	8.1	0.5
February	9.1	8.0	8.1	8.3	8.2	8.0	8.1	7.9	7.9	8.1	8.3	8.0	8.1	.4
March	9.1	8.5	8.5	8.7	8.7	8.6	8.6	8.4	8.3	8.5	8.7	8.5	8.5	.4
April	8.6	8.6	8.7	8.7	8.9	8.8	8.8	8.6	8.6	8.7	8.6	8.7	8.7	.2
May	8.3	9.0	9.0	8.7	9.2	9.0	9.2	8.9	9.1	9.2	8.8	9.3	9.0	.5
June	9.1	8.7	8.6	8.7	8.6	8.7	8.6	8.7	8.8	8.3	8.6	8.3	8.6	.5
July	8.7	8.7	8.6	8.6	8.4	8.7	8.6	8.5	8.7	8.5	8.5	8.6	8.6	.2
August	8.2	8.5	8.5	8.4	8.4	8.5	8.3	8.6	8.7	8.5	8.4	8.6	8.5	.4
September	8.1	8.6	8.6	8.4	8.3	8.6	8.3	8.8	8.8	8.5	8.4	8.5	8.5	.5
October	7.8	8.6	8.7	8.4	8.6	8.7	8.3	8.7	8.7	8.6	8.5	8.6	8.6	.4
November	7.8	8.4	8.4	8.2	8.3	8.5	8.2	8.6	8.4	8.4	8.2	8.4	8.4	.4
December	7.8	8.3	8.4	8.2	8.3	8.3	8.3	8.5	8.2	8.3	8.2	8.4	8.3	.2
1976														
January	8.8	7.8	7.8	8.0	7.8	7.8	8.1	8.0	7.8	7.8	8.2	7.9	7.9	.4
February	8.7	7.6	7.6	7.8	7.6	7.6	7.7	7.5	7.5	7.6	7.7	7.6	7.6	.3
March	8.1	7.5	7.5	7.6	7.5	7.5	7.7	7.3	7.4	7.5	7.6	7.5	7.5	.4
April	7.4	7.5	7.5	7.5	7.4	7.4	7.6	7.4	7.5	7.5	7.4	7.5	7.5	.2
May	6.7	7.3	7.4	7.2	7.2	7.2	7.5	7.2	7.4	7.5	7.2	7.5	7.4	.3
June	8.0	7.6	7.5	7.5	7.5	7.6	7.5	7.5	7.5	7.3	7.4	7.3	7.5	.3
July	7.8	7.8	7.8	7.7	7.8	7.8	7.7	7.6	7.8	7.7	7.7	7.7	7.7	.2
August	7.6	7.9	7.9	7.8	7.9	7.9	7.7	8.0	8.0	7.9	7.8	8.0	7.9	.3
September	7.4	7.8	7.8	7.7	7.8	7.8	7.6	8.0	7.9	7.8	7.8	7.8	7.8	.4
October	7.2	7.9	8.0	7.8	7.9	7.9	7.7	8.0	7.9	8.0	7.9	7.9	7.9	.3
November	7.4	8.0	8.0	7.8	8.1	8.0	7.8	8.1	8.0	8.0	7.8	8.0	7.9	.3
December	7.4	7.8	7.9	7.8	7.9	7.8	7.9	7.9	7.8	7.8	7.8	7.9	7.8	.1

1977														
January	8.3	7.3	7.3	7.5	7.3	7.4	7.5	7.4	7.4	7.4	7.6	7.4	7.4	.3
February	8.5	7.5	7.5	7.7	7.5	7.5	7.6	7.4	7.4	7.5	7.6	7.5	7.5	.3
March	7.9	7.3	7.3	7.4	7.3	7.3	7.5	7.3	7.3	7.3	7.3	7.4	7.3	.2
April	6.9	7.0	7.0	7.0	7.0	7.0	7.1	7.0	7.0	7.0	6.9	7.0	7.0	.2
May	6.4	6.9	7.0	6.8	6.9	7.0	7.1	7.0	7.1	7.1	7.0	7.1	7.0	.3
June	7.5	7.1	7.0	7.1	7.1	7.1	7.0	7.0	7.0	6.9	7.0	6.8	7.0	.3
July	7.0	6.9	6.9	6.9	6.9	6.9	6.8	6.8	6.9	6.9	6.8	6.9	6.9	.1
August	6.8	7.1	7.1	7.1	7.1	7.0	6.9	7.2	7.2	7.1	7.1	7.1	7.1	.3
September	6.6	6.9	6.9	6.9	6.9	6.9	6.7	7.0	7.0	7.0	7.0	7.0	6.9	.3
October	6.3	7.0	7.0	7.0	7.0	6.9	6.8	7.1	6.9	7.0	7.1	7.0	7.0	.3
November	6.4	6.9	6.9	6.8	6.9	6.8	6.8	7.0	6.9	6.9	6.8	6.9	6.9	.2
December														

An explanation of cols. 1–13 follows:

(1) Unemployment rate not seasonally adjusted.

(2) Official rate.—This is the published seasonally adjusted rate. Each of 4 unemployed age-sex components—males and females, 16–19 and 20 yr of age and over—is independently adjusted. The teenage unemployment components are adjusted using the additive procedure of the X–11 method, while adults are adjusted using the X–11 multiplicative option. The rate is calculated by aggregating the 4 and dividing them by 12 summed labor force components—these 4 plus 8 employment components, which are the 4 age-sex groups in agriculture and nonagricultural industries. This employment total is also used in the calculation of the labor force base in cols. (3)–(9).

The current implicit factors for the total unemployment rate are as follows: January—113.8, February—113.7, March—108.1, April—98.7, May—92.2, June—105.2, July—100.2, August—96.1, September—94.6, October—90.1, November—93.0, December—93.8.

(3) Multiplicative rate.—The 4 basic unemployed age-sex groups—males and females, 16 to 19 and 20 yr and over—are adjusted by the X–11 multiplicative procedure. This procedure was used to adjust unemployment data in 1975 and previous years

(4) Additive rate.—The 4 basic unemployed age-sex groups—males and females, 16 to 19 and 20 yr and over—are adjusted by the X–11 additive procedure.

(5) Year-ahead factors.—The official seasonal adjustment procedure for each of the components is followed through computation of the factors for the last years of data. A projected factor—the factor for the last year plus ½ of the difference from the previous year—is then computed for each of the components, and the rate is calculated. The rates are as first calculated and are not subject to revision.

(6) Concurrent adjustment through current month.—The official procedure is followed with data reseasonally adjusted incorporating the experience through the current month, i.e., the rate for March 1976 is based on adjustment of data for the period, January 1967 to March 1976. The rates are as first calculated and are not subject to revision.

(7) Stable seasonals (January 1967 to December 1973).—The stable seasonal option in the X–11 program uses an unweighted average of all available seasonal-irregular ratios to compute final seasonal factors. In essence, it assumes that seasonal patterns are relatively constant from year-to-year. A cutoff of input data as of December 1973 was selected to avoid the impact of cyclical changes in the 1974–75 period.

(8) Duration.—Unemployment total is aggregated from 3 independently adjusted unemployment by duration groups (0 to 4, 5 to 14, 15 plus).

(9) Reasons.—Unemployment total is aggregated from 4 independently seasonally adjusted unemployment levels by reasons for unemployment—job losers, job leavers, new entrants, and reentrants.

(10) Unemployment and labor force levels adjusted directly.

(11) Labor force and employment levels adjusted directly, unemployment as a residual and rate then calculated.

(12) Unemployment rate adjusted directly.

(13) Average of cols. 2 to 12.

Note: The X–11 method, developed by Julius Shiskin at the Bureau of the Census over the period 1955–65, was used in computing all the seasonally adjusted series described above.

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United States Department of Labor
Bureau of Labor Statistics Washington, D.C. 20212

Contact: J. Bregger (202) 523-1944
523-1371
K. Hoyle (202) 523-1913
523-1208
home: 333-1384

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THE EMPLOYMENT SITUATION: NOVEMBER 1977

Employment rose sharply in November but unemployment was little changed, it was reported today by the Bureau of Labor Statistics of the U. S. Department of Labor. The November unemployment rate was 6.9 percent, marking the eighth straight month that the rate was within the narrow range of 6.9 and 7.1 percent.

Total employment--as measured by the monthly survey of households--rose by 950,000 to 92.2 million in November. Over the past year, employment has expanded by 3.9 million, and the proportion of the population with jobs has risen from 56.2 percent to an alltime high of 57.8 percent.

Nonfarm payroll employment--as measured by the monthly survey of establishments--rose by 310,000 over the month to 83.2 million. Payroll jobs have increased by 3.1 million since November 1976. (As in past years, the seasonally-adjusted establishment data have been revised based on new seasonal-adjustment factors. See note on page 5.)

Unemployment

The number of unemployed persons was little changed over the month. The November level was 6.8 million, seasonally adjusted, about the same as the levels recorded since April; however, strong declines prior to April accounted for an over-the-year reduction in joblessness of 750,000. Similarly, the rate of unemployment--6.9 percent in November--was about unchanged from the rates registered between April and October but well below the 8.0 percent high for 1976 recorded last November. (See table A-1.)

While the jobless rate for adult women advanced slightly over the month (to 7.1 percent) and that for teenagers held about steady (at 17.1 percent), the rate for adult men dropped by 0.4 percentage point; this decline represented a return to the September level (of 4.9 percent). On an over-the-year basis, all three rates, but most notably the adult men's, have registered reductions. (See table A-2.)

The overall unemployment rates for whites and blacks (6.0 and 13.8 percent, respectively) exhibited little over-the-month change. Compared with a year earlier, the rate for whites has declined by more than a percentage point, while the rate for blacks has shown no improvement.

The rate for full-time workers fell from 6.6 to 6.4 percent in November and was down from 7.6 percent a year earlier.

The average (mean) duration of unemployment held steady in November at 13.8 weeks but was 1.7 weeks less than in November 1976. (See table A-4.)

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

Selected categories	Quarterly averages					Monthly data		
	1976		1977			1977		
	III	IV	I	II	III	Sept.	Oct.	Nov.
HOUSEHOLD DATA	Thousands of persons							
Civilian labor force	95,261	95,711	96,067	97,186	97,623	97,868	98,102	98,998
Total employment	87,804	88,133	88,998	90,370	90,809	91,095	91,230	92,180
Unemployment	7,457	7,578	7,068	6,816	6,814	6,773	6,872	6,818
Not in labor force	58,963	59,132	59,379	58,908	59,140	59,114	59,099	58,391
Discouraged workers	827	992	929	1,061	1,104	N.A.	N.A.	N.A.
	Percent of labor force							
Unemployment rates:								
All workers	7.8	7.9	7.4	7.0	7.0	6.9	7.0	6.9
Adult men	6.0	6.2	5.6	5.1	5.1	4.9	5.3	4.9
Adult women	7.7	7.6	7.1	6.9	7.0	7.0	6.8	7.1
Teenagers	18.8	19.1	18.6	18.1	17.7	18.1	17.3	17.1
White	7.1	7.2	6.7	6.3	6.1	6.1	6.1	6.0
Black and other	13.1	13.4	12.8	12.8	13.6	13.1	13.9	13.8
Full-time workers	7.4	7.5	6.8	6.5	6.6	6.5	6.6	6.4
ESTABLISHMENT DATA	Thousands of jobs							
Nonfarm payroll employment	79,674	80,111	80,925	81,871	82,548	82,763	82,905p	83,217p
Goods-producing industries	23,359	23,456	23,788	24,265	24,359	24,360	24,438p	24,534p
Service-producing industries	56,314	56,655	57,137	57,606	58,189	58,403	58,467p	58,683p
	Hours of work							
Average weekly hours:								
Total private nonfarm	36.1	36.2	36.1	36.2	36.0	36.0	36.2p	36.1p
Manufacturing	39.9	40.0	40.1	40.4	40.3	40.3	40.4p	40.5p
Manufacturing overtime	3.0	3.1	3.3	3.4	3.3	3.3	3.5p	3.5p

p=preliminary. N.A.=not available.

Total Employment and the Labor Force

Total employment registered an unusually large increase of 950,000 in November, with all major demographic groups sharing in the growth. Employment has risen almost continuously over the year to 92.2 million, 3.9 million above its year-ago level. This advance was about evenly divided between men and women (16 years and over), but, because the male employment total is much greater than the women's, their percentage increase over the year was considerably less (3.9 versus 5.2 percent for women). (See table A-3.)

As would be expected, the bulk of the over-the-month and over-the-year employment growth occurred among persons on full-time schedules. However, employment growth for voluntary part-time workers was proportionately greater in both time frames. (See table A-3.)

The labor force in November, at 99.0 million seasonally adjusted, was 900,000 above the October level and 3.2 million higher than a year earlier. The labor force participation rate--the proportion of the civilian noninstitutional population either working or seeking work--rose by half a percentage point in November to 62.9 percent, an alltime high.

Industry Payroll Employment

Although not nearly as great as the increase in employment from the household survey, the increase in nonagricultural payroll employment was nonetheless substantial. Payroll employment increased by 310,000 in November to 83.2 million, seasonally adjusted. All of the major industry groups posted employment gains, as 70 percent of the 172 industries that comprise the BLS diffusion index of private nonagricultural payroll employment showed over-the-month increases. Nonfarm payrolls have expanded by 3.1 million over the past year. (See tables B-1 and B-6.)

The services industry division had the largest over-the-month employment increase with a gain of 75,000. Manufacturing employment rose by 65,000; most of this increase occurred in the durable goods group, with the lumber, stone-clay-glass, fabricated metals, and electrical equipment industries each registering gains of about 10,000 jobs. Trade and government also showed sizeable gains in their November payroll counts. All of the increase in government employment occurred in the State and local sector.

Construction employment continued the growth that began early in the year; approximately half of the 30,000 over-the-month increase, however, was due to strike settlements. Contract construction employment in November was 355,000 above its year-ago level.

Hours

The average workweek for production or nonsupervisory workers on private nonagricultural payrolls slipped by a tenth of an hour in November to 36.1 hours, seasonally adjusted. The manufacturing workweek, however, edged up by 0.1 hour in November to 40.5 hours, equaling the post-1973 high reached in June of this year. Manufacturing overtime was 3.5 hours, unchanged from October but 0.4 hour above the year-ago level. (See table B-2.)

The index of aggregate weekly hours of production or nonsupervisory workers on private nonagricultural payrolls edged up to 116.9 (1967=100) in November, 0.1 percent above the October level. All of the over-the-month increase occurred in the goods-producing sector. The overall index has increased by 3.6 percent since November 1976.

Hourly and Weekly Earnings

Average hourly earnings of production or nonsupervisory workers on private nonfarm payrolls advanced 0.4 percent, seasonally adjusted, in November. Because of the slight decline in hours of work, there was an even smaller increase in average weekly earnings (0.1 percent). Compared with their year-ago levels, average hourly and weekly earnings were up 7.8 and 7.5 percent, respectively.

Before adjustment for seasonality, average hourly earnings were unchanged from October's $5.40 and were 40 cents above the level of November a year ago. Average weekly earnings, however, declined $1.08 from the previous month to $194.40. Over the year, average weekly earnings rose by $13.90. (See table B-3.)

Hourly Earnings Index

(The data usually presented in table B-4 and the analysis were not available in time for this release.)

Revisions in Seasonally-Adjusted Establishment Data

This release introduces revisions in seasonally-adjusted data from the establishment survey (tables B-1 through B-6). The revised data reflect the seasonal experience from January 1968 through August 1977. The revisions, which affect all seasonally-adjusted data since January 1972, are being made in accordance with long standing annual practice. The revised historical series and new seasonal adjustment factors will be published in the December issue of Employment and Earnings.

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 conducted by the Bureau of the Census for the Bureau of Labor Statistics. The sample consists of about 47,000 households selected to represent the U.S. civilian noninstitutional population 16 years of age 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 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 population 16 years of age and over, without duplication, since each person is classified as employed, unemployed, or not in the labor force.

The payroll survey relates only to paid wage and salary employees (regardless of age) on the payrolls of nonagricultural establishments. The household survey counts employed persons in both agriculture and in nonagricultural industries and, in addition to wage and salary workers (including private household workers), includes the self-employed, unpaid family workers, and persons "with a job but not at work" and not paid for the period absent. 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) 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).

To meet the extensive needs of data users, the Bureau regularly publishes data on a wide variety of labor market indicators—see, for example, the demographic, occupational, and industry detail in tables A-2 and A-3. 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, extending 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, school vacations, 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 90 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, current seasonal adjustment factors for unemployment and other labor force series are calculated taking into account the prior year's experience, and revised data are introduced in the release containing January data.

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 unemployment (the sum of four seasonally-adjusted age-sex components) by the civilian labor force (the sum of 12 seasonally-adjusted age-sex components). Several alternative methods for seasonally adjusting the overall unemployment rate are also used on a regular basis in order to illustrate the degree of uncertainty that arises because of the seasonal adjustment procedure. Among these alternative methods are five different age-sex adjustments,

including a concurrent adjustment and one based on stable factors and four based on other unemployment aggregations. Alternative rates for 1976 are shown in the table at the end of this note. (Current alternative rates and an explanation of the methods may be obtained from BLS upon request.)

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 revised annually, usually in conjunction with the annual benchmark adjustments (comprehensive counts of employment).

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 questionnaire and procedures. The standard error is the measure of sampling variability, that is, the variations that might occur by chance because only a sample of the population is surveyed. Tables A-E in the "Explanatory Notes" of *Employment and Earnings* provide standard errors for unemployment and other labor force categories.

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. Moreover, since the estimating procedures employ 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, usually annually. 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 1974 benchmark levels. Measures of reliability for employment estimates are provided in the "Explanatory Notes" of *Employment and Earnings*, as are the actual amounts of revisions due to benchmark adjustments (tables G-L).

Unemployment rate by alternative seasonal adjustment methods

Month	Unadjusted rate	Official Adjusted Rate	Alternative age-sex procedures					Other aggregations (all multiplicative)				Direct adjustment	Composite	Range (cols. 2-13)
			All multiplicative	All additive	Year-ahead	Concurrent	Stable 1967-73	Duration	Reasons	Total	Residual			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1976														
January	8.8	7.8	7.8	8.0	7.8	7.8	8.1	8.0	7.8	7.8	8.2	7.9	7.9	0.4
February	8.7	7.6	7.6	7.8	7.6	7.6	7.7	7.5	7.5	7.6	7.7	7.6	7.6	.3
March	8.1	7.5	7.5	7.6	7.5	7.5	7.7	7.3	7.4	7.5	7.6	7.5	7.5	.4
April	7.4	7.5	7.5	7.5	7.4	7.4	7.6	7.4	7.5	7.5	7.4	7.5	7.5	.2
May	6.7	7.3	7.4	7.2	7.2	7.2	7.5	7.2	7.4	7.5	7.2	7.5	7.3	.3
June	8.0	7.6	7.5	7.5	7.5	7.6	7.5	7.5	7.5	7.3	7.4	7.3	7.5	.3
July	7.8	7.8	7.8	7.7	7.8	7.8	7.7	7.6	7.8	7.7	7.7	7.7	7.7	.2
August	7.6	7.9	7.9	7.8	7.9	7.9	7.7	8.0	8.0	7.9	7.8	8.0	7.9	.3
September	7.4	7.8	7.8	7.7	7.8	7.8	7.6	8.0	7.9	7.8	7.8	7.8	7.8	.4
October	7.2	7.9	8.0	7.8	7.9	7.9	7.7	8.0	7.9	8.0	7.9	7.9	7.9	.3
November	7.4	8.0	8.0	7.8	8.1	8.0	7.8	8.1	8.0	8.0	7.8	8.0	8.0	.3
December	7.4	7.8	7.9	7.8	7.9	7.8	7.9	7.9	7.8	7.8	7.8	7.9	7.8	.1

Table A-1. Employment status of the noninstitutional population

(Numbers in thousands)

Employment status	Not seasonally adjusted			Seasonally adjusted					
	Nov. 1976	Oct. 1977	Nov. 1977	Nov. 1976	July 1977	Aug. 1977	Sept. 1977	Oct. 1977	Nov. 1977
TOTAL									
Total noninstitutional population[1]	157,006	159,334	159,522	157,006	158,682	158,899	159,114	159,334	159,522
Armed Forces[1]	2,149	2,134	2,132	2,149	2,135	2,137	2,131	2,134	2,132
Civilian noninstitutional population[1]	154,857	157,201	157,389	154,857	156,547	156,761	156,982	157,201	157,389
Civilian labor force	95,637	98,451	98,819	95,871	97,305	97,697	97,868	98,102	98,998
Participation rate	61.8	62.6	62.8	61.9	62.2	62.3	62.3	62.4	62.9
Employed	88,542	92,230	92,473	88,220	90,561	90,771	91,095	91,230	92,180
Employment-population ratio[2]	56.4	57.9	58.0	56.2	57.1	57.1	57.3	57.3	57.8
Agriculture	3,081	3,408	3,181	3,248	3,213	3,252	3,215	3,272	3,362
Nonagricultural industries	85,460	88,822	89,292	84,972	87,348	87,519	87,880	87,958	88,818
Unemployed	7,095	6,221	6,346	7,651	6,744	6,926	6,773	6,872	6,818
Unemployment rate	7.4	6.3	6.4	8.0	6.9	7.1	6.9	7.0	6.9
Not in labor force	59,220	58,750	58,570	58,986	59,242	59,064	59,114	59,099	58,391
Men, 20 years and over									
Total noninstitutional population[1]	66,699	67,852	67,948	66,699	67,537	67,642	67,745	67,852	67,948
Civilian noninstitutional population[1]	65,001	66,161	66,257	65,001	65,845	65,947	66,056	66,161	66,257
Civilian labor force	51,844	52,910	52,890	52,066	52,494	52,588	52,457	52,844	53,033
Participation rate	79.8	80.0	79.8	80.1	79.7	79.7	79.4	79.9	80.0
Employed	48,931	50,610	50,578	48,773	49,794	49,854	49,884	50,043	50,421
Employment-population ratio[2]	73.4	74.0	74.4	73.1	73.7	73.7	73.6	73.8	74.2
Agriculture	2,248	2,427	2,283	2,283	2,305	2,355	2,343	2,338	2,318
Nonagricultural industries	46,683	48,182	48,295	46,490	47,489	47,499	47,541	47,705	48,103
Unemployed	2,913	2,300	2,312	3,263	2,700	2,734	2,573	2,801	2,612
Unemployment rate	5.6	4.3	4.4	6.3	5.1	5.2	4.9	5.3	4.9
Not in labor force	13,158	13,251	13,367	12,935	13,531	13,359	13,599	13,317	13,224
Women, 20 years and over									
Total noninstitutional population[1]	73,491	74,660	74,768	73,491	74,315	74,429	74,543	74,660	74,768
Civilian noninstitutional population[1]	73,401	74,561	74,669	73,401	74,217	74,332	74,444	74,561	74,669
Civilian labor force	35,227	36,549	36,896	34,848	35,667	35,723	36,201	35,931	36,505
Participation rate	48.0	49.0	49.4	47.5	48.1	48.1	48.6	48.2	48.9
Employed	32,683	34,109	34,405	32,208	33,212	33,172	33,672	33,474	33,921
Employment-population ratio[2]	44.5	45.7	46.0	43.8	44.7	44.6	45.2	44.8	45.4
Agriculture	512	617	548	558	525	515	492	541	597
Nonagricultural industries	32,172	33,493	33,857	31,650	32,687	32,657	33,180	32,933	33,324
Unemployed	2,544	2,440	2,491	2,640	2,455	2,551	2,529	2,457	2,584
Unemployment rate	7.2	6.7	6.8	7.6	6.9	7.1	7.0	6.8	7.1
Not in labor force	38,173	38,012	37,772	38,556	38,550	38,609	38,242	38,630	38,164
Both sexes, 16-19 years									
Total noninstitutional population[1]	16,816	16,822	16,806	16,816	16,830	16,828	16,825	16,822	16,806
Civilian noninstitutional population[1]	16,455	16,480	16,463	16,455	16,485	16,483	16,483	16,480	16,463
Civilian labor force	8,565	8,992	9,033	8,957	9,144	9,386	9,210	9,327	9,460
Participation rate	52.1	54.6	54.9	54.4	55.5	56.9	55.9	56.6	57.5
Employed	6,927	7,511	7,490	7,239	7,555	7,745	7,539	7,713	7,838
Employment-population ratio[2]	41.2	44.6	44.6	43.0	44.9	46.0	44.8	45.9	46.6
Agriculture	321	364	350	407	383	382	380	393	447
Nonagricultural industries	6,606	7,147	7,140	6,832	7,172	7,363	7,159	7,320	7,391
Unemployed	1,638	1,480	1,543	1,718	1,589	1,641	1,671	1,614	1,622
Unemployment rate	19.1	16.5	17.1	19.2	17.4	17.5	18.1	17.3	17.1
Not in labor force	7,889	7,488	7,431	7,498	7,341	7,097	7,273	7,153	7,003
WHITE									
Total noninstitutional population[1]	138,117	139,962	140,095	138,117	139,450	139,620	139,789	139,962	140,095
Civilian noninstitutional population[1]	136,336	138,218	138,351	136,336	137,698	137,865	138,046	138,218	138,351
Civilian labor force	84,570	87,081	87,287	84,816	85,968	86,285	86,471	86,861	87,442
Participation rate	62.0	63.0	63.1	62.2	62.4	62.6	62.6	62.8	63.2
Employed	78,877	82,307	82,451	78,647	80,752	81,010	81,214	81,540	82,216
Employment-population ratio[2]	57.1	58.8	58.9	56.9	57.9	58.0	58.1	58.3	58.7
Unemployed	5,693	4,774	4,836	6,169	5,216	5,275	5,257	5,321	5,226
Unemployment rate	6.7	5.5	5.5	7.3	6.1	6.1	6.1	6.1	6.0
Not in labor force	51,766	51,137	51,064	51,520	51,730	51,580	51,575	51,357	50,909
BLACK AND OTHER									
Total noninstitutional population[1]	18,889	19,372c	19,427	18,889	19,232	19,279	19,325	19,372c	19,427
Civilian noninstitutional population[1]	18,521	18,983	19,038	18,521	18,850	18,826	18,936	18,983	19,038
Civilian labor force	11,067	11,370	11,532	11,114	11,236	11,402	11,359	11,375	11,575
Participation rate	59.8	59.9	60.6	60.0	59.6	60.3	60.0	59.9	60.8
Employed	9,664	9,923	10,022	9,618	9,758	9,744	9,868	9,799	9,976
Employment-population ratio[2]	51.2	51.2c	51.6	50.9	50.7	50.5	51.1	50.6c	51.4
Unemployed	1,402	1,447	1,510	1,496	1,478	1,685	1,491	1,576	1,599
Unemployment rate	12.7	12.7	13.1	13.5	13.2	14.5	13.1	13.9	13.8
Not in labor force	7,454	7,613	7,506	7,407	7,614	7,494	7,577	7,608	7,463

[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).

c=corrected.

Table A-2. Major unemployment indicators, seasonally adjusted

Selected categories	Number of unemployed persons (in thousands)		Unemployment rates					
	Nov. 1976	Nov. 1977	Nov. 1976	July 1977	Aug. 1977	Sept. 1977	Oct. 1977	Nov. 1977
CHARACTERISTICS								
Total, 16 years and over	7,651	6,818	8.0	6.9	7.1	6.9	7.0	6.9
Men, 20 years and over	3,293	2,612	6.3	5.1	5.2	4.9	5.3	4.9
Women, 20 years and over	2,640	2,584	7.6	6.9	7.1	7.0	6.8	7.1
Both sexes, 16-19 years	1,718	1,622	19.2	17.4	17.5	18.1	17.3	17.1
White, total	6,169	5,226	7.3	6.1	6.1	6.1	6.1	6.0
Men, 20 years and over	2,671	2,043	5.7	4.6	4.5	4.3	4.5	4.3
Women, 20 years and over	2,121	1,958	7.0	6.2	6.3	6.2	6.2	6.2
Both sexes, 16-19 years	1,377	1,225	17.2	14.3	14.7	15.9	14.8	14.5
Black and other, total	1,496	1,599	13.5	13.2	14.5	13.1	13.9	13.8
Men, 20 years and over	631	575	11.6	10.1	11.7	10.4	11.7	10.3
Women, 20 years and over	519	622	11.0	10.9	12.2	11.3	11.4	12.5
Both sexes, 16-19 years	346	402	36.5	40.7	40.4	37.4	37.9	39.0
Married men, spouse present	1,796	1,371	4.5	3.4	3.5	3.4	3.7	3.4
Married women, spouse present	1,592	1,491	7.2	6.6	6.6	6.4	6.3	6.6
Women who head families	420	430	9.8	9.3	10.5	10.4	9.6	9.3
Full-time workers	6,185	5,383	7.6	6.5	6.8	6.5	6.6	6.4
Part-time workers	1,469	1,429	10.5	9.2	8.9	9.5	9.7	9.6
Unemployed 15 weeks and over[1]	2,517	1,933	2.6	1.9	1.9	1.9	1.9	2.0
Labor force time lost[2]	--	--	8.6	7.4	7.7	7.4	7.5	7.5
OCCUPATION[3]								
White-collar workers	2,165	2,059	4.7	4.0	4.2	4.2	4.1	4.3
Professional and technical	481	431	3.4	2.8	3.0	3.0	3.0	3.0
Managers and administrators, except farm	303	311	3.1	2.6	2.5	2.5	2.6	3.0
Sales workers	337	305	5.7	5.4	5.3	5.1	5.0	5.0
Clerical workers	1,044	1,012	6.3	5.4	5.8	6.0	5.7	5.7
Blue-collar workers	3,109	2,616	9.7	8.2	8.4	7.9	8.3	7.9
Craft and kindred workers	858	673	7.0	5.6	5.5	5.2	5.5	5.3
Operatives, except transport	1,269	1,112	11.3	10.1	10.0	10.2	10.2	9.7
Transport equipment operatives	290	200	8.2	7.5	7.6	5.7	6.5	5.4
Nonfarm laborers	692	631	13.5	10.7	12.6	11.1	12.2	12.3
Service workers	1,227	1,066	9.3	7.7	8.4	7.8	8.3	7.8
Farm workers	148	120	5.1	3.8	3.7	4.7	4.3	4.1
INDUSTRY[3]								
Nonagricultural private wage and salary workers[4]	5,700	4,939	8.2	6.8	7.0	6.9	7.1	6.9
Construction	671	539	15.4	12.1	11.5	10.4	12.2	11.3
Manufacturing	1,735	1,473	8.2	6.7	7.0	7.2	7.0	6.8
Durable goods	966	802	7.7	6.1	6.5	6.6	6.3	6.3
Nondurable goods	769	671	8.9	7.6	7.7	8.2	8.1	7.5
Transportation and public utilities	278	243	5.7	4.7	4.9	5.0	5.0	4.7
Wholesale and retail trade	1,612	1,378	9.0	7.7	8.3	7.6	8.1	7.5
Finance and service industries	1,372	1,291	6.8	5.7	5.6	5.7	5.9	6.1
Government workers	677	710	4.3	3.9	4.4	4.0	4.1	4.4
Agricultural wage and salary workers	196	141	13.2	9.7	9.3	10.4	10.4	9.1
VETERAN STATUS								
Male Vietnam-era veterans:[5]								
20 to 34 years	545	466	8.5	7.9	7.8	7.7	7.5	7.2
20 to 24 years	162	136	16.8	16.3	17.4	20.1	16.0	14.7
25 to 29 years	261	186	8.6	7.2	6.3	6.1	6.9	6.8
30 to 34 years	122	144	5.0	5.8	6.0	5.1	5.3	5.1
Male nonveterans:								
20 to 34 years	1,434	1,132	9.3	7.6	7.9	7.0	7.5	7.0
20 to 24 years	832	669	12.1	9.9	10.5	9.1	9.4	9.6
25 to 29 years	385	288	7.9	6.8	6.6	5.9	6.8	5.6
30 to 34 years	217	175	5.8	4.6	4.9	4.8	5.2	4.4

[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.

[5] Vietnam-era veterans are those who served between August 5, 1964, and May 7, 1975.

Table A-3. Selected employment indicators

[In thousands]

Selected categories	Not seasonally adjusted		Seasonally adjusted					
	Nov. 1976	Nov. 1977	Nov. 1976	July 1977	Aug. 1977	Sept. 1977	Oct. 1977	Nov. 1977
CHARACTERISTICS								
Total employed, 16 years and over	88,542	92,473	88,220	90,561	90,771	91,095	91,230	92,180
Men	52,344	54,590	52,643	53,900	53,958	53,966	54,266	54,715
Women	35,998	37,884	35,577	36,661	36,813	37,129	36,964	37,465
Married men, spouse present	38,123	38,716	37,895	38,434	38,316	38,358	38,386	38,485
Married women, spouse present	21,042	21,839	20,482	20,846	20,814	21,232	21,097	21,265
OCCUPATION								
White-collar workers	44,738	46,689	44,297	45,105	45,114	45,437	46,147	46,232
Professional and technical	13,900	14,224	13,597	13,863	13,720	13,777	14,034	13,918
Managers and administrators, except farm	9,569	9,995	9,491	9,583	9,688	9,777	9,951	9,916
Sales workers	5,600	5,786	5,597	5,716	5,722	5,748	5,687	5,780
Clerical workers	15,668	16,684	15,612	15,943	15,984	16,135	16,455	16,618
Blue-collar workers	29,177	30,554	29,001	30,063	30,231	30,282	30,084	30,370
Craft and kindred workers	11,412	12,100	11,353	11,887	11,931	11,974	11,827	12,040
Operatives, except transport	10,124	10,507	9,970	10,270	10,242	10,211	10,204	10,352
Transport equipment operatives	3,315	3,536	3,258	3,397	3,462	3,541	3,430	3,493
Nonfarm laborers	4,321	4,391	4,420	4,509	4,596	4,556	4,623	4,485
Service workers	12,000	12,557	12,026	12,460	12,591	12,604	12,420	12,592
Farm workers	2,627	2,674	2,743	2,743	2,778	2,676	2,783	2,795
MAJOR INDUSTRY AND CLASS OF WORKER								
Agriculture:								
Wage and salary workers	1,178	1,283	1,285	1,271	1,331	1,350	1,402	1,401
Self-employed workers	1,609	1,589	1,627	1,561	1,604	1,566	1,584	1,607
Unpaid family workers	294	310	342	363	315	275	303	361
Nonagricultural industries:								
Wage and salary workers	79,280	82,786	78,786	80,738	80,951	81,341	81,651	82,269
Government	15,195	15,576	15,045	15,131	15,282	15,296	15,494	15,422
Private industries	64,084	67,211	63,721	65,607	65,669	66,045	66,157	66,847
Private households	1,443	1,409	1,448	1,445	1,401	1,409	1,352	1,415
Other industries	62,642	65,802	62,273	64,162	64,268	64,636	64,805	65,432
Self-employed workers	5,758	6,062	5,771	5,896	6,151	6,072	6,039	6,074
Unpaid family workers	423	443	449	523	469	504	448	471
PERSONS AT WORK [1]								
Nonagricultural industries	82,219	85,823	79,940	85,572	82,613	82,799	82,626	83,378
Full-time schedules	66,822	69,713	65,385	67,867	67,755	67,706	67,646	68,212
Part time for economic reasons	3,244	3,083	3,545	3,371	3,199	3,315	3,298	3,366
Usually work full time	1,210	1,189	1,289	1,440	1,196	1,246	1,251	1,266
Usually work part time	2,034	1,894	2,256	1,931	2,003	2,069	2,047	2,100
Part time for noneconomic reasons	12,153	13,027	11,010	11,334	11,659	11,778	11,682	11,800

[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]

Weeks of unemployment	Not seasonally adjusted		Seasonally adjusted					
	Nov. 1976	Nov. 1977	Nov. 1976	July 1977	Aug. 1977	Sept. 1977	Oct. 1977	Nov. 1977
DURATION								
Less than 5 weeks	2,698	2,781	2,759	2,830	2,870	2,789	2,890	2,844
5 to 14 weeks	2,355	1,997	2,494	1,969	2,338	2,236	2,208	2,115
15 weeks and over	2,042	1,568	2,517	1,834	1,808	1,866	1,862	1,933
15 to 26 weeks	899	768	1,188	917	966	940	916	1,003
27 weeks and over	1,143	800	1,329	917	842	926	946	930
Average (mean) duration, in weeks	15.0	13.3	15.5	14.1	13.5	14.2	13.8	13.8
PERCENT DISTRIBUTION								
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than 5 weeks	38.0	43.6	35.5	42.7	40.9	40.5	41.5	41.3
5 to 14 weeks	33.2	31.5	32.1	29.7	33.3	32.4	31.7	30.7
15 weeks and over	28.8	24.7	32.4	27.6	25.8	27.1	26.8	28.0
15 to 26 weeks	12.7	12.1	15.3	13.8	13.8	13.6	13.2	14.6
27 weeks and over	16.1	12.6	17.1	13.8	12.0	13.4	13.6	13.5

Table A-5. Reasons for unemployment

(Numbers in thousands)

Reasons	Not seasonally adjusted		Seasonally adjusted					
	Nov. 1976	Nov. 1977	Nov. 1976	July 1977	Aug. 1977	Sept. 1977	Oct. 1977	Nov. 1977
NUMBER OF UNEMPLOYED								
Lost last job	3,364	2,733	3,802	3,075	3,289	3,144	3,139	3,088
On layoff	836	636	1,067	919	1,018	928	947	812
Other job losers	2,528	2,098	2,735	2,156	2,271	2,216	2,192	2,276
Left last job	876	890	858	841	910	873	886	872
Reentered labor force	2,009	1,889	2,061	1,822	1,857	1,856	1,915	1,937
Seeking first job	846	833	920	974	1,000	935	840	907
PERCENT DISTRIBUTION								
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Job losers	47.4	43.1	49.8	45.8	46.6	46.2	46.3	45.4
On layoff	11.8	10.0	14.0	13.7	14.4	13.6	14.0	11.9
Other job losers	35.6	33.1	35.8	32.1	32.2	32.5	32.3	33.5
Job leavers	12.3	14.0	11.2	12.5	12.9	12.8	13.1	12.8
Reentrants	28.3	29.8	27.0	27.1	26.3	27.3	28.2	28.5
New entrants	11.9	13.1	12.0	14.5	14.2	13.7	12.4	13.3
UNEMPLOYED AS A PERCENT OF THE CIVILIAN LABOR FORCE								
Job losers	3.5	2.7	4.0	3.2	3.4	3.2	3.2	3.1
Job leavers	.9	.9	.9	.9	.9	.9	.9	.9
Reentrants	2.1	1.9	2.1	1.9	1.9	1.9	2.0	2.0
New entrants	.9	.8	1.0	1.0	1.0	1.0	.9	.9

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

Sex and age	Number of unemployed persons (in thousands)		Unemployment rates					
	Nov. 1976	Nov. 1977	Nov. 1976	July 1977	Aug. 1977	Sept. 1977	Oct. 1977	Nov. 1977
Total, 16 years and over	7,651	6,818	8.0	6.9	7.1	6.9	7.0	6.9
16 to 19 years	1,718	1,622	19.2	17.4	17.5	18.1	17.3	17.1
16 to 17 years	792	752	21.6	19.9	20.7	19.8	18.8	18.9
18 to 19 years	930	875	17.6	15.3	15.6	16.9	16.3	16.0
20 to 24 years	1,802	1,577	12.7	10.6	11.1	10.7	10.6	10.8
25 years and over	4,102	3,594	5.6	5.0	5.0	4.8	5.0	4.8
25 to 54 years	3,438	2,969	5.9	5.2	5.3	4.9	5.2	4.9
55 years and over	664	619	4.6	3.9	3.9	4.2	4.2	4.2
Men, 16 years and over	4,244	3,459	7.5	6.2	6.3	6.0	6.3	5.9
16 to 19 years	951	847	19.7	16.9	17.6	17.5	16.7	16.5
16 to 17 years	449	407	22.2	20.2	21.7	19.2	18.8	18.2
18 to 19 years	505	444	18.1	14.7	14.8	16.0	15.1	15.3
20 to 24 years	987	801	12.6	10.6	11.3	10.5	10.2	10.1
25 years and over	2,281	1,792	5.2	4.2	4.2	3.9	4.4	4.0
25 to 54 years	1,902	1,453	5.4	4.3	4.4	3.8	4.5	4.0
55 years and over	387	339	4.4	3.6	3.5	3.9	4.1	3.7
Women, 16 years and over	3,407	3,359	8.7	8.0	8.3	8.2	8.0	8.2
16 to 19 years	767	775	18.5	17.9	17.4	18.9	18.0	17.9
16 to 17 years	343	345	20.8	19.5	19.4	20.5	18.7	19.7
18 to 19 years	425	431	17.1	16.0	16.4	17.9	17.6	16.8
20 to 24 years	815	776	12.8	10.5	10.8	10.9	11.2	11.7
25 years and over	1,821	1,802	6.4	6.2	6.2	6.1	5.9	6.1
25 to 54 years	1,536	1,516	6.7	6.4	6.6	6.4	6.3	6.3
55 years and over	277	280	5.1	4.4	4.6	4.5	4.4	5.0

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

[Percent]

Measures	Quarterly averages					Monthly data		
	1976		1977			1977		
	III	IV	I	II	III	Sept.	Oct.	Nov.
U-1—Persons unemployed 15 weeks or longer as a percent of the civilian labor force	2.4	2.6	2.2	1.8	1.9	1.9	1.9	2.0
U-2—Job losers as a percent of the civilian labor force	3.9	3.9	3.4	3.1	3.2	3.2	3.2	3.1
U-3—Unemployed household heads as a percent of the household head labor force	5.3	5.3	4.8	4.4	4.5	4.5	4.6	4.3
U-4—Unemployed full-time jobseekers as a percent of the full-time labor force	7.4	7.5	6.8	6.5	6.6	6.5	6.6	6.4
U-5—Total unemployed as a percent of the civilian labor force (official measure)	7.8	7.9	7.4	7.0	7.0	6.9	7.0	6.9
U-6—Total full-time jobseekers plus ½ part-time jobseekers plus ½ total on part time for economic reasons as a percent of the civilian labor force less ½ of the part-time labor force	9.5	9.7	9.0	8.6	8.6	8.6	8.7	8.5
U-7—Total full-time jobseekers plus ½ part-time jobseekers plus ½ total on part time for economic reasons plus discouraged workers as a percent of the civilian labor force plus discouraged workers less ½ of the part-time labor force	10.3	10.7	9.9	9.7	9.7	N.A.	N.A.	N.A.

N.A.= Not available.

Table B-1. Employees on nonagricultural payrolls, by industry

[In thousands]

Industry	Not seasonally adjusted				Seasonally adjusted					
	Nov. 1976	Sept. 1977	Oct. 1977 p	Nov. 1977 p	Nov. 1976	July 1977	Aug. 1977	Sept. 1977	Oct. 1977 p	Nov. 1977 p
TOTAL	80,943	83,146	83,678	84,065	80,127	82,407	82,474	82,763	82,905	83,217
GOODS-PRODUCING	23,781	24,960	24,912	24,846	23,484	24,412	24,305	24,360	24,438	24,534
MINING	807	862	863	865	805	833	818	856	859	863
CONTRACT CONSTRUCTION	3,742	4,157	4,175	4,099	3,609	3,913	3,893	3,892	3,924	3,953
MANUFACTURING	19,232	19,941	19,874	19,882	19,070	19,666	19,594	19,612	19,655	19,718
Production workers	13,839	14,401	14,349	14,354	13,688	14,145	14,078	14,091	14,141	14,200
DURABLE GOODS	11,218	11,687	11,686	11,741	11,126	11,548	11,527	11,545	11,597	11,645
Production workers	8,021	8,396	8,406	8,458	7,932	8,271	8,252	8,266	8,321	8,367
Ordnance and accessories	156.3	156.2	150.3	150.7	157	156	156	155	150	151
Lumber and wood products	617.0	663.4	661.1	658.8	621	640	642	648	652	663
Furniture and fixtures	498.1	519.4	524.6	525.5	492	515	508	510	517	519
Stone, clay, and glass products	640.9	672.9	671.0	673.3	636	659	656	658	558	668
Primary metal industries	1,182.8	1,215.8	1,204.8	1,205.1	1,189	1,204	1,202	1,211	1,206	1,211
Fabricated metal products	1,411.4	1,481.2	1,491.4	1,499.8	1,397	1,459	1,460	1,456	1,474	1,485
Machinery, except electrical	2,110.6	2,217.4	2,223.9	2,249.2	2,102	2,202	2,210	2,217	2,242	2,240
Electrical equipment	1,878.6	1,969.7	1,981.2	1,993.9	1,858	1,959	1,951	1,944	1,962	1,972
Transportation equipment	1,776.9	1,833.2	1,815.1	1,823.2	1,746	1,813	1,802	1,809	1,795	1,791
Instruments and related products	517.4	530.3	532.4	534.7	514	527	526	528	530	532
Miscellaneous manufacturing	427.9	427.8	429.8	426.6	414	414	414	409	411	413
NONDURABLE GOODS	8,014	8,254	8,188	8,141	7,944	8,118	8,067	8,067	8,058	8,073
Production workers	5,818	6,005	5,943	5,896	5,756	5,874	5,826	5,825	5,820	5,833
Food and kindred products	1,733.5	1,837.9	1,759.3	1,703.6	1,713	1,728	1,710	1,711	1,692	1,683
Tobacco manufactures	81.8	75.0	76.0	73.2	75	72	68	67	68	67
Textile mill products	964.6	991.0	991.0	993.5	962	992	982	985	987	991
Apparel and other textile products	1,293.6	1,301.7	1,304.9	1,302.4	1,278	1,292	1,286	1,285	1,284	1,287
Paper and allied products	685.8	707.6	707.1	710.8	680	705	704	702	703	705
Printing and publishing	1,093.6	1,116.3	1,119.6	1,122.4	1,089	1,114	1,114	1,116	1,116	1,118
Chemicals and allied products	1,039.9	1,063.7	1,062.5	1,065.7	1,038	1,064	1,061	1,058	1,058	1,064
Petroleum and coal products	203.7	213.7	213.4	212.5	203	210	210	210	211	212
Rubber and plastics products, nec	651.9	684.9	688.7	688.7	642	683	671	671	673	679
Leather and leather products	265.1	262.5	265.6	268.3	264	258	261	262	266	267
SERVICE-PRODUCING	57,162	58,186	58,766	59,219	56,643	57,995	58,169	58,403	58,467	58,683
TRANSPORTATION AND PUBLIC UTILITIES	4,546	4,653	4,635	4,635	4,523	4,572	4,581	4,616	4,607	4,612
WHOLESALE AND RETAIL TRADE	18,122	18,463	18,530	18,749	17,848	18,322	18,377	18,431	18,411	18,465
WHOLESALE TRADE	4 321	4,428	4,452	4,465	4,291	4,394	4,398	4,410	4,417	4,434
RETAIL TRADE	13,801	14,035	14,078	14,284	13,557	13,928	13,979	14,021	13,994	14,031
FINANCE, INSURANCE, AND REAL ESTATE	4,368	4,554	4,566	4,578	4,381	4,506	4,524	4,545	4,571	4,592
SERVICES	14,858	15,513	15,578	15,606	14,858	15,372	15,448	15,482	15,531	15,606
GOVERNMENT	15,268	15,003	15,457	15,651	15,033	15,223	15,239	15,329	15,347	15,408
FEDERAL	2,720	2,717	2,714	2,720	2,731	2,721	2,732	2,728	2,730	2,731
STATE AND LOCAL	12,548	12,286	12,743	12,931	12,302	12,502	12,507	12,601	12,617	12,677

p=preliminary.

NOTE: The seasonally-adjusted data have been revised based on new seasonal adjustment factors.

Table B-2. Average weekly hours of production or nonsupervisory workers[1] on private nonagricultural payrolls, by industry

Industry	Not seasonally adjusted				Seasonally adjusted					
	Nov. 1976	Sept. 1977	Oct. 1977[p]	Nov. 1977[p]	Nov. 1976	July 1977	Aug. 1977	Sept. 1977	Oct. 1977[p]	Nov. 1977[p]
TOTAL PRIVATE	36.1	36.2	36.2	36.0	36.2	36.1	36.0	36.0	36.2	36.1
MINING	43.6	44.7	45.0	44.8	43.3	44.8	44.2	44.3	44.5	44.5
CONTRACT CONSTRUCTION	36.8	37.1	37.6	36.4	37.3	36.9	36.5	36.4	36.8	36.9
MANUFACTURING	40.3	40.6	40.5	40.6	40.1	40.2	40.3	40.3	40.4	40.5
Overtime hours	3.2	3.7	3.6	3.5	3.1	3.4	3.3	3.3	3.5	3.5
DURABLE GOODS	40.9	41.3	41.2	41.3	40.7	40.9	40.9	41.0	41.2	41.2
Overtime hours	3.3	3.9	3.9	3.8	3.2	3.6	3.5	3.5	3.5	3.7
Ordnance and accessories	40.8	40.6	40.6	40.2	40.6	40.3	40.2	40.6	40.7	40.0
Lumber and wood products	39.9	40.4	40.5	40.2	40.3	40.4	39.6	40.0	40.2	40.6
Furniture and fixtures	38.8	39.7	40.1	40.1	38.6	38.8	39.0	39.2	39.7	39.9
Stone, clay, and glass products	41.3	41.4	41.5	41.2	41.2	41.4	41.4	41.0	41.0	41.1
Primary metal industries	40.3	41.3	41.0	41.4	40.4	41.1	41.0	40.9	41.2	41.5
Fabricated metal products	41.0	41.2	41.2	41.4	40.8	41.0	40.9	40.9	41.1	41.2
Machinery, except electrical	41.7	42.0	42.0	42.4	41.4	41.8	41.8	41.8	42.0	42.1
Electrical equipment	40.6	40.6	40.4	40.5	40.2	40.2	40.3	40.3	40.3	40.1
Transportation equipment	42.0	42.8	42.8	42.5	42.0	42.0	42.3	42.6	42.8	42.5
Instruments and related products	40.8	40.6	40.6	40.7	40.4	40.3	40.3	40.3	40.6	40.3
Miscellaneous manufacturing	39.3	39.2	39.3	39.4	38.9	38.7	38.8	39.0	39.1	39.0
NONDURABLE GOODS	39.6	39.6	39.5	39.6	39.2	39.3	39.3	39.3	39.4	39.5
Overtime hours	3.0	3.4	3.3	3.2	3.0	3.0	3.1	3.0	3.1	3.2
Food and kindred products	40.4	40.2	39.6	40.0	40.3	39.8	39.7	39.5	39.5	39.9
Tobacco manufactures	38.1	39.4	39.6	39.5	36.8	38.6	37.8	38.6	38.3	38.2
Textile mill products	40.0	40.6	40.6	40.8	39.8	40.1	40.2	40.3	40.6	40.6
Apparel and other textile products	35.4	35.5	35.8	35.8	35.2	35.3	35.5	35.3	35.5	35.6
Paper and allied products	42.6	43.1	42.9	42.9	42.4	42.7	42.4	42.7	42.8	42.7
Printing and publishing	37.8	38.3	38.0	38.2	37.6	37.8	37.7	38.0	37.9	38.0
Chemicals and allied products	41.8	41.8	41.6	41.8	41.7	41.7	41.8	41.7	41.6	41.7
Petroleum and coal products	42.3	43.4	43.7	43.4	42.0	42.8	43.0	42.8	43.3	43.1
Rubber and plastics products, nec	41.4	41.0	41.0	40.8	41.2	40.6	40.8	40.7	40.9	40.6
Leather and leather products	36.5	37.3	37.5	37.9	36.4	36.8	37.3	37.6	37.6	37.8
TRANSPORTATION AND PUBLIC UTILITIES	40.2	40.1	40.1	40.1	40.2	39.9	40.0	39.9	39.9	40.1
WHOLESALE AND RETAIL TRADE	33.2	33.3	33.3	32.9	33.4	33.3	33.2	33.2	33.5	33.1
WHOLESALE TRADE	38.7	38.9	39.1	38.9	38.7	38.8	38.8	38.8	39.1	38.9
RETAIL TRADE	31.6	31.6	31.6	31.1	31.9	31.7	31.6	31.6	31.9	31.4
FINANCE, INSURANCE, AND REAL ESTATE	36.6	36.5	36.7	36.5	36.7	36.6	36.7	36.6	36.7	36.6
SERVICES	33.4	33.2	33.3	33.2	33.5	33.2	33.2	33.2	33.4	33.3

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

p=preliminary.

NOTE: The seasonally-adjusted data have been revised based on new seasonal adjustment factors.

Table B-3. Average hourly and weekly earnings of production or nonsupervisory workers[1] on private nonagricultural payrolls, by industry

Industry	Average hourly earnings				Average weekly earnings			
	Nov. 1976	Sept. 1977	Oct. 1977[p]	Nov. 1977[p]	Nov. 1976	Sept. 1977	Oct. 1977[p]	Nov. 1977[p]
TOTAL PRIVATE	$5.00	$5.36	$5.40	$5.40	$180.50	$194.03	$195.48	$194.40
Seasonally adjusted	5.00	5.32	5.37	5.39	181.00	191.52	194.39	194.58
MINING	6.62	7.05	7.07	7.09	288.63	315.14	318.15	317.63
CONTRACT CONSTRUCTION	7.86	8.20	8.24	8.21	289.25	304.22	309.82	298.84
MANUFACTURING	5.34	5.75	5.78	5.81	215.20	233.45	234.09	235.89
DURABLE GOODS	5.68	6.14	6.18	6.21	232.31	253.58	254.62	256.47
Ordnance and accessories	5.98	6.37	6.33	6.44	243.98	258.62	257.00	258.89
Lumber and wood products	4.86	5.22	5.23	5.21	193.91	210.89	211.82	209.44
Furniture and fixtures	4.07	4.39	4.39	4.41	157.92	174.28	176.04	176.84
Stone, clay, and glass products	5.45	5.87	5.90	5.92	225.09	243.02	244.85	243.90
Primary metal industries	6.94	7.70	7.68	7.72	279.68	318.01	314.88	319.61
Fabricated metal products	5.53	5.95	6.00	6.03	226.73	245.14	247.20	249.64
Machinery, except electrical	5.91	6.32	6.38	6.39	246.45	265.44	267.96	270.94
Electrical equipment	5.07	5.46	5.47	5.50	205.84	221.68	220.99	222.75
Transportation equipment	6.69	7.27	7.43	7.47	280.98	311.16	318.00	317.48
Instruments and related products	4.99	5.28	5.27	5.31	203.59	214.37	213.96	216.12
Miscellaneous manufacturing	4.08	4.38	4.40	4.44	160.34	171.70	172.92	174.94
NONDURABLE GOODS	4.84	5.17	5.18	5.21	190.70	204.73	204.61	206.32
Food and kindred products	5.09	5.42	5.43	5.51	205.64	217.88	215.03	220.40
Tobacco manufactures	4.87	5.37	5.31	5.41	185.55	211.58	210.28	213.70
Textile mill products	3.81	4.08	4.08	4.09	152.40	165.65	165.65	166.87
Apparel and other textile products	3.50	3.68	3.69	3.70	123.90	130.64	132.10	132.46
Paper and allied products	5.62	6.07	6.10	6.08	239.41	261.62	261.69	260.83
Printing and publishing	5.82	6.21	6.23	6.26	220.00	237.84	236.74	239.13
Chemicals and allied products	6.09	6.52	6.57	6.59	254.56	272.54	273.31	275.46
Petroleum and coal products	7.26	7.79	7.82	7.86	307.10	338.09	341.73	341.12
Rubber and plastics products, nec	4.94	5.18	5.20	5.21	204.52	212.38	213.20	212.57
Leather and leather products	3.50	3.67	3.68	3.72	127.75	136.89	138.00	140.99
TRANSPORTATION AND PUBLIC UTILITIES	6.65	7.10	7.13	7.18	267.33	284.71	285.91	287.92
WHOLESALE AND RETAIL TRADE	4.08	4.34	4.37	4.37	135.46	144.52	145.52	143.77
WHOLESALE TRADE	5.31	5.63	5.68	5.67	205.50	219.01	222.09	220.56
RETAIL TRADE	3.65	3.88	3.91	3.90	115.34	122.61	123.56	121.29
FINANCE, INSURANCE, AND REAL ESTATE	4.40	4.65	4.72	4.70	161.04	169.73	173.22	171.55
SERVICES	4.49	4.80	4.84	4.85	149.97	159.36	161.17	161.02

[1] See footnote 1, table B-2.
p=preliminary.

NOTE: The seasonally-adjusted data have been revised based on new seasonal adjustment factors.

Table B-5. Indexes of aggregate weekly hours of production or nonsupervisory workers[1] on private nonagricultural payrolls, by industry, seasonally adjusted

[1967 = 100]

Industry division and group	1976		1977										
	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.[p]	Nov.[p]
TOTAL	112.8	113.3	112.3	114.2	115.0	115.4	115.9	115.8	115.8	115.6	115.9	116.8	116.9
GOODS-PRODUCING	97.1	97.0	95.2	98.6	100.1	100.8	101.4	101.8	101.4	100.6	100.9	101.8	102.4
MINING	132.6	133.7	131.3	134.3	140.6	141.6	140.6	142.3	139.9	134.7	142.5	143.6	144.3
CONTRACT CONSTRUCTION	104.9	104.0	95.9	105.8	108.7	111.7	112.4	111.8	112.8	110.8	110.4	112.7	113.9
MANUFACTURING	94.5	94.5	93.9	96.1	97.2	97.5	98.1	98.7	98.0	97.6	97.8	98.5	99.0
DURABLE GOODS	93.8	93.7	93.2	95.2	96.8	96.9	97.8	98.7	98.3	98.1	98.4	99.5	100.0
Ordnance and accessories	39.1	39.4	39.1	39.3	39.2	40.1	40.7	41.0	40.5	39.3	39.1	37.5	36.9
Lumber and wood products	101.2	101.9	101.4	103.0	103.6	103.5	104.1	104.0	105.3	104.0	106.0	106.9	110.3
Furniture and fixtures	103.0	103.3	98.7	103.2	105.3	106.1	107.1	107.9	108.4	107.2	108.3	111.2	112.6
Stone, clay, and glass products	100.2	99.3	96.6	97.4	101.7	103.9	104.2	105.4	104.9	104.1	103.3	103.3	105.3
Primary metal industries	86.2	85.4	85.2	85.9	88.6	89.7	90.7	90.9	89.0	88.2	89.0	89.4	90.4
Fabricated metal products	98.3	98.3	97.3	100.3	101.7	101.3	102.8	104.2	103.7	103.3	103.1	105.1	106.4
Machinery, except electrical	96.2	96.0	95.2	97.9	98.7	98.8	100.2	101.6	103.2	103.5	103.6	105.5	105.6
Electrical equipment and supplies	93.0	93.3	91.9	95.6	96.1	96.3	97.2	97.9	98.3	98.3	97.8	98.8	99.3
Transportation equipment	91.4	90.8	93.4	92.9	96.4	94.7	95.3	96.5	94.8	95.4	96.5	97.1	95.8
Instruments and related products	108.8	110.4	108.7	112.7	111.6	111.7	112.3	113.2	111.7	111.3	112.4	113.6	113.1
Miscellaneous manufacturing, ind.	91.9	93.0	92.5	96.5	95.5	95.0	94.7	94.6	91.4	91.3	90.3	91.1	91.5
NONDURABLE GOODS	95.6	95.7	94.9	97.3	97.7	98.5	98.5	98.7	97.7	96.9	96.9	97.1	97.5
Food and kindred products	96.6	95.8	94.9	97.5	97.8	98.5	97.3	97.3	95.9	94.5	94.1	92.7	92.9
Tobacco manufactures	80.1	81.6	76.1	82.4	75.1	80.5	78.2	80.2	77.2	71.7	73.2	74.0	71.1
Textile mill products	96.0	96.6	96.7	98.1	99.4	99.6	100.2	99.7	99.9	98.9	99.4	100.5	101.0
Apparel and other textile products	86.5	86.3	84.1	87.9	88.1	87.7	88.6	89.8	87.6	87.8	87.2	87.7	88.1
Paper and allied products	97.2	97.2	96.2	98.2	98.6	100.8	100.4	101.1	100.3	99.4	99.7	100.4	100.7
Printing and publishing	93.6	93.7	93.4	94.6	94.5	95.2	95.1	95.3	95.6	95.1	95.7	95.7	96.3
Chemicals and allied products	100.1	100.1	100.7	101.6	102.2	102.9	103.3	103.8	103.7	103.4	103.0	102.6	103.5
Petroleum and coal products	113.4	114.4	115.0	114.4	118.4	119.6	119.3	121.6	119.9	120.4	120.8	123.1	124.2
Rubber and plastics products, nec	125.7	127.8	128.0	131.8	132.9	134.8	135.3	133.9	132.5	129.7	129.3	130.5	130.5
Leather and leather products	70.7	70.7	69.1	72.1	71.8	73.4	73.3	72.9	69.9	71.8	72.7	73.6	74.4
SERVICE-PRODUCING	123.7	124.7	124.1	125.0	125.3	125.5	125.9	125.6	125.8	125.1	126.4	127.2	126.9
TRANSPORTATION AND PUBLIC UTILITIES	103.3	104.9	102.7	104.4	104.1	103.8	104.6	104.1	103.1	103.5	103.9	103.4	104.3
WHOLESALE AND RETAIL TRADE	119.1	120.3	119.4	120.3	120.7	121.0	121.4	121.2	121.6	121.6	121.8	122.7	121.4
WHOLESALE TRADE	114.8	114.8	115.4	117.1	116.9	117.3	117.3	117.3	117.5	117.5	117.8	118.7	118.7
RETAIL TRADE	120.7	122.3	120.8	121.6	122.1	122.4	123.0	122.7	123.1	123.1	123.3	124.1	122.4
FINANCE, INSURANCE, AND REAL ESTATE	129.1	129.6	130.1	130.2	131.0	131.0	131.6	131.7	132.3	132.7	133.2	134.2	134.5
SERVICES	137.7	138.3	138.8	139.3	139.8	140.1	140.3	139.6	140.1	140.6	140.9	142.2	142.6

[1] See footnote 1, table B-2.

[p]preliminary.

NOTE: The seasonally-adjusted data have been revised based on new seasonal adjustment factors.

Table B-6. Indexes of diffusion: Percent of industries in which employment[1] increased

Year and month	Over 1-month span	Over 3-month span	Over 6-month span	Over 12-month span
1975				
January	15.1	12.8	12.8	16.6
February	15.7	12.8	11.9	17.4
March	25.6	18.6	17.7	17.7
April	39.0	32.3	28.2	20.6
May	51.2	43.9	41.6	27.0
June	40.7	52.3	56.7	40.7
July	58.1	57.0	67.2	50.6
August	73.0	76.2	70.1	63.1
September	80.8	81.7	75.3	72.4
October	66.9	74.1	82.3	77.3
November	62.2	72.4	83.4	80.2
December	74.1	74.7	81.7	82.6
1976				
January	78.5	82.0	83.1	86.0
February	77.9	84.3	81.7	84.6
March	74.1	85.2	79.9	81.1
April	79.4	77.9	79.4	74.4
May	66.6	71.5	70.9	79.7
June	54.1	61.0	68.6	79.1
July	57.3	52.9	57.0	74.1
August	47.1	62.5	57.3	74.7
September	69.8	56.7	63.7	78.5
October	42.4	62.8	69.8	76.5
November	69.5	58.7	73.5	75.0
December	73.0	79.9	78.5	74.7
1977				
January	75.0	79.7	89.0	75.9
February	73.5	86.0	86.6	75.6
March	82.3	85.8	83.1	78.2
April	77.6	84.0	80.5	78.2p
May	68.6	73.3	71.5	80.1p
June	63.7	70.1	68.0	
July	65.7	56.1	68.6p	
August	50.0	62.5	71.9p	
September	61.3	59.3p		
October	60.8p	70.8p		
November	69.9p			
December				
1978				
January				
February				
March				
April				
May				
June				
July				
August				
September				
October				
November				
December				

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

NOTE: The seasonally-adjusted data have been revised based on new seasonal adjustment factors.

Senator PROXMIRE. Thank you very much, Mr. Shiskin, for a competent analysis, as always.

Let me get back to the point I made at the beginning. It seems to me that today's report of November employment's increase may be a misleading indicator of the economy's state of health.

The increase may be inaccurate because of the imperfect seasonal adjustment and because of an inadequate measurement of the employment flow in the last few months which is now reflected in the November figures.

It is hard for me to accept this colossal increase in November, when there doesn't seem to be any corresponding increases in production and other indicators that reflect that.

Mr. SHISKIN. We don't have the other figures for the month of November yet.

Senator PROXMIRE. We have, for instance, on automobile production, and steel production, the retail sales figures that have been made available. They don't indicate that we have had a spectacular increase in the month.

It looks as if it might be a moderate increase, but nothing like that would warrant almost a million new jobs.

Furthermore, the figures that you have that you report to us this morning on hours of work, which usually go up sharply when there is an expansion in the economy, are down a little bit, one-tenth of 1 percent—not much of a change.

So, it seems to me that the 500,000 increase might be more likely, more accurate, than the 950,000.

Mr. SHISKIN. It might be a seasonal adjustment problem but, as you know, we provide you—and it is attached here as exhibit 4 this morning—a table on alternative methods of seasonal adjustment.

If you look at that table this month, you see they are all almost exactly the same. The differences are very small.

Senator PROXMIRE. There is a colossal difference between your household survey and your payroll data.

Is that right?

Mr. SHISKIN. Sure. Let me come to these questions one at a time.

We are talking about seasonal adjustment, and I have 10 different methods there. They are all very, very similar.

Now, it is always possible to find another method that will give you different results, and you found it. We did too, I might say, because if you add up the industry data, you get a big discrepancy.

But, I want to call your attention to the fact that all the methods we have used in the past were not always valid, and perhaps the industry one is right this time.

So, maybe there is a seasonal problem here, but it sure doesn't show up in my table, exhibit 4. Even the stable seasonal adjustment gives about the same.

So, it is hard to pin it on the seasonal adjustment.

We had an early survey week, the earliest you can get. As I figure that, our seasonal factors aren't quite appropriate; if you had worked out seasonal factors for an early survey week, a middle survey week, and a late survey week, they would be different.

But I think that would have raised this number of 950,000 even more.

What I am really getting at is this: Let's not look at this month, let's look at this year.

Senator PROXMIRE. Well, that is right.

Mr. SHISKIN. There is surely an increase in employment.

It is absolutely sensational.

Senator PROXMIRE. Maybe you can give us some theoretical explanation of why this is so. Normally, in the past, we have had a big increase in the labor force when we have had a sharp drop in unemployment and when jobs are more available and when there is an effort on the part of employers to attract people into the labor force because they need them.

Of course, we had a spectacular increase in World War II but here we have a situation where unemployment has been at the same level for 8 months and yet we have this enormous increase of people flowing into the labor force.

Mr. SHISKIN. As I said in my statement, I am going to try to answer your questions and try to cope with the problem, but I don't pretend this is the last word or anything like it on this issue.

I think this puzzle is going to get a lot of attention in the future, and it should get it.

But first let me give you some figures for earlier such large expansions in 1 month. Then I would like to comment again—go back to what I said in the text to explain these figures.

I want to rationalize it. Maybe that is a better word. From May to June 1948 we got an increase in employment of about 900,000, an enormous increase considering the base in that day. But the unemployment rate rose one-tenth, from 3.5 to 3.6 percent.

In 1950, we had a rise of 850,000, from March to April 1950. That led to a drop in the unemployment rate of 0.5 percentage point. From November of 1959 to December 1959, right after the big steel strike, we had a rise of 800,000 in employment, and the unemployment rate declined half a point—0.5.

Senator PROXMIRE. That was after a major strike, and we didn't have anything like that now.

Mr. SHISKIN. In both of the two examples I gave you, the unemployment rate dropped by half a point.

The biggest rise we have ever had in our record in employment was 1,300,000 from March to April 1960, and the unemployment rate dropped two-tenths.

Senator PROXMIRE. What happened then?

Was there ever any historical explanation of why we had that?

Mr. SHISKIN. It was just before we entered the economic recession at that time—at the peak of the expansion. The large increase in the hiring of a temporary workers for the 1960 decennial census was also a factor.

We have four other examples here of similar phenomena, and the results are not clear. They are mixed.

If I may, let me get back to the substance of this.

It seems to me that, as I said in my statement, that there are a large number of people who are really available for work but not actively looking for work.

When the job market is favorable, and opportunities arise, they can take jobs. Now, I have said here many times that the normal sequence

is for a person to go from not in the labor force to unemployed to employed.

Well, I think maybe I ought to revise that. At least it is pretty clear that last month a lot of people skipped the unemployment stage. They go from not in the labor force——

Senator PROXMIRE. We see, on that point, again and again, reports of advertisements by companies for 200 people, and 15,000 or 20,000 people will show up for it.

You have read reports of that during the last couple of months.

Mr. SHISKIN. Yes.

Senator PROXMIRE. It is not as if you had a new opportunity for great increases, or there doesn't seem to be any.

It is not reflected in any of these other figures that we have.

Let me just ask you about this: The gain in the household survey was 950,000. The gain of only 312,000 was in the survey of establishments. That is an enormous discrepancy, since the household survey shows a gain in adult male employment of 378,000, again, in excess of the entire establishment gain.

I would have thought the establishment survey would at least have caught the employment gain among adult males.

Mr. SHISKIN. As I said, I don't have a good explanation for that. However, I only want to point out that a gain of 310,000 in one month in the payroll survey is a very good gain, and from 1976 to 1977 there were only two monthly gains that were larger than that, and they weren't much larger.

It is a very good figure.

I think we shouldn't lose sight of the fact that what we are looking at are good results.

The economy is doing well in terms of everything except unemployment.

Senator PROXMIRE. That is hard to tell the fellow out of work. I wonder, with the momentum established in the last year of people entering the work force, if we have a notion of what gain we need to drop the unemployment rate down from 7 to 6 or 5 percent.

Is there any feeling that this colossal increase in the labor force is pretty much over, or likely to be over? The only limit on it seems to be the population, and we are at an alltime low in the percentage of people who are not at work, an alltime high in the percentage of those who are.

Mr. SHISKIN. If we get away from this one month, most of it has been the movement of women, younger women, from outside the labor force into the labor force.

Now, I assume I will be reporting to you, hopefully in the near future, the passing of two major thresholds. The labor force as of this report is almost 99 million.

We should have some kind of a celebration when it is 100 million. It doesn't seem far away. It could even happen next month.

But the other one relates to the fact that the participation rate for adult women is 48.9.

Senator PROXMIRE. It is possible we could go over 100 million next month. After all, we went up 950,000 last month.

Mr. SHISKIN. The labor force didn't go up that much.

Senator PROXMIRE. It almost did. It is conceivable that we could go over it in the next 2 or 3 months.

Mr. SHISKIN. Of adult women in the population, 48.9 percent are now in the labor force. Well, that will soon be 50, and that will be another major threshold.

I don't see the end of that trend coming soon, though. This trend will come to an end sometime, but I don't think it is going to come to an end soon. So I think we are going to see more of the situation we have seen this year, maybe not quite as much, but it will go on for a while.

Senator PROXMIRE. Let me ask you about one other basic statistic you have.

You have in exhibit 2, which is a very helpful exhibit, and I am grateful for it, but it relies heavily on your measure of civilian population.

Mr. SHISKIN. Yes.

Senator PROXMIRE. How did you get those figures?

I can understand how employment, unemployment, and labor force can be inferred in a sample, but how do you make such an inference on the total civilian population?

Mr. SHISKIN. The data comes from the Census Bureau. Mr. Stein used to work there and is a great expert.

Senator PROXMIRE. How do you feel about the accuracy of that figure? Is it thoroughly reliable and accurate?

Mr. STEIN. I think it has some problems in it, Senator, but it is pretty sound.

It comes from the latest decennial census, and it is updated month by month by information on births and deaths, aging of the population, emigration and immigration and so on, and we use it at fairly detailed levels, disaggregated by race and sex level, to which we control our sample results.

One place it may be having problems nowadays is with the illegal alien population.

Senator PROXMIRE. Is it possible that the illegal alien problem or some other problem could be distorting this to the point of giving us a false picture?

Mr. STEIN. In terms of population growth?

Senator PROXMIRE. Yes; so that we are over by a significant number, several hundred thousand.

Mr. STEIN. I would say it is possible.

Senator PROXMIRE. You say it is possible?

Mr. STEIN. I would say so.

Senator PROXMIRE. What would be the margin of possible error?

Mr. STEIN. I don't know. There are such wide ranges of estimates of the size of that population and its growth and so on, but it is not the kind of population that is easily measured.

Senator PROXMIRE. Incidentally, I did ask you about the survey of the illegal aliens, how big a population is it and so forth. You say that is being made by——

Mr. SHISKIN. The Immigration and Naturalization Service.

Senator PROXMIRE. When will that be forthcoming?

Mr. SHISKIN. About a year.

Senator PROXMIRE. About a year? Will there be any preliminary report at all?

Mr. SHISKIN. They haven't even started it. I understand they will go to 12 areas heavily populated by aliens. Their reasoning is that illegal aliens live with legal aliens.

They will go into the legal alien households and ask them, on a voluntary basis, for certain information.

We don't know what the results will be.

Senator PROXMIRE. They ask him on a voluntary basis whether they have any legal aliens in the house? [Laughter.]

Mr. SHISKIN. Well, I would prefer that you ask the Commissioner of the INS to answer that question. I was going to say that we wish him the best of luck, but we have our fingers crossed about that survey.

Senator PROXMIRE. This is very frustrating, because, of course, it is a big element.

A lot of people feel there are many. Senator Javits has said something like 8 million. I don't know how he can possibly estimate whether it is 8 million or 800,000, or some figure in between, or some figure higher.

Mr. SHISKIN. It is very hard even under the best of circumstances, to find out what people are doing that is illegal, but I am glad to see the Immigration and Naturalization Service making this effort.

Senator PROXMIRE. It will help.

A few years ago, the Census Bureau set up a pie, and when we got to 200 million in the populace, there was a big notice of it and there we were aware of it and so forth.

Would it be possible for BLS to establish a clock for the work force, so that when the work force got to 100 million, we could have that kind of notice and attention?

Mr. SHISKIN. It would be possible to set one up, but your question concerns how accurate it would be.

Senator PROXMIRE. That didn't seem to bother the Census Bureau. [Laughter.]

Mr. SHISKIN. I don't think there is as much attention directed to population as there is to employment and unemployment. It would bother me, sir.

Senator PROXMIRE. Well, I think the work force figures would be very significant. It would be good to have someone get people interested in this.

Mr. SHISKIN. We have 92 million people at work today. It is a great thing.

Senator PROXMIRE. As you say, it is a very good thing.

Mr. SHISKIN. It is a great thing.

Senator PROXMIRE. It is a fundamental economic resource.

Mr. SHISKIN. Sure, and we are getting more and more people to work. I heard a few years ago that more and more people were dropping out of work, and that more and more people were supported by fewer and fewer workers.

I can't tell you what exactly is going on today, because we have dealt only with the population of 16 and over. We will deal with the whole population within a few weeks.

I think it is a wonderful thing. More people are working. More women are going into the labor force. I think we ought to be cheering about this situation.

Senator PROXMIRE. Yes; but I think we ought to know more about it. I think the explanation that more women are working and house-

wives are entering the work force is a conjecture, but it is still hard for me to understand where these people are coming from in this number this suddenly.

There is no concurrent decline or big decline in discouraged workers.

If there were such a decline, I would be curious given the continuing sideways motion of the economy, at least as far as unemployment is concerned.

Adult males increased by 289,000, more than double the normal increase.

How do you account for that, inasmuch as the adult male population is fairly stable?

Mr. SHISKIN. There could be a fluke there. I have been trying, in the dialog, to direct more of the attention to the annual figure. If you look at the annual change, there you get a similar picture of a very strong change, unprecedented in our history.

Senator PROXMIRE. We have, for adult women, an increase of 574,000, more than four times the normal rate.

So, it appears that there is reason to be dubious.

Mr. SHISKIN. Yes; and I expressed our skepticism in my statement. But let me say, perhaps for the third or fourth time, take a look at the trend in the annual change.

We have been getting a tremendous number of new people in the labor force in recent years.

An overwhelming portion of them are going to work, and our resources, as you put it, are growing. Now, I don't want to lose sight of the point that we do have large numbers of persons who are unemployed. We have very serious problems there.

In the last few meetings here, I have spent a considerable amount of time pointing out the unemployment problems of the black community.

Senator PROXMIRE. Let's get on that. As far as the black community is concerned, there is no improvement?

Mr. SHISKIN. A very small one.

Senator PROXMIRE. It is still over 13 percent. You said all the improvement has been in the white employment in the last year.

Mr. SHISKIN. If you could somehow separate the blacks from the whites and look at only the white population, the current expansion would far exceed all other expansions in terms of all, or nearly all, the measures of economic performance.

The blacks are having a very hard time.

Senator PROXMIRE. How about blacks entering the labor force?

Mr. SHISKIN. Last month the number increased as it has all this year. Prior to this year, blacks had been dropping out of the labor force.

Senator PROXMIRE. They are dropping out?

Mr. SHISKIN. Yes. The employment-population ratio of blacks has been hovering at the lowest levels in history.

Senator PROXMIRE. Say that again? You say that the employment-population ratio for blacks has been hovering at the lowest rate?

Mr. SHISHIN. I am sorry.

Senator PROXMIRE. At exactly the same time that the overall employment population has been breaking all records?

Mr. SHISKIN. Let me put it a little more sharply or focus it a little more sharply.

The employment-population ratio for whites has been breaking all records month after month.

Senator PROXMIRE. Right; particularly this month.

Mr. SHISKIN. At the same time, the employment-population ratio for blacks has been hovering at one of the lowest levels in history.

Now, there is an analogy that I believe can be made: Although this curve I showed you for the percent of the total population that is not in the labor force keeps going down, it is because of whites, not blacks.

We have looked into that, and I can tell you what our reports show.

In the survey where the respondents are mostly housewives, the explanation of what the people not in the labor force are doing, is that a great percentage of blacks——

Senator PROXMIRE. A greater percentage of blacks are what?

Mr. SHISKIN. Are in school than whites.

Senator PROXMIRE. Are in school?

Mr. SHISKIN. That's what they tell us.

Senator PROXMIRE. Well, a lot of people in school are looking for jobs. Virtually all of the 16-year-olds looking for jobs are in school.

Mr. SHISKIN. Yes.

Senator PROXMIRE. What possible explanation can there be for that?

We have put on the books in the last 20 years a tremendous amount of legislation, particularly legislation to provide for fair employment.

We are stressing affirmative action or we were, or seemed to be, and yet we don't seem to be making any progress at all. It is getting worse and worse.

Mr. SHISKIN. There are a lot of standard explanations. One is that blacks are in the central cities, which are disaster areas.

Senator PROXMIRE. They have lived there for some time.

Mr. SHISKIN. The central cities have gotten worse. It takes quite a lot of energy and quite a lot of drive to go out of the central cities to the suburb—where the jobs are.

Senator PROXMIRE. They have gotten worse because the jobs have moved away from the central cities to the suburbs.

Mr. SHISKIN. It takes a lot of drive and know how to get from the central city to the outlying areas where the jobs are. Of course, they need more training.

Senator PROXMIRE. Aren't they getting more training now than they did before.

Mr. SHISKIN. Yes; I think so.

Senator PROXMIRE. But it is not making any significant progress.

You say more of them are in school. That ought to allow more blacks to develop skills.

Mr. SHISKIN. If the schools are doing their job, and there is a question about that.

I certainly am not one who has the answer to that question.

Senator PROXMIRE. Do you have any figures at all on Spanish-speaking people?

Mr. SHISKIN. We don't have any monthly figures. Mr. Stein, do you know what that is?

Senator PROXMIRE. Is that situation paralleling the white improvement?

Mr. STEIN. The unemployment rate for the Spanish-speaking people is about halfway between the black and white.

Mr. SHISKIN. We have a lot of pressure from the Hispanic-American groups to get more information for them, and, of course, we are all for it. Unfortunately, our sample isn't large enough to support reliable figures.

Senator PROXMIRE. A lot of your emphasis here is on women entering the labor force. Do you have any figures on women entering the labor force for the first time?

Mr. STEIN. I think we could work something up on that.

Senator PROXMIRE. I wish you would, because it is hard to really understand how this can take place unless there are a tremendous proportion of women coming in for the first time, but we have to guess at it.

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

Between the third quarters of 1976 and 1977, we estimate that more than 7.4 million women (16 years and over) entered the labor force, either as new or reentrants. Of this total, nearly 1.5 million represented the net increase in the female labor and nearly 6.0 were replacements for those existing the labor force. Unfortunately, we cannot determine what proportion of these changes represented the increase in new entrants to the labor force.

Mr. SHISKIN. I think, Senator Proxmire, if may I say this, developments in the last few years really require us to take a very hard look at the survey itself, and the concepts we are using. Are we asking the right questions?

Perhaps we ought to change the questions, and ask under what conditions a person who is not in the labor market would take a job?

The subject isn't being neglected. As you know, the President is in the process of setting up a commission to look into that, and we have been in very close touch with the Chairman of that Commission, who has been appointed by the President, and the designated members of the Commission. We are hoping that they can provide us with good guidance on how to cope with these questions.

It is a situation that is certainly different from what it was 20 years ago.

Senator PROXMIRE. Let me ask you an arithmetic question, and I will make the assumption, so you don't have to indicate any policy judgment of any kind, but as you indicated, employment has grown by 3.9 million over the last 12 months, and during that same period unemployment has been at pretty much the same or, rather, in the last 8 months it has been pretty much the same, much of the increase in employment has been during the last 8 months.

Now, if we have a continuing trend with the labor force continuing to grow at that rate in the coming year, how many new jobs will we have to have in order to reduce unemployment by 1 percent, to get unemployment down to 6 percent by the end of next year?

Mr. SHISKIN. You are talking about November, right?

Senator PROXMIRE. Well, the last 12-month rate.

Mr. SHISKIN. Well, in the last 12 months we have gotten 4 million persons into jobs, and that reduced unemployment by 1 percentage point, so we would have to add about 12 million more people into jobs in 1 year to reduce unemployment to 4 percent.

Senator PROXMIRE. Say that again?

We will have to have what?

Mr. SHISKIN. In the last year, we reduced the unemployment rate by 1 percentage point.

During that period we added about 4 million employed persons—4 million persons got jobs.

So, if you use the ratio that it takes 4 million persons to reduce the unemployment rate by 1 percentage point, you need to have 12 million jobs to reduce it down to 4 percent.

I hope no one tries to do it on a monthly basis, because then they would really get fantastic results——

Senator PROXMIRE. Now, average weekly earnings declined from $195.48 in October to $194.40. It dropped about $1 during the month. That is a very substantial decrease, particularly given the strong increase in employment.

How do you account for that?

Mr. SHISKIN. Well, I haven't thought about that, but one explanation may be that a great many of the new employees, and we know this is true, have gotten part-time jobs.

Senator PROXMIRE. Of course, it is in current dollars, so in real purchasing power, the drop is even more substantial.

Mr. SHISKIN. If a lot of them got part-time jobs, that reduces the average.

Senator PROXMIRE. Well, that may be the case.

Now, the index of diffusion, the percentage of industries in which employment increased jumped substantially in November to 69.9 percent, as employment grew by 950,000.

Mr. SHISKIN. Right.

Senator PROXMIRE. But the index figure is still below this year's high of 82 percent, which occurred in March when employment rose by 513,000.

Is there an inconsistency here? Shouldn't we have expected a higher index figure for November in view of the past experience?

Mr. SHISKIN. No; I don't think so. The diffusion index usually rises very, very sharply in the early stages of recovery.

It comes from a very low figure to figures that range between 80 and 100, because the economy is expanding very rapidly. So, the percentage of industries with growing employment rises rapidly during the early stages of a recovery.

After you go through the early recovery stages, it is much harder to get continued expansion and continued growth in large numbers of industry.

So, I think the figure of 70 is a very good figure. I think it is an excellent figure.

Senator PROXMIRE. Let me go back again to see if I understand the number of jobs you say we will have to have in the next year, the increase, in order to reduce unemployment by 1 percent, if the work force continues to increase at a 4-million rate.

The staff has suggested to me that the increase might be more than you have suggested, because your base is increasing substantially, and that you can't do it by simply adding another 4 million jobs.

Mr. SHISKIN. On the other hand, I used a round figure of 4 million, and the actual figure is 3.9.

Senator PROXMIRE. In the neighborhood of 4 million, 4.1, or something like that?

Mr. SHISKIN. Pardon me.

Senator PROXMIRE. Four million, or 4.1 we will have to have if we reduce it?

Mr. SHISKIN. Yes; 4 million, but who knows if this pattern will hold. This month we found that so many people came from outside the labor force. Maybe in the future we will get people from inside the labor force.

I think there are two elements to this. One is the industry pattern, and the service and financing industries are growing very rapidly.

I would say it is partly an industry pattern, with the service and finance industries growing very rapidly. It just so happens that many of the women who are entering the work force either for the first time or after a long period of absence, can easily acquire the skills to take on these jobs. Manufacturing is still sluggish.

Now, if manufacturing weren't sluggish, you would have a very different picture. You would have experienced workers with high rates of pay getting jobs.

So, a lot of it is the industry pattern. What we are getting is a very vigorous growth in services and finance, and much less in manufacturing.

Senator PROXMIRE. In October, the OMB forecast a budget shortfall of $15 billion, less Federal spending than they thought. As an economist, what would you say that shortfall had on real GNP growth and our efforts to reduce unemployment?

Mr. SHISKIN. I would say it depressed it.

Senator PROXMIRE. By how much? And $15 billion would be how many jobs?

Mr. SHISKIN. I don't know. I don't have that figure.

Senator PROXMIRE. $10,000 a job divided into $15 billion?

Mr. SHISKIN. We use $20,000 a job at BLS, but I don't know how typical that is. [Laughter.]

Senator PROXMIRE. Why don't you figure that out?

Mr. SHISKIN. And please let us know.

Senator PROXMIRE. I have asked them to figure it out at $20,000 a job.

I understand the BLS is involved in producing unemployment seasonal adjustment facts for 1978 and for purposes of historical revision?

Mr. SHISKIN. Yes.

Senator PROXMIRE. Will the process you intend to use in January 1978 bias the January unemployment rate downward?

Mr. SHISKIN. We don't intend to introduce or continue any biases. Let me explain.

Senator PROXMIRE. I certainly don't charge you with bias. You are as objective and honest as anybody I know, but I am just asking you if that approach might possibly have some effect.

Mr. SHISKIN. The standard approach might do that. But, we have done something a little different from previous years in our seasonal adjustment review process.

This year we made a great effort to succeed in getting a really comprehensive analysis of the seasonal adjustment problem early, and we have already distributed a report on that subject very widely.

We have distributed that report to many people in the administration; we have distributed it to our advisory committees, and we have sent copies to your staff. We have held meetings within the

administration, and I believe this next week or the week after we will be holding a meeting with a group of academic economists. The arrangements are being made by the Brookings Institution.

We are trying our best to get their advice. I might say that at the meeting I held with the Government people a few weeks ago, we did get a lot of very good observations and some good memos, but I don't think it helped me, at least in knowing what to do. The reason is that the kind of things they tell us we could do we know about, and I don't think we will be able to do them because of public relations problems.

That is, if I could fix the seasonal factors and fix them any way I wanted to every month without publishing our seasonal factors in advance, I might be able to do better.

But we publish our factors in advance. We think the great sensitivity of this program to the public requires that. I don't know of any way to do it better. Maybe the academics will be able to come up with something.

Let me give you the issue in a nutshell as I see it. As I see the issue, it is this—well, let me start a little differently.

A few years ago, our method of seasonal adjustment resulted in a very poor seasonal adjustment in June, you will recall. We knew that, and we took in advance, steps to correct it, and I think we have corrected it.

I don't think June is a problem any more. Hopefully, not. However, you never know until you get a lot of figures from it.

There is a problem, not as great as the June problem, between December and January. What you get by our present method is a change between December and January, that is probably exaggerated by something like two-tenths.

Senator PROXMIRE. Exaggerated in what way?

Mr. SHISKIN. The drop is two-tenths larger than the true drop, whatever it is.

Senator PROXMIRE. So that would mean unemployment is understated?

Mr. SHISKIN. Unemployment is understated by two-tenths in January.

However, before the year is up, the seasonal factors take care of this, because they have to average out.

Senator PROXMIRE. Before the year is up?

Mr. SHISKIN. In 12 months, seasonal factors average out.

So, one way we could proceed next year is to take our lumps, as the saying goes, between December and January, and then it would be made up later in the year.

Senator PROXMIRE. But if you are sure that there is a two-tenths understatement, why not add two-tenths?

Mr. SHISKIN. If I did that, Senator, you would roast me the day I came in here, saying why didn't I add four-tenths, or zero-tenths, and you would be right.

I don't think the BLS can operate that way. We can't add tenths without——

Senator PROXMIRE. Of course not, but what I am saying is that if you are quite sure it is two-tenths of a percent understated, why can't you work out the reasons for it, explain them thoroughly, and indicate that that is the reason why the BLS is making adjustment?

Mr. SHISKIN. Then I would have to make opposite adjustments some other months.

If I made it two-tenths in January, I would have to subtract two-tenths in another month. Which month?

You give a Government agency, sir, that kind of latitude, and the whole situation becomes very political.

Senator PROXMIRE. Instead, we understate the figure in January, and——

Mr. SHISKIN. I recognize that, but what I am saying is that if I ever did any of these things that are being suggested, I can assure you that I would feel as though I were sitting on a hot stove dealing with this committee, because think of what you would be allowing.

Senator PROXMIRE. All right.

Mr. SHISKIN. Let me go on with my explanation of what we are trying to do, and what I think is a viable alternative.

Senator PROXMIRE. I suppose one of the ways you can do it in January is, say the unemployment figure is 6.8 percent and say if we made the adjustments we think correct we would have to report 7 percent.

Mr. SHISKIN. I did that last year.

Senator PROXMIRE. If it is reported fully that seems to me it is all we could expect.

Mr. SHISKIN. There is another way to do it. We could change the seasonal adjustment to one that would do a better job between December and January but a worse job in the other months.

My own judgment as of this morning and I could reach a different conclusion before this round is over when I get more evidence and advice is that overall for the 12 months our present method is the best we can do.

It gives you worse results between December and January but better results in the other months.

We have another method which does better between December and January, but a little worse in the other months. So, the tradeoff seems to me to be, do we want to take our lumps in December and January and do better then the rest of the year, or do we want to moderate the problem of December and January and do a little worse in the rest of the months?

There is a lot of difference of opinion about this. I have talked to a great expert in this field from another country who advised me to fix up December-January but I think it is fair to say that my staff is against that.

I must say that I personally think it is better to distribute the error, even though on the average you do a little worse, than to concentrate it in one month. But that is the dilemma I see.

I don't think BLS or I or anybody else could survive the criticisms of the public, and the Congress especially, if we started to take some liberties in making these adjustments.

But, nobody can say that we are not trying, Senator Proximre, to solve this problem in an objective way.

Senator PROXMIRE. Is it possible that these statistics as now reported may make things look a little better in November, an election month, than other times?

Mr. SHISKIN. It is possible, but there isn't much of an adjustment for that month.

Senator PROXMIRE. The October figure would be the pertinent figure for the election.

Mr. SHISKIN. The error is estimated at 0.2, and there is a lot of argument about that. Some people think it is higher and others think it is lower. You know, there is no "true" way to do this. And if the special adjustment is spread among the 11 months, it is not going to amount to much in any 1 month.

I don't know how we will come out of this, but I am in the minority at BLS. I am leaning toward moderating the December-January change and spreading ths adjustment out over the rest of the year.

Senator PROXMIRE. The Bureau is nearing the completion of the 7-year program to revise the Consumer Price Index.

Can you give us a status report on this project, what major changes are going to be made in the Consumer Price Index?

Mr. SHISKIN. Yes. First let me say that we revised our schedules early this year, and our revised schedules call for the release of the January data as the first new data under the program.

The CPI revision really has been an absolutley tremendous job. We are now producing test indexes every month. I want to take this opportunity to say something, Senator Proxmire. John Layng, sitting next to me, and his staff have accomplished a magnificent job of bringing this project along.

Senator PROXMIRE. Do you feel that easy about the CPI seeming not to be reflecting the Wholesale Price Index?

Mr. SHISKIN. Sir, could I say a little bit more in answer to your earlier question, because there are a number of other important things to be said.

Senator PROXMIRE. Yes.

Mr. SHISKIN. We do have a very serious problem of another kind, however. As you know, we produce figures on unemployment, the WPI the CPI, and many other economic indicators.

You get the unemployment right on time and the CPI right on time and so on, but starting in early next year—the beginning of next year—we will be producing three CPI indexes per month, and the two new indexes are more complex than the old index.

We are not sure that we can produce all three indexes on the same time schedule as we do now. We don't think we can at the beginning. However, we expect to come out with the new indexes in the month following the reference month. That is our schedule, and we expect to make it. But, you know, we are not 100 percent sure.

The reason I am emphasizing this is that it is a very important question in collective bargaining, Senator Proxmire, because many of the contracts say that the escalation is triggered by or goes into effect soon after we release the data.

If we release January data in March, at least some contracts may have the escalation delayed. If we get the data out in February, most will be triggered on time.

So, that is a very important issue, and we do have a problem of getting the new indexes out on a timely basis.

I wanted to bring that to your attention. I want to mention one other point to be sure it is not overlooked.

The other point is that, starting with the January data, which we now expect to release on February 28—I might say that we couldn't

have picked a worse time, because February is the shortest month of the year—we expect to publish three indexes.

We expect to publish a new index for all urban consumers covering 80 percent of the population. We expect to publish a revised index for wage earners and clerical workers, which will include new expenditure weights, a new establishment sample, and a new market basket. We also expect to release the old index—the present index—at that time.

So, if we are on schedule and we expect to be, we will be producing three indexes on February 28.

Senator PROXMIRE. Each of those indexes is used in different collective bargaining agreements; is that right?

Mr. SHISKIN. Presumably, yes. Some of the contracts refer just to CPI.

Senator PROXMIRE. CPI is complicated. Organized labor fought hard to retain the old index, because they felt otherwise it wouldn't be fair to them, and I assume they have tied their contracts to the old index.

Mr. SHISKIN. Right.

Now, I want to say, also that the last old index will be published for June 1978, in July. So, starting with the index for July, there will only be two indexes.

At that time, we expect to improve our timing, because for one thing, we will only have to get out two indexes, not three. Now let me explain why we are doing that.

Many unions are pushing us to continue the old index longer than that. Well, it costs $400,000 a month, so we asked Congress for $2 million to continue it for 6 months. We got that money, and that is all the money we have.

So, starting with the July data, the CPI indexes will be only the new index and the revised index.

Senator PROXMIRE. Let me ask you a question about prices.

In the last 6 months, there has been a steady change in the Wholesale Price Index from a sharp drop in June of seven-tenths of a percent, a much lesser drop in July, a tenth of a percent, a rise in August of a tenth of a percent, a much bigger rise in September of five-tenths of a percent, and a much bigger rise in October of eight-tenths of a percent.

That has not been reflected in the Consumer Price Index. There was a steady drop, and then in September, October, and November, a rise of three-tenths of a percent, which you say is very encouraging on the basis of the past record.

Why hasn't that begun to reflect the increases in the wholesale prices?

Mr. SHISKIN. The fluctuation in wholesale prices has always been much greater than in retail prices.

So, we can't expect the same degree of fluctuation in retail prices. However, I think we are going to see increases in the retail prices soon.

Senator PROXMIRE. The reason I ask that question, and Mr. Layng may want to respond to this, is that I am informed that there is usually a closer relationship; that it only takes, as you have told us in the past, it only takes a month or so, and sometimes even less, for the increase in wholesale prices to be reflected in the higher consumer prices.

Mr. LAYNG. That is true.

I think the best way to look at this problem is to look at food prices and other types of commodities that are ready for sale to retailers, and if you look at the food sector, the relationship is very close.

In other words, you could have had a turn upward in grocery store food prices last month, November, based on the Wholesale Price Index figures for the previous month.

But it is also true if you look at the historical trend that it could occur 1 month later. In other words, it doesn't have to be simultaneous. If you look at the figures, you could have one additional month in which the Consumer Price Index for grocery store food would not reflect the increase in the Wholesale Price Index.

I would say if the Wholesale Price Index increases one more month, it would be very unusual for that change not to be reflected at the retail level.

Something very similar to that occurred in the other types of products as well. They turned up at the wholesale level 2 months ago, and that has not yet been reflected at the retail level, but those lags are much more complicated and many times take a lot longer to be reflected.

Senator PROXMIRE. Go ahead.

Mr. SHISKIN. I was going to make a comment, but Mr. Layng says it is wrong, so I am not going to make it.

Senator PROXMIRE. I want to thank you very much.

I think what has been disclosed this morning is that obviously we have had a most encouraging increase in the number of jobs; the amount of employment is very encouraging, particularly year after year, and in the last month.

At the same time, we have had a continuation of the stagnation in unemployment, and that is something that we can't seem to do much about, and haven't been able to do much about in the last 8 months, and if we continue to have that tremendous flow of people into the work force, we are going to need at least 4 million jobs in the next year to reduce unemployment by 1 percent.

That is a colossal demand on the economy to expand and grow. Thank you very much.

[Whereupon, at 12:40 p.m., the committee adjourned, subject to the call of the Chair.]

EMPLOYMENT-UNEMPLOYMENT

WEDNESDAY, JANUARY 11, 1978

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

The committee met, pursuant to notice, at 10:15 a.m., in room 5503 Dirksen Senate Office Building, Hon. Richard Bolling (chairman o the committee) presiding.

Present: Representative Bolling and Senator Proxmire.

Also present: Louis C. Krauthoff II, assistant director; G. Thomas Cator, Thomas F. Dernburg, and Kent H. Hughes, professional staff members; Mark Borchelt, administrative assistant; and Charles H. Bradford, minority professional staff member.

OPENING STATEMENT OF REPRESENTATIVE BOLLING, CHAIRMAN

Representative BOLLING. The committee will be in order.

This morning, the Joint Economic Committee convenes to review the December employment-unemployment situation and the 1977 gross national product. We are once again pleased to have Commissioner Shiskin testify before us, and we are also pleased to have Courtenay Slater here to testify on the gross national product.

Today's hearing is particularly important because we will be reviewing the Nation's economic performance in the fourth quarter of 1977 on the basis of preliminary information prior to the release of the official GNP statistics. In a very real sense, this hearing marks the beginning of the Joint Economic Committee's annual review of the economic situation and outlook in a year in which sustained economic activity, and sound economic leadership will be useful to this country's welfare.

Until today's news on unemployment, 1977 was a year in which there were not any outstanding changes in our economic signals which indicated accelerating expansion or a substantial slowdown. Real GNP grew at an annual rate of 6.3 percent in the first three quarters. However, in the 6 months prior to December, neither the unemployment rate nor the manufacturing capacity utilization index, the two measures of utilization of our productive resources, showed much change.

Today's news on the sharp decline in unemployment to 6.4 percent in December is extremely encouraging. In 1978, I hope we will see a continuation of the improvement in the labor market situation. At the present time, without fiscal stimulus and an accommodative monetary policy, it is difficult to identify any sector of the economy

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which will sustain the rate of economic growth and substantially reduce unemployment in 1978.

Commissioner Shiskin, please proceed with your statement.

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

Mr. SHISKIN. Thank you, Mr. Chairman.

I have a brief statement to read, and I would like to have an opportunity to read it in a few minutes. But I had a few afterthoughts and I would like to open my comments with these afterthoughts.

As everybody, I presume, knows by this time, the unemployment rate, the official figure we issued, shows a very sharp drop from 6.9 percent in November to 6.4 in December.

We were able through a series of fortuitous circumstances this year to calculate our revised seasonal factors earlier than usual, and I can go into those factors later, if you wish. They show a very different picture from the figures that we were looking at the last 7 or 8 months.

The differences, primarily, are that the revised figures for the total unemployment rate now show a generally steady decline in the unemployment rate from February through December. The figure we have for December today is much more credible in the light of the declining trend over the last 11 months than it would have been if we had stayed with the unrevised figures which showed a very sharp drop in 1 month.

So I think that the revision of the overall seasonal factors lend credence to the December figure. I would not say it is exactly 6.4. It might be 6.5 or it might be 6.3. But I think in light of this trend it is a very credible figure.

That is point one.

Now, point two, a question we get all the time, and I am sure we have talked about it over the phone in the last hour or two back in my building, is when was the last time we had a rate this low?

The answer is in October 1974. But I think that is a misleading comparison for the following reason: Throughout 1974, the unemployment rate was rising from a level of 4.6 in 1973.

Now, especially in the light of these revised figures, we have a declining trend, so what I am saying in my second point is that this 6.4 as part of a declining trend is much better than a 6.4 that is part of a rising trend, because as you expect a rising trend to continue; you also expect a declining trend to continue.

So I think a mechanical comparison with 1974 is misleading. I think the situation is much better today.

Third, I think these figures, and I don't mean only the December figure but also the revised figures for last year, have very great implications for forecasts and for Government programs.

Now, let me do a very mechanical thing that I don't subscribe to but which gives some indication of unemployment next year. Over the last year we have had a decline of 1.4 percentage points in unemployment. Before that, we also had a decline of about that magnitude from the peak in May of 1975.

Now, the forecasts that are around of next year are pretty good. The projections for the GNP growth rate for next year are in the neighborhood of 4½ percent.

Let me go back on that. I attended a meeting of the American Economic Association in New York a few weeks ago with some of our most distinguished forecasters—Larry Klein, Alan Greenspan—and 4½ percent is about the figure they were using.

SENATOR PROXMIRE. I didn't hear that.

Mr. SKISKIN. I attended a meeting of the American Economic Association with six panelists, all non-Government people. Otto Eckstein was one, Lawrence Klein, the president of the AEA was another, Michael Evans was a third, Alan Greenspan was a fourth, and there were two others. The forecasts, except that of Mike Evans, were about 4½ percent.

The point I am trying to make is if you have a GNP growth rate, anything like that, you ought to expect a continuation of the decline in the unemployment rate.

Let's do a very mechanical thing which I don't subscribe to and which I think is quite conservative.

Suppose we made a mechanical, conservative forecast that we will get a decline in unemployment next year of half the amount we got this year. That would bring the rate below 6 percent. I think there are very great implications for that.

Now, may I go on and read what I consider to be a more pedestrian statement than what I just said?

I am glad to have this opportunity to offer the Joint Economic Committee a few brief comments to supplement our press release, "The Employment Situation," issued this morning at 9 a.m.

1. THE OVERALL EMPLOYMENT-UNEMPLOYMENT SITUATION

The economy completed the year, and the 33d month of the current expansion, with a truly remarkable performance in the labor markets. In December, total employment rose by 409,000, unemployment declined by 481,000, and the civilian labor force declined by 72,000.

It is to be noted that the household survey data for December 1977 relate to the week of December 4–10, rather than the usual week for other months which includes the 12th day. The survey week was moved up, as it typically has been in past Decembers, because of difficulties in finding people at home in the period just before Christmas.

The December figures show a strong and widespread decline in unemployment. Almost every major economic and demographic category shown in our press release participated in this improvement—men, women, teenagers, full-time workers, part-time workers, job losers, blacks and whites.

The improvement in the unemployment situation was accompanied by another above-average increase in employmeut. Total employment rose by over 400,000, following a rise of more than twice that

amount in the previous month; for the last 3 months of 1977, the average monthly increase was a little more than 500,000.

The employment-population ratio rose again once to a new high—58 percent. If this ratio is calculated by considering only the labor force 18–64 years of age, the result is 67.1; that is, more than two-thirds of the population 18–64 is at work—one of the highest ratios in the Western World.

Over the year—December to December—the figures are also very impressive—more than 4.1 million additional persons were employed in 1977. This compares with a year-to-year increase in the same period a year earlier of slightly less than 3 million. The employment-population ratio rose very substantially—1.7 percentage points, Unemployment declined by well over 1 million, and there was a drop of 1.4 points in the rate.

This strong performance is supported by the data reported in our survey of business payrolls covering employment, hours and earnings. Employment reported in this survey rose by 215,000, but if the big increase in strike activity is taken into account, then the increase would have been about 330,000—persons on strike are counted as employed in the household survey, but are not reported in the payroll survey since they are not paid while absent. Similarly, the aggregate hours index shows a slight decline, but it undoubtedly would have increased were it not for the strike effects.

Manufacturing employment rose by 160,000 and the aggregate hours index for manufacturing also rose, but at a slower rate. The diffusion indexes, showing the percentage of 172 BLS industries with rising employment, continued strong, with more than three-fourths of the industries posting gains over the month and more than 70 percent over longer spans. Since last December, the number of employees on payrolls rose by 3.1 million, or 3.8 percent, and there was an increase of nearly this magnitude in the aggregate hours index.

2. SEASONAL ADJUSTMENT

Following usual practice, new seasonal factors for labor force series will be introduced next month. The official data for this month are based on seasonal factors which incorporate the experience of the years 1973–76. These are the factors which we published at the beginning of year for use throughout calendar year 1977.

Our customary practice each year is to update these seasonal factors for the next year and to revise the seasonally adjusted data for the previous 5 years. The revised seasonal factors are usually published in the February release of January data. Thus, in February this year we will publish revised seasonal factors based on the years 1974–77, and these factors will be used throughout 1978.

This year, through a combination of fortuitous circumstances, the calculation of the new seasonal factors incorporating the experience of 1977 has now been completed for the total unemployment rate. It is to be noted that a few minor changes in the seasonal methodology were also introduced for the 1978 factors.

These revisions have just become available, and we are not prepared to go into a complete discussion of these revised rates at this time. The seasonally adjusted rate for December is the same—6.4 percent—using the old or revised factors. However, as can be seen in the at-

tached table, the pattern for the year is somewhat different using the revised factors in that there is a more or less steady decline in the unemployment rate throughout most of 1977 rather than a sharp drop in December. For this reason, I thought this material should be brought to your immediate attention.

[The attached table follows:]

SEASONALLY ADJUSTED TOTAL UNEMPLOYMENT RATES

	Published in 1977	Revised
1976: December	7.8	7.8
1977:		
January	7.3	7.4
February	7.5	7.6
March	7.3	7.4
April	7.0	7.1
May	6.9	7.1
June	7.1	7.1
July	6.9	6.9
August	7.1	7.0
September	6.9	6.8
October	7.0	6.8
November	6.9	6.7
December	6.4	6.4

Mr. SHISKIN. Revised 1977 seasonally adjusted data for the principal employment-unemployment indicators will be issued by BLS on or about January 23, and revised historical series will be published in mid-February, as is our customary practice.

3. CONTRIBUTIONS TO THE TOTAL UNEMPLOYMENT RATE

I thought it might be helpful to this committee to show the unemployment rate in a somewhat different perspective from that in our usual presentation.

Table 1, attached to this statement, shows the amount that each major category of the unemployment rate contributes to the total unemployment rate for December. This presentation indicates the groups which, because of their large numbers in the labor force, affect the total rate most substantially. The usual presentation, on the other hand, shows the unemployment rate for each separate group, and the impact on that group, without regard to the impact on the total rate.

As can be seen in the table, males 20 and over accounted for 2.5 points out of the 6.4 rate for December; femalse, 20 and over, also 2.5; white, 4.9; and blacks, 1.5. Two groups with very hight rates, black teenagers and women who head families, each contributed 0.4. Thus, while the unemployment problem is exceptionally severe for these groups, their individual impacts on the overall rate are comparatively small.

This is a different perspective from the way we usually show our figures, and I think from some points of view it is quite useful.

It is to be noted that the contributions to the total unemployment rate shown here represent unemployment levels of the groups as a proportion of the entire civilian labor force. This differs from the usual calculation which shows the unemployment rates as a percentage of the labor force in that category.

My colleagues and I are now prepared to try to answer your questions.

[The tables attached to Mr. Shiskin's statement, together with the press release referred to, follow:]

TABLE 1.—*Contributions to total unemployment rate*

	December 1977
Total, 16+	6.4
Men, 20+	2.5
Women, 20+	2.5
Both sexes, 16–19	1.5
White, total	4.9
Men, 20+	2.0
Women, 20+	1.9
Both sexes, 16–19	1.1
Black, total	1.5
Men, 20+	.5
Women, 20+	.6
Both sexes, 16–19	.4
Married men	1.3
Married women	1.4
Women who head families	.4
Full-time workers	5.0
Part-time workers	1.3

TABLE 2.—UNEMPLOYMENT RATES BY ALTERNATE SEASONAL ADJUSTMENT METHODS

Month	Unadjusted rate	Official adjusted rate	Alternative age-sex procedures					Other aggregations (all multiplicative)				Direct adjustment rate	Composite	Range (cols. 2–13)
			All multiplicative	All additive	Year ahead	Concurrent	Stable 1967–73	Duration	Reasons	Total	Residual			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1975														
January	9.0	7.9	7.9	8.2	8.2	8.0	8.1	8.0	7.9	8.0	8.4	8.1	8.1	0.5
February	9.1	8.0	8.1	8.3	8.2	8.0	8.1	7.9	7.9	8.1	8.3	8.0	8.1	.4
March	9.1	8.5	8.5	8.7	8.7	8.6	8.6	8.4	8.3	8.5	8.7	8.5	8.5	.4
April	8.6	8.6	8.7	8.7	8.9	8.8	8.8	8.6	8.6	8.7	8.6	8.7	8.7	.2
May	8.3	9.0	9.0	8.7	9.2	9.0	9.2	8.9	9.1	9.2	8.8	9.3	9.0	.5
June	9.1	8.7	8.6	8.7	8.6	8.7	8.6	8.7	8.8	8.3	8.6	8.3	8.6	.5
July	8.7	8.7	8.6	8.6	8.4	8.7	8.6	8.5	8.7	8.5	8.5	8.6	8.6	.2
August	8.2	8.5	8.5	8.4	8.4	8.5	8.3	8.6	8.7	8.5	8.4	8.6	8.5	.4
September	8.1	8.6	8.6	8.4	8.3	8.6	8.3	8.8	8.8	8.5	8.4	8.5	8.5	.5
October	7.8	8.6	8.7	8.4	8.6	8.7	8.3	8.7	8.7	8.6	8.5	8.6	8.6	.4
November	7.8	8.4	8.4	8.2	8.3	8.5	8.2	8.6	8.4	8.4	8.2	8.4	8.4	.4
December	7.8	8.3	8.4	8.2	8.3	8.3	8.3	8.5	8.2	8.3	8.2	8.4	8.3	.2
1976														
January	8.8	7.8	7.8	8.0	7.8	7.8	8.1	8.0	7.8	7.8	8.2	7.9	7.9	.4
February	8.7	7.6	7.6	7.8	7.6	7.6	7.7	7.5	7.5	7.6	7.7	7.6	7.6	.3
March	8.1	7.5	7.5	7.6	7.5	7.5	7.7	7.3	7.4	7.5	7.6	7.5	7.5	.4
April	7.4	7.5	7.5	7.5	7.4	7.4	7.6	7.4	7.5	7.5	7.4	7.5	7.5	.2
May	6.7	7.3	7.4	7.2	7.2	7.2	7.5	7.2	7.4	7.5	7.2	7.5	7.4	.3
June	8.0	7.6	7.5	7.5	7.5	7.6	7.5	7.5	7.5	7.3	7.4	7.3	7.5	.3
July	7.8	7.8	7.8	7.7	7.8	7.8	7.7	7.6	7.8	7.7	7.7	7.7	7.7	.2
August	7.6	7.9	7.9	7.8	7.9	7.9	7.7	8.0	8.0	7.9	7.8	8.0	7.9	.3
September	7.4	7.8	7.8	7.7	7.8	7.8	7.6	8.0	7.9	7.8	7.8	7.8	7.8	.4
October	7.2	7.9	8.0	7.8	7.9	7.9	7.7	8.0	7.9	8.0	7.9	7.9	7.9	.3
November	7.4	8.0	8.0	7.8	8.1	8.0	7.8	8.1	8.0	8.0	7.8	8.0	7.9	.3
December	7.4	7.8	7.9	7.8	7.9	7.8	7.9	7.9	7.8	7.8	7.8	7.9	7.8	.1
1977														
January	8.3	7.3	7.3	7.5	7.3	7.4	7.5	7.4	7.4	7.4	7.6	7.4	7.4	.3
February	8.5	7.5	7.5	7.7	7.5	7.5	7.6	7.4	7.4	7.5	7.6	7.5	7.5	.3
March	7.9	7.3	7.3	7.4	7.3	7.3	7.5	7.3	7.3	7.3	7.3	7.4	7.3	.2
April	6.9	7.0	7.0	7.0	7.0	7.0	7.1	7.0	7.0	7.0	6.9	7.0	7.0	.2
May	6.4	6.9	7.0	6.8	6.9	7.0	7.1	7.0	7.1	7.1	7.0	7.1	7.0	.3
June	7.5	7.1	7.0	7.1	7.1	7.1	7.0	7.0	7.0	6.9	7.0	6.8	7.0	.3
July	7.0	6.9	6.9	6.9	6.9	6.9	6.8	6.8	6.9	6.9	6.8	6.9	6.9	.1
August	6.8	7.1	7.1	7.1	7.1	7.0	6.9	7.2	7.2	7.1	7.1	7.1	7.1	.3
September	6.6	6.9	6.9	6.9	6.9	6.9	6.7	7.0	7.0	7.0	7.0	7.0	6.9	.3
October	6.3	7.0	7.0	7.0	7.0	6.9	6.8	7.1	6.9	7.0	7.1	7.0	7.0	.3
November	6.4	6.9	6.9	6.8	6.9	6.8	6.8	7.0	6.9	6.9	6.8	6.9	6.9	.2
December	6.0	6.4	6.4	6.4	6.4	6.4	6.5	6.4	6.4	6.4	6.4	6.4	6.4	.1

See footnote on next page.

An explanation of cols. 1 to 13 follows:

(1) Unemployment rate not seasonally adjusted.

(2) Official rate.—This is the published seasonally adjusted rate. Each of 4 unemployed age-sex components—males and females, 16 to 19 and 20 yr of age and over—is independently adjusted. The teenage unemployment components are adjusted using the additive procedure of the X–11 method, while adults are adjusted using the X–11 multiplicative option. The rate is calculated by aggregating the 4 and dividing them by 12 summed labor force components—these 4 plus 8 employment components, which are the 4 age-sex groups in agriculture and nonagricultural industries. This employment total is also used in the calculation of the labor force base in cols. (3)–(9).

The current "implicit" factors for the total unemployment rate are as follows: January—113.8, February—113.7, March—108.1, April—98.7, May—92.2, June—105.2, July—100.2, August—96.1, September—94.6, October—90.1, November—93.0, December—93.8.

(3) Multiplicative rate.—The 4 basic unemployed age-sex groups—males and females, 16 to 19 and 20 yr and over—are adjusted by the X–11 multiplicative procedure. This procedure was used to adjust unemployment data in 1975 and previous years.

(4) Additive rate.—The 4 basic unemployed age-sex groups—males and females, 16 to 19 and 20 yr and over—are adjusted by the X–11 additive procedure.

(5) Year-ahead factors.—The official seasonal adjustment procedure for each of the components is followed through computation of the factors for the last years of data. A projected factor—the factor for the last year plus ½ of the difference from the previous year—is then computed for each of the components, and the rate is calculated. The rates are as first calculated and are not subject to revision.

(6) Concurrent adjustment through current month.—The official procedure is followed with data reseasonally adjusted incorporating the experience through the current month, i.e., the rate for March 1976 is based on adjustment of data for the period, January 1976 to March 1976. The rates are as first calculated and are not subject to revision.

(7) Stable seasonals (January 1967 to December 1973).—The stable seasonal option in the X–11 program uses an unweighted averaged of all available seasonal-irregular ratios to compute final seasonal factors. In essence, it assumes that seasonal patterns are relatively constant from year-to-year. A cutoff of input data as of December 1973 was selected to avoid the impact of cyclical changes in the 1974–75 period.

(8) Duration.—Unemployment total is aggregated from 3 independently adjusted unemployment by duration groups (0 to 4, 5 to 14, 15 plus).

(9) Reasons.—Unemployment total is aggregated from 4 independently seasonally adjusted unemployment levels by reasons for unemployment—job losers, job leavers, new entrants, and reentrants.

(10) Unemployment and labor force levels adjusted directly.

(11) Labor force and employment levels adjusted directly, unemployment as a residual and rate then calculated.

(12) Unemployment rate adjusted directly.

(13) Average of cols. 2–12.

Note: The X–11 method, developed by Julius Shiskin at the Bureau of the Census over the period 1955–65, was used in computing all the seasonally adjusted series described above.

Source: U.S. Department of Labor, Bureau of Labor Statistics, Jan. 11, 1978.

News
United States Department of Labor
Bureau of Labor Statistics Washington, D.C. 20212

Contact: J. Bregger (202) 523-1944
523-1371
K. Hoyle (202) 523-1913
523-1208
home: 333-1384

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TRANSMISSION OF MATERIAL IN THIS RELEASE IS EMBARGOED UNTIL 9:00 A. M. (EST), WEDNESDAY, JANUARY 11, 1978

THE EMPLOYMENT SITUATION: DECEMBER 1977

Employment rose and unemployment dropped sharply in December, it was reported today by the Bureau of Labor Statistics of the U. S. Department of Labor. The December unemployment rate was 6.4 percent, down considerably from November and 1.4 points below December 1976.

Total employment--as measured by the monthly survey of households--continued to expand with a substantial increase for the second straight month. The proportion of the population with jobs reached a record 58.0 percent, up from 56.3 in December a year ago. The number of employed persons increased by 4.1 million over this period to 92.6 million.

Nonfarm payroll employment--as measured by the monthly survey of establishments--rose by 215,000 over the month to 83.4 million. This employment count excludes striking workers, whose ranks increased by 110,000 in December as a result of the mine workers' strike. (The household survey, on the other hand, classifies striking workers as employed.) Over the past year, payroll jobs have risen by 3.1 million.

Unemployment

The level of unemployment fell by 480,000 to 6.3 million, seasonally adjusted, in December. Most of the improvement took place among persons who had lost their last jobs. The unemployment rate also declined sharply in December, to 6.4 percent. Over the year, the number of unemployed dropped by more than 1.1 million and the rate registered a decline of 1.4 percentage points. (See table A-1.) Both the number and the rate were the lowest since late 1974. (See addendum on seasonal adjustment on page 6 of this release.)

The November-December unemployment declines affected nearly all major demographic, occupational, and industry groups. Substantial declines among adult men, women, and

teenagers brought their rates to 4.7 percent, 6.7 percent, and 15.4 percent, respectively. Black unemployment showed a substantial reduction, as the rate fell from 13.8 to 12.5 percent. The rate for whites also declined, from 6.0 to 5.6 percent. Over the year, jobless rates dropped markedly for white men, women, and teenagers and black adult men, while no downtrend was evident among black women and teenagers. (See table A-2.)

Although the unemployment rate for blue-collar workers continued to exceed that for white-collar workers, the difference narrowed in 1977. A strong November-December improvement brought the blue-collar rate to 7.3 percent, down from 9.6 percent a year earlier. The white-collar rate of 3.9 percent showed a drop of six-tenths of a point

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

Selected categories	Quarterly averages					Monthly data		
	1976	1977				1977		
	IV	I	II	III	IV	Oct.	Nov.	Dec.
HOUSEHOLD DATA	Thousands of persons							
Civilian labor force	95,711	96,067	97,186	97,623	98,675	98,102	98,998	98,926
Total employment	88,133	88,998	90,370	90,809	92,000	91,230	92,180	92,589
Unemployment	7,578	7,068	6,816	6,814	6,676	6,872	6,818	6,337
Not in labor force	59,132	59,379	58,908	59,140	58,724	59,099	58,391	58,682
Discouraged workers	992	929	1,061	1,104	968	N.A.	N.A.	N.A.
	Percent of labor force							
Unemployment rates:								
All workers	7.9	7.4	7.0	7.0	6.8	7.0	6.9	6.4
Adult men	6.2	5.6	5.1	5.1	5.0	5.3	4.9	4.7
Adult women	7.6	7.1	6.9	7.0	6.9	6.8	7.1	6.7
Teenagers	19.1	18.6	18.1	17.7	16.6	17.3	17.1	15.4
White	7.2	6.7	6.3	6.1	5.9	6.1	6.0	5.6
Black and other	13.4	12.8	12.8	13.6	13.4	13.9	13.8	12.5
Full-time workers	7.5	6.8	6.5	6.6	6.3	6.6	6.4	5.9
ESTABLISHMENT DATA	Thousands of jobs							
Nonfarm payroll employment	80,111	80,925	81,871	82,548	83,188p	82,902	83,222p	83,439p
Goods-producing industries	23,456	23,788	24,265	24,359	24,505p	24,436	24,526p	24,553p
Service-producing industries	56,655	57,137	57,606	58,189	58,683p	58,466	58,696p	58,886p
	Hours of work							
Average weekly hours:								
Total private nonfarm	36.2	36.1	36.2	36.0	36.1p	36.2	36.1p	36.0p
Manufacturing	40.0	40.1	40.4	40.3	40.4p	40.4	40.5p	40.3p
Manufacturing overtime	3.1	3.3	3.4	3.3	3.5p	3.5	3.5p	3.4p

p=preliminary. N.A.=not available.

over the year. The rate for service workers fell a full percentage point in that time frame to 8.0 percent, and the farm workers rate was down two points to 4.1 percent. Among the major industries, there was a particularly strong decline for factory workers in December, and their rate was nearly two and a half points lower than its year-ago level.

The average (mean) duration of unemployment was little changed in December, at 14.1 weeks, but was down 1½ weeks over the past year. (See table A-4.)

Total Employment and the Labor Force

An increase in employment almost matched the decline in unemployment, as the size of the labor force was little changed over the month. Total employment rose 410,000 in December to 92.6 million, with adult men the major job gainers. (See table A-1.) The November-December growth in employment was concentrated among full-time workers.

Over the year, employment grew by 4.1 million, or 4.7 percent, marking the largest 12-month gain ever recorded in the post-World War II period. The number of employed adult men was up 1.8 million, adult women advanced by 1.7 million, and teenagers increased their employment by close to 650,000. Employment in blue-collar and service work grew relatively more than other occupations. (See tables A-1 and A-3.)

The civilian labor force remained at 98.9 million in December, after an unusually large increase of 900,000 in the prior month. The 12-month rise was nearly 3 million. The labor force participation rate--the proportion of the civilian noninstitutional population either working or seeking work-- edged back to 62.8 percent, just below the alltime high of 62.9 percent recorded in November.

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 as unemployed. These data are published on a quarterly basis.

Consistent with the decline in unemployment during the fourth quarter, the number of discouraged workers also fell. The fourth quarter average was about 970,000, down from 1.1 million in the second and third quarters and slightly below its year-ago level. About 70 percent of the discouraged total cite job-market factors as their reason for not seeking work. (See table A-8.)

Industry Payroll Employment

Nonfarm payroll employment increased by 215,000 in December to 83.4 million, seasonally adjusted. All but one of the major industry groups posted employment gains, as 78 percent of the 172 industries that comprise the BLS diffusion index of private nonagricultural payroll employment showed increases in December. Although the over-the-month increase in payroll employment was substantial, it would have been greater save for the effect of a net increase of 110,000 workers on strike. Nonfarm payroll jobs have expanded by 3.1 million over the past year. (See tables B-1 and B-6.)

The largest over-the-month employment gain took place in manufacturing--160,000. Most of this increase occurred in the durable goods industries, where gains were pervasive. However, the 40,000 increase in the transportation equipment industry resulted mainly from a return of striking aircraft workers to their jobs.

Employment in contract construction continued to improve. An over-the-month increase of nearly 20,000 brought the level of employment 355,000 above its level in December 1976. Employment increases also occurred in the services industry, State and local government, transportation and public utilities, and trade.

Employees on mining payrolls declined by 150,000 over the month, due entirely to the effects of a major strike by the United Mine Workers.

Hours

The average workweek for production or nonsupervisory workers on private nonagricultural payrolls edged down by a tenth of an hour in December to 36.0 hours, seasonally adjusted. The December workweek stood 0.2 hour below its year-ago level. In manufacturing, the workweek dropped 0.2 hour in December, but, at 40.3 hours, was still 0.3 hour above its year-ago level. Manufacturing overtime, at 3.4 hours, declined 0.1 hour from November but was still above the year-ago point. (See table B-2.)

The index of aggregate weekly hours of production or nonsupervisory workers on private nonagricultural payrolls edged down to 117.0 (1967=100) in December, 0.1 percent below the November level. However, the overall index has increased by 3.3 percent since December 1976. (See table B-5.)

Hourly and Weekly Earnings

Average hourly earnings of production or nonsupervisory workers on private nonfarm payrolls increased by 0.4 percent, seasonally adjusted, in December. Average weekly earnings advanced by only 0.1 percent, however, due to the slight decline in the average workweek. Compared with their year-ago levels, average hourly and weekly earnings were up 7.8 and 7.2 percent, respectively.

Before adjustment for seasonality, average hourly earnings were unchanged from November's $5.41 but were 39 cents above December 1976. Average weekly earnings increased by $1.08 over the month, reaching $195.84 in December. Over the year, average weekly earnings grew by $13.11. (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 204.8 (1967=100) in December, 0.4 percent higher than in November. The index was 7.4 percent above December a year ago. During the 12-month period ended in November, the Hourly Earnings Index in dollars of constant purchasing power rose 0.7 percent. (See table B-4. Data in table B-4 reflect revised seasonal adjustment factors.)

ADDENDUM ON SEASONAL ADJUSTMENT

At the beginning of each calendar year, the Bureau of Labor Statistics routinely revises the seasonally-adjusted labor force series derived from the Current Population Survey to take into account data from the previous year. These revisions are published in the February release of January data and are used through the end of the year. Because of the particular timing of this release and a speed-up in seasonal-adjustment processing, it is possible this year to release at this time the revisions in the overall unemployment rate that result from the use of new seasonal-adjustment factors for 1978.

The table below contains the overall monthly seasonally-adjusted unemployment rates for the past 13 months as originally published and as they are to be revised. It is to be noted that the seasonally-adjusted rate for December is the same using the old and the new factors. However, the pattern for the year is somewhat different using the revised factors, in that there is a more steady decline in the unemployment rate during the year rather than a sharp drop in December. The revisions, of course, have no effect on the 1977 annual average rate, which was 7.0 percent.

As soon as they can be prepared for publication, revised 1977 data for many series presented in this release will be issued in a special press release, probably on or about January 23. As usual, the release of January 1978 seasonally-adjusted data on February 3 will be based on the revised seasonal factors. Historical data will be available after January 23 upon request and will also be published in the February 1978 issue of Employment and Earnings.

Table B. Seasonally adjusted unemployment rates for the past 13 months

Month		As currently published	As revised
1976:	December	7.8	7.8
1977:	January	7.3	7.4
	February	7.5	7.6
	March	7.3	7.4
	April	7.0	7.1
	May	6.9	7.1
	June	7.1	7.1
	July	6.9	6.9
	August	7.1	7.0
	September	6.9	6.8
	October	7.0	6.8
	November	6.9	6.7
	December	6.4	6.4

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 conducted by the Bureau of the Census for the Bureau of Labor Statistics. The sample consists of about 47,000 households selected to represent the U.S. civilian noninstitutional population 16 years of age 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 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 population 16 years of age and over, without duplication, since each person is classified as employed, unemployed, or not in the labor force.

The payroll survey relates only to paid wage and salary employees (regardless of age) on the payrolls of nonagricultural establishments. The household survey counts employed persons in both agriculture and in nonagricultural industries and, in addition to wage and salary workers (including private household workers), includes the self-employed, unpaid family workers, and persons "with a job but not at work" and not paid for the period absent. 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) 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).

To meet the extensive needs of data users, the Bureau regularly publishes data on a wide variety of labor market indicators—see, for example, the demographic, occupational, and industry detail in tables A-2 and A-3. 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, extending 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, school vacations, 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 90 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, current seasonal adjustment factors for unemployment and other labor force series are calculated taking into account the prior year's experience, and revised data are introduced in the release containing January data.

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 unemployment (the sum of four seasonally-adjusted age-sex components) by the civilian labor force (the sum of 12 seasonally-adjusted age-sex components). Several alternative methods for seasonally adjusting the overall unemployment rate are also used on a regular basis in order to illustrate the degree of uncertainty that arises because of the seasonal adjustment procedure. Among these alternative methods are five different age-sex adjustments,

including a concurrent adjustment and one based on stable factors and four based on other unemployment aggregations. Alternative rates for 1976 are shown in the table at the end of this note. (Current alternative rates and an explanation of the methods may be obtained from BLS upon request.)

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 revised annually, usually in conjunction with the annual benchmark adjustments (comprehensive counts of employment).

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 questionnaire and procedures. The standard error is the measure of sampling variability, that is, the variations that might occur by chance because only a sample of the population is surveyed. Tables A-E in the "Explanatory Notes" of *Employment and Earnings* provide standard errors for unemployment and other labor force categories.

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. Moreover, since the estimating procedures employ 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, usually annually. 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 1974 benchmark levels. Measures of reliability for employment estimates are provided in the "Explanatory Notes" of *Employment and Earnings*, as are the actual amounts of revisions due to benchmark adjustments (tables G-L).

Unemployment rate by alternative seasonal adjustment methods

Month	Unadjusted rate	Official Adjusted Rate	Alternative age-sex procedures					Other aggregations (all multiplicative)				Direct adjustment	Composite	Range (cols. 2-13)
			All multiplicative	All additive	Year-ahead	Concurrent	Stable 1967-73	Duration	Reasons	Total	Residual			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1976														
January	8.8	7.8	7.8	8.0	7.8	7.8	8.1	8.0	7.8	7.8	8.2	7.9	7.9	0.4
February	8.7	7.6	7.6	7.8	7.6	7.6	7.7	7.5	7.5	7.6	7.7	7.6	7.6	.3
March	8.1	7.5	7.5	7.6	7.5	7.5	7.7	7.3	7.4	7.5	7.6	7.5	7.5	.4
April	7.4	7.5	7.5	7.5	7.4	7.4	7.6	7.4	7.5	7.5	7.4	7.5	7.5	.2
May	6.7	7.3	7.4	7.2	7.2	7.2	7.5	7.2	7.4	7.5	7.2	7.5	7.3	.3
June	8.0	7.6	7.5	7.5	7.5	7.6	7.5	7.5	7.5	7.3	7.4	7.3	7.5	.3
July	7.8	7.8	7.8	7.7	7.8	7.8	7.7	7.6	7.8	7.7	7.7	7.7	7.7	.2
August	7.6	7.9	7.9	7.8	7.9	7.9	7.7	8.0	8.0	7.9	7.8	8.0	7.9	.3
September	7.4	7.8	7.8	7.7	7.8	7.8	7.6	8.0	7.9	7.8	7.8	7.8	7.8	.4
October	7.2	7.9	8.0	7.8	7.9	7.9	7.7	8.0	7.9	8.0	7.9	7.9	7.9	.3
November	7.4	8.0	8.0	7.8	8.1	8.0	7.8	8.1	8.0	8.0	7.8	8.0	8.0	.3
December	7.4	7.8	7.9	7.8	7.9	7.8	7.9	7.9	7.8	7.8	7.8	7.9	7.8	.1

Table A-1. Employment status of the noninstitutional population

(Numbers in thousands)

Employment status	Not seasonally adjusted			Seasonally adjusted					
	Dec. 1976	Nov. 1977	Dec. 1977	Dec. 1976	Aug. 1977	Sept. 1977	Oct. 1977	Nov. 1977	Dec. 1977
TOTAL									
Total noninstitutional population[1]	157,176	159,522	159,736	157,176	158,899	159,114	159,334	159,522	159,736
Armed Forces[1]	2,146	2,132	2,129	2,146	2,137	2,131	2,134	2,132	2,129
Civilian noninstitutional population[1]	155,031	157,389	157,608	155,031	156,761	156,982	157,201	157,389	157,608
Civilian labor force	95,517	98,819	98,503	95,960	97,697	97,868	98,102	98,998	98,926
Participation rate	61.6	62.8	62.5	61.9	62.3	62.3	62.4	62.9	62.8
Employed	88,494	92,473	92,623	88,441	90,771	91,095	91,230	92,180	92,589
Employment-population ratio[2]	56.3	58.0	58.0	56.3	57.1	57.3	57.3	57.8	58.0
Agriculture	2,850	3,181	2,914	3,257	3,252	3,215	3,272	3,362	3,331
Nonagricultural industries	85,645	89,292	89,710	85,184	87,519	87,880	87,958	88,818	89,258
Unemployed	7,022	6,346	5,880	7,519	6,926	6,773	6,872	6,818	6,337
Unemployment rate	7.4	6.4	6.0	7.8	7.1	6.9	7.0	6.9	6.4
Not in labor force	59,514	58,570	59,105	59,071	59,064	59,114	59,099	58,391	58,682
Men, 20 years and over									
Total noninstitutional population[1]	66,835	67,948	68,052	66,835	67,642	67,745	67,852	67,968	68,052
Civilian noninstitutional population[1]	65,140	66,257	66,364	65,140	65,947	66,056	66,161	66,257	66,364
Civilian labor force	51,855	52,890	52,921	52,078	52,588	52,457	52,844	53,033	53,142
Participation rate	79.6	79.8	79.7	79.9	79.7	79.4	79.9	80.0	80.1
Employed	48,727	50,578	50,514	48,859	49,854	49,884	50,043	50,421	50,666
Employment-population ratio[2]	72.9	74.4	74.2	73.1	73.7	73.6	73.8	74.2	74.5
Agriculture	2,125	2,283	2,192	2,273	2,355	2,343	2,338	2,318	2,344
Nonagricultural industries	46,603	48,295	48,322	46,586	47,499	47,541	47,705	48,103	48,322
Unemployed	3,128	2,312	2,407	3,219	2,734	2,573	2,801	2,612	2,476
Unemployment rate	6.0	4.4	4.5	6.2	5.2	4.9	5.3	4.9	4.7
Not in labor force	13,285	13,367	13,443	13,062	13,359	13,599	13,317	13,224	13,222
Women, 20 years and over									
Total noninstitutional population[1]	73,535	74,768	74,883	73,535	74,429	74,543	74,660	74,768	74,883
Civilian noninstitutional population[1]	73,445	74,669	74,783	73,445	74,332	74,444	74,561	74,669	74,783
Civilian labor force	35,168	36,896	36,708	34,938	35,723	36,201	35,931	36,505	36,435
Participation rate	47.9	49.4	49.1	47.6	48.1	48.6	48.2	48.9	48.7
Employed	32,831	34,405	34,530	32,340	33,172	33,672	33,474	33,921	34,011
Employment-population ratio[2]	44.6	46.0	46.1	44.0	44.6	45.2	44.8	45.4	45.4
Agriculture	432	548	436	573	515	492	541	597	553
Nonagricultural industries	32,379	33,857	34,094	31,767	32,657	33,180	32,933	33,324	33,458
Unemployed	2,337	2,491	2,179	2,598	2,551	2,529	2,457	2,584	2,424
Unemployment rate	6.6	6.8	5.9	7.4	7.1	7.0	6.8	7.1	6.7
Not in labor force	38,276	37,772	38,075	38,507	38,609	38,242	38,630	38,164	38,348
Both sexes, 16-19 years									
Total noninstitutional population[1]	16,806	16,806	16,802	16,806	16,828	16,825	16,822	16,806	16,802
Civilian noninstitutional population[1]	16,446	16,463	16,460	16,446	16,483	16,483	16,480	16,463	16,460
Civilian labor force	8,493	9,033	8,873	8,944	9,386	9,210	9,327	9,460	9,369
Participation rate	51.6	54.9	53.9	54.4	56.9	55.9	56.6	57.5	56.8
Employed	6,935	7,490	7,580	7,242	7,745	7,539	7,713	7,838	7,912
Employment-population ratio[2]	41.3	44.6	45.1	43.1	46.0	44.8	45.9	46.6	47.1
Agriculture	273	350	286	411	382	380	393	447	434
Nonagricultural industries	6,663	7,140	7,293	6,831	7,363	7,159	7,320	7,391	7,478
Unemployed	1,558	1,543	1,294	1,702	1,641	1,671	1,614	1,622	1,457
Unemployment rate	18.3	17.1	14.6	19.0	17.5	18.1	17.3	17.1	15.4
Not in labor force	7,953	7,431	7,587	7,502	7,097	7,273	7,153	7,003	7,111
WHITE									
Total noninstitutional population[1]	138,253	140,095	140,264	138,253	139,620	139,789	139,962	140,095	140,264
Civilian noninstitutional population[1]	136,475	138,351	138,523	136,475	137,865	138,046	138,218	138,351	138,523
Civilian labor force	84,521	87,287	86,879	84,854	86,285	86,471	86,861	87,442	87,214
Participation rate	61.9	63.1	62.7	62.2	62.6	62.6	62.8	63.2	63.0
Employed	78,889	82,451	82,375	78,828	81,010	81,214	81,540	82,216	82,353
Employment-population ratio[2]	57.1	58.9	58.7	57.0	58.0	58.1	58.3	58.7	58.7
Unemployed	5,632	4,836	4,505	6,026	5,275	5,257	5,321	5,226	4,861
Unemployment rate	6.7	5.5	5.2	7.1	6.1	6.1	6.1	6.0	5.6
Not in labor force	51,955	51,064	51,644	51,621	51,580	51,575	51,357	50,909	51,309
BLACK AND OTHER									
Total noninstitutional population[1]	18,923	19,427	19,473	18,923	19,279	19,325	19,372	19,427	19,473
Civilian noninstitutional population[1]	18,555	19,038	19,084	18,555	18,826	18,936	18,983	19,038	19,084
Civilian labor force	10,996	11,532	11,624	11,109	11,402	11,359	11,375	11,575	11,741
Participation rate	59.3	60.6	60.9	59.9	60.3	60.0	59.9	60.8	61.5
Employed	9,605	10,022	10,249	9,623	9,744	9,868	9,799	9,976	10,269
Employment-population ratio[2]	50.8	51.6	52.6	50.9	50.5	51.1	50.6	51.4	52.7
Unemployed	1,390	1,510	1,375	1,486	1,685	1,491	1,576	1,599	1,472
Unemployment rate	12.6	13.1	11.8	13.4	14.5	13.1	13.9	13.8	12.5
Not in labor force	7,559	7,506	7,460	7,446	7,494	7,577	7,608	7,463	7,343

[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).

NOTE: Household data for December 1977 relate to the week of Dec. 4-10 (week of the 5th) rather than the usual week containing the 12th day.

Table A-2. Major unemployment indicators, seasonally adjusted

Selected categories	Number of unemployed persons (in thousands)		Unemployment rates					
	Dec. 1976	Dec. 1977	Dec. 1976	Aug. 1977	Sept. 1977	Oct. 1977	Nov. 1977	Dec. 1977
CHARACTERISTICS								
Total, 16 years and over	7,519	6,337	7.8	7.1	6.9	7.0	6.9	6.4
Men, 20 years and over	3,219	2,476	6.2	5.2	4.9	5.3	4.9	4.7
Women, 20 years and over	2,598	2,424	7.4	7.1	7.0	6.8	7.1	6.7
Both sexes, 16-19 years	1,702	1,437	19.0	17.5	18.1	17.3	17.1	15.4
White, total	6,026	4,861	7.1	6.1	6.1	6.1	6.0	5.6
Men, 20 years and over	2,580	1,952	5.5	4.5	4.3	4.5	4.3	4.1
Women, 20 years and over	2,068	1,863	6.8	6.3	6.2	6.2	6.2	5.9
Both sexes, 16-19 years	1,378	1,046	17.2	14.7	15.9	14.8	14.5	12.6
Black and other, total	1,486	1,472	13.4	14.5	13.1	13.9	13.8	12.5
Men, 20 years and over	619	510	11.3	11.7	10.4	11.7	10.3	9.1
Women, 20 years and over	541	567	11.5	12.2	11.3	11.4	12.5	11.2
Both sexes, 16-19 years	326	395	34.8	40.4	37.4	37.9	39.0	37.3
Married men, spouse present	1,719	1,305	4.3	3.5	3.4	3.7	3.4	3.3
Married women, spouse present	1,547	1,405	7.0	6.6	6.4	6.3	6.6	6.2
Women who head families	449	374	10.2	10.5	10.4	9.6	9.3	8.0
Full-time workers	6,125	4,995	7.5	6.8	6.5	6.6	6.4	5.9
Part-time workers	1,366	1,313	9.8	8.9	9.5	9.7	9.6	8.9
Unemployed 15 weeks and over[1]	2,514	1,838	2.6	1.9	1.9	1.9	2.0	1.9
Labor force time lost[2]	—	—	8.4	7.7	7.4	7.5	7.5	7.1
OCCUPATION[3]								
White-collar workers	2,083	1,883	4.5	4.2	4.2	4.1	4.3	3.9
Professional and technical	459	396	3.3	3.0	3.0	3.0	3.0	2.7
Managers and administrators, except farm	303	253	3.1	2.5	2.5	2.6	3.0	2.5
Sales workers	307	282	5.0	5.3	5.1	5.0	5.0	4.6
Clerical workers	1,014	852	6.1	5.8	6.0	5.7	5.7	5.4
Blue-collar workers	3,110	2,420	9.6	8.4	7.9	8.3	7.9	7.3
Craft and kindred workers	854	680	7.0	5.5	5.2	5.5	5.3	5.3
Operatives, except transport	1,269	964	11.0	10.0	10.2	10.2	9.7	8.5
Transport equipment operatives	288	220	8.1	7.6	5.7	6.5	5.4	5.9
Nonfarm laborers	699	536	13.9	12.6	11.1	12.2	12.3	10.6
Service workers	1,181	1,088	9.0	8.4	7.8	8.3	7.8	8.0
Farm workers	181	120	6.1	3.7	4.7	4.3	4.1	4.1
INDUSTRY[3]								
Nonagricultural private wage and salary workers[4]	5,519	4,522	7.9	7.0	6.9	7.1	6.9	6.3
Construction	638	485	14.1	11.5	10.4	12.2	11.3	10.5
Manufacturing	1,757	1,265	8.2	7.0	7.2	7.0	6.8	5.8
Durable goods	1,013	726	8.0	6.5	6.6	6.3	6.3	5.7
Nondurable goods	744	539	8.6	7.7	8.2	8.1	7.5	6.0
Transportation and public utilities	253	230	5.2	4.9	5.0	5.0	4.7	5.0
Wholesale and retail trade	1,456	1,324	8.2	8.3	7.6	8.1	7.5	7.2
Finance and service industries	1,371	1,167	6.8	5.6	5.7	5.9	6.1	5.5
Government workers	687	702	4.4	4.4	4.0	4.1	4.4	4.4
Agricultural wage and salary workers	224	156	14.0	9.3	10.4	10.4	9.1	10.2
VETERAN STATUS								
Male Vietnam-era veterans:[5]								
20 to 34 years	538	363	8.3	7.8	7.7	7.5	7.2	5.7
20 to 24 years	161	89	16.8	17.4	20.1	16.0	14.7	11.9
25 to 29 years	261	161	8.7	6.3	6.1	6.9	6.8	6.5
30 to 34 years	116	113	4.7	6.0	5.1	5.3	5.1	5.7
Male nonveterans:								
20 to 34 years	1,421	1,184	9.1	7.9	7.0	7.5	7.0	7.2
20 to 24 years	865	718	12.4	10.5	9.1	9.4	9.6	9.2
25 to 29 years	353	280	7.2	6.6	5.9	6.8	5.6	5.1
30 to 34 years	203	186	5.4	4.9	4.8	5.2	4.4	4.9

[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 by industry covers only unemployed wage and salary workers.

[4] Includes mining, not shown separately.

[5] Vietnam-era veterans are those who served between August 5, 1964, and May 7, 1975.

Table A-3. Selected employment indicators

[In thousands]

Selected categories	Not seasonally adjusted		Seasonally adjusted					
	Dec. 1976	Dec. 1977	Dec. 1976	Aug. 1977	Sept. 1977	Oct. 1977	Nov. 1977	Dec. 1977
CHARACTERISTICS								
Total employed, 16 years and over	88,494	92,623	88,441	90,771	91,095	91,230	92,180	92,589
Men	52,369	54,524	52,799	53,958	53,966	54,066	54,715	54,996
Women	36,125	38,099	35,642	36,813	37,129	36,964	37,465	37,593
Married men, spouse present	38,055	38,655	37,998	38,316	38,358	38,386	38,485	38,616
Married women, spouse present	20,996	21,892	20,498	20,814	21,232	21,097	21,265	21,379
OCCUPATION								
White-collar workers	45,212	46,981	44,648	45,114	45,437	46,147	46,232	46,386
Professional and technical	13,705	14,179	13,544	13,720	13,777	14,054	13,918	14,011
Managers and administrators, except farm	9,580	9,982	9,564	9,688	9,777	9,951	9,916	9,962
Sales workers	5,956	6,039	5,815	5,722	5,748	5,687	5,780	5,897
Clerical workers	15,970	16,780	15,725	15,984	16,135	16,455	16,618	16,516
Blue-collar workers	28,933	30,600	29,150	30,231	30,282	30,084	30,370	30,842
Craft and kindred workers	11,291	12,208	11,302	11,931	11,974	11,827	12,040	12,220
Operatives, except transport	10,245	10,441	10,231	10,242	10,211	10,204	10,352	10,431
Transport equipment operatives	3,309	3,539	3,283	3,462	3,341	3,430	3,493	3,511
Nonfarm laborers	4,088	4,413	4,334	4,596	4,556	4,623	4,485	4,680
Service workers	11,935	12,616	11,880	12,591	12,604	12,420	12,592	12,558
Farm workers	2,415	2,426	2,791	2,778	2,676	2,783	2,795	2,798
MAJOR INDUSTRY AND CLASS OF WORKER								
Agriculture:								
Wage and salary workers	1,150	1,147	1,380	1,331	1,350	1,402	1,401	1,377
Self-employed workers	1,456	1,516	1,530	1,604	1,566	1,584	1,607	1,592
Unpaid family workers	244	250	340	315	275	303	361	348
Nonagricultural industries:								
Wage and salary workers	79,420	83,109	78,957	80,951	81,341	81,651	82,269	82,642
Government	15,131	15,592	14,967	15,282	15,296	15,494	15,422	15,422
Private industries	64,289	67,517	63,990	65,669	66,045	66,157	66,847	67,220
Private households	1,383	1,454	1,384	1,401	1,409	1,352	1,415	1,455
Other industries	62,906	66,063	62,606	64,268	64,636	64,805	65,432	65,765
Self-employed workers	5,779	6,178	5,798	6,151	6,077	6,039	6,074	6,197
Unpaid family workers	446	424	460	469	504	448	471	438
PERSONS AT WORK [1]								
Nonagricultural industries	82,583	86,112	80,369	82,613	82,799	82,626	83,378	83,753
Full-time schedules	67,297	70,212	65,846	67,755	67,706	67,646	68,212	68,701
Part time for economic reasons	3,184	3,008	3,434	3,199	3,315	3,298	3,366	3,278
Usually work full time	1,210	1,214	1,234	1,196	1,246	1,251	1,266	1,239
Usually work part time	1,954	1,794	2,220	2,003	2,069	2,047	2,100	2,039
Part time for noneconomic reasons	12,122	12,892	11,069	11,659	11,778	11,682	11,800	11,774

[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]

Weeks of unemployment	Not seasonally adjusted		Seasonally adjusted					
	Dec. 1976	Dec. 1977	Dec. 1976	Aug. 1977	Sept. 1977	Oct. 1977	Nov. 1977	Dec. 1977
DURATION								
Less than 5 weeks	2,563	2,361	2,765	2,870	2,789	2,890	2,844	2,547
5 to 14 weeks	3,314	1,951	2,319	2,338	2,236	2,208	2,115	1,955
15 weeks and over	2,143	1,568	2,514	1,808	1,866	1,862	1,933	1,838
15 to 26 weeks	935	791	1,130	966	940	916	1,003	950
27 weeks and over	1,210	777	1,384	842	926	946	930	888
Average (mean) duration, in weeks	15.6	14.1	15.6	13.5	14.2	13.8	13.8	14.1
PERCENT DISTRIBUTION								
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than 5 weeks	36.5	40.2	36.4	40.9	40.5	41.5	41.3	40.2
5 to 14 weeks	33.0	33.2	30.5	33.3	32.4	31.7	30.7	30.8
15 weeks and over	30.5	26.7	33.1	25.8	27.1	26.8	28.0	29.0
15 to 26 weeks	13.3	13.5	14.9	13.8	13.6	13.2	14.6	15.0
27 weeks and over	17.2	13.2	18.2	12.0	13.4	13.6	13.5	14.0

Table A-5. Reasons for unemployment

[Numbers in thousands]

Reasons	Not seasonally adjusted		Seasonally adjusted					
	Dec. 1976	Dec. 1977	Dec. 1976	Aug. 1977	Sept. 1977	Oct. 1977	Nov. 1977	Dec. 1977
NUMBER OF UNEMPLOYED								
Lost last job	3,730	2,749	3,736	3,289	3,144	3,139	3,088	2,755
On layoff	1,114	737	1,057	1,018	928	947	812	699
Other job losers	2,616	2,012	2,679	2,271	2,216	2,192	2,276	2,056
Left last job	789	809	831	910	873	886	872	852
Reentered labor force	1,691	1,642	1,957	1,857	1,856	1,915	1,937	1,900
Seeking first job	812	679	942	1,000	935	840	907	809
PERCENT DISTRIBUTION								
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Job losers	53.2	46.7	50.0	46.6	46.2	46.3	45.4	43.6
On layoff	15.9	12.5	14.2	14.4	13.6	14.0	11.9	11.1
Other job losers	37.3	34.2	35.9	32.2	32.5	32.3	33.5	32.6
Job leavers	11.2	13.8	11.1	12.9	12.8	13.1	12.8	13.5
Reentrants	24.1	27.9	26.2	26.3	27.3	28.2	28.5	30.1
New entrants	11.6	11.5	12.6	14.2	13.7	12.4	13.3	12.8
UNEMPLOYED AS A PERCENT OF THE CIVILIAN LABOR FORCE								
Job losers	3.9	2.7	3.9	3.4	3.2	3.2	3.1	2.8
Job leavers	.8	.8	.9	.9	.9	.9	.9	.9
Reentrants	1.8	1.7	2.0	1.9	1.9	2.0	2.0	1.9
New entrants	.9	.7	1.0	1.0	1.0	.9	.9	.8

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

Sex and age	Number of unemployed persons (In thousands)		Unemployment rates					
	Dec. 1976	Dec. 1977	Dec. 1976	Aug. 1977	Sept. 1977	Oct. 1977	Nov. 1977	Dec. 1977
Total, 16 years and over	7,519	6,337	7.8	7.1	6.9	7.0	6.9	6.4
16 to 19 years	1,702	1,437	19.0	17.5	18.1	17.3	17.1	15.4
16 to 17 years	760	685	20.7	20.7	19.8	18.8	18.9	17.4
18 to 19 years	930	742	17.7	15.6	16.9	16.3	16.0	13.7
20 to 24 years	1,779	1,537	12.5	11.1	10.7	10.6	10.8	10.5
25 years and over	4,027	3,356	5.5	5.0	4.8	5.0	4.8	4.5
25 to 54 years	3,449	2,800	5.9	5.3	4.9	5.2	4.9	4.6
55 years and over	608	585	4.2	3.9	4.2	4.2	4.2	4.0
Men, 16 years and over	4,152	3,246	7.3	6.3	6.0	6.3	5.9	5.6
16 to 19 years	933	770	19.1	17.6	17.5	16.7	16.5	15.1
16 to 17 years	432	358	21.0	21.7	19.2	18.8	18.2	16.2
18 to 19 years	487	400	17.4	14.8	16.0	15.1	15.3	13.9
20 to 24 years	1,022	801	12.9	11.3	10.5	10.2	10.1	10.1
25 years and over	2,194	1,675	5.0	4.2	3.9	4.4	4.0	3.7
25 to 54 years	1,853	1,343	5.2	4.4	3.8	4.5	4.0	3.7
55 years and over	349	338	3.9	3.5	3.9	4.1	3.7	3.7
Women, 16 years and over	3,367	3,091	8.6	8.3	8.2	8.0	8.2	7.6
16 to 19 years	769	667	18.9	17.4	18.9	18.0	17.9	15.7
16 to 17 years	328	327	20.2	19.4	20.5	18.7	19.7	18.9
18 to 19 years	443	342	18.0	16.4	17.9	17.6	16.8	13.5
20 to 24 years	757	736	11.9	10.8	10.9	11.2	11.7	11.0
25 years and over	1,833	1,681	6.4	6.2	6.1	5.9	6.1	5.7
25 to 54 years	1,596	1,457	6.9	6.6	6.4	6.3	6.3	6.0
55 years and over	259	247	4.7	4.6	4.5	4.4	5.0	4.4

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

[Percent]

Measures	Quarterly averages					Monthly data		
	1976	1977				1977		
	IV	I	II	III	IV	Oct.	Nov.	Dec.
U-1—Persons unemployed 15 weeks or longer as a percent of the civilian labor force	2.6	2.2	1.8	1.9	1.9	1.9	2.0	1.9
U-2—Job losers as a percent of the civilian labor force	3.9	3.4	3.1	3.2	3.0	3.2	3.1	2.8
U-3—Unemployed household heads as a percent of the household head labor force	5.5	4.8	4.4	4.5	4.3	4.6	4.3	4.0
U-4—Unemployed full-time jobseekers as a percent of the full-time labor force	7.5	6.8	6.5	6.6	6.3	6.6	6.4	5.9
U-5—Total unemployed as a percent of the civilian labor force (official measure)	7.9	7.4	7.0	7.0	6.8	7.0	6.9	6.4
U-6—Total full-time jobseekers plus ½ part-time jobseekers plus ½ total on part time for economic reasons as a percent of the civilian labor force less ½ of the part-time labor force	9.7	9.0	8.6	8.6	8.4	8.7	8.5	8.0
U-7—Total full-time jobseekers plus ½ part-time jobseekers plus ½ total on part time for economic reasons plus discouraged workers as a percent of the civilian labor force plus discouraged workers less ½ of the part-time labor force	10.7	9.9	9.7	9.7	9.3	N.A.	N.A.	N.A.

N.A.= Not available.

Table A-8. Persons not in the labor force by selected characteristics, quarterly averages

[In thousands]

Characteristics	Not seasonally adjusted		Seasonally adjusted					
	IV	IV	1976		1977			
	1976	1977	III	IV	I	II	III	IV
Total not in labor force	59,264	58,808	58,963	59,132	59,379	58,908	59,141	58,724
Do not want a job now	54,058	53,493	54,715	53,991	53,792	53,190	53,429	53,374
Want a job now	5,206	5,314	4,339	5,436	5,663	5,762	5,909	5,565
Discouraged workers	962	934	827	992	929	1,061	1,104	968
Job-market factors[1]	700	605	568	762	644	726	746	665
Personal factors[2]	263	329	259	230	285	335	358	303
Men	314	279	281	361	283	316	381	307
Women	648	655	546	651	647	745	723	661
White	713	686	601	755	665	741	746	733
Black and other	249	249	226	250	280	287	356	250

[1] Job market factors include "could not find job" and "thinks no job available."

[2] Personal factors include "employers think too young or old," "lacks education or training," and "other personal handicap."

Table B-1. Employees on nonagricultural payrolls, by industry

(In thousands)

Industry	Not seasonally adjusted				Seasonally adjusted					
	DEC. 1976	OCT. 1977	NOV. 1977 p	DEC. 1977 p	DEC. 1976	AUG. 1977	SEPT. 1977	OCT. 1977	NOV. 1977 p	DEC. 1977 p
TOTAL	81,099	83,672	84,070	84,186	80,370	82,474	82,763	82,902	83,222	83,439
GOODS-PRODUCING	23,480	24,907	24,839	24,500	23,528	24,305	24,360	24,436	24,526	24,553
MINING	805	863	865	709	809	818	856	859	863	713
CONTRACT CONSTRUCTION	3,547	4,161	4,092	3,901	3,605	3,893	3,892	3,911	3,946	3,964
MANUFACTURING	19,128	19,883	19,882	19,890	19,114	19,594	19,612	19,666	19,717	19,876
Production workers	13,730	14,343	14,345	14,329	13,719	14,078	14,091	14,132	14,190	14,314
DURABLE GOODS	11,189	11,693	11,721	11,769	11,165	11,527	11,545	11,604	11,627	11,746
Production workers	7,989	8,400	8,432	8,462	7,967	8,252	8,266	8,313	8,339	8,436
Ordnance and accessories	157.1	149.9	151.2	153.3	156	156	155	150	152	153
Lumber and wood products	614.2	662.2	659.0	651.7	625	642	646	653	663	663
Furniture and fixtures	495.9	524.8	527.8	530.6	494	508	510	517	521	529
Stone, clay, and glass products	623.7	669.3	672.1	662.4	630	656	658	657	667	669
Primary metal industries	1,182.3	1,206.8	1,200.9	1,209.3	1,185	1,202	1,211	1,208	1,207	1,212
Fabricated metal products	1,409.4	1,490.7	1,495.0	1,499.0	1,405	1,460	1,456	1,473	1,480	1,495
Machinery, except electrical	2,122.1	2,225.1	2,245.1	2,267.7	2,107	2,210	2,217	2,243	2,236	2,252
Electrical equipment	1,876.2	1,981.0	1,996.5	2,006.8	1,863	1,951	1,944	1,961	1,975	1,993
Transportation equipment	1,778.6	1,820.6	1,812.6	1,835.1	1,765	1,802	1,809	1,801	1,781	1,821
Instruments and related products	518.7	532.2	534.7	536.6	517	526	528	530	532	535
Miscellaneous manufacturing	410.6	430.1	426.4	416.2	418	414	409	411	413	424
NONDURABLE GOODS	7,939	8,190	8,161	8,121	7,949	8,067	8,067	8,062	8,090	8,130
Production workers	5,741	5,943	5,913	5,867	5,752	5,826	5,825	5,819	5,851	5,878
Food and kindred products	1,694.3	1,763.4	1,720.8	1,690.6	1,711	1,710	1,711	1,696	1,700	1,708
Tobacco manufacturers	79.4	75.0	72.9	71.4	75	68	67	67	67	67
Textile mill products	962.8	991.2	996.0	995.3	961	982	985	987	993	993
Apparel and other textile products	1,266.9	1,305.5	1,308.0	1,289.4	1,273	1,286	1,285	1,285	1,292	1,296
Paper and allied products	683.9	706.3	708.0	711.4	682	704	702	702	702	709
Printing and publishing	1,097.3	1,120.0	1,123.6	1,133.7	1,089	1,114	1,116	1,117	1,119	1,125
Chemicals and allied products	1,038.5	1,061.9	1,062.4	1,061.6	1,042	1,061	1,058	1,058	1,060	1,065
Petroleum and coal products	202.5	213.2	212.5	211.8	204	210	210	211	212	213
Rubber and plastics products, nec	650.0	688.2	690.4	692.4	648	671	671	673	680	690
Leather and leather products	263.3	265.6	266.2	263.6	264	261	262	266	265	264
SERVICE-PRODUCING	57,619	58,765	59,231	59,686	56,842	58,169	58,403	58,466	58,696	58,886
TRANSPORTATION AND PUBLIC UTILITIES	4,553	4,638	4,653	4,665	4,549	4,581	4,616	4,610	4,630	4,660
WHOLESALE AND RETAIL TRADE	18,559	18,533	18,770	19,165	17,925	18,377	18,431	18,414	18,466	18,511
WHOLESALE TRADE	4,326	4,450	4,470	4,478	4,305	4,398	4,410	4,415	4,439	4,456
RETAIL TRADE	14,233	14,083	14,300	14,687	13,620	13,979	14,021	13,999	14,047	14,055
FINANCE, INSURANCE, AND REAL ESTATE	4,385	4,567	4,586	4,604	4,398	4,524	4,545	4,572	4,600	4,618
SERVICES	14,861	15,580	15,601	15,598	14,936	15,448	15,482	15,533	15,601	15,676
GOVERNMENT	15,261	15,447	15,621	15,654	5,034	15,239	15,329	15,337	15,379	15,421
FEDERAL	2,725	2,714	2,716	2,726	2,720	2,732	2,728	2,730	2,727	2,722
STATE AND LOCAL	12,536	12,733	12,905	12,928	12,314	12,507	12,601	12,607	12,652	12,699

p=preliminary.

ESTABLISHMENT DATA

Table B-2. Average weekly hours of production or nonsupervisory workers,[1] on private nonagricultural payrolls, by industry

Industry	Not seasonally adjusted				Seasonally adjusted					
	DEC. 1976	OCT. 1977	NOV. 1977 p	DEC. 1977 p	DEC. 1976	AUG. 1977	SEPT. 1977	OCT. 1977	NOV. 1977 p	DEC. 1977 p
TOTAL PRIVATE	36.4	36.2	36.0	36.2	36.2	36.0	36.0	36.2	36.1	36.0
MINING	43.7	45.1	44.9	43.3	43.6	44.2	44.3	44.6	44.6	43.2
CONTRACT CONSTRUCTION	36.8	37.6	36.4	36.1	37.2	36.5	36.4	36.8	36.9	36.5
MANUFACTURING	40.6	40.5	40.6	40.9	40.0	40.3	40.3	40.4	40.5	40.3
Overtime hours	3.3	3.6	3.6	3.7	3.2	3.3	3.3	3.5	3.5	3.4
DURABLE GOODS	41.3	41.2	41.3	41.7	40.5	40.9	41.0	41.2	41.1	40.9
Overtime hours	3.5	3.9	3.8	3.9	3.3	3.5	3.5	3.8	3.7	3.6
Ordnance and accessories	41.6	40.7	40.4	41.5	40.9	40.2	40.6	40.8	40.2	40.8
Lumber and wood products	40.4	40.4	40.1	40.0	40.3	39.6	40.0	40.1	40.5	39.9
Furniture and fixtures	39.3	39.9	39.7	40.3	38.5	39.0	39.2	39.5	39.5	39.5
Stone, clay, and glass products	41.3	41.6	41.8	41.5	41.2	41.4	41.0	41.1	41.7	44.4
Primary metal industries	40.5	41.1	41.2	41.6	40.2	41.0	40.9	41.3	41.3	41.3
Fabricated metal products	41.2	41.2	41.3	41.7	40.5	40.9	40.9	41.1	41.1	41.0
Machinery, except electrical	42.3	42.0	42.2	42.9	41.2	41.8	41.8	42.0	41.9	41.8
Electrical equipment	40.9	40.4	40.6	41.2	40.2	40.3	40.3	40.3	40.2	40.5
Transportation equipment	42.6	42.7	42.5	42.9	41.2	42.3	42.6	42.7	42.5	41.5
Instruments and related products	41.4	40.6	40.8	40.8	40.6	40.3	40.3	40.6	40.4	40.0
Miscellaneous manufacturing	39.3	39.3	39.6	39.6	38.9	38.8	39.0	39.1	39.2	39.2
NONDURABLE GOODS	39.7	39.5	39.7	39.8	39.3	39.3	39.3	39.4	39.5	39.4
Overtime hours	3.1	3.3	3.2	3.3	3.0	3.1	3.0	3.1	3.2	3.2
Food and kindred products	40.5	39.6	39.9	39.9	40.1	39.7	39.5	39.5	39.8	39.5
Tobacco manufacturers	38.3	39.5	40.0	38.4	37.5	37.8	38.6	38.2	38.7	37.6
Textile mill products	40.4	40.5	40.8	41.0	40.1	40.2	40.3	40.5	40.6	40.7
Apparel and other textile products	35.3	35.9	36.0	35.9	35.2	35.5	35.3	35.6	35.7	35.8
Paper and allied products	43.1	42.9	42.9	43.7	42.5	42.4	42.7	42.8	42.7	43.1
Printing and publishing	38.3	38.0	38.1	38.4	37.7	37.7	38.0	37.9	37.9	37.8
Chemicals and allied products	42.1	41.6	41.8	41.8	41.7	41.8	41.7	41.6	41.7	41.4
Petroleum and coal products	42.4	43.6	43.6	43.6	42.4	43.0	42.8	43.2	43.3	43.6
Rubber and plastics products, nec	41.9	41.0	41.1	41.3	41.4	40.8	40.7	40.9	40.9	40.8
Leather and leather products	36.8	37.6	37.8	37.6	36.4	37.3	37.6	37.7	37.7	37.2
TRANSPORTATION AND PUBLIC UTILITIES	40.5	39.9	39.9	40.1	40.4	40.0	39.9	39.7	39.9	40.0
WHOLESALE AND RETAIL TRADE	33.9	33.3	33.0	33.5	33.6	33.2	33.2	33.5	33.3	33.2
WHOLESALE TRADE	39.0	39.1	39.0	39.2	38.6	38.6	38.8	39.1	39.0	38.8
RETAIL TRADE	32.5	31.6	31.3	31.9	32.2	31.6	31.6	31.9	31.6	31.6
FINANCE, INSURANCE, AND REAL ESTATE	36.7	36.7	36.6	36.5	36.7	36.7	36.6	36.7	36.7	36.5
SERVICES	33.4	33.4	33.2	33.2	33.5	33.2	33.2	33.5	33.3	33.3

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

p=preliminary.

Table B-3. Average hourly and weekly earnings of production or nonsupervisory workers[1] on private nonagricultural payrolls, by industry

Industry	Average hourly earnings				Average weekly earnings			
	DEC. 1976	OCT. 1977	NOV. p 1977	DEC. p 1977	DEC. 1976	OCT. 1977	NOV. p 1977	DEC. p 1977
TOTAL PRIVATE	$5.02	$5.40	$5.41	$5.41	$182.73	$195.48	$194.76	$195.84
Seasonally adjusted	5.02	5.38	5.39	5.41	181.72	194.76	194.58	194.76
MINING	6.71	7.08	7.11	6.61	293.23	319.31	319.24	286.21
CONTRACT CONSTRUCTION	7.88	8.25	8.22	8.23	289.98	310.20	299.21	297.10
MANUFACTURING	5.42	5.78	5.81	5.87	220.05	234.09	235.89	240.08
DURABLE GOODS	5.78	6.19	6.21	6.27	238.71	255.03	256.47	261.46
Ordnance and accessories	6.05	6.36	6.44	6.46	251.68	258.85	260.18	268.09
Lumber and wood products	4.88	5.23	5.22	5.20	197.15	211.29	209.32	208.00
Furniture and fixtures	4.13	4.39	4.43	4.49	162.31	175.16	175.87	180.95
Stone, clay, and glass products	5.47	5.91	5.93	5.93	225.91	245.86	247.87	246.19
Primary metal industries	7.00	7.72	7.77	7.79	283.50	317.29	320.12	324.06
Fabricated metal products	5.62	6.00	6.03	6.02	231.54	247.20	249.04	251.03
Machinery, except electrical	5.99	6.39	6.41	6.52	253.38	268.38	270.50	279.71
Electrical equipment	5.15	5.47	5.51	5.58	210.64	220.99	223.71	229.90
Transportation equipment	6.94	7.43	7.46	7.54	295.64	317.26	317.05	323.47
Instruments and related products	5.09	5.28	5.33	5.41	210.73	214.37	217.46	220.73
Miscellaneous manufacturing	4.18	4.39	4.43	4.48	164.27	172.53	175.43	177.41
NONDURABLE GOODS	4.90	5.17	5.21	5.25	194.53	204.22	206.84	208.55
Food and kindred products	5.16	5.42	5.50	5.54	208.98	214.63	219.45	221.05
Tobacco manufacturers	5.04	5.31	5.58	5.76	193.03	209.75	223.20	221.18
Textile mill products	3.83	4.08	4.10	4.10	154.73	165.24	167.28	168.10
Apparel and other textile products	3.52	3.69	3.71	3.74	134.26	132.47	133.56	134.27
Paper and allied products	5.66	6.10	6.13	6.19	243.95	261.69	262.98	270.50
Printing and publishing	5.86	6.23	6.25	6.27	224.44	236.74	238.13	240.77
Chemicals and allied products	6.14	6.56	6.59	6.65	258.49	272.90	275.46	277.97
Petroleum and coal products	7.29	7.81	7.81	7.84	309.10	340.52	340.52	341.82
Rubber and plastics products, nec	5.01	5.19	5.21	5.25	209.92	212.79	214.13	216.83
Leather and leather products	3.53	3.68	3.70	3.71	129.90	138.37	139.86	139.50
TRANSPORTATION AND PUBLIC UTILITIES	6.65	7.17	7.20	7.23	269.33	286.08	287.28	289.92
WHOLESALE AND RETAIL TRADE	4.07	4.38	4.38	4.38	137.97	145.85	144.54	146.73
WHOLESALE TRADE	5.34	5.69	5.69	5.75	208.26	222.48	221.91	225.40
RETAIL TRADE	3.65	3.90	3.91	3.92	116.63	123.24	122.38	125.05
FINANCE, INSURANCE, AND REAL ESTATE	4.43	4.72	4.71	4.75	162.58	173.22	172.39	173.38
SERVICES	4.52	4.85	4.86	4.89	150.97	161.99	161.35	162.35

[1] See footnote 1, table B-2.
p=preliminary.

ESTABLISHMENT DATA

Table B-4. Hourly earnings index for production or nonsupervisory workers[1] on private nonagricultural payrolls, by industry division, seasonally adjusted

[1967=100]

Industry	DEC. 1976	JULY 1977	AUG. 1977	SEPT. 1977	OCT. 1977	NOV. P 1977	DEC. P 1977	Percent change from: DEC. 1976–DEC. 1977	Percent change from: NOV. 1977–DEC. 1977
TOTAL PRIVATE NONFARM:									
Current dollars	190.7	199.4	199.9	201.2	203.3	204.0	204.8	7.4	0.4
Current (1967) dollars	109.4	109.2	109.1	109.5	110.3	110.1	N.A.	(2)	(3)
MINING	207.0	217.1	217.4	218.8	221.7	221.1	216.1	4.4	-2.3
CONTRACT CONSTRUCTION	189.8	195.1	195.8	196.2	197.8	198.1	198.4	4.5	.2
MANUFACTURING	191.0	200.3	201.2	202.7	204.2	205.4	205.7	7.7	.2
TRANSPORTATION AND PUBLIC UTILITIES	203.5	214.3	212.3	215.0	217.8	218.9	221.2	8.7	1.0
WHOLESALE AND RETAIL TRADE	184.7	193.1	193.3	194.4	196.2	196.8	198.5	7.4	.8
FINANCE, INSURANCE, AND REAL ESTATE	173.1	180.3	180.6	181.8	185.2	185.4	185.8	7.3	.2
SERVICES	194.4	203.5	204.8	205.8	208.6	208.5	209.3	7.7	.4

[1] See footnote 1, table B-2.

[2] PERCENT CHANGE WAS .7 FROM NOVEMBER 1976 TO NOVEMBER 1977, THE LATEST MONTH AVAILABLE.

[3] PERCENT CHANGE WAS -.1 FROM OCTOBER 1977 TO NOVEMBER 1977, THE LATEST MONTH AVAILABLE.

N.A. = not available.
P=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,[1] on private nonagricultural payrolls, by industry, seasonally adjusted

[1967=100]

Industry division and group	1976	1977											
	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV. P	DEC. P
TOTAL PRIVATE	113.3	112.3	114.2	115.0	115.4	115.9	115.8	115.8	115.6	115.9	116.8	117.1	117.0
GOODS-PRODUCING	97.0	95.2	98.6	100.1	100.8	101.4	101.8	101.4	100.6	100.9	101.7	102.4	101.8
MINING	133.7	131.3	134.3	140.6	141.6	140.6	142.3	139.9	134.7	142.5	143.9	144.8	112.2
CONTRACT CONSTRUCTION	104.0	95.9	105.8	108.7	111.7	112.4	111.8	112.8	110.8	110.4	112.3	113.9	113.2
MANUFACTURING	94.5	93.9	96.1	97.2	97.5	98.1	98.7	98.0	97.6	97.8	98.4	98.9	99.4
DURABLE GOODS	93.7	93.2	95.2	96.8	96.9	97.8	98.7	98.3	98.1	98.4	99.3	99.6	100.3
Ordnance and accessories	39.4	39.1	39.3	39.2	40.1	40.7	41.0	40.5	39.3	39.1	38.2	38.2	38.7
Lumber and wood products	101.9	101.4	103.0	103.6	103.5	104.1	104.0	105.3	104.0	106.0	106.8	110.2	108.4
Furniture and fixtures	103.3	98.7	103.2	105.3	106.1	107.1	107.9	108.4	107.2	108.3	110.6	112.0	113.5
Stone, clay, and glass products	99.3	96.6	97.4	101.7	103.9	104.2	105.4	104.9	104.1	103.3	103.2	106.3	106.1
Primary metal industries	85.4	85.2	85.9	88.6	89.7	90.7	90.9	89.0	88.2	89.0	89.7	89.6	90.3
Fabricated metal products	98.3	97.3	100.3	101.7	101.3	102.8	104.2	103.7	103.3	103.1	105.0	105.8	106.6
Machinery, except electrical	96.0	95.2	97.9	98.7	98.8	100.2	101.6	103.2	103.5	103.6	105.5	104.9	105.3
Electrical equipment and supplies	93.3	91.9	95.6	96.1	96.3	97.2	97.9	98.3	98.3	97.8	98.8	99.5	101.3
Transportation equipment	90.8	93.4	92.9	96.4	94.7	95.3	96.5	94.8	95.4	96.5	96.2	94.5	94.8
Instruments and related products	110.4	108.7	112.7	111.6	111.7	112.3	113.2	111.7	111.3	112.4	113.2	113.0	112.6
Miscellaneous manufacturing industry	93.0	92.5	96.5	95.5	95.0	94.7	94.6	91.4	91.3	90.3	91.1	92.3	95.2
NONDURABLE GOODS	95.7	94.9	97.3	97.7	98.5	98.5	98.7	97.7	96.9	96.9	97.1	97.8	98.1
Food and kindred products	95.8	94.9	97.5	97.8	98.5	97.3	97.3	95.9	94.5	94.1	92.6	94.1	93.7
Tobacco manufacturers	81.6	76.1	82.4	75.1	80.5	78.2	80.2	77.2	71.7	73.2	72.4	72.0	70.0
Textile mill products	96.6	96.7	98.1	99.4	99.6	100.2	99.7	99.9	98.9	99.4	100.2	101.3	101.4
Apparel and other textile products	86.3	84.1	87.9	88.1	87.7	88.6	89.8	87.6	87.8	87.2	87.8	88.8	89.4
Paper and allied products	97.2	96.2	98.2	98.6	100.8	100.4	101.1	100.3	99.4	99.7	100.2	99.9	101.8
Printing and publishing	93.7	93.4	94.6	94.5	95.2	95.1	95.3	95.6	95.1	95.7	95.7	95.9	96.0
Chemicals and allied products	100.1	100.7	101.6	102.2	102.9	103.3	103.8	103.7	103.4	103.0	102.6	103.2	102.8
Petroleum and coal products	114.4	115.0	114.4	118.4	119.6	119.3	121.6	119.9	120.4	120.8	122.8	123.9	125.7
Rubber and plastics products, nec	127.8	128.0	131.8	132.9	134.8	135.3	133.9	132.5	129.7	129.3	130.5	132.2	134.4
Leather and leather products	70.7	69.1	72.1	71.8	73.4	73.3	72.9	69.9	71.8	72.7	73.8	73.5	72.2
SERVICE-PRODUCING	124.7	124.1	125.0	125.3	125.5	125.9	125.6	125.8	126.1	126.4	127.2	127.3	127.6
TRANSPORTATION AND PUBLIC UTILITIES	104.9	102.7	104.4	104.1	103.8	104.6	104.1	103.1	103.5	103.9	102.9	104.1	105.4
WHOLESALE AND RETAIL TRADE	120.3	119.4	120.3	120.7	121.0	121.4	121.2	121.6	121.6	121.8	122.7	122.3	122.2
WHOLESALE TRADE	114.8	115.4	117.1	116.9	117.3	117.3	117.3	117.5	117.5	117.8	118.7	119.1	118.8
RETAIL TRADE	122.3	120.8	121.6	122.1	122.4	123.0	122.7	123.1	123.1	123.3	124.2	123.4	123.4
FINANCE, INSURANCE, AND REAL ESTATE	129.6	130.1	130.2	131.0	131.0	131.6	131.7	132.3	132.7	133.2	134.2	135.2	134.9
SERVICES	138.3	138.8	139.3	139.8	140.1	140.3	139.6	140.1	140.6	140.9	142.7	142.6	143.1

[1] See footnote 1, table B-2.

P=preliminary.

Table B-6. Indexes of diffusion: Percent of industries in which employment[1] increased

Year and month	Over 1-month span	Over 3-month span	Over 6-month span	Over 12 month span
1975				
January	15.1	12.8	12.8	16.6
February	15.7	12.8	11.9	17.4
March	25.6	18.6	17.7	17.7
April	39.0	32.3	28.2	20.6
May	51.2	43.9	41.6	27.0
June	40.7	52.3	56.7	40.7
July	58.1	57.0	67.2	50.6
August	73.0	76.2	70.1	63.1
September	80.8	81.7	75.3	72.4
October	66.9	74.1	82.3	77.3
November	62.2	72.4	83.4	80.2
December	74.1	74.7	81.7	82.6
1976				
January	78.5	82.0	83.1	86.0
February	77.9	84.3	81.7	84.6
March	74.1	85.2	79.9	81.1
April	79.4	77.9	79.4	74.4
May	66.6	71.5	70.9	79.7
June	54.1	61.0	68.6	79.1
July	57.3	52.9	57.0	74.1
August	47.1	62.5	57.3	74.7
September	69.8	56.7	63.7	78.5
October	42.4	62.8	69.8	76.5
November	69.5	58.7	73.5	75.0
December	73.0	79.9	78.5	74.7
1977				
January	75.0	79.7	89.0	75.9
February	73.5	86.0	86.6	75.6
March	82.3	85.8	83.1	78.2
April	77.6	84.0	80.5	78.2
May	68.6	73.3	71.5	80.4p
June	63.7	70.1	68.0	78.9p
July	65.7	56.1	68.3	
August	50.0	62.5	70.2p	
September	61.3	57.0	74.3p	
October	59.9	71.9p		
November	73.7p	76.0p		
December	77.8p			
1978				
January				
February				
March				
April				
May				
June				
July				
August				
September				
October				
November				
December				

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

Representative BOLLING. Thank you. We will proceed with Mrs. Slater.

STATEMENT OF COURTENAY M. SLATER, CHIEF ECONOMIST, DEPARTMENT OF COMMERCE, ACCOMPANIED BY H. KEMBLE STOKES, JR., STAFF ASSISTANT

Mrs. SLATER. I am very pleased to be here this morning. I have no new data to give you. I yield to Commissioner Shiskin on that point gladly, because we are all very happy with the news.

The preliminary estimates of fourth quarter 1977 gross national product (GNP) will not be available until next week. Hence, the comments I will make this morning are based entirely on my own rough estimates of what may have happened in the fourth quarter.

Total real GNP grew fairly strongly during 1977, probably about 5¾ percent when measured from the fourth quarter of 1976 to the fourth quarter of 1977. This growth was paralleled by very strong growth of employment and over a full percentage point drop in the unemployment rate over the same period.

The quarterly pattern during the year was one of a diminishing rate of overall real GNP growth, from a 7.5-percent annual rate in the first quarter to 5.1 percent in the third and perhaps 4 percent or a little less in the fourth. This slowing should not be interpreted as a progressive weakening of the economy, however. Most of the slowing is attributable to a change in the pattern of inventory accumulation.

Inventories were low when the year began, and a restoration to more normal levels made a large contribution to first quarter growth. Continued increases in inventory accumulation also contributed—although less dramatically—to second and third quarter growth. This is shown in the table attached to my statement.

The fourth quarter was a different story. Available data indicate that retail sales were very strong in the fourth quarter. This in turn resulted in much less inventory accumulation than in the previous three quarters. Hence, the overall GNP growth rate for the fourth quarter was below that of previous quarters, but the growth of real final sales—that is, all GNP components except business inventory accumulation—was the strongest of the year. The year closed with inventories in good balance with sales, so that further growth of final sales should be quickly and fully matched by growth of total production and employment.

The relatively steady growth of total final sales during 1977, of course, disguises far more erratic changes in the individual sectors of the economy. The year produced its share of random events and special factors which impacted on production: severe winter weather in the early months, a dramatic swing toward deficit in our foreign trade, drought and excessive heat in the summer months, and a dock strike and a coal strike.

These and other shocks were absorbed and did not prevent 1977 from being a year of solid and, on the whole, well-balanced growth. To me, this is impressive evidence of the resiliency and flexibility of the U.S. economy.

I have in my statement some slightly more detailed comments on individual sectors. The personal consumption sector advanced strongly

early in the year, was sluggish in the summer and, apparently, resumed strong growth in the fourth quarter.

Residential construction has been a strong sector this year, stronger than expected. A good surprise. Business investment was fairly strong, but we might have wished that more could have been in new plant construction. There was a major swing in the trade balance toward a deficit and this subtracted from the GNP total.

Government purchases, after being essentially stable for a long time, rose strongly in the second and third quarters. In the fourth quarter, we suspect that the Federal Government purchases have leveled off and will show little change in either direction. State and local government purchases should continue to grow. Part of the growth in State and local purchases, of course, reflects the special job creating programs which President Carter has instituted. I do think it is worth noting that even with the fairly strong growth of the Government sector this year. Government purchases grew more slowly than did total GNP during 1977 and, therefore, declined as a percent of the total GNP.

Per capita real disposable income grew quite strongly last year, and profits rose somewhat more rapidly than GNP.

This, I hope, gives you a view of production growth in 1977, as best we know it at this time.

In summary, I think we should view 1977 as a year of considerable progress toward economic recovery, although as expected, it did not carry us all the way, and several more years will be required to reach some reasonable approximation of full employment.

Thank you.

[The prepared statement of Mrs. Slater follows:]

PREPARED STATEMENT OF COURTENAY M. SLATER

I am pleased to be here this morning to review last year's trends in income and production as revealed by the National Income and Product Accounts.

Preliminary estimates of fourth quarter 1977 Gross National Product (GNP) will not be available until next week. Hence, the comments I will make this morning are based entirely on my own very rough estimates of what may have happened in the fourth quarter. When complete data for the fourth quarter become available, my estimates may turn out to have been very rough indeed.

Total real GNP grew fairly strongly during 1977, probably about 5¾ percent when measured from the fourth quarter of 1976 to the fourth quarter of 1977. This growth was paralleled by very strong growth of employment and a full percentage point drop in the unemployment rate over the same period.

The quarterly pattern during the year was one of a diminishing rate of overall real GNP growth, from a 7.5 percent annual rate in the first quarter to 5.1 percent in the third and perhaps 4.0 percent of a little less in the fourth. This slowing should not be interpreted as a progressive weakening of the economy, however. Most of the slowing is attributable to a change in the pattern of inventory accumulation.

Inventories were low when the year began, and a restoration to more normal levels made a large contribution to first quarter growth. Continued increases in inventory accumulation also contributed—although less dramatically—to second and third quarter growth. This is shown in the table attached to my statement.

The fourth quarter was a different story. The presently available data indicate that retail sales were very strong in the fourth quarter. This in turn resulted in much less inventory accumulation than in the previous three quarters. Hence, the overall GNP growth rate for the fourth quarter was below that of previous quarters, but the growth of real final sales (that is, all GNP components except business inventory accumulation) was the strongest of the year. The year closed with inventories in good balance with sales, so that further growth of final sales should be quickly and fully matched by growth of total production and employment.

The relatively steady growth of total final sales during 1977 of course disguises far more erratic changes in the individual sectors of the economy. 1977 produced its share of random events and special factors which impacted on production: severe winter weather in the early months, a dramatic swing toward deficit in our foreign trade, drought and excessive heat in the summer months, a dock strike, a coal strike. These and other shocks were absorbed and did not prevent 1977 from being a year of solid and, on the whole, well-balanced growth. To me, this is impressive evidence of the resiliency and flexibility of the U.S. economy.

To review the sectors quickly:

Led by a boom in auto sales, personal consumption advanced strongly early in the year, then turned somewhat sluggish in the summer months—except for a surge in energy services due to heavy use of electricity for air conditioning. In the fourth quarter, consumption apparently has resumed a strong growth trend, though no longer with autos in the lead.

Residential construction was interupted by bad weather last winter, but recovered quickly. The continued high level of activity in this sector has been a pleasant surprise.

Business fixed investment grew fairly strongly in 1977 but much of the growth consisted of purchases of motor vehicles and other equipment. Construction of new plant facilities rose only modestly.

Higher oil imports and sluggish growth abroad led to a $15 billion swing toward deficit in the net export balance (in current dollars) from the third quarter of 1976 to the third quarter of 1977, and this was a major offset to growth in other sectors. The large trade deficit continued in the fourth quarter, but the October–November dock strike has made the figures difficult to interpret.

After a long period of essential stability, real government purchases rose strongly in the second and third quarters. In the fourth quarter, there probably was little if any further real growth of Federal purchases, but State and local purchases continued to rise. The growth of State and local spending has been in part the result of the special job creation programs instituted by the Carter Administration. Even so, total government purchases grew more slowly than private purchases last year, and thus declined as a percent of total GNP.

Per capita real disposable income grew throughout last year and by the third quarter was more than 4 percent above year earlier levels. Total personal income rose strongly in October and November, and there is every reason to suppose that this resulted in further strong gains in real income per capita in the fourth quarter. It should be noted, of course, that much of the gain in average real income has resulted from the rising ratio of employment to population. Personal tax reduction also contributed to disposable income growth. The average before tax real income gains per worker were fairly modest.

Corporate profits from current production (that is profits including inventory valuation and capital consumption adjustments), which had slumped badly in the fourth quarter of 1976, remained low in the first quarter of last year, but revived strongly in the second quarter and continued to grow in the third. If profits leveled-off in the fourth quarter, they still were far above year ago levels. For 1977 as a whole, profits from current production in current dollars probably averaged some 9 percent higher than the previous year. This particular profit measure, which is a before-tax measure is not readily available on a deflated basis. Two deflated measures of corporate profits *after taxes* are published by the Commerce Department. Total after tax profits adjusted for inflation probably rose 5½ to 6 percent in 1977; after tax profits from current production adjusted for inflation may have risen about 9 percent.

I have attempted to review some of the important aspects of production growth in 1977 as best we know them at this time. I have indicated that I view 1977 as a year of considerable progress toward full economic recovery, though, as expected, one which leaves us still far short of "maximum employment production, and purchasing power."

CHANGE IN REAL GNP, FINAL SALES, AND INVENTORY ACCUMULATION

[Seasonally adjusted annual rate]

	1977		
	I	II	III
GNP (percent change)	7.5	6.2	5.1
Final sales (percent change)	3.8	5.1	4.4
Business inventory accumulation (change in billions of 1972 dollars)	11.5	3.5	2.5

Representative BOLLING. Thank you.

Senator Proxmire.

Senator PROXMIRE. Mr. Shiskin, it appears that while December was a spectacular month in the improvement in the unemployment rate, a drop from 6.9 to 6.4, that is composed of several components which we don't usually expect. There wasn't that kind of a big surge in the economy in that 1 month, obviously.

As I take it, the additional jobs of 409,000 was a little less than you had for that quarter on the average. I think you said something like 500,000 per month. Furthermore, it was about in keeping with what you had during the year. So that the heart of it seems to be a moderate increase in the work force instead of a big increase in the work force during that month, a seasonal adjustment factor you said would have made no difference?

Mr. SHISKIN. That is right for December, but it did make a difference for November.

Senator PROXMIRE. The reason I ask these questions is it seems if we are going to have a substantial improvement in unemployment in the coming year it might come as much from a moderation in the growth in the work force as from an increase in the number of jobs.

So, could you give me your estimates, if you have one, of the projection of the growth in the work force in 1978?

Mr. SHISKIN. About 2.3 million is our estimate. The actual increase last year was exceptionally high.

Senator PROXMIRE. If you have only a 2.3 million growth in the work force——

Mr. SHISKIN. No. The question I answered was on the labor force and not employment. I don't have an estimate of the increase in employment.

Senator PROXMIRE. What was the increase last year in the labor force?

Mr. SHISKIN. About 3 million, December to December.

Senator PROXMIRE. And you expect, again, a 2.3?

Mr. SHISKIN. Yes.

Senator PROXMIRE. So that is about 700,000 fewer to enter the labor force in 1978 compared to 1977?

Mr. SHISKIN. Right, but the 3 million December to December increase exceeds the annual average increase which was 2.6 million. We think that an annual figure is preferable, because labor force growth is uneven throughout the year. The implication of all of this is if we have anything close to last year's increase in employment, the unemployment rate will go down more.

Senator PROXMIRE. You are saying that the consensus of the private economists was that we would have a growth of about 4½ percent?

Mr. SHISKIN. I cited four of them, but they are among the most distinguished forecasters in our profession.

Why don't you address that to Mrs. Slater? I can only speak for four economists. She can speak for a lot more people.

Senator PROXMIRE. Mrs. Slater, could you tell us the view which you seem to feel that the private economists may have?

Mrs. SLATER. Commissioner Shiskin used the number of 4½ percent for overall GNP growth for next year. I think I would tend to agree with him that that may be a little on the low side.

I would expect, particularly with the President's proposed tax reduction plan, that overall GNP growth next year would be above that.

Senator PROXMIRE. Based on your rough figures for the fourth quarter, what was the GNP this year?

Mrs. SLATER. Measured from the end of last year to the end of this year, probably 5¾ percent.

Senator PROXMIRE. So you would expect a growth of somewhat less than last year, about 1 percent less?

Mrs. SLATER. Maybe, not quite.

Senator PROXMIRE. The basis of that and the expert estimates we have of the work force, could you give us your estimates of what unemployment is going to look like a year from now if we make those assumptions?

Mrs. SLATER. It will decline only gradually during 1978 based on those assumptions, which are reasonable assumptions. It requires, as you well know, something between 3½ and 4½ percent real GNP growth to keep the unemployment rate from rising.

Senator PROXMIRE. I am asking for an approximate figure. It is now 6.4.

Mrs. SLATER. If GNP growth is in the range that we anticipate, that might bring you a one-half percentage point reduction in unemployment.

Senator PROXMIRE. A 5.9 percent, perhaps, by the end of the year?

Mrs. SLATER. I would suggest, because monthly figures are, as you know, somewhat erratic, it is helpful to look at these things in terms of quarterly averages, and I think we should point out the unemployment rate for the fourth quarter averaged 6.8 percent, I would think, speaking very, very roughly that a one-half percentage point decline from that, from fourth quarter to fourth quarter would be reasonable.

Senator PROXMIRE. Are you looking at the revised figures?

Mrs. SLATER. No, I am not; 6.6 is the revised.

Senator PROXMIRE. That would give you what?

Mrs. SLATER. Over 6 percent.

Senator PROXMIRE. What is your projection, Mr. Shiskin?

Mr. SHISKIN. None of us are very good in making projections. My guess is that Mrs. Slater is a little pessimistic.

Senator PROXMIRE. You think it might be 6 or a little less?

Mr. SHISKIN. Yes.

Mrs. SLATER. I will be very delighted to be proved pessimistic, I assure you.

Senator PROXMIRE. Do you accept that 2.3 million growth in the work force as something that will be pretty likely?

Mrs. SLATER. I find it very difficult to predict a precise number. I am sure that is reasonable. That would be a strong growth in the work force. We had extraordinarily strong growth this year and——

Senator PROXMIRE. So from the standpoint of unemployment the assumptions are rather conservative, the 2.3 million projected growth in the work force is a strong growth and it could be less than that, a little more likely to be less rather than more?

Mrs. SLATER. I would expect a strong growth in the work force. You will recall that the BLS projections of the labor growth have repeatedly proved too low because of the entry of women in the labor force,

particularly, has been stronger than people anticipated. I would think that continues to be strong.

So I think a reasonable expectation is a strong growth in the labor force and that will slow the decline in unemployment.

Senator PROXMIRE. Mr. Shiskin, do you expect to have any revision in your growth of labor force estimates to be looking at it with that in mind?

Mr. SHISKIN. We always revise them.

Senator PROXMIRE. When would you do that?

Mr. SHISKIN. Bob Stein is the expert on that. I will turn it over to him, if you agree.

Mr. STEIN. We are in the middle of reviewing now and the 2.3 million figure is based on the new look rather than on the long-term projections published last year.

Senator PROXMIRE. 1977 was a banner year in terms of growth and jobs, we have never had a year like it, have we?

Mr. SHISKIN. It was a very good year.

Senator PROXMIRE. In terms of growth and labor force, it was not a good year with inflation and unemployment, it was still too high but it was a great year in terms of growth. The reason it wasn't better in unemployment was because of the labor force situation.

Now, you certainly didn't anticipate that 3 million growth in the labor force in 1977 last year, a year ago, did you?

Mr. SHISKIN. No; I don't think so.

Senator PROXMIRE. What was the reason for that and why do you think it is likely to be a 1-year aberration rather than something to expect for sometime?

Mr. STEIN. The 3 million is really on a December to December basis; we make our projections on an annual average basis, which for 1977 was 2.6 million.

Senator PROXMIRE. You would agree that everybody's estimates were way below that 3 million. And, again, what was the reason for that remarkable sharp increase?

Mr. STEIN. I think we would agree, as Mrs. Slater pointed out, the entry of women in the labor force has been much stronger than we anticipated earlier.

Senator PROXMIRE. Why can't we anticipate that will continue for a while. Lots of women are still not working.

Mr. STEIN. We will.

Senator PROXMIRE. How about teenagers, hasn't that been increasing?

Mr. STEIN. The teenage labor force has been increasing but at the same time the teenage population is now beginning to level off.

Senator PROXMIRE. Wasn't the peak of the baby boom in 1957 and wouldn't you expect them to be coming out of college and increasing the work force?

Mr. STEIN. The actual numbers in the teenage group will be declining.

Senator PROXMIRE. Mr. Shiskin, there is another interesting factor here. I notice that in December there was an actual drop in the number of hours worked. Usually, when you have growth, you have longer hours worked, it is logical people will work longer if there is more for them to do but you have a drop in December.

Mr. SHISKIN. There is a special situation there, Senator. We had a sharp drop in mining, and although it is a small industry, it affected the overall total. If we didn't have the coal strike we probably would have had no drop.

Senator PROXMIRE. That is a very puzzling figure. It puzzles me and I am sure many Members of Congress and many members of the public.

Why is it that you count a person on strike as employed, not unemployed, employed, as at work. It does not make any sense. He has no pay. He doesn't work, and, yet, he is considered employed.

Furthermore, you have a conflict between your two series. Your household survey counts him at work, and your establishment data counts him not part of the work force, I guess.

Mr. SHISKIN. Let me ask a rhetorical question, which I think answers your question. How should we handle people on vacation or on sick leave or on special leave without pay? Even though he or she has to do something special he still has a job.

In the household survey, we ask the question, "Do you have a job?" On the other hand, in the parallel survey of establishment, we go to a piece of paper which has payrolls on it. If a person is not on the payroll, he is not getting paid and is not counted.

So that is one of the differences between the two series.

Senator PROXMIRE. What do you do if somebody (*a*) has been on strike for a long, long time, and (*b*) if he does what many, many people on strike do, he gets a job, a job as a cab driver, a job as a handyman, bartender, whatever; do you count him twice employed?

Mr. SHISKIN. No. He is employed. Another difference between the two surveys is that in the household survey, an employed person is counted only once, whether he has one job or five jobs, whereas, in the payroll survey, we just count numbers of persons on payrolls.

Now, if a person is on strike for a long time and he goes out and drives a taxi, he will show up on somebody's payroll—as long as he is not self-employed—and he will be counted as employed. In the household survey, he might not even indicate that he is on strike but rather will report the job he currently has.

Senator PROXMIRE. I just wonder. The only reflection, then, you get in your statistics, household statistics of a strike is a secondary effect. If the coal strike should continue, for example, for many months and, therefore, the steel industry has to lay off people, then, they are counted as unemployed, the people laid off by the steel industry?

Mr. SHISKIN. Yes; they would be unemployed. I know our definitions are not perfect. Upon my recommendation and that of many others, the President is appointing a commission to test them, which I think is a wholesome thing. Meanwhile, however, we use what we have now.

The current definitions have been reviewed by many groups—peer groups, commissions—and they seem about right. I think they are quite reasonable. But the new group appointed by the President is about to take another look at them.

Senator PROXMIRE. The people who are on strike now working in the coal mines, are counted as employed. Can you give us any estimate to what effects that has had, if any, on the unemployment figures?

Mr. SHISKIN. No; because they are not counted as unemployed. We don't have that. Maybe next month we will be able to give you something.

Senator PROXMIRE. What is your judgment?

Mr. SHISKIN. My general impression is that the impact on other industries has been very small up to now.

Mr. STEIN. We don't really have any measurements of that which we would be able to come up with at this point.

Senator PROXMIRE. Can you next month tell us what you expect the effects of the coal strike might be if it goes on through indirect unemployment?

Mr. SHISKIN. We will try.

Senator PROXMIRE. I think it would be helpful for us to have some kinds of supplementary figures, knowing how many people are on strike, because these are people, most of whom are not working and are not paid.

Mr. SHISKIN. We do have that.

Senator PROXMIRE. How many are on strike?

Mr. SHISKIN. As I remember, the figure is about 215,000. However we also have figures, which in a sense are very relevant, showing the net change in the number of people on strike. There are some people going on strike each month and some people going back to work.

Our estimate this month of the net increase in the number of persons on strike is 115,000. In mining, approxmiately 150,000 coal miners went out on strike in December. There was a substantial number of people, including about 30,000 from the aircraft industry and 45,000 overall from manufacturing, who returned to work last month. That should be taken into account when considering this big rise in manufacturing employment.

Senator PROXMIRE. People returning from strikes——

Mr. SHISKIN. I am talking about the establishment survey.

Senator PROXMIRE. But the establishment figure isn't 6.4, it is something else.

Mr. SHISKIN. The point I am making, if you look at the establishment figures which already show an increase in employment, and you add to that an estimate—which we think is pretty good—of 115,000 as the net increase of the number of persons on strike, the employment measured in that survey would have gone up by 215,000 plus 115,000, giving us an increase of 330,000, which is a very healthy figure.

Senator PROXMIRE. Could you give us your estimates of the effect of the coal strike on the economy today?

Mrs. SLATER. I think it will not have much effect in the fourth quarter, because there was a high level of coal production in the early part of the fourth quarter in anticipation of the strike.

Senator PROXMIRE. How about 1978?

Mrs. SLATER. We don't have any precise estimate of what impact it might have if it were to continue.

Senator PROXMIRE. Do you have any judgments on that?

Mrs. SLATER. No, it would have obviously some impact.

Senator PROXMIRE. I got the impression from you, Mr. Shiskin, when you indicated that unemployment might go down below 6 percent this coming year, if we have anything like the year we have just had, how close do you feel that is to so-called full employment, that is on a level where there might be a serious effect on the inflation?

Mr. SHISKIN. There is a great debate among economists as to what full employment entails, and there are very strong differences of opinion. Our contribution to that debate was a study of the areas in which the figures today are not comparable with the figures 20 years ago, and some examples of that are as follows:

First of all, the most obvious factor affecting comparability is the big change in the labor force mix, which now includes relatively more women and teenagers.

Another factor is changes in the minimum wage law.

A third factor is the existence of the unemployment insurance system and the growth in the proportion of multiple earner families, which both give employees more "elbow room" to look for new jobs.

Numerous agencies in Washington have come up with very different estimates of the full-employment rate of unemployment, ranging from 4.0 to about 5.3. So while we don't have an individual estimate, we do have a range.

Senator PROXMIRE. So you would suggest that even if we get below 6 percent and do well that we are not as full employment at that rate, and there are policies that would help us achieve that level that would not be inflationary?

Mr. SHISKIN. Yes, sir. I think that is the implication.

Senator PROXMIRE. Mrs. Slater, what is your view on this, is it about the same?

Mrs. SLATER. Well, certainly I would agree that during the coming year we are not going to approach anything like an inflationary danger point in unemployment.

Senator PROXMIRE. Let me interrupt to say, as I understood, I am told that you did not, in your estimates of a 4 to 5 percent growth in 1978, assume that there would be any tax cut?

Mrs. SLATER. That is an estimate that was published in the Commerce Department's Industrial Outlook which had to go to press some time ago.

Senator PROXMIRE. And it projected no tax reduction?

Mrs. SLATER. At that time we did not know what the policy would be.

Senator PROXMIRE. What would a $25 billion tax cut do to that; how much of a difference, half a percent, 1 percent?

Mrs. SLATER. The tax cut which the President would propose would not take effect until October 1, so on the GNP for 1978, it would not have an enormous effect. It would have some, but I don't have a qualification.

Senator PROXMIRE. There would be no retroactivity?

Mrs. SLATER. There may be some in the business tax area but the large personal tax cut which the President has indicated he will propose would not have a retroactive feature.

Senator PROXMIRE. It would on the fourth quarter, and also an anticipatory effect.

Mrs. SLATER. Some. It is worth pointing out the larger effect of that tax cut would be in 1979 and in our best judgment 1979 looks like a year when that additional support will be needed.

Senator PROXMIRE. If the tax cut materializes and goes into effect on October 1, and you say it would be a small effect, would it be significant enough to give you another one-half or 1 percent or something of that kind or not?

Mrs. SLATER. We will have an administration forecast forthcoming in the economic report before very long and it would be inappropriate for me to jump the gun on that.

But what I said in the industrial outlook was GNP growth between 4 and 5 percent. That is quite a wide range and with the tax proposal we would expect something toward the upper end of that range.

Senator PROXMIRE. What is your view of the full employment rate?

Mrs. SLATER. My view, despite what Commissioner Shiskin feels has been a great debate, is that there is very little debate. There is far too much consensus among economists that the full employment-unemployment rate is much higher than it used to be.

I think the economics profession has been quite deficient in completely analyzing this question and I think we don't know the answer. However, I would certainly not put it above the 5 percent range. So long as we have unemployment rates above 5 percent our policy definitely should be targeted toward bringing them lower at as rapid a pace as we can reasonably achieve.

When we get to 5 percent I think we will have to proceed much more cautiously. We will have to put more and more emphasis on structural approaches to reducing unemployment as well as overall macroeconomic policy, but unlike many of my professional colleagues, I remain reasonably optimistic that over time and if we proceed gradually and sensibly, we can bring the unemployment rate down considerably below 5 percent.

Senator PROXMIRE. And are the recommendations made by the President and the administration sufficient to provide that kind of structural improvement so we have the skills with the people who don't have the skills now and so that the very, very high unemployment that we have for blacks and teenagers, that that is likely to be improved?

Mrs. SLATER. I think the administration will come forth with policy proposals in that area. We are talking about a considerable timeframe now. The 5-year budget projections which the administration previously released indicate an interim objective of getting the unemployment rate down to 5 percent or slightly under, perhaps in late 1980.

So, when we talk about additional things to be done to bring it further down, we are looking somewhat into the future and we certainly will need new and more imaginative policies.

Senator PROXMIRE. The chairman is being very generous with the time and I have offered several times to yield to him but he prefers to have me continue.

Mrs. Slater, would you break down your assumptions on growth in 1978; that is, break them down by category, the Government spending, the consumer area, the business investment, and so forth?

You must make some assumptions with respect to these areas, what kind of growth you expect in each.

Would you tell us what they are?

Mrs. SLATER. We do make assumptions and, again, I will have to ask for your patience in waiting for the CEA report to deal with that. I can give you some general ideas. Some sections of the economy have been very strong in 1977; two that stand out are motor vehicle sales and residential construction. Those we expect to remain at high levels

but not grow much further. There does not seem to be much room for further growth in those sectors.

Senator PROXMIRE. You would expect motor vehicle sales and residential construction to be not quite as strong in 1978 as in 1977?

Mrs. SLATER. About the same.

Senator PROXMIRE. I understand the Department indicates a 2- to 3-percent decline in automobile sales in 1978. What effects would that have?

Mrs. SLATER. I would describe that as staying roughly at the current high levels. It would not contribute to the growth of employment and, of course, we have known for a long time that the automobile industry is not one to look to for employment growth. They are not a growing industry in terms of employment.

The sectors one would look to for growth would be personal consumption other than automobiles, consumer durables, furniture.There has been a lot of homebuilding this year and people will furnish their homes.

Senator PROXMIRE. Do you expect the savings rate to drop a little?

Mrs. SLATER. I think the savings rate will not be changing a great deal. It had dropped sharply but by the end of the year it had come back up. It is still, perhaps, a little below what might be a normal or average level.

State and local governments will be a growing sector particularly in the first half of the year. The business-fixed investment sector will be growing.

Senator PROXMIRE. State and local government has considerably more assurance. Don't we have some notion on the basis of their budgets and so forth, some clearer understanding of what they will be likely to be spending in 1978?

Mrs. SLATER. Their borrowing has picked up indicating that State and local governments feel in stronger positions and are prepared to undertake more construction projects. We do know——

Senator PROXMIRE. You expect that to pick up how much, roughly?

Mrs. SLATER. We do expect it to pick up. The public service and local public works programs operate through grants to local governments, they show up in the State and local sector of the GNP.

Those programs are still building up in terms of outlays and will continue to build up until about midyear next year and will be contributing to the economic growth, particularly in the first half of the year.

Senator PROXMIRE. The Federal Government?

Mrs. SLATER. The Federal Government will be rising some, perhaps not as strongly as this year. In terms of Federal purchases, which is not all Federal spending, it wouldn't be a leading sector.

Senator PROXMIRE. How about business investment?

Mrs. SLATER. It will be a growth sector. The surveys we have so far do not indicate as strong a growth as we would like to have. I do think it is reasonable to suppose that when an energy bill is passed and when the details of the President's proposals are available, that should make some contribution to business confidence and readiness to go ahead with investments. It would seem reasonable to expect the surveys, which were taken during a period of considerable uncertainty to be a little on the low side.

Senator PROXMIRE. I understand the estimates are something like 10 or 11 percent nominal growth and in real terms that would be 5 percent or so, that would be about what we had last year, not a great deal of change, not a big improvement. Do you think it may be better than that?

Mrs. SLATER. That 5 percent would be a little less than 1977's 8 or 9 percent, but I think we could see better performance than what is suggested in those surveys, after there is more certainty about policy.

Senator PROXMIRE. I would like to ask Mr. Shiskin about something that concerns me very much as a Senator from Wisconsin and concerns the people out in Milwaukee quite a bit. The New York Times of December 31 contained an article entitled, "For Blacks, Milwaukee Is the Toughest Place To Find a Job."

That article contained a number of statistics and conclusions based on data from your shop, the Bureau of Labor Statistics.

First of all, these year-old statistics for 1976 showed 9,000 blacks unemployed in Milwaukee, not the 11,000 in that article. Do you have information on that; is that correct?

Mr. SHISKIN. We sent you a memorandum and pointed that out.

Senator PROXMIRE. The Times article reported adult unemployment among Milwaukee blacks as 19.8 percent, isn't the correct figure 16.7 percent?

Mr. SHISKIN. I don't remember that. The figures we sent to you were the best estimates we could make. Some of the figures in the Times article are clearly wrong.

Senator PROXMIRE. Could you explain to me how these figures for blacks are used and how they are obtained?

We are very proud of Milwaukee, but it is a relatively small example of the United States as a whole.

Mr. SHISKIN. Sir, my principal deputy, has been working on the local area unemployment statistics. So, with your permission, I would like to ask her to come up, as she can answer these questions better than I.

Senator PROXMIRE. I understand there is less than 30,000 households that were surveyed.

Mr. SHISKIN. I would like to say Mrs. Norwood's activities are not confined to Milwaukee, sir. She covers the full range but she knows more about Milwaukee than I do.

Mrs. NORWOOD. There are approximately 340 households in the Milwaukee SMSA in the current population survey which are selected for interview each month. That makes about 4,000 or so per year. Our information shows that blacks constitute somewhere around 7½ percent of the population, and, of course——

Senator PROXMIRE. The figure I gave was for the city. The SMSA figure would be much less.

Mrs. NORWOOD. You are correct, the samples are very small.

Senator PROXMIRE. How small, how many households would that be? Would 27 be about right?

Mrs. NORWOOD. That would be about the right number per month for black households in the SMSA.

Senator PROXMIRE. How large is the error rate for those statistics and how can they be improved?

Mrs. NORWOOD. For the statistical area of Milwaukee, I have the error rates at 90 percent confidence level, 7.9 percent on the total

unemployment rate; for the total black unemployment rate, it is 17.7 percent.

Senator PROXMIRE. That is teenage?

Mrs. NORWOOD. No, total. The error rate for teenage black unemployment is much larger than that.

Senator PROXMIRE. What is the variation, then, that this might be when you have that kind—you have thrown some statistics at me that are not very clear in my mind. The figure I have is 16.7 percent for the unemployment figure for blacks in Milwaukee.

Perhaps that is wrong. I think you said 17 percent just now. Oh, the adult unemployment is 16.7 percent; is that right?

Mrs. NORWOOD. You recall, Senator, that our release had the range of error set alongside the figures in the column right next to the figures, so that for the Milwaukee SMSA the total unemployment rate of 6.3 for 1976 ranged from 5.8 to 6.8, and for the city, on a rate of 8.7, the error ranged from 7.7 to 9.7.

Senator PROXMIRE. That was for the entire city?

Mrs. NORWOOD. That is right. For blacks, in the SMSA it was in the range of 16.3 to 23.3; and for the city, the black unemployment rate ranged between 16.6 to 23.7.

Senator PROXMIRE. Therefore, to compare Milwaukee with other cities and to say it is the highest in Milwaukee——

Mrs. NORWOOD. That is not correct.

Senator PROXMIRE. That is not correct.

Mrs. NORWOOD. No; that is not correct. You will recall in the little statement we sent to you we had a table showing some five other metropolitan areas, and the rates for Milwaukee fell within the error range of those five areas, so it is not correct to single out Milwaukee on the basis of the data that we had that we published in the release.

The error rates which were included in the release showed that, I believe.

Senator PROXMIRE. I want to thank you very, very much.

I certainly don't want to give the impression that we are satisfied with the unemployment rate for blacks in this country; it is a disgrace. I think it is the No. 1 economic injustice we have in America today, and it is too high in Milwaukee, much higher than it should be. But I think the facts suggest that Milwaukee's rate on the basis of the statistics you have cannot be compared with other cities; you cannot tell whether it is higher, lower, or about the same as other cities.

Mrs. NORWOOD. One rather interesting aspect of this, Senator, is if you compare the unemployment rates for the annual average for 1976 for the Milwaukee SMSA with the national unemployment rates for the same period, you find that in many categories, Milwaukee had a somewhat lower unemployment rate than the national rate, although the rate for black adult men was somewhat worse than the national average.

Senator PROXMIRE. I certainly accept that. There is no question that Milwaukee had a better unemployment rate overall than other cities and, I guess, than the national rate, but the blacks in Milwaukee are doing basically worse.

I accept that. I think the notion that they are doing worse in Milwaukee than any other city just does not stand up on the basis of your statistics, and I take it you concur in that; is that correct?

Mrs. NORWOOD. Yes; with the possible exception of adult black men, and that is a very slight difference.

Senator PROXMIRE. What does that mean, the possible exception of adult black men? Do you think it is possible the adult black unemployment in Milwaukee is the worst of any cities?

Mrs. NORWOOD. Not the worst of any cities, but somewhat higher than the national rate.

Senator PROXMIRE. How about the teenagers?

Mrs. NORWOOD. Teenagers, I think, when compared to the national unemployment rate for black teenagers, is really pretty much within the error range.

Senator PROXMIRE. Thank you very much. I want to apologize for this most unusual chairman. When I am chairman of the committee, I usually hog all the questions, and I won't let anyone else come on until I am through.

Dick is a very generous man, and I deeply appreciate having the opportunity to question at such length. I apologize for taking the time.

Representative BOLLING. There is no reason to apologize. I insisted that you do it that way.

I would like to establish the relative optimism-pessimism of a couple of private forecasts on GNP for the next year, and yours.

I understand that the most recent Wharton forecasts project real GNP to grow at the rate of 4.5 percent in 1978; however, the forecast assumes a tax cut of approximately $20 billion in July of 1978, Data Resources Inc. also forecasts a 4.5 percent growth rate in 1978, but they also assume about a $24.3 billion tax cut effective October 1, 1978.

I understand that yours was about 4½ and based on an October 1 effective date. I am curious as to how you compare these slightly different approaches, and I am curious as to which is the more optimistic or vice versa, in your opinion.

Mrs. SLATER. Congressman Bolling, I have tried very hard to avoid giving forecasts. I must continue to do so. I am not familiar with those forecasts, but as you are describing the policy assumptions, they are fairly similar, not different enough to have big impacts on the numbers, and they are fairly similar to what the President has indicated he plans to propose.

Those, I think, are not unreasonable or impossible GNP forecasts. I think I have indicated in an earlier discussion that my own judgment would be that those GNP forecasts are a little on the low side.

Representative BOLLING. The tax cut is going to be one of the variables in what happens in the coming year—in the coming 2 years, I guess, is a better way to put it.

In terms of the overall long-range objective of the administration, in terms of a relatively short-range set of problems, how much of the help or benefit that one gets from the tax cut may be directly affected by the kind of monetary policy that we have?

Is it possible that we would face a situation even though there is a new Chairman of the Board at the Fed that the Congress would pass a significant tax cut that could be substantially vitiated in terms of its effect on the GNP and employment by monetary policy?

Mrs. SLATER. That is always a possibility of which one should be aware, and, certainly, if monetary policies were to turn restrictive, it could offset, in part, the favorable impact of the tax cut.

I do not anticipate that will happen. My forecast is based on the assumption that the Federal Reserve will accommodate fiscal policy.

Representative BOLLING. There is one indication that it might be more accommodative in the future than it has been in the past.

The other factor that seems to me to be in play very much, that I have been thinking about for 2 months, as an individual Congressman who has to act initially on the conference on the energy bill, and, then, as somebody who will have to vote for or against a conference report—if we are able to produce one finally—I am very curious, and this has to be unscientific, I am very curious as to the impact, No. 1, of failure to act on an energy policy—in other words, the failure of Congress to produce a product—and No. 2, how important the kind of product that the Congress produces is going to be on an overall long-range basis.

It looks to me, to be very specific, that for reasons that everybody knows that has paid any attention to it, as if we are going to have what I would consider a very bad energy bill.

What I am trying to figure out, and I find it extraordinarily difficult to come to any rational conclusion, is whether any energy bill, even a very bad one, is better for the economy than no energy bill.

I don't see any constant reiteration of the constant accumulative impact on our economy of our failure to have any energy policy over a period of even many years, and it occurs to me that this may be the most important hidden factor in all of our calculations about GNP and employment.

Am I completely off base on that?

Mrs. SLATER. No, sir. I think one of the things that has had some short-run adverse impact on the economy has been energy policy. I am not a businessman, I have never met a payroll, but if I were a business person, considering an investment decision, I would want some certainty as to whether I had to build a coal-fired plant, a gas-fired plant, an oil-fired plant and what the energy costs were going to be.

Questions of that sort it would seem to me are having some adverse effect, and from that point of view, it would be very desirable and very important to do whatever we are going to do in an energy policy and to go ahead and do it.

It is too bad it has been delayed this long. Another aspect of this is the foreign perception of our failure to act on energy policy. Other countries cannot understand the profligate way in which we use energy and the long delay now since the price increases in doing anything very effective about conservation.

They see the effect of this on the trade balance. It is obviously a cause of our trade deficit. We are not making our contribution to the world economy when we don't get around to our own energy policies.

However, your question to me almost was: Is it better to enact a bill that is worse than nothing? Without getting into the specifics of particular provisions of the bill, that is rather hard to answer.

I am not an expert in this area. I would certainly hope that Congress can enact something reasonably in line with what the President proposed, which I think was a good proposal.

Representative BOLLING. The House generally went along with what the President proposed, to a degree, certainly a larger degree than the Senate, and I was sympathetic to that approach. But we

have been playing chicken on this matter for so long, for almost at least, observably, a decade—some people recognized it two decades ago—it seems to me we are getting to the point where almost anything is better than nothing.

The other question that I am curious about is equally general or as general. One of the things that has disturbed me is that we clearly have developed a kind of inflation which while not consistent in its chronic nature is consistent in being sort of endemic. There is always the possibility that it is going to be out of hand again and we are never quite sure why or how and despite that, there is absolutely no indication that the administration is going to swim upstream, or, perhaps, that the Congress is either, in terms of having an incomes policy, that is, some kind of a policy that tries to move in or the ratchet effect that I think everybody, regardless of their predilection, recognizes now exists between the market power of business and the market power of labor.

It seems to me that somewhere along the line that we are going to have to begin to put these massive problems of monetary policy, questions of an energy policy, and the use of fiscal policy, on a more consistent and systematic basis—perhaps even doing the unheard of thing of allowing the President to have certain flexibility in increases and decreases in taxes within limits and, perhaps, with a veto. It seems to me that unless we do this, there is absolutely no possibility of this economy doing other than continuing to stumble blindly into very serious trouble without even having anticipated the relatively easy parts.

We could have anticipated this bulge in the labor force without any pain and did, in fact, because the people were born long before the events became painful. But it occurs to me that unless we begin to have an overall put-together of the great range of these difficulties that we simply are not going to have a manageable economy.

I don't think that anybody can say that the economy has been reasonably manageable in the last 3 or 4 or 5 years. My question is there. That is, Why don't we have to have an incomes policy?

Mrs. SLATER. As you know, I have been very sympathetic to your viewpoint on that. The difficulty we face at the present time is that any sort of voluntary incomes policy requires the understanding and cooperation not only of the President and the Congress but of the public, of business and labor and consumer groups.

It has been, for legitimate understandable historical reasons, difficult in recent times to obtain that cooperation and it is going to be a long, difficult challenge to put together the kind of coordinated policies that would be effective.

Representative BOLLING. I don't mean to interrupt you even at the end, but I surely agree that it is very difficult. I don't see any sign of even a beginning and the thing that worries me is that if there isn't any beginning at the level of the administration, it seems to me highly unlikely that there will be any beginning anywhere. Since it is so predictably an ele ient in our capacity to maintain relatively full employment without excessive inflation, I find it almost terrifying that we are not doing anything more about it; and I agree that it is difficult, even though you and I are both sympathetic to doing something.

Mrs. SLATER. I might add here, taking a much more shortrun perspective, I think while we are not satisfied with the current inflation rate and its failure to come down, we do feel some increasing confidence that the inflation rate is not going to accelerate next year.

There are some favorable factors, the low Federal price increase, the food supplies seem ample, the collective bargaining settle nents have been edging down slightly, these are offset by some unfavorable short-run things like the increase in social security taxes,

Representative BOLLING. Mr. Shiskin, I have no questions for you. I am so pleased with your report.

Senator, do you have some more?

Senator PROXMIRE. I have a couple I would like to wind up with.

Maybe Mr. Layng could do this or both of you could. The last response by Mrs. Slater referred to the expectations with respect to inflation. I know you are not in the prediction business but can you see on the basis of our past experience any encouraging elements?

I can think of one, I don't know if Mrs. Slater mentioned it or not. I may have missed it, but, certainly, the very good performance from the consumer standpoint on the food prices, the very bad performance from the farmers' standpoint, I would expect that food prices would be likely to increase in the coming year.

Are there other elements that you can give us a clear picture of here? We are hoping we have a diminution in unemployment and we may get down to 6 percent or below if things continue as we hope they will.

There may be some conceivable bottlenecks in the economy. As I say we expect that food prices may go up. If we continue to devalue the dollar, the cost of imported goods will rise in price.

Does this add up to a situation in which we can expect a more serious inflation in 1978 and 1977?

Mr. SHISKIN. I think that the factors which Mrs. Slater set out are quite valid. There are areas which suggest that the pressures on prices will be less.

Senator PROXMIRE. I didn't mention social security increases, the minimum wage increases, the very likely increase in natural gas prices, and, perhaps, oil prices, although oil prices are less likely to rise.

Mr. SHISKIN. I don't remember whether Mrs. Slater mentioned as a factor the good performance of the economy in terms of output and employment. If output increases and enough goods are provided, inflation is likely to be dampened.

On the other hand, let me mention an unfavorable factor: I think the recent trend of rising unit labor costs is bad.

Senator PROXMIRE. Because productively increases are not as promising as they should be?

Mr. SHISKIN. It is a very complex situation. In my judgment and that of Mrs. Slater, there are favorable factors and there are unfavorable factors. Particularly in price forecasting, it is very difficult to know how they will balance out.

We economists have not achieved outstanding success in any kind of forecasting but I think it is true that our record in price forecasting is the worst, so I am glad I am not in that business.

Senator PROXMIRE. It seems to a lot of people that the performance of the stock market and the Federal Reserve's action, the inflation situation, would seem to be less promising next year.

Mr. SHISKIN. I think there is one other element which is unfavorable and which is tied to unit labor costs. Typically, as you proceed in an economic expansion, costs rise more rapidly than prices, putting a lot of pressure on businessmen to raise prices. But it is a complex matter which is really very difficult to forecast—and I am glad I don't have to do it, and I don't intend to do this morning if I can get away with it.

Mr. LAYNG. I have nothing to add to that other than to point out that the rate of increase in the Consumer Price Index did accelerate for 1977. The rate increase between December 1975, at year end, and December 1976, was 4.8 percent. At the end of this year we will be between 6½ and 7 percent.

In November we stood at 6.7 percent. A large part of that did come in the food sector in the first half of the year. In the second half, performance on food was quite good. We are ending the year with some upward pressure. What direction that will take us in the future, I don't think is clear.

Senator PROXMIRE. You look at farm prices and they have gone through the floor and the farmers have a whale of a lot to complain about. There is no way they can continue with the less than parity they are now getting. The average income per farm last year was $7,000—it was $11,000 in 1973, and it has gone steadily down every year since then, while prices have gone up—farmers just cannot take that.

I would like to clear up a couple of things. I didn't ask you about the foreign sector and the effect that might have and what your expectations are with respect to that.

Mrs. SLATER. As you know, the foreign sector had a quite negative impact on GNP this year because the deficit was increasing. Dealing in a very general way, we would not expect the deficit to be increasing by any large amount next year.

On the other hand, neither would we expect it to diminish very much. Perhaps a little. So in terms of GNP performance there will be a neutral factor. They will not contribute much to the growth but neither will they be offsetting growth in the other sectors.

Senator PROXMIRE. I would like your expert advice on the effect of devaluation. Some economists argue that the devaluation of the dollar shows up in price but not really in trade, that is, the declining value of the dollar is said to have no impact on real trade flows and the prices just go up.

It is hard for me to accept that. It would seem to me as the dollar is devalued, we would be able to sell more abroad and we would buy less from abroad.

Mrs. SLATER. As a general proposition and allowing for some period to adjust, devaluations do have the effect of decreasing imports and increasing exports. We saw that in the early 1970's with the dollar devalued in 1971 and in 1973 we began to have very, very rapid growth of exports although that was not the only reason because there was general prosperity in the world economy.

With respect to recent developments, I think I should point out that the overall change in the value of the dollar, averaged across the cur-

rencies of the countries we trade with is not as great as you might expect.

Much of our trade is with Canada, our largest trading partner, where the U.S. dollar has appreciated in value. The question to address is whether the trade value of the dollar has changed that much and how much effect it will have on our trade balance. There will be some effects. Imports from Japan will be more expensive, and we could expect that to have an effect in reducing purchases.

Senator PROXMIRE. I want to thank both of you.

I guess we cannot give Mr. Shiskin full credit for reducing unemployment this year but I think this is a most happy and heartening—this is probably the best session we have had in a long, long time.

It is one thing to have 6.4 percent when you are going up and another to have it when you are going down.

Mr. SHISKIN. Yes, it is much better.

Senator PROXMIRE. It sure is. Your presentation was helpful and particularly that excellent letter you wrote me with respect to the seasonal factors you put in, in revising the unemployment figures.

If the chairman would permit, I would like to have that letter, if possible, printed at this point in the record.

Representative BOLLING. Without objection, it will be done.

[The letter referred to follows:]

U.S. DEPARTMENT OF LABOR,
BUREAU OF LABOR STATISTICS,
OFFICE OF THE COMMISSIONER,
Washington, D.C. January 9, 1978.

Hon. WILLIAM PROXMIRE,
U.S. Senate,
Washington, D.C.

DEAR SENATOR PROXMIRE: In my testimony before the Joint Economic Committee on December 2, 1977, I reported briefly on the work that the Bureau of Labor Statistics had undertaken to analyze the problem of seasonally adjusting the labor force series. During the past year, we have given the problem a comprehensive review. In the past few weeks we have distributed widely a research report on the subject, and have solicited advice from experts on time series analysis, both from within government agencies and outside the government.

As I mentioned in my testimony, there are several options available to improve our procedures for adjusting the labor force series, especially with regard to correcting for the troublesome misspecification of the seasonal pattern between December and January. Some of the most promising approaches simply are not practical. One method of improving our adjustment, for example, would be to re-seasonally adjust the series as each month's data become available. However, this would preclude our practice of announcing the seasonal factors in advance—a practice that I believe is essential if we are to maintain outside confidence in the impartiality of our publication program.

After carefully considering all of the approaches that have been developed internally and those suggested by outside experts, we have elected to employ an option available within the X–11 seasonal-adjustment program which has been applied in similar situations to other economic time series. Because this is the first time we have applied this option to a major economic indicator, I would like to explain the reasons that have led to our decision, and provide an indication of the effect that the revised procedure will have on the unemployment rate.

In effect, the December-January problem that I discussed in my testimony can be traced to the abrupt change in the trend level of unemployment at the end of 1974. This level shift was particularly evident for adult male unemployment. The ratio-to-moving average procedure, despite other well-known strengths, tends to produce a poor identification of the trend-cycle when shifts in the level of the series are both sudden and large. In turn, the seasonal-irregular ratios and the seasonal factor curves are disorted.

To correct for this, the prior weight adjustment option available in the X–11 program has been used, applying a constant factor that raises the level of the historical series, and thus, corrects for the abrupt change in late 1974. The use of the trend-level adjustment correction does not affect the month-to-month changes in the original series, and facilitates a better estimation of the seasonals.

A graphic representation of the effect of this prior adjustment is shown in the enclosed chart. You will note that the seasonal pattern is preserved, and the discontinuity in trend level is reduced. This enables the better identification of the true movement in seasonality.

The impact of this prior adjustment of the unemployment rate over the period in which the distortion of the December-January seasonal pattern was most pronounced is shown in the accompanying tables. This level adjustment produces a more satisfactory pattern than the present official method, approximating the results obtained by additively adjusting the unemployment series.

Thus, we are able to achieve the same better portrayal of the December-January pattern without reducing the reliability of seasonal estimates in other months, as would have been the case with an additive adjustment of the adult unemployment series.

We expect this minimal revision in procedure, using a standard X–11 option will produce a better adjustment in 1978. We intend to follow this procedure for computation of seasonal factors for the months of 1978 and for revising the seasonally adjusted levels for the normal period of revision.

Sincerely yours,

JULIUS SHISKIN,
Commissioner.

Enclosures.

COMPARISONS OF SEASONAL ADJUSTMENT METHODS AS INITIALLY COMPUTED AND AS REVISED THROUGH NOVEMBER 1977

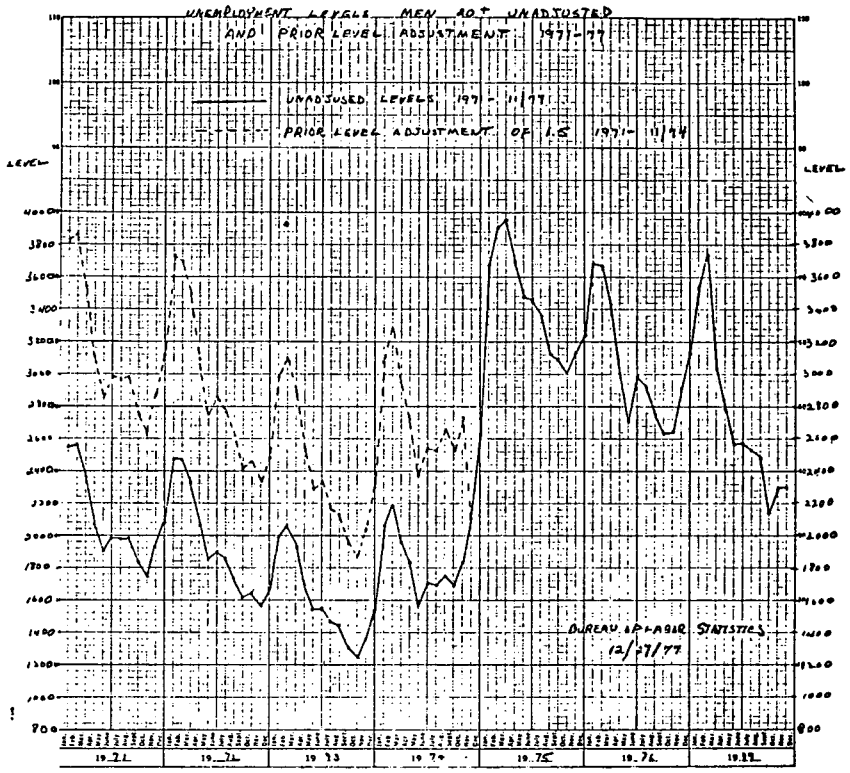
	Official		Additive		Prior level adjustment—
	Initial computation	Revision, November 1977	Initial computation	Revision, November 1977	Revision, November 1977
1976: December	7.8	7.8	7.8	7.8	7.8
1977:					
January	7.3	7.3	7.5	7.4	7.4
February	7.5	7.5	7.7	7.6	7.5
March	7.3	7.4	7.4	7.4	7.4
April	7.0	7.0	7.0	7.1	7.1
May	6.9	7.1	6.8	6.9	7.1
June	7.1	7.1	7.1	7.1	7.1
July	6.9	6.9	6.9	7.0	6.9
August	7.1	7.0	7.1	7.0	7.0
September	6.9	6.9	6.9	6.9	6.8
October	7.0	6.9	7.0	6.9	6.8
November	6.9	6.8	6.8	6.8	6.8

Source: U.S. Department of Labor, Bureau of Labor Statistics, Dec. 27, 1977.

DECEMBER TO JANUARY CHANGE IN SEASONALLY ADJUSTED UNEMPLOYMENT RATES, 1974–77

	Official			Additive			Level adjustment		
	December	January	Difference	December	January	Difference	December	January	Difference
1974–75	7.1	7.9	+0.8	7.1	8.2	+1.1	7.1	8.0	+0.9
1975–76	8.2	7.8	−.4	8.2	8.0	−.2	8.2	7.9	−.3
1976–77	7.8	7.3	−.5	7.8	7.4	−.4	7.8	7.4	−.4

Source: U.S. Department of Labor, Bureau of Labor Statistics, Dec. 27, 1977.



Representative BOLLING. We are very grateful to both of you, you, Mr. Shiskin always, and Mrs. Slater, because it is nice to have you back.

The committee stands adjourned.

[Whereupon, at 11:45 a.m., the committee adjourned, subject to the call of the Chair.]

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