873

EMPLOYMENT-UNEMPLOYMENT

HEARINGS

BEFORE THE

JOINT ECONOMIC COMMITTEE

CONGRESS OF THE UNITED STATES

NINETY-FIFTH CONGRESS

FIRST SESSION

PART 10

MAY 6, JUNE 3, JULY 8, AND AUGUST 5, 1977

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EMPLOYMENT–UNEMPLOYMENT

FRIDAY, MAY 6, 1977

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

The committee met, pursuant to notice, at 11 a.m., in room 6226, Dirksen Senate Office Building, Hon. Gillis W. Long (member of the committee) presiding.

Present: Representatives Reuss and Long.

Also present: John R. Stark, executive director; Louis C. Krauthoff II, assistant director; Richard F. Kaufman, general counsel; G. Thomas Cator, professional staff member; Mark Borchelt, administrative assistant; and Charles H. Bradford, Stephen J. Entin, M. Catherine Miller, and Mark R. Policinski, minority professional staff members.

OPENING STATEMENT OF REPRESENTATIVE LONG

Representative LONG. The committee will come to order.

Mr. Shiskin, on behalf of the Joint Economic Committee, I would like to welcome you here once again to discuss the unemployment and inflation figures for April.

According to this morning's "Employment Situation" release, unemployment in April declined significantly from 7.3 percent in March to 7 percent. If I recall correctly, this is the lowest unemployment rate since December 1974.

Mr. SHISKIN. It is the lowest figure in 29 months.

Representative LONG. This month's improvement was apparently the result of a rather large 550,000 gain in total employment, combined with a relatively moderate increase in the labor force of just over 200,000. I hope you will evaluate these two figures in your statement, and tell us whether you think this pattern will hold for the rest of the year or will be reversed.

As to inflation, yesterday's figures on wholesale price increases are very disturbing. The April increase in the wholesale price index of 1.1 percent is the third increase in a row of that magnitude. Since this index rose at a much more moderate rate during 1976, I think we should spend some time during this hearing exploring whether the past 3 months represent a temporary blip that will moderate during the spring and summer, or whether it represents the start of new inflationary pressures.

We are pleased to have Congressman Reuss with us. Do you have anything before we call on Mr. Shiskin?

Representative REUSS. No, let's just get to the meat of it.

Reperenstative LONG. Go ahead, Mr. Shiskin.

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 F. EARLY, CHIEF, DIVISION OF INDUSTRIAL PRICES AND PRICE INDEXES

Mr. SHISKIN. Thank you, Mr. Chairman.

As usual, I have a brief statement.

Before reading it, I will point out that Mr. Robert L. Stein, Assistant Commissioner for Current Employment Analysis is with me again today.

Mr. Layng, who usually accompanies me, is on a business trip, so Mr. John Early is going to help me out with questions on prices.

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 10 a.m.

The economy completed the 25th month of the current economic expansion in April with another sharp rise in employment and aggregate hours and a further decline in unemployment.

The labor force increased by 220,000 in April; employment rose by 550,000; and unemployment declined by 330,000.

Over the past 6 months, employment has risen by 2.3 million, an average of 380,000 per month; this compares with virtually no job growth during the previous 6 months. Unemployment has declined by nearly a full point since last October. Over the same period, other measures of economic performance have also improved substantially, including real GNP, industrial production, real retail sales, and real personal income—adjusted for transfer payments. Recent rises in the index of leading indicators suggest that expansion will continue in the months immediately ahead.

The decline in unemployment was not only substantial, but also widespread. With only an exception here and there, all economic, demographic, industry and occupational groups participated. Long-term unemployment also continued to drop. Even at the reduced rate, however, total unemployment remains at an unprecedented high level for this stage of economic expansion.

Total employment reached 90 million jobs, with increases of more than one-half million in March and again in April. Nonagricultural employment also expanded vigorously, and during the past 2 months there has been substantial growth in manufacturing and construction employment. Aggregate hours rose again, both in the total private economy and in manufacturing. The employment-population ratio continued to advance toward its all-time high in early 1974.

During the past two JEC hearings on the employment situation, there was considerable discussion of a two-tier pattern of unemployment, with younger workers taking one path—that of continuing high unemployment—and experienced workers taking another path—that of fairly strong decline. Empirical evidence BLS has assembled on this matter confirms the existence of such a dual pattern. I refer you to the chart attached to my statement.

Since May 1975, the total unemployment rate has declined by 2 percentage points, or 22 percent. At the same time, there has been a

much larger decline in the rate for job losers—experienced workers who have been laid off or terminated from their jobs—about 40 percent. On the other hand, there has been little change for everybody else—new entrants, reentrants, and job leavers—who are mostly teenagers and women.

The pattern also is evident—though not so clearly—in unemployment statistics by age. Thus, there has been a sharp drop in the unemployment rate for men and women 20 and over—26 percent—but a much smaller decline in the unemployment rate for teenagers, about 12 percent.

This pattern shows up again divergent trends of full-time workers and part-time workers, with a decline of 25 percent for full-time workers since the beginning of the current expansion in the spring of 1975, and a decline of only 7 percent in the rate for those seeking part-time jobs.

It seems clear from these figures that substantial declines, more consistent with improvements in other sectors of the economy, have taken place among experienced, adult employees, while little improvement has taken place among younger persons and those seeking part-time jobs.

In the three previous periods of recovery—1971–73, 1961–63, 1958–61—the cyclical declines in the unemployment rates for adult workers also was greater than the decline in the rate for teenagers. Thus the present cyclical patterns appear to be typical. However, the declines for both age categories in the earlier expansions were greater and faster than in the current expansion.

In response to a request by Chairman Bolling, I am adding a few comments about recent developments in prices.

Recent fluctuations in prices are much more similar to those that took place prior to 1973 than those during the 1973–74 bulge.

The Wholesale Price Index showed a sharp drop in the rate of increase in late 1974 and early 1975 following the great bulge in 1973 and 1974. Over the past 6 months or so, the rates of increase in the components of the WPI, which include farm products and processed foods, have risen; however, the annual rate of increase in the wholesale prices of industrial commodities has fluctuated around a flat trend of 7 percent or so for about 2 years.

Following about 2 years of decline, the rate of increase in the Consumer Price Index has turned up during the past few months. This upturn is evident in all the major components.

While, on balance, most prices have risen in recent months, at this time the increases do not resemble those that took place during the rapid inflation of 1973–74.

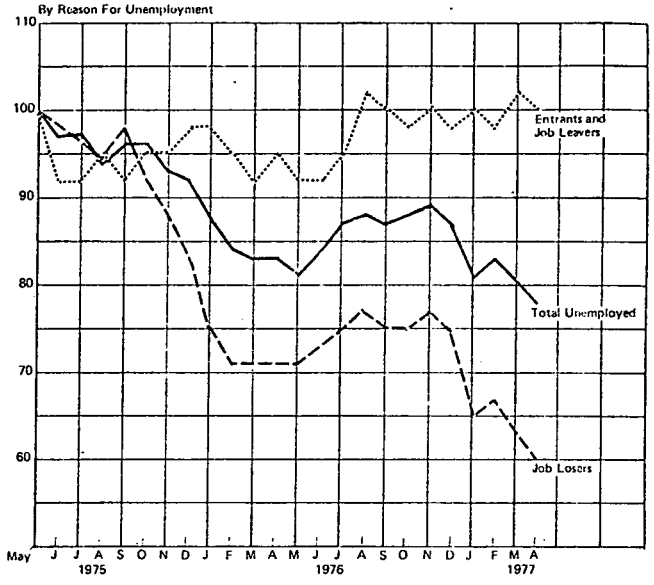
Preliminary data to be released by the BLS next week show that the share of the consumption dollar going to automobile-related expenditures increased more between the early 1960's and 1970's than any other component, and much more rapidly than for the previous decade. Housing increased its share by a small amount, but the shares going to food at home and clothing continued their historical declines. The release will compare the results of nationwide surveys of consumer expenditures conducted by the Government in 1960–61 and 1972–73.

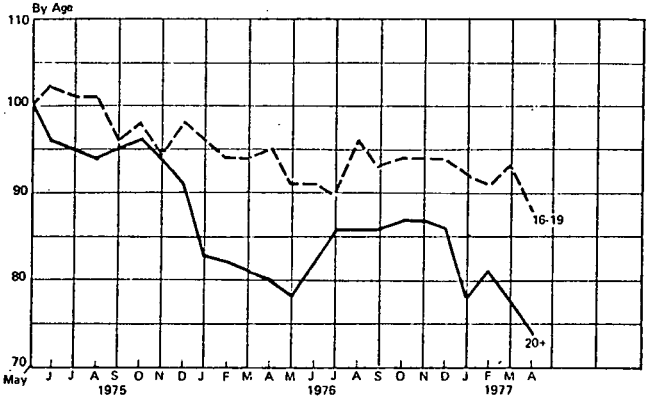
My colleagues and I shall now try to answer your questions.

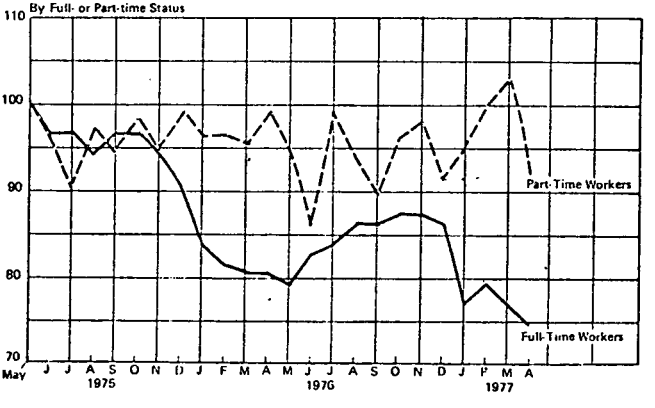
[The chart and table referred to, together with the press release follow:]

Two-Tier Patterns of Unemployment

(Indexes of Unemployment Rates, May 1975 = 100)







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 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	NA	NA	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	NA	NA	8.1	7.9	7.9	8.1	8.3	8.0	8.1	.4
March	9.1	8.5	8.5	8.7	NA	NA	8.6	8.4	8.3	8.5	8.7	8.5	8.5	.4
April	8.6	8.6	8.7	8.7	NA	NA	8.8	8.6	8.6	8.7	8.6	8.7	8.7	.2
May	8.3	9.0	9.0	8.7	NA	NA	9.2	8.9	9.1	9.2	8.8	9.3	9.0	.5
June	9.1	8.7	8.6	8.7	NA	NA	8.6	8.7	8.8	8.3	8.6	8.3	8.6	.5
July	8.7	8.7	8.6	8.6	NA	NA	8.6	8.5	8.7	8.5	8.5	8.6	8.6	.2
August	8.2	8.5	8.5	8.4	NA	NA	8.3	8.6	8.7	8.5	8.4	8.6	8.5	.4
September	8.1	8.6	8.6	8.4	NA	NA	8.3	8.8	8.8	8.5	8.4	8.5	8.5	.5
October	7.8	8.6	8.7	8.4	NA	NA	8.3	8.7	8.7	8.6	8.5	8.6	8.6	.4
November	7.8	8.4	8.4	8.2	NA	NA	8.2	8.6	8.4	8.4	8.2	8.4	8.4	.4
December	7.8	8.3	8.4	8.2	NA	NA	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	NA	NA	8.1	8.0	7.8[b]	7.8	8.2	7.9	7.9	.4
February	8.7	7.6	7.6	7.8	NA	NA	7.7	7.5	7.5	7.6	7.7	7.6	7.6	.3
March	8.1	7.5	7.5	7.6	NA	NA	7.7	7.3	7.4	7.5	7.6	7.5	7.5	.4
April	7.4	7.5	7.5	7.5	NA	NA	7.6	7.4	7.5	7.5	7.4	7.5	7.5	.2
May	6.7	7.3	7.4	7.2	NA	NA	7.5	7.2	7.4	7.5	7.2	7.5	7.4	.3
June	8.0	7.6	7.5	7.5	NA	NA	7.5	7.5	7.5	7.3	7.4	7.3	7.5	.3
July	7.8	7.8	7.8	7.7	NA	NA	7.7	7.6	7.8	7.7	7.7	7.7	7.7	.2
August	7.6	7.9	7.9	7.8	NA	NA	7.7	8.0	8.0	7.9	7.8	8.0	7.9	.3
September	7.4	7.8	7.8	7.7	NA	NA	7.6	8.0	7.9	7.8	7.8	7.8	7.8	.4
October	7.2	7.9	8.0	7.8	NA	NA	7.7	8.0	7.9	8.0	7.9	7.9	7.9	.3
November	7.4	8.0	8.0	7.8	NA	NA	7.8	8.1	8.0	8.0	7.8	8.0	7.9	.3
December	7.4	7.8	7.9	7.8	NA	NA	7.9	7.9	7.8	7.8	7.8	7.9	7.8	.1

See footnotes at end of table.

UNEMPLOYMENT RATES BY ALTERNATE SEASONAL ADJUSTMENT METHODS—Continued

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 67–73	Duration	Reasons	Total	Residual			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
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														
June														
July														
August														
September														
October														
November														
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, 16–19 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, 16–19 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.

(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–March 1976.

(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 (0–4, 5–14, 15+).

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

(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, May 6, 1977.

News United States Department of Labor

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USDL 77-412
TRANSMISSION OF MATERIAL IN THIS RELEASE IS EMBARGOED UNTIL 10:00 A. M. (EDT), FRIDAY, MAY 6, 1977

THE EMPLOYMENT SITUATION: APRIL 1977

Employment in April continued its recent pattern of strong growth and unemployment declined, it was reported today by the Bureau of Labor Statistics of the U. S. Department of Labor. The overall unemployment rate fell from 7.3 percent in March to 7.0 percent, its lowest level in 29 months. The rate has decreased 1 full percentage point in the last 5 months and 2 percentage points from its May 1975 recession peak.

Total employment--as measured by the monthly survey of households--rose by more than half a million for the second month in a row, reaching a milestone of 90 million persons. Employment growth has been especially sharp since last October, totaling nearly 2.3 million, or an average of 380,000 a month.

Nonagricultural payroll employment--as measured by the monthly survey of establishments--also continued to exhibit marked growth with an increase of 270,000 in April to 81.6 million. Payroll jobs have expanded by almost 1.8 million since last October.

Unemployment

The number of persons unemployed declined by 330,000 in April to 6.7 million, seasonally adjusted. This decrease took place primarily among persons who had lost their last job (including many who were recalled from layoff), and to a lesser extent among job leavers. (See tables A-1 and A-5.) Total unemployment has declined by more than 900,000 since its 1976 peak level reached last November, with nearly all of the improvement occurring among persons who had lost their last job.

The overall rate of unemployment declined from 7.3 to 7.0 percent over the month and was down a full percentage point from last November. In 1976, the rate had moved up from a low of 7.3 percent in May to the year's high of 8.0 percent during the second half "pause" in the economic expansion.

Although nearly every worker group shared in the March-April downturn in unemployment, most of the reduction took place among adult men, whose jobless rate, at 5.0 percent, was also at its lowest point in 29 months. In addition, teenage unemployment showed its first sign of improvement in over a year, as the jobless rate moved down from 18.8 to 17.8 percent. The rate for adult women, on the other hand, was little changed over the month, at 7.0 percent. Among other worker categories, unemployment declined for male heads of households and white workers. The jobless rate for workers in the construction industry fell by more than 2 percentage points to 12.0 percent in April, its lowest level

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

Selected categories	Quarterly averages					Monthly data		
	1976				1977	1977		
	I	II	III	IV	I	Feb.	Mar.	Apr.
HOUSEHOLD DATA	Thousands of persons							
Civilian labor force	93,644	94,544	95,261	95,711	96,067	96,145	96,539	96,760
Total employment	86,514	87,501	87,804	88,133	88,998	88,962	89,475	90,023
Unemployment	7,130	7,043	7,457	7,578	7,068	7,183	7,064	6,737
Not in labor force	59,327	59,032	58,963	59,132	59,379	59,302	59,104	59,094
Discouraged workers	940	903	827	992	929	N.A.	N.A.	N.A.
	Percent of labor force							
Unemployment rates:								
All workers	7.6	7.4	7.8	7.9	7.4	7.5	7.3	7.0
Adult men	5.8	5.7	6.0	6.2	5.6	5.8	5.4	5.0
Adult women	7.4	7.1	7.7	7.6	7.1	7.2	7.2	7.0
Teenagers	19.2	18.8	18.8	19.1	18.6	18.5	18.8	17.8
White	6.9	6.8	7.1	7.2	6.7	6.7	6.6	6.3
Black and other	13.1	12.9	13.1	13.4	12.8	13.1	12.7	12.3
Household heads	5.0	4.9	5.3	5.3	4.8	4.9	4.6	4.4
Full-time workers	7.1	7.0	7.4	7.5	6.8	6.9	6.7	6.5
ESTABLISHMENT DATA	Thousands of jobs							
Nonfarm payroll employment	78,674	79,333	79,683	80,090	80,919p	80,824	81,372p	81,644p
Goods-producing industries	23,142	23,380	23,372	23,440	23,758p	23,701	23,985p	24,151p
Service-producing industries	55,532	55,953	56,311	56,650	57,161p	57,123	57,387p	57,493p
	Hours of work							
Average weekly hours:								
Total private nonfarm	36.3	36.2	36.1	36.2	36.1p	36.3	36.2p	36.2p
Manufacturing	40.3	40.0	39.9	40.0	40.1p	40.3	40.4p	40.2p
Manufacturing overtime	3.1	3.0	3.0	3.1	3.3p	3.3	3.3p	3.4p

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

in 2½ years; the rate had been over 21 percent at the trough of the recent recession. Among the major occupational groups, the decline in unemployment was greatest for blue-collar workers. (See table A-2.)

The number of persons looking for work for 15 or more weeks--the long-term unemployed--continued the decline that began in January, dropping by 100,000 to 1.8 million. However, because there was an even larger decrease (over 200,000) among those unemployed from 5 to 14 weeks, there was a slight increase in the average (mean) duration of joblessness over the month, from 14.0 to 14.3 weeks. (See table A-4.)

In addition to the drop in total unemployment, there was also a small reduction in the number of persons working part time for economic reasons. With the exception of the weather-energy related upturn in February, their number has also trended downward since reaching a November 1976 high of 3.5 million. (See table A-3.)

Total Employment and Labor Force

Total employment rose for the sixth consecutive month, advancing by 550,000 in April to 90.0 million, seasonally adjusted. All three of the major age-sex categories shared in the expansion, with the largest gain taking place among adult women. (See table A-1.) Over the past year, employment has grown by 2.7 million, more than half of it in the last 3 months.

The employment-population ratio--the proportion of the total noninstitutional population that is employed--sustained its recent steady rise and in April stood at 57.0 percent. This was only 0.4 percentage point below the alltime high last reached in March 1974.

The civilian labor force increased by 220,000 in April. The labor force has risen by 2.4 million since last April with adult women accounting for 60 percent of this growth.

The civilian labor force participation rate--the proportion of the civilian noninstitutional population that is either working or looking for work--continued to rise. It was at an alltime high in April--62.1 percent--well above the year-earlier level of 61.5 percent. (See table A-1.) The over-the-year increase has been dominated by the pronounced upsurge of adult women into the labor market. Adult men, on the other hand, have resumed their very gradual long-term downtrend in recent months, such that their

rate of participation in April was below that of a year ago.

Industry Payroll Employment

Total nonagricultural payroll employment also increased for the sixth consecutive month, advancing by 270,000 in April to 81.6 million, seasonally adjusted. Over-the-month gains occurred in 75 percent of the industries that comprise the BLS diffusion index of nonagricultural payroll employment. Since last April, payroll employment has grown by 2.3 million, with over three-quarters of the increase occurring in the past 6 months. (See tables B-1 and B-6.)

The largest over-the-month increases occurred in manufacturing (80,000) and contract construction (75,000). Unlike recent months when there were strong gains in durable goods industries, most of the April advance in manufacturing took place in the nondurable goods sector, with the increases widespread throughout. Factory jobs have risen by 540,000 since last October. The increase in contract construction marked the third straight month of substantial growth, bringing employment in the industry to 3.8 million, 415,000 above its June 1975 recession low.

In the service-producing sector, employment in services rose by nearly 50,000, while gains of about 20,000 each were posted in wholesale trade and finance, insurance, and real estate.

Hours

The average workweek for production or nonsupervisory workers on private nonagricultural payrolls was 36.2 hours in April, seasonally adjusted, unchanged from the revised March level. The manufacturing workweek moved down 0.2 hour to 40.2 hours, while factory overtime edged up 0.1 hour to 3.4 hours. (See table B-2.)

Reflecting the increase in employment, the index of aggregate hours of private nonagricultural production or nonsupervisory workers rose to new high of 115.4 in April (1967=100), 3.5 percent above its year-earlier level. The factory index edged up to 97.3 in April and was up 4.6 percent from last April. (See table B-5.)

Hourly and Weekly Earnings

Both average hourly and weekly earnings of private nonagricultural production or nonsupervisory workers increased 0.8 percent in April, seasonally adjusted. Since last

April, hourly and weekly earnings have risen 7.7 percent and 8.0 percent, respectively.

Before adjustment for seasonality, average hourly earnings were $5.14, up 3 cents from March. Hourly earnings were 36 cents above the April 1976 level. Average weekly earnings rose $1.08 over the month to $184.53 and have risen $13.41 since April a year ago. (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 195.2 (1967=100) in April, 0.6 percent higher than in March. The index was 7.0 percent above April a year ago. During the 12-month period ended in March, the Hourly Earnings Index in dollars of constant purchasing power rose 0.6 percent. (See table B-4. Several data series presented in the table have been revised slightly as a result of corrections in the computerized data file and the introduction of more precision in the processing system.)

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	7.8	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	7.9	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					
	Apr. 1976	Mar. 1977	Apr. 1977	Apr. 1976	Dec. 1976	Jan. 1977	Feb. 1977	Mar. 1977	Apr. 1977
TOTAL									
Total noninstitutional population[1]	155,516	157,782	157,986	155,516	157,176	157,381	157,584	157,782	157,986
Armed Forces[1]	2,144	2,138	2,132	2,144	2,146	2,133	2,137	2,138	2,132
Civilian noninstitutional population[2]	153,371	155,643	155,854	153,371	155,031	155,248	155,447	155,643	155,854
Civilian labor force	93,474	95,771	95,826	94,376	95,960	95,516	96,145	96,539	96,760
Participation rate	60.9	61.5	61.5	61.5	61.9	61.5	61.9	62.0	62.1
Employed	86,584	88,215	89,258	87,329	88,441	88,558	88,962	89,475	90,023
Employment-population ratio[3]	55.7	55.9	56.5	56.2	56.3	56.3	56.5	56.7	57.0
Agriculture	3,273	2,804	3,160	3,398	3,257	3,090	3,090	3,116	3,260
Nonagricultural industries	83,311	85,411	86,118	83,931	85,184	85,468	85,872	86,359	86,763
Unemployed	6,890	7,556	6,568	7,047	7,519	6,958	7,183	7,064	6,737
Unemployment rate	7.4	7.9	6.9	7.5	7.8	7.3	7.5	7.3	7.0
Not in labor force	59,898	59,872	60,028	58,995	59,071	59,732	59,302	59,104	59,094
Men, 20 years and over									
Total noninstitutional population[1]	66,002	67,114	67,209	66,002	66,835	66,930	67,025	67,114	67,209
Civilian noninstitutional population[2]	64,311	65,423	65,522	64,311	65,140	65,250	65,342	65,423	65,522
Civilian labor force	51,134	51,925	51,909	51,277	52,078	51,842	52,092	52,061	52,089
Participation rate	79.5	79.4	79.2	79.7	79.9	79.5	79.7	79.6	79.5
Employed	48,129	48,599	49,114	48,455	48,859	48,961	49,091	49,267	49,465
Employment-population ratio[3]	72.9	72.4	73.1	73.4	73.1	73.2	73.2	73.4	73.6
Agriculture	2,379	2,106	2,259	2,401	2,273	2,209	2,230	2,208	2,280
Nonagricultural industries	45,750	46,494	46,855	46,054	46,586	46,752	46,861	47,059	47,185
Unemployed	3,005	3,325	2,795	2,822	3,219	2,881	3,001	2,794	2,624
Unemployment rate	5.9	6.4	5.4	5.5	6.2	5.6	5.8	5.4	5.0
Not in labor force	13,177	13,498	13,614	13,034	13,062	13,408	13,250	13,362	13,433
Women, 20 years and over									
Total noninstitutional population[1]	72,737	73,852	73,958	72,737	73,535	73,642	73,746	73,852	73,958
Civilian noninstitutional population[2]	72,653	73,757	73,863	72,653	73,445	73,550	73,654	73,757	73,863
Civilian labor force	33,959	35,433	35,418	34,013	34,938	34,740	34,982	35,295	35,455
Participation rate	46.7	48.0	48.0	46.8	47.6	47.2	47.5	47.9	48.0
Employed	31,625	32,850	33,080	31,546	32,340	32,331	32,477	32,750	32,985
Employment-population ratio[3]	43.5	44.5	44.7	43.4	44.0	43.9	44.0	44.3	44.6
Agriculture	487	402	511	550	573	488	485	496	577
Nonagricultural industries	31,138	32,448	32,570	30,996	31,767	31,843	31,992	32,254	32,408
Unemployed	2,334	2,583	2,337	2,467	2,598	2,409	2,505	2,545	2,470
Unemployment rate	6.9	7.3	6.6	7.3	7.4	6.9	7.2	7.2	7.0
Not in labor force	38,695	38,323	38,446	38,640	38,507	38,810	38,672	38,462	38,408
Both sexes, 16-19 years									
Total noninstitutional population[1]	16,776	16,816	16,819	16,776	16,806	16,810	16,813	16,816	16,819
Civilian noninstitutional population[1]	16,407	16,464	16,468	16,407	16,446	16,448	16,451	16,464	16,468
Civilian labor force	8,381	8,414	8,499	9,086	8,944	8,934	9,071	9,183	9,216
Participation rate	51.1	51.1	51.6	55.4	54.4	54.3	55.1	55.8	56.0
Employed	6,830	6,766	7,063	7,328	7,242	7,266	7,394	7,458	7,573
Employment-population ratio[3]	40.7	40.2	42.0	43.7	43.1	43.2	44.0	44.4	45.0
Agriculture	407	297	370	447	411	393	375	412	403
Nonagricultural industries	6,423	6,469	6,693	6,881	6,831	6,873	7,019	7,046	7,170
Unemployed	1,551	1,648	1,436	1,758	1,702	1,668	1,677	1,725	1,643
Unemployment rate	18.5	19.6	16.9	19.3	19.0	18.7	18.5	18.8	17.8
Not in labor force	8,026	8,050	7,969	7,321	7,502	7,514	7,380	7,281	7,252
WHITE									
Total noninstitutional population[1]	136,928	138,732	138,894	136,928	138,253	138,415	138,575	138,732	138,894
Civilian noninstitutional population[1]	135,141	136,972	137,139	135,141	136,475	136,654	136,810	136,972	137,139
Civilian labor force	82,727	84,792	84,890	83,469	84,854	84,616	85,086	85,482	85,642
Participation rate	61.2	61.9	61.9	61.8	62.2	61.9	62.2	62.4	62.4
Employed	77,189	78,685	79,618	77,818	78,828	78,923	79,365	79,832	80,249
Employment-population ratio[3]	56.4	56.7	57.3	56.8	57.0	57.0	57.3	57.5	57.8
Unemployed	5,537	6,107	5,273	5,651	6,026	5,693	5,721	5,650	5,393
Unemployment rate	6.7	7.2	6.2	6.8	7.1	6.7	6.7	6.6	6.3
Not in labor force	52,414	52,180	52,249	51,672	51,621	52,038	51,724	51,490	51,497
BLACK AND OTHER									
Total noninstitutional population[1]	18,587	19,050	19,091	18,587	18,923	18,966	19,009	19,050	19,091
Civilian noninstitutional population[1]	18,230	18,672	18,714	18,230	18,555	18,594	18,637	18,672	18,714
Civilian labor force	10,747	10,979	10,935	10,876	11,109	11,030	11,163	11,104	11,071
Participation rate	59.0	58.8	58.4	59.7	59.9	59.3	59.9	59.5	59.2
Employed	9,394	9,530	9,640	9,466	9,623	9,648	9,697	9,690	9,711
Employment-population ratio[3]	50.5	50.0	50.5	50.9	50.9	50.9	51.0	50.9	50.9
Unemployed	1,352	1,449	1,295	1,410	1,486	1,382	1,466	1,414	1,360
Unemployment rate	12.6	13.2	11.8	13.0	13.4	12.5	13.1	12.7	12.3
Not in labor force	7,483	7,692	7,779	7,354	7,446	7,564	7,474	7,568	7,643

[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					
	Apr. 1976	Apr. 1977	Apr. 1976	Dec. 1976	Jan. 1977	Feb. 1977	Mar. 1977	Apr. 1977
Total, 16 years and over	7,047	6,737	7.5	7.8	7.3	7.5	7.3	7.0
Men, 20 years and over	2,822	2,624	5.5	6.2	5.6	5.8	5.4	5.0
Women, 20 years and over	2,467	2,470	7.3	7.4	6.9	7.2	7.2	7.0
Both sexes, 16-19 years	1,758	1,643	19.3	19.0	18.7	18.5	18.8	17.8
White, total	5,651	5,393	6.8	7.1	6.7	6.7	6.6	6.3
Men, 20 years and over	2,295	2,166	5.0	5.5	5.0	5.2	4.9	4.6
Women, 20 years and over	1,950	1,882	6.6	6.8	6.3	6.4	6.5	6.1
Both sexes, 16-19 years	1,406	1,345	17.2	17.2	18.1	16.3	16.6	16.1
Black and other, total	1,410	1,360	13.0	13.4	12.5	13.1	12.7	12.3
Men, 20 years and over	531	460	10.0	11.3	10.2	9.9	9.4	8.5
Women, 20 years and over	512	587	11.1	11.5	10.8	12.4	11.6	12.3
Both sexes, 16-19 years	367	313	38.5	34.8	36.1	37.2	40.1	36.2
Household heads, total	2,602	2,382	4.8	5.1	4.8	4.9	4.6	4.4
Men	2,004	1,762	4.4	4.8	4.3	4.5	4.2	3.9
With relatives	1,376	1,409	3.9	4.3	3.8	4.0	3.7	3.5
Without relatives	628	353	9.0	8.4	8.2	8.2	7.8	6.9
Women	607	632	7.0	7.6	7.0	7.1	7.2	7.0
With relatives	393	394	9.5	10.2	9.0	9.4	9.6	9.2
Without relatives	214	238	4.7	5.1	5.1	4.9	5.0	5.0
Married men, spouse present	1,576	1,426	4.0	4.3	3.8	4.1	3.7	3.6
Married women, spouse present	1,477	1,491	6.8	7.0	6.5	6.7	6.7	6.6
Full-time workers	5,626	5,343	7.0	7.5	6.7	6.9	6.7	6.5
Part-time workers	1,473	1,441	10.6	9.8	10.2	10.7	11.1	9.9
Unemployed 15 weeks and over[1]	2,101	1,816	2.2	2.6	2.4	2.3	2.0	1.9
Labor force time lost[2]	--	--	8.1	8.4	8.0	7.9	7.8	7.4
OCCUPATION[3]								
White-collar workers	2,161	2,067	4.7	4.5	4.5	4.6	4.7	4.4
Professional and technical	442	455	3.3	3.3	3.3	3.3	3.1	3.2
Managers and administrators, except farm	270	286	2.8	3.1	3.0	2.8	3.4	2.9
Sales workers	286	307	5.0	5.0	5.7	5.6	5.5	5.1
Clerical workers	1,163	1,019	7.0	6.1	6.0	6.4	6.5	6.0
Blue-collar workers	2,839	2,561	8.9	9.6	8.4	8.7	8.3c	7.8
Craft and kindred workers	828	616	6.9	7.0	6.1	6.5	6.0	4.9
Operatives, except transport	1,125	1,064	9.9	11.0	9.2	9.6	9.2	9.3
Transport equipment operatives	221	223	6.3	8.1	7.2	7.7	6.9	6.0
Nonfarm laborers	665	638	13.0	13.9	12.9	12.8	13.2	12.6
Service workers	1,082	1,086	8.3	9.0	8.6	8.4	7.9	8.1
Farm workers	138	141	4.5	6.1	4.8	6.7	5.4	4.8
INDUSTRY[3]								
Nonagricultural private wage and salary workers[4]	5,167	4,884	7.6	7.9	7.4	7.6	7.4	7.0
Construction	654	548	15.2	14.1	14.9	15.2	14.2	12.0
Manufacturing	1,617	1,445	7.6	8.2	6.9	7.1	6.6	6.7
Durable goods	949	768	7.5	8.0	6.5	7.0	6.1	6.0
Nondurable goods	668	677	7.7	8.6	7.4	7.3	7.3	7.7
Transportation and public utilities	202	219	4.2	5.2	4.7	4.6	5.1	4.4
Wholesale and retail trade	1,436	1,396	8.3	8.2	8.4	8.7	8.4	7.8
Finance and service industries	1,229	1,238	6.3	6.8	6.2	6.2	6.4	6.1
Government workers	742	621	4.8	4.4	4.3	4.5	4.0	4.0
Agricultural wage and salary workers	174	184	11.4	14.0	12.6	13.4	13.2	12.3
VETERAN STATUS								
Male Vietnam-era veterans:[5]								
20 to 34 years	636	474	6.9	8.3	7.6	7.0	6.8	7.3
20 to 24 years	149	138	15.4	16.8	16.8	15.8	17.1	14.4
25 to 29 years	203	222	6.4	8.7	7.9	6.7	6.6	7.7
30 to 34 years	84	114	3.9	4.7	3.6	3.9	3.3	4.3
Male nonveterans:								
20 to 34 years	1,190	1,135	8.0	9.1	8.2	8.6	7.9	6.8
20 to 24 years	725	689	10.8	12.4	10.6	11.6	10.4	10.1
25 to 29 years	289	286	6.3	7.2	7.7	7.3	7.0	5.7
30 to 34 years	176	160	4.8	5.4	4.2	4.8	4.3	4.2

[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 April 30, 1975, on extended.

Table A-3. Selected employment indicators

[Numbers in thousands]

Selected categories	Not seasonally adjusted		Seasonally adjusted					
	Apr. 1976	Apr. 1977	Apr. 1976	Dec. 1976	Jan. 1977	Feb. 1977	Mar. 1977	Apr. 1977
CHARACTERISTICS								
Total employed, 16 years and over	86,584	89,258	87,329	88,441	88,558	88,962	89,475	90,023
Men	51,812	52,955	52,397	52,799	52,918	53,046	53,270	53,575
Women	34,772	36,303	34,932	35,642	35,640	35,916	36,205	36,448
Household heads	50,960	52,021	51,151	51,525	51,710	51,729	51,970	52,230
Married men, spouse present	38,014	38,305	38,225	37,998	38,195	38,159	38,294	38,536
Married women, spouse present	20,113	21,076	20,113	20,498	20,511	20,756	20,963	21,076
OCCUPATION								
White-collar workers	43,360	44,791	43,431	44,648	44,521	44,451	44,495	44,851
Professional and technical	13,134	13,659	13,067	13,544	13,444	13,408	13,419	13,591
Managers and administrators, except farm	9,237	9,292	9,382	9,564	9,613	9,502	9,543	9,434
Sales workers	5,483	5,794	5,458	5,815	5,633	5,815	5,617	5,765
Clerical workers	15,507	16,045	15,524	15,725	15,831	15,726	15,896	16,061
Blue-collar workers	28,470	29,521	29,118	29,150	29,634c	29,917	30,025c	30,193
Craft and kindred workers	10,982	11,670	11,189	11,302	11,626	11,668	11,709	11,896
Operatives, except transport	10,006	10,207	10,190	10,231	10,341	10,351	10,374	10,394
Transport equipment operatives	3,259	3,440	3,299	3,283	3,358	3,448	3,487	3,482
Nonfarm laborers	4,223	4,204	4,440	4,334	4,309	4,450	4,255	4,421
Service workers	11,924	12,252	11,930	11,880	11,874	12,017	12,272	12,254
Farm workers	2,830	2,694	2,918	2,791	2,624	2,663	2,652	2,779
MAJOR INDUSTRY AND CLASS OF WORKER								
Agriculture:								
Wage and salary workers	1,294	1,252	1,354	1,380	1,246	1,280	1,282	1,310
Self-employed workers	1,626	1,534	1,641	1,530	1,490	1,511	1,513	1,548
Unpaid family workers	353	355	364	340	354	338	319	366
Nonagricultural industries:								
Wage and salary workers	77,311	79,753	77,823	78,957	79,205	79,520	79,869	80,306
Government	14,988	15,140	14,806	14,967	15,013	14,913	14,923	14,960
Private industries	62,323	64,613	63,017	63,990	64,192	64,607	64,946	65,346
Private households	1,346	1,331	1,337	1,384	1,391	1,317	1,313	1,320
Other industries	60,975	63,282	61,680	62,606	62,801	61,290	63,633	64,026
Self-employed workers	5,524	5,853	5,617	5,798	5,853	5,854	5,919	5,954
Unpaid family workers	476	511	465	460	419	516	536	499
PERSONS AT WORK [1]								
Nonagricultural industries	78,337	81,788	77,632	80,369	79,832	80,837	81,330	81,005
Full-time schedules	63,835	66,436	63,853	65,846	65,700	66,144	66,659	66,436
Part time for economic reasons	2,937	2,897	3,194	3,454	3,320	3,438	3,276	3,174
Usually work full time	1,330	1,187	1,307	1,234	1,112	1,335	1,212	1,167
Usually work part time	1,607	1,710	1,887	2,220	2,208	2,103	2,064	2,007
Part time for noneconomic reasons	11,565	12,455	10,585	11,069	10,812	11,255	11,395	11,395

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

c=corrected.

Table A-4. Duration of unemployment

[Numbers in thousands]

Weeks of unemployment	Not seasonally adjusted		Seasonally adjusted					
	Apr. 1976	Apr. 1977	Apr. 1976	Dec. 1976	Jan. 1977	Feb. 1977	Mar. 1977	Apr. 1977
DURATION								
Less than 5 weeks	2,455	2,545	2,988	2,765	2,762	2,804	3,005	3,100
5 to 14 weeks	1,706	1,666	1,902	2,319	2,083	2,107	2,098	1,857
15 weeks and over	2,729	2,357	2,103	2,514	2,283	2,182	1,923	1,816
15 to 26 weeks	1,194	1,140	715	1,130	1,038	947	777	715
27 weeks and over	1,534	1,217	1,388	1,384	1,245	1,235	1,146	1,101
Average (mean) duration, in weeks	18.0	16.3	15.8	15.6	15.5	14.7	14.0	14.3
PERCENT DISTRIBUTION								
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than 5 weeks	35.6	38.8	42.7	36.4	38.7	39.5	42.8	45.8
5 to 14 weeks	24.8	25.4	27.2	30.5	29.2	29.7	29.9	27.4
15 weeks and over	39.6	35.9	30.1	33.1	32.0	30.8	27.4	26.8
15 to 26 weeks	17.3	17.4	10.2	14.9	14.6	13.4	11.1	10.6
27 weeks and over	22.3	18.5	19.8	18.2	17.5	17.4	16.3	16.3

Table A-5. Reasons for unemployment

(Numbers in thousands)

Reasons	Not seasonally adjusted		Seasonally adjusted					
	Apr. 1976	Apr. 1977	Apr. 1976	Dec. 1976	Jan. 1977	Feb. 1977	Mar. 1977	Apr. 1977
NUMBER OF UNEMPLOYED								
Lost last job	3,768	3,216	3,461	3,736	3,207	3,396	3,143	2,953
On layoff	1,109	844	990	1,057	791	1,001	865	754
Other job losers	2,659	2,372	2,471	2,679	2,416	2,395	2,278	2,199
Left last job	769	774	841	831	932	852	919	856
Reentered labor force	1,595	1,715	1,840	1,957	1,791	1,963	2,013	2,001
Seeking first job	758	842	888	942	905	936	1,003	972
PERCENT DISTRIBUTION								
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Job losers	54.7	49.0	49.2	50.0	45.6	47.5	44.4	43.6
On layoff	16.1	12.9	14.1	14.2	11.[illegible]	1[illegible]	12.2	11.1
Other job losers	38.6	36.1	35.1	35.9	34.3	33.5	32.2	32.5
Job leavers	11.2	11.8	12.0	11.1	13.2	11.9	13.0	12.5
Reentrants	23.1	26.4	26.2	26.2	28.3	27.5	28.4	29.5
New entrants	11.	12.8	12.6	12.6	12.9	13.1	14.2	14.4
UNEMPLOYED AS A PERCENT OF THE CIVILIAN LABOR FORCE								
Job losers	4.0	3.4	3.7	3.9	3.4	3.5	3.3	3.1
Job leavers	.8	.8	.9	.9	1.0	.9	1.0	.9
Reentrants	1.7	1.8	1.9	2.0	2.1	2.0	2.1	2.1
New entrants	.8	.9	.9	1.0	.9	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					
	Apr. 1976	Apr. 1977	Apr. 1976	Dec. 1976	Jan. 1977	Feb. 1977	Mar. 1977	Apr. 1977
Total, 16 years and over	7,047	6,737	7.5	7.[illegible]	7.3	7.5	7.3	7.0
16 to 19 years	1,758	1,643	19.3	19.0	18.7	18.5	18.[illegible]	17.8
16 to 17 years	798	736	20.9	20.7	21.1	19.8	22.2	19.2
18 to 19 years	969	916	18.2	17.7	17.0	17.5	16.6	16.8
20 to 24 years	1,654	1,545	11.9	12.5	11.4	12.0	11.4	10.8
25 years and over	3,673	3,580	5.1	5.5	5.1	5.2	5.1	4.9
25 to 54 years	3,049	3,039	5.3	5.9	5.3	5.3	5.2	5.1
55 years and over	640	579	4.6	4.2	4.1	4.8	4.3	4.1
Men, 16 years and over	3,812	3,466	6.8	7.3	6.6	6.9	6.5	6.1
16 to 19 years	990	842	20.1	19.1	17.4	18.6	18.7	17.0
16 to 17 years	447	374	21.1	21.0	19.5	19.3	22.2	17.9
18 to 19 years	540	465	19.0	17.4	16.1	17.9	16.1	16.0
20 to 24 years	866	819	11.3	12.9	11.3	12.1	11.2	10.5
25 years and over	1,987	1,835	4.5	5.0	4.6	4.6	4.3	4.1
25 to 54 years	1,606	1,517	4.6	5.2	4.7	4.6	4.3	4.3
55 years and over	379	328	4.3	3.9	4.0	4.7	4.4	3.7
Women, 16 years and over	3,235	3,271	8.5	8.6	8.3	8.4	8.5	8.2
16 to 19 years	768	801	18.5	18.9	20.1	18.4	18.9	18.8
16 to 17 years	351	362	20.7	20.2	23.0	20.4	22.2	20.8
18 to 19 years	429	451	17.3	18.0	18.1	16.9	17.1	17.7
20 to 24 years	788	726	12.5	11.9	11.4	11.9	11.7	11.2
25 years and over	1,686	1,745	6.1	6.4	5.9	6.1	6.1	6.0
25 to 54 years	1,443	1,522	6.4	6.9	6.2	6.3	6.6	6.5
55 years and over	261	251	4.9	4.7	4.3	4.9	4.2	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		
	I	II	III	IV	I	Feb.	Mar.	Apr.
U-1—Persons unemployed 15 weeks or longer as a percent of the civilian labor force	2.7	2.2	2.4	2.6	2.2	2.3	2.0	1.9
U-2—Job losers as a percent of the civilian labor force	3.8	3.7	3.9	3.9	3.4	3.5	3.3	3.1
U-3—Unemployed household heads as a percent of the household head labor force	5.0	4.9	5.3	5.3	4.8	4.9	4.6	4.4
U-4—Unemployed full-time jobseekers as a percent of the full-time labor force	7.1	7.0	7.4	7.5	6.8	6.9	6.7	6.5
U-5—Total unemployed as a percent of the civilian labor force (official measure)	7.6	7.4	7.8	7.9	7.4	7.5	7.3	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	9.3	9.1	9.5	9.7	9.0	9.1	8.9	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	10.2	10.0	10.3	10.7	9.9	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					
	Apr. 1976	Feb. 1977	Mar. 1977p	Apr. 1977p	Apr. 1976	Dec. 1976	Jan. 1977	Feb. 1977	Mar. 1977p	Apr. 1977p
TOTAL	78,976	79,734	80,527	81,293	79,312	80,344	80,561	80,824	81,372	81,644
GOODS-PRODUCING	23,047	23,063	23,442	23,783	23,403	23,508	23,589	23,701	23,985	24,151
MINING	766	807	825	839	775	808	817	823	840	848
CONTRACT CONSTRUCTION	3,468	3,251	3,439	3,661	3,620	3,605	3,561	3,645	3,746	3,822
MANUFACTURING	18,813	19,005	19,178	19,283	19,008	19,095	19,211	19,233	19,399	19,481
Production workers	13,529	13,600	13,766	13,863	13,700	13,691	13,801	13,810	13,964	14,039
DURABLE GOODS	10,945	11,108	11,246	11,318	11,016	11,158	11,236	11,230	11,369	11,392
Production workers	7,814	7,899	8,026	8,092	7,871	7,955	8,026	8,011	8,131	8,153
Ordnance and accessories	159.3	155.8	155.2	155.7	160	156	156	156	156	157
Lumber and wood products	587.5	606.0	615.0	623.3	600	626	625	626	634	636
Furniture and fixtures	487.4	493.7	500.5	502.1	493	493	494	497	505	508
Stone, clay, and glass products	618.3	597.6	626.7	639.9	626	629	631	620	642	648
Primary metal industries	1,184.3	1,170.6	1,191.0	1,207.2	1,187	1,182	1,183	1,178	1,199	1,210
Fabricated metal products	1,377.6	1,397.7	1,416.1	1,425.8	1,387	1,404	1,413	1,416	1,432	1,436
Machinery, except electrical	2,057.9	2,140.6	2,141.3	2,146.2	2,056	2,107	2,125	2,134	2,135	2,144
Electrical equipment	1,813.8	1,878.9	1,890.2	1,899.9	1,830	1,863	1,874	1,888	1,909	1,917
Transportation equipment	1,735.3	1,735.8	1,775.5	1,785.1	1,742	1,766	1,790	1,766	1,808	1,792
Instruments and related products	505.6	521.1	521.1	516.8	509	517	521	524	525	520
Miscellaneous manufacturing	417.7	409.7	413.3	416.0	426	415	424	425	424	424
NONDURABLE GOODS	7,868	7,897	7,932	7,965	7,992	7,937	7,975	8,003	8,030	8,089
Production workers	5,715	5,701	5,740	5,771	5,829	5,736	5,775	5,799	5,833	5,886
Food and kindred products	1,630.2	1,652.5	1,656.6	1,653.8	1,707	1,710	1,721	1,727	1,729	1,732
Tobacco manufactures	68.9	71.4	67.5	66.3	76	75	74	73	72	73
Textile mill products	969.8	962.8	970.0	980.5	973	957	958	964	973	983
Apparel and other textile products	1,316.7	1,277.8	1,287.8	1,289.3	1,322	1,271	1,278	1,280	1,284	1,294
Paper and allied products	669.1	680.3	683.4	689.7	677	680	684	688	689	697
Printing and publishing	1,075.1	1,094.2	1,096.9	1,096.3	1,076	1,089	1,090	1,095	1,098	1,097
Chemicals and allied products	1,029.8	1,041.0	1,044.8	1,049.5	1,036	1,041	1,044	1,050	1,048	1,056
Petroleum and coal products	201.1	198.9	200.7	207.9	205	204	205	205	206	212
Rubber and plastics products, nec	629.4	655.8	660.6	665.7	641	647	656	656	665	678
Leather and leather products	277.9	262.4	264.1	265.8	279	263	265	265	266	267
SERVICE-PRODUCING	55,929	56,671	57,085	57,510	55,909	56,836	56,972	57,123	57,387	57,493
TRANSPORTATION AND PUBLIC UTILITIES	4,474	4,494	4,521	4,538	4,510	4,553	4,549	4,553	4,567	4,575
WHOLESALE AND RETAIL TRADE	17,490	17,653	17,783	18,019	17,662	17,898	17,981	18,067	18,172	18,196
WHOLESALE TRADE	4,212	4,291	4,306	4,331	4,250	4,304	4,323	4,334	4,349	4,370
RETAIL TRADE	13,278	13,362	13,477	13,688	13,412	13,594	13,658	13,733	13,823	13,826
FINANCE, INSURANCE, AND REAL ESTATE	4,276	4,391	4,419	4,454	4,289	4,403	4,423	4,431	4,450	4,467
SERVICES	14,536	14,887	15,032	15,200	14,536	14,936	15,010	15,068	15,153	15,200
GOVERNMENT	15,153	15,246	15,330	15,299	14,912	15,046	15,009	15,004	15,045	15,055
FEDERAL	2,730	2,705	2,714	2,721	2,733	2,720	2,721	2,721	2,725	2,724
STATE AND LOCAL	12,423	12,541	12,616	12,578	12,179	12,326	12,288	12,283	12,320	12,331

pPreliminary.

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

Industry	Not seasonally adjusted				Seasonally adjusted					
	Apr. 1976	Feb. 1977	Mar. 1977[p]	Apr. 1977[p]	Apr. 1976	Dec. 1976	Jan. 1977	Feb. 1977	Mar. 1977[p]	Apr. 1977[p]
TOTAL PRIVATE	35.8	35.9	35.9	35.9	36.1	36.2	35.8	36.3	36.2	36.2
MINING	42.3	43.3	43.5	43.2	42.8	43.7	42.9	43.6	44.2	43.7
CONTRACT CONSTRUCTION	37.1	36.6	36.6	36.8	37.4	37.3	35.4	37.8	36.9	37.1
MANUFACTURING	39.2	39.9	40.2	40.0	39.4	40.0	39.5	40.3	40.4	40.2
Overtime hours	2.4	3.0	3.2	3.1	2.6	3.2	3.2	3.3	3.3	3.4
DURABLE GOODS	39.6	40.4	40.8	40.7	39.8	40.5	40.0	40.8	41.0	40.8
Overtime hours	2.3	3.1	3.3	3.3	2.5	3.3	3.4	3.3	3.4	3.6
Ordnance and accessories	39.5	40.6	40.8	41.1	39.7	41.0	40.5	40.6	40.6	41.3
Lumber and wood products	40.0	40.2	39.8	39.7	40.0	40.3	39.9	40.5	40.1	39.7
Furniture and fixtures	37.9	37.5	38.2	37.8	38.4	38.6	37.0	38.1	38.7	38.3
Stone, clay, and glass products	40.8	40.7	41.1	41.4	41.1	41.2	39.9	41.4	41.3	41.7
Primary metal industries	40.5	40.4	41.1	41.2	40.6	40.1	40.0	40.6	41.2	41.3
Fabricated metal products	39.4	40.4	40.8	40.6	39.6	40.5	39.9	40.8	41.0	40.8
Machinery, except electrical	40.0	41.3	41.5	41.1	40.2	41.2	40.6	41.3	41.5	41.3
Electrical equipment	39.0	40.3	40.2	39.9	39.1	40.2	39.4	40.6	40.3	40.0
Transportation equipment	39.9	41.0	42.4	42.4	39.8	41.1	41.4	41.4	42.8	42.3
Instruments and related products	39.5	40.6	40.2	40.3	39.6	40.7	39.8	40.8	40.3	40.4
Miscellaneous manufacturing	38.0	39.3	39.3	38.6	38.0	38.9	38.2	39.5	39.3	38.6
NONDURABLE GOODS	38.5	39.1	39.2	39.1	38.9	39.3	38.7	39.6	39.5	39.4
Overtime hours	2.5	2.9	2.9	2.9	2.8	3.1	3.0	3.2	3.1	3.2
Food and kindred products	39.4	39.7	39.6	39.4	40.1	40.1	39.5	40.3	40.2	40.1
Tobacco manufactures	38.1	38.5	37.8	37.5	38.6	37.5	36.1	39.4	38.5	38.0
Textile mill products	38.9	40.2	40.4	40.3	39.3	40.1	39.7	40.5	40.7	40.7
Apparel and other textile products	34.8	35.3	35.5	35.0	34.9	35.3	34.2	35.7	35.6	35.1
Paper and allied products	41.6	42.1	42.4	42.5	42.1	42.6	41.9	42.7	42.8	43.0
Printing and publishing	36.9	37.5	37.6	37.1	37.2	37.7	37.4	37.9	37.7	37.4
Chemicals and allied products	41.7	41.5	41.7	41.8	41.7	41.7	41.6	41.7	41.8	41.8
Petroleum and coal products	42.2	41.8	42.3	42.5	42.2	42.5	42.3	42.5	42.7	42.5
Rubber and plastics products, nec	39.4	41.3	41.2	40.9	39.6	41.5	40.9	41.4	41.2	41.1
Leather and leather products	37.0	36.5	36.4	36.4	37.7	36.5	35.3	36.7	36.5	37.1
TRANSPORTATION AND PUBLIC UTILITIES	39.6	40.2	39.9	40.0	39.8	40.5	39.8	40.5	40.3	40.2
WHOLESALE AND RETAIL TRADE	33.5	33.0	33.1	33.1	33.9	33.6	33.2	33.4	33.5	33.5
WHOLESALE TRADE	38.6	38.8	38.7	38.6	38.9	38.6	38.7	39.1	38.9	38.9
RETAIL TRADE	32.1	31.3	31.4	31.5	32.5	32.2	31.6	31.8	31.9	31.9
FINANCE, INSURANCE, AND REAL ESTATE	36.6	36.7	36.6	36.6	36.6	36.7	36.8	36.6	36.7	36.6
SERVICES	33.3	33.4	33.2	33.3	33.5	33.5	33.5	33.6	33.4	33.5

[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			
	Apr. 1976	Feb. 1977	Mar. 1977[p]	Apr. 1977[p]	Apr. 1976	Feb. 1977	Mar. 1977[p]	Apr. 1977[p]
TOTAL PRIVATE	$4.78	$5.09	$5.11	$5.14	$171.12	$182.73	$183.45	$184.53
Seasonally adjusted	4.79	5.09	5.12	5.16	172.92	184.77	185.34	186.79
MINING	6.33	6.76	6.77	6.81	267.76	292.71	294.50	294.19
CONTRACT CONSTRUCTION	7.50	7.88	7.85	7.84	278.25	288.41	287.31	288.51
MANUFACTURING	5.07	5.43	5.49	5.52	198.74	216.66	220.70	220.80
DURABLE GOODS	5.41	5.79	5.85	5.88	214.24	233.92	238.68	239.32
Ordnance and accessories	5.59	6.06	6.14	6.14	220.81	246.04	250.51	252.35
Lumber and wood products	4.52	4.91	4.88	4.90	180.80	197.38	194.22	194.53
Furniture and fixtures	3.91	4.16	4.18	4.16	148.19	156.00	159.68	158.00
Stone, clay, and glass products	5.20	5.54	5.57	5.61	212.16	225.48	228.93	232.25
Primary metal industries	6.77	7.06	7.14	7.21	274.19	285.22	293.45	297.05
Fabricated metal products	5.27	5.57	5.64	5.67	207.64	225.03	230.11	230.20
Machinery, except electrical	5.62	6.02	6.04	6.05	224.80	248.63	250.66	248.66
Electrical equipment	4.76	5.17	5.19	5.23	185.64	208.35	208.64	208.68
Transportation equipment	6.31	6.87	7.05	7.03	251.77	281.67	298.92	298.07
Instruments and related products	4.77	5.10	5.10	5.10	188.42	207.06	205.02	205.53
Miscellaneous manufacturing	3.95	4.25	4.28	4.28	150.10	167.03	166.20	165.21
NONDURABLE GOODS	4.59	4.93	4.95	4.98	176.72	192.76	194.04	194.72
Food and kindred products	4.88	5.22	5.23	5.28	192.27	207.23	207.11	208.03
Tobacco manufactures	5.12	5.37	5.46	5.58	195.07	206.75	206.39	209.25
Textile mill products	3.52	3.84	3.85	3.87	136.93	154.37	155.54	155.96
Apparel and other textile products	3.37	3.55	3.57	3.57	117.28	125.32	126.74	124.95
Paper and allied products	5.26	5.69	5.72	5.77	218.82	239.55	242.53	245.23
Printing and publishing	5.60	5.93	5.97	5.97	206.64	222.38	224.47	221.49
Chemicals and allied products	5.77	6.18	6.21	6.25	240.61	256.47	258.96	261.25
Petroleum and coal products	7.12	7.63	7.67	7.83	300.46	318.93	324.44	332.78
Rubber and plastics products, nec	4.50	5.03	5.04	5.08	177.30	207.74	207.65	207.77
Leather and leather products	3.41	3.60	3.61	3.60	126.17	131.40	131.40	131.04
TRANSPORTATION AND PUBLIC UTILITIES	6.35	6.74	6.72	6.78	251.46	270.95	268.13	271.20
WHOLESALE AND RETAIL TRADE	3.91	4.20	4.20	4.22	130.99	138.60	139.02	139.68
WHOLESALE TRADE	5.10	5.40	5.41	5.48	196.86	209.52	209.37	211.53
RETAIL TRADE	3.50	3.76	3.76	3.77	112.35	117.69	118.06	118.76
FINANCE, INSURANCE, AND REAL ESTATE	4.34	4.52	4.51	4.53	158.84	165.88	165.07	165.43
SERVICES	4.30	4.61	4.62	4.64	143.19	153.97	153.38	154.51

[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	Apr. 1976	Nov. 1976	Dec. 1976	Jan. 1977	Feb. 1977	Mar.p 1977	Apr.p 1977	Percent change from: Apr. 1976-Apr. 1977	Percent change from: Mar. 1977-Apr. 1977
TOTAL PRIVATE NONFARM:									
Current dollars	182.4	189.7	190.6	192.5	193.2	194.1	195.2	7.0	0.6
Constant (1967) dollars	108.4	109.3	109.4	109.5	109.0	108.8	N.A.	(2)	(3)
MINING	195.7	205.0	206.8	207.8	210.4	210.0	211.9	8.3	.9
CONTRACT CONSTRUCTION	183.3	189.2	189.5	192.4	190.8	191.1	191.9	4.7	.4
MANUFACTURING	181.9	189.8	191.0	192.3	193.2	194.5	195.4	7.4	.5
TRANSPORTATION AND PUBLIC UTILITIES	195.7	203.7	203.1	205.1	206.2	207.0	208.9	6.8	.9
WHOLESALE AND RETAIL TRADE	176.0	183.4	184.5	185.8	187.6	188.3	189.4	7.6	.6
FINANCE, INSURANCE, AND REAL ESTATE	169.1	173.1	172.9	176.5	175.7	175.9	176.7	4.5	.4
SERVICES	185.9	193.0	194.6	197.7	197.7	199.0	200.0	7.6	.5

[1] See footnote 1, table B-2.
[2] Percent change was 0.6 from March 1976 to March 1977, the latest month available.
[3] Percent change was -0.2 from February 1977 to March 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 Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1977 Jan.	Feb.	Mar.p	Apr.p
TOTAL	111.5	112.0	111.6	111.8	111.8	112.2	112.2	112.8	113.3	112.3	114.2	115.0	115.4
GOODS-PRODUCING	95.6	97.2	96.8	96.5	95.7	95.9	96.0	97.2	96.9	95.2	98.3	99.8	100.4
MINING	125.9	124.7	125.0	127.7	115.6	131.7	131.1	132.6	134.0	130.7	134.6	140.4	140.4
CONTRACT CONSTRUCTION	105.0	104.0	104.0	103.7	102.5	99.4	104.2	105.7	104.3	96.4	105.9	107.0	110.6
MANUFACTURING	93.0	95.1	94.6	94.2	93.9	94.0	93.2	94.5	94.4	93.8	95.7	97.2	97.3
DURABLE GOODS	90.9	94.0	93.8	93.5	93.6	93.2	92.0	93.8	93.6	93.2	94.8	96.9	96.6
Ordnance and accessories	39.9	41.0	40.7	40.0	39.8	38.6	38.5	38.5	39.5	39.0	39.1	39.1	40.9
Lumber and wood products	96.0	96.6	96.1	98.6	97.6	98.2	99.4	100.8	101.9	101.1	103.0	103.6	102.7
Furniture and fixtures	102.7	105.1	103.3	102.3	101.2	102.4	102.2	102.8	103.5	98.5	102.7	106.1	106.0
Stone, clay, and glass products	98.6	99.5	99.7	99.2	98.6	98.9	99.7	100.2	99.1	96.1	97.1	101.5	103.3
Primary metal industries	86.8	88.3	89.2	90.1	89.8	88.8	86.2	85.7	85.0	84.8	85.5	88.7	89.9
Fabricated metal products	94.9	98.7	98.4	98.0	98.6	98.6	96.5	98.1	98.1	97.6	100.0	101.6	101.5
Machinery, except electrical	91.7	94.9	94.5	95.9	95.9	95.9	94.0	96.7	96.0	95.7	97.7	98.2	98.3
Electrical equipment and supplies	89.0	92.2	91.9	90.5	92.2	91.5	92.1	93.4	93.1	91.7	95.5	96.2	96.2
Transportation equipment	96.9	92.8	92.6	90.3	90.7	89.1	86.1	91.5	90.6	93.3	91.3	96.7	94.3
Instruments and related products	105.7	109.6	109.1	110.3	108.1	107.2	107.9	108.5	110.4	108.9	112.4	111.3	109.9
Miscellaneous manufacturing, ind.	93.1	95.4	94.7	93.1	91.8	92.2	92.0	92.1	91.6	93.1	96.8	95.7	94.3
NONDURABLE GOODS	96.0	96.6	95.8	95.2	94.2	95.2	95.0	95.4	95.5	94.7	97.1	97.6	98.2
Food and kindred products	96.1	96.6	96.8	97.0	96.5	96.4	96.2	96.6	95.5	95.1	97.5	97.6	97.5
Tobacco manufactures	85.4	85.4	83.4	82.3	84.0	82.1	83.0	81.6	81.6	76.1	83.0	79.8	80.1
Textile mill products	96.1	99.9	98.6	98.0	95.5	95.2	95.0	95.6	96.1	95.4	97.9	99.4	100.5
Apparel and other textile products	89.3	92.0	91.4	88.9	87.6	86.2	85.7	86.1	86.3	84.1	88.0	88.1	87.5
Paper and allied products	95.9	98.1	97.3	96.9	96.1	96.5	95.7	97.0	97.2	96.2	98.0	98.6	100.6
Printing and publishing	92.3	93.6	93.1	93.6	92.9	93.1	93.4	93.6	93.7	93.0	94.8	94.5	93.6
Chemicals and allied products	100.1	100.0	99.0	99.4	99.8	100.3	99.4	100.0	100.0	100.4	101.8	102.1	103.2
Petroleum and coal products	115.6	113.9	111.6	112.2	112.4	112.2	112.5	113.1	114.7	115.0	114.7	117.0	120.8
Rubber and plastics products, nec	121.3	108.8	107.0	106.2	105.2	124.3	125.6	125.7	127.6	127.7	129.6	131.9	134.6
Leather and leather products	78.4	79.8	76.0	74.7	72.5	72.1	71.0	70.4	70.5	69.1	71.9	71.8	73.3
SERVICE-PRODUCING	122.6	122.3	121.8	122.5	123.0	123.6	123.5	123.5	124.6	124.1	125.3	125.6	125.9
TRANSPORTATION AND PUBLIC UTILITIES	102.4	101.9	101.6	102.1	102.5	102.9	102.0	103.2	105.0	102.7	104.4	104.0	104.0
WHOLESALE AND RETAIL TRADE	119.8	118.9	118.1	118.9	119.0	119.7	119.3	118.9	120.0	119.1	120.7	121.4	121.5
WHOLESALE TRADE	114.3	114.3	114.1	115.3	114.7	114.9	114.8	114.8	114.8	115.4	117.0	116.8	117.5
RETAIL TRADE	121.8	120.6	119.6	120.3	120.6	121.6	121.0	120.4	122.0	120.4	122.1	123.1	122.9
FINANCE, INSURANCE, AND REAL ESTATE	126.1	126.3	126.3	126.6	127.3	127.7	128.3	129.1	129.8	130.6	130.2	131.0	131.0
SERVICES	134.6	135.3	135.0	135.4	136.6	137.2	137.6	137.7	138.4	138.8	139.7	139.7	140.5

[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	77.0p
October	39.0	59.9	70.1	75.0p
November	64.2	53.8	69.8	
December	68.3	75.9	74.4p	
1977				
January	71.5	76.7	88.1p	
February	61.6	82.6p		
March	76.7p	83.7p		
April	75.3p			
May				
June				
July				
August				
September				
October				
November				
December				

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

Mr. SHISKIN. Mr. Chairman, I did not get to the questions earlier about recent price changes, but if you will put them to me, I will be happy to answer them.

Representative LONG. Fine.

Congressman Reuss.

Representative REUSS. Thank you very much, Mr. Chairman, and thank you, Mr. Shishkin, for bringing us the glad tidings this morning.

At least in the conventional tier of the unemployment picture, what has happened between now and last November is that unemployment generally has gone down from 8 percent to 7 percent, and that is encouraging.

Almost all of the 900,000 people who have found jobs since last November have been those who had jobs and lost them and have now found them again. That is great news for which we are very grateful.

But I now return to what bothered me last month, and continues to bother me, and that is simply this:

While overall employment figures are good and figures particularly for white male heads of family are extremely promising, nevertheless, when you get to black women 20 years and over, their unemployment went up from 11.6 percent last month, that is in March, and from 10.8 percent in January of this year, to 12.3 percent today, and black teenagers, their unemployment has gone up from 34 percent last November and December to 36 percent today. It is a little better today than it was the month before, but it is still tragic.

Isn't it a fact, therefore, that there does seem to be two tiers in our national employment picture, and that the bottom tier, blacks, teenagers and women, is being left behind, they are not being helped by the present miniboom?

Mr. SHISKIN. Yes, sir. I think that is correct. I said that last month, and this month, I illustrated it by a chart in my brief statement. I didn't select some of the particular categories you did, but it is crystal clear to me that we are having diverse trends in the pattern of unemployment for experienced people, adults, on one hand, and teenagers, women, and also blacks on the other.

So I agree with you.

Representative REUSS. Would you agree with the observation I have been making that the administration, in withdrawing the $13 billion additional deficit that would have been entailed by the tax reduction program, largely in $50 rebates, that that action was about half right? It was right in the sense that we perhaps didn't need all of that crude, vulgar neo-Keynesian stimulus, but that it was not right in that we didn't take $3 billion of that $13 billion savings and put it into "get jobs for those who need them quickly" programs. Would you agree with that?

Mr. SHISKIN. I try to stay out of the policy issues. I leave that to other officials in the department. Let me say that Secretary Marshall has been pushing the very line that you have suggested.

Representative REUSS. He has been and I admire his pertinacity, though so far I don't see any signs of success.

You know, 10 days ago I introduced a bill which was a complete piece of plagiarism. It was FDR's original Civilian Conservation Corps bill, which President Roosevelt introduced on March 21, 1933, 10 days thereafter, on March 31, the Congress passed it and it was

signed into law. A couple of weeks after that, half a million young people were out in the forests doing work, whose benefit lives on to the present day, 40 years later, and who got their start in life and dignity as a result of that work.

The bill, I have to report, has not passed the Congress. It hasn't even gotten a hearing. It isn't very original, but I don't see anything better around. Isn't something like that needed?

Mr. SHISKIN. Secretary Marshall is promoting programs like that, and he is familiar with what I have been doing. I showed him an earlier version of this chart several weeks ago and he and Under Secretary Brown have both been using this chart. That is about as far as I can go there.

Representative REUSS. I completely agree with you and hope you will, within the limits of your statistical office, let your voice ring out within the Government.

We need something, in short, to reach the second tier of our people, those who are not helped by general stimulus, and it is perfectly plain who those are. They are poor people, largely people who have never worked, heavily minority groups, and heavily young, and heavily women. We had better get going.

Mr. SHISKIN. Sir, I think this chart, and now I am using it today obviously and I will be using it in a speech I am giving next week, at the Business Council, and the Secretary is using it, or at least the contents of it and the Under Secretary, so I think it will get around. I hope you will use it, too.

Representative REUSS. We will do our best. Thank you.

Representative LONG. Thank you, Congressman Reuss.

As Mr. Reuss has indicated we always try to get some idea of the effectiveness of what we do as Members of Congress. As you know, the stimulus program that has been implemented was not as strong as the Joint Economic Committee had recommended; recognizing that you try to stay out of these policy statements, let me ask you a factual question:

If we break down the data to specifics on the construction trades, it appears that the jobless rate in thus category fell by two percentage points during April. Is there any way you can determine how much of this decrease is due to the stimulus program enacted by Congress, last fall in the Public Works Employment Act?

Mr. SHISKIN. I don't think we could come up with a quantitative figure. As you know, in accordance with this act, the Public Work Employment Act, large sums of money are being allocated periodically on the basis of our unemployment figures. So it will appear that bill must have been helpful.

What we can say is that a very substantial decline of unemployment in the construction trades has taken place, not only in this month, but the decline has been going on quite a while.

Representative LONG. We always experience to some degree, a decrease in unemployment in the spring. Are the figures seasonally adjusted?

Mr. SHISKIN. Yes; they are.

Representative LONG. Then, since there was a more substantial employment increase in the construction trades than there was in practically any other segment of the economy, we could logically

assume that, as you said, at least to some degree the legislation was responsible.

Mr. SHISKIN. I think it is worth pointing out in this context that one of the reassuring aspects of the recent data that have come out on employment are that there has been substantial employment growth in construction and manufacturing. That was not true earlier in this expansion, and particularly in the early first part of this year.

But in March, again in April, we had substantial growth in manufacturing and construction. Now these are two sectors of the economy which have, if I may use an economist's term, a large multiplier. I think I should also say that over the last 2 months, we have had one of the best performances in American history in the labor market. The private sector created a million jobs in 2 months. I don't think we have often done anything like that, have we, Mr. Stein?

Mr. STEIN. No.

Mr. SHISKIN. It is really a fantastic performance.

Representative LONG. Would you repeat that, please, Mr. Shiskin?

Mr. SHISKIN. Yes. In the last 2 months we have had an increase of more than 1 million in total employment. There has been very little growth in Government, as you know, so these jobs were almost all in the private sector.

So the private sector in the last 2 months has created over a million new jobs. That has happened only a very few times before in the postwar period.

The reason I haven't dwelt overly on that is that I think that there are two special factors that are pushing up the figures for March and April. One is that there still may be some makeup, even in April, from the bad weather at the beginning of the year.

Also, I think it is safe to assume that we are having a new inventory buildup. Inventories were drawn down in the fourth quarter of the year, and while the figures are very late in coming out, so we don't have them yet, it seems pretty clear that we are having an upward adjustment in inventories.

The makeup is probably going to go away and we won't have it next month, but the inventory buildup will probably continue for at least a few months.

I don't believe we can expect to create a million jobs every 2 months for very long, and I think the figure I did use, 380,000 per month for the last 6 months, is more representative, but that is a very good figure, too.

You know, if we average 380,000 jobs for this year, and I don't know what the second half will bring, 1977 will probably show the best performance in the labor markets in American history.

In recent months we have introduced a new measure related to this, the employment population ratio. The thought is this, in a country with a growing population, you always should expect employment to grow, because the population is growing, the country is growing.

So the employment growth is related to the population growth to take into account the fact that the country is growing.

Last month we saw almost a new high in the employment-population ratio; 57 percent of the American people, age 16 and over, are working today, one of the highest figures we have ever seen. I might say that in many ways this recovery is better than the recovery after

the severe recession in 1958, and one of the ways is that the employment population ratio has grown more rapidly than in 1958–59.

Representative LONG. How does that employment-population ratio compare to nonrecessionary periods?

Mr. SHISKIN. This is a nonrecessionary period we are in now. In 1974, the ratio was 57.4, the beginning of 1974, that is the highest in history.

If you go back to earlier years, we have never been close to that. The employment-population ratio can be interpreted as a measure of welfare, how well is the country doing in getting people to work. We are just doing very, very well.

On the other hand, we do have these problems with pockets of unemployment that Congressman Reuss referred to, and they can't be overlooked. But in terms of the overall situation, as measured by the employment population ratio——

Representative LONG. If I could get the benefit of your expertise—I am not necessarily asking you to try to help make policy, that being our responsibility—tell me this: I gather from what you say that this high population-employment ratio is right at the second highest that it has ever been in the history of the United States. If this ratio should continue for another month or so, it seems logical to me that we should at that time perhaps focus our attention on the specific pockets of unemployment rather than to the general business stimulants that we have heretofore been directing a great deal of our attention.

Would you agree with that?

Mr. SHISKIN. Certainly I would agree with you, sir.

Representative LONG. Specific pockets of unemployment and the problem of teenage unemployment, as Congressman Reuss pointed out, continue to plague us. Your figures indicate that unemployment in this area during the month dropped from 18.8 to 17.8, which in unusual circumstances would be a pretty substantial improvement.

Mr. SHISKIN. Yes; it was. It was a very substantial improvement.

Representative LONG. How much of this, in your opinion, was due to an increase in teenage employment and how much of it was due to a reduction in the teenage labor force?

Mr. SHISKIN. I didn't think of that. Could you comment on that, Mr. Stein?

Mr. STEIN. I have figures like that here, but it would take me a minute to check them out.

Mr. SHISKIN. Could we come back to that question in a minute or two?

Representative LONG. If you would, please.

While we are waiting here, let's return to the question of inflation, which continues to cause us problems. The 1.1 percent increase in the wholesale price index, which you announced yesterday, marks the third month in a row that this index has increased by about 1 percent. Is that correct?

Mr. SHISKIN. Right.

Representative LONG. Offsetting that, this is the second month in a row that we have shown a substantial decrease in the unemployment figure?

Mr. SHISKIN. Right.

Representative LONG. But if we look at the wholesale price index increases, this is the first sustained increase we have experienced since 1974 when we started this inflationary period, or, at least this is the first time we have had, I think, three increases in a row in which wholesale prices have risen by almost 19 percent.

Give us a little bit more of the benefit of your thinking concerning the relationship of the unemployment figures and the inflation figures. To simplify it in the form of a question, In your opinion, is this the beginning of a new round of high inflation in wholesale prices, or is it just a temporary aberration?

I realize that you have already indicated you believe that other factors are at play here.

Mr. SHISKIN. I am looking at a chart, a series of charts that BLS releases each month, with the WPI and the CPI, which show the historical record back to 1968.

As I said, if you look at the WPI records, you see some rather mild fluctuations in 1975 and 1976. They look more like those that took place in 1969, 1970, 1971, not at all like the ones that took place in 1973, 1974.

Now the figures for the most recent months are in the upward direction. So far they are within the same limits that we saw prior to the 1973, 1974 inflationary bulge.

Furthermore, if you dissect the figures you see that here also are two very different trends.

If you look at the chart showing changes in industrial prices, the prices of industrial commodities, you see the same kinds of patterns of cycles, very small cycles in 1975 and 1976 which look like the ones that we had in 1969, 1970, 1971, and so on, not at all like the one in 1973–74. There is no sign of a big increase in industrial commodity prices of the kind that we had when the big inflation took place.

I think there is a tendency on the part of people, and I have inflation in mind, to think back to the very unusual inflation of 1973–74. We have to be eternally vigilant that we are not getting into that kind of inflation again, but on the other hand, we should not be rash and think because we have a few months of price rises that is what we are going to get into.

So that is the story on industrial prices. I think industrial prices have been flat. In fact, if you look at the last 2 years, at the chart showing percent change over 12 months, which I have in front of me, for the industrial commodities component, it is almost exactly flat over that period. But prices of farm products and of processed foods have been rising.

This morning I seem to be talking about two tracks both in unemployment and prices.

Representative LONG. There are about as many points of dissimilarity between the trends that occurred prior to the major inflation of 1974 as there are of similarity, are there not?

There are substantial numbers of points of dissimilarity between the two?

Mr. SHISKIN. Yes, I am sure there are. The point I am making, Mr. Chairman, I am trying to make at this time, I would put it this way. It is customary, it has always happened during periods of vigorous economic growth, which I think we are experiencing now, that the

rate of increase in prices accelerates, and I think we are seeing that now.

We are seeing that both in parts of the WPI and parts of the CPI. So that is customary.

I would expect more of it as the expansion continues. But there is no reason at the present time to think we are getting into a very wild inflation.

As I say, we have to be eternally vigilant and watch it and worry about it, but at this point I think that the price increases look more like past history than they do to price increases during the 1973–74 period.

Representative LONG. Are we ready to go back to the other question?

Mr. STEIN. Yes. The drop in the teenage unemployment rate was the result of an increase in employment. The teenage employment went up 115,000 between March and April, unemployment dropped 82,000 and the teenage labor force changed very little, up 33,000.

Representative LONG. So the figures indicate a substantial increase in teenage employment, rather than a decline in the number of teenagers who were seeking employment?

Mr. STEIN. That is correct.

Representative LONG. Again, I assume that both of you gentlemen interpret this as a good sign?

Mr. SHISKIN. Yes, sir.

Mr. STEIN. Yes.

Mr. SHISKIN. It is hard to see anything bad in the employment-unemployment figures this month. I have a person on my staff whom I ask each month to go back and see what she can find in the figures that is unfavorable and she almost always manages to find something. But she could not find anything this month, so we have a very good report.

Representative LONG. The only trouble is, if she had put on yesterday's hat and had examined the inflation figures, she would have found something.

Mr. SHISKIN. She doesn't like to work on prices.

Representative LONG. Thank you, gentlemen, very much. We appreciate your coming here and being with us.

The committee stands adjourned.

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

98-520 O - 78 - 3

EMPLOYMENT–UNEMPLOYMENT

FRIDAY, JUNE 3, 1977

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

The committee met, pursuant to notice, at 11 a.m., in room 1202, Dirksen Senate Office Building, Hon. Richard Bolling (chairman of the committee) presiding.

Present: Representatives Bolling, Long, and Pike.

Also present: John R. Stark executive director; Louis C. Krauthoff II, assistant director; 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 REPRESENTATIVE BOLLING, CHAIRMAN

Representative BOLLING. The committee will be in order.

Today the Joint Economic Committee continues its monthly hearings on the employment and unemployment situation.

Julius Shiskin, Commissioner of the Bureau of Labor Statistics, is with us this morning to present the unemployment and wholesale price data for May.

Mr. Commissioner, you bring mixed news today. The good news is that employment continued its strong upward trend in May, growing by nearly 400,000. This follows an employment gain of over 1 million in the previous 2 months. However, the number of people unemployed changed very little from April to May, and May's strong increase in employment was accompanied by an equally large increase in the labor force. Hence, the unemployment rate is 6.9 percent, little changed from the previous month.

In addition, the May figures indicate the continued existence of the two tier structure of unemployment. The teenage unemployment rate was 17.9 percent, and the unemployment rate among black youth was 38.7 percent. The rate for all blacks was 12.9 percent.

While the employment-unemployment situation in May contained mixed news in that sense, the price data for that month contained uniformly good news. The Wholesale Price Index for all commodities increased 0.4 percent in May, the smallest increase this year. The indexes for industrial commodities and processed foods and feeds increased at a slower rate than they had in the 2 previous months. youth was 38.7 percent. The rate for all blacks was 12.9 percent.

Although I am hesitant to read too much into 1 month's data, I hope that the May data portend a reduction from the double digit rate of inflation we have experienced over the last several months.

Mr. Commissioner, please proceed with your statement.

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, Mr. Stein and Mr. Layng are with me to help answer any questions. I have a very brief statement to read this morning.

Mr. Chairman and members of the committee, I wish to offer the Joint Economic Committee a few brief comments to supplement our press releases, "The Employment Situation" and the "Wholesale Price Index," issued this morning at 10 a.m.

The economy completed the 26th month of the current expansion in May with further rises in employment and aggregate hours and a smaller rate of increase in wholesale prices, both for foods and industrial commodities. Unemployment was little changed, although the overall rate was below 7 percent for the first time in 30 months.

Both total employment and the labor force increased by nearly 400,000 in May. As a result of the employment gain, there was a further rise in the employment-population ratio, which is now close to the all time high. The rise in employment was about equal to the average of the preceding 6 months. About 2 million new jobs were added during the first 5 months of this year. It is to be noted, however, that nonagricultural payroll employment rose somewhat less in May than in the immediately preceding months. On the other hand, the gains in manufacturing and construction employment since the beginning of this year have been substantial—about 625,000 new jobs in those industries, an increase of nearly 3 percent over this 4-month period.

Let me interpolate to say that these are the heavy goods industries, manufacturing, and construction, the ones that have been sluggish during the earlier parts of this expansion, so I think it is especially noteworthy that they have had such a strong gain.

Another comment is that the level reached by manufacturing and construction combined in May is the highest level in 30 months. So I think that is a very important statistical finding.

Average hours also rose slightly. As a result of the increases in employment and average hours, aggregate hours again rose substantially.

Total unemployment showed little change, as did most of the major components. However, there were offsetting movements among adult men, whose rate rose 0.3 point, and adult women, who showed a 0.4 drop over the month. It should be noted once again that both the level and rate of unemployment continue high by historical standards.

The all commodities wholesale price index continued to rise, but the increase of 0.4 was less than half the rate of each of the previous 3 months. Prices of farm products declined, after rising sharply in previous months. Prices of processed foods rose less than in April, but at about the same rate as February and March. The rate of increase for industrial comodities was a little lower than last month, and the

smallest since December. Since prices of fuels and power continued to rise rapidly, the rate of increase in the WPI, less farm products, processed foods and fuels, was, at 0.3 percent, lower than in recent months. However, these May improvements in prices should be interpreted with caution, since they represent only a 1-month trend.

In summary, the May figures for employment and prices indicate continued expansion in economic activity with moderate price increases.

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

[The table attached to Mr. Shiskin's statement, together with the press release referred to 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. 2–13)
			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	.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	9.2	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	7.7	7.6	7.8	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														
July														
August														
September														
October														
November														
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) Multpilicative rate. The 4 basic unemployed age-sex groups—males and females, 16–19 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, 16–19 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 th ecomponents 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–March 1976. The rates are as first calculated and are not subject to revision.

(7) Stable seasonals (January 1967–December 1973). The stable seasonal op tion 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 (0–4, 5–14, 15+).

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

(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, May 6, 1977.

News United States Department of Labor

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TRANSMISSION OF MATERIAL IN THIS RELEASE IS EMBARGOED UNTIL 10:00 A. M. (EDT), FRIDAY, JUNE 3, 1977

THE EMPLOYMENT SITUATION: MAY 1977

Employment rose in May and unemployment showed little change, it was reported today by the Bureau of Labor Statistics of the U. S. Department of Labor. The Nation's overall rate of unemployment was 6.9 percent, not much different from April's 7.0-percent rate but down substantially from last November's high of 8.0 percent.

Total employment--as measured by the monthly survey of households--rose by nearly 400,000 in May to 90.4 million. Employment gains have totaled almost 2.7 million since last October, an average of 380,000 a month.

Nonagricultural payroll employment--as measured by the monthly survey of establishments--rose by 185,000 in May to 81.8 million. Manufacturing continued to pace the current expansion and over the past 7 months has accounted for 600,000 of the total job growth of 2.0 million.

Unemployment

There were 6,750,000 persons unemployed in May, seasonally adjusted, virtually the same level as in April. This followed reductions totaling 450,000 in the 2 previous months. The overall unemployment rate of 6.9 percent was about unchanged from the previous month, after declining by half a percentage point from February and a full point since November.

Despite the over-the-month stability in overall joblessness, there were some offsetting movements among component labor force groups. The jobless rate for adult women fell from 7.0 to 6.6 percent; this was accompanied by decreases among female household heads and married women. The unemployment rate for adult men, on the other hand, moved up from 5.0 to 5.3 percent, largely the result of an increase for black men. The adult male rate had declined by nearly a full percentage point between February and April. Rates for most other major worker categories--including teenagers, full-time

and part-time workers, and job losers--showed little or no change in May. (See tables A-2 and A-5.)

The number of persons looking for work for 15 or more weeks--the long-term unemployed-- was about unchanged in May at 1.8 million, after declining steadily during the first 4 months of the year. Among the shorter duration categories, there was an increase among those jobless for 5 to 14 weeks, but an even greater decrease took place among workers who were seeking work for less than 5 weeks. The average (mean) duration of unemployment moved up from 14.3 to 14.9 weeks. (See table A-4.)

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

Selected categories	Quarterly averages					Monthly data		
	1976				1977	1977		
	I	II	III	IV	I	Mar.	Apr.	May
HOUSEHOLD DATA	Thousands of persons							
Civilian labor force	93,644	94,544	95,261	95,711	96,067	96,539	96,760	97,158
Total employment	86,514	87,501	87,804	88,133	88,998	89,475	90,023	90,408
Unemployment	7,130	7,043	7,457	7,578	7,068	7,064	6,737	6,750
Not in labor force	59,327	59,032	58,963	59,132	59,379	59,104	59,094	58,943
Discouraged workers	940	903	827	992	929	N.A.	N.A.	N.A.
	Percent of labor force							
Unemployment rates:								
All workers	7.6	7.4	7.8	7.9	7.4	7.3	7.0	6.9
Adult men	5.8	5.7	6.0	6.2	5.6	5.4	5.0	5.3
Adult women	7.4	7.1	7.7	7.6	7.1	7.2	7.0	6.6
Teenagers	19.2	18.8	18.8	19.1	18.6	18.8	17.8	17.9
White	6.9	6.8	7.1	7.2	6.7	6.6	6.3	6.2
Black and other	13.1	12.9	13.1	13.4	12.8	12.7	12.3	12.9
Household heads	5.0	4.9	5.3	5.3	4.8	4.6	4.4	4.5
Full-time workers	7.1	7.0	7.4	7.5	6.8	6.7	6.5	6.5
ESTABLISHMENT DATA	Thousands of jobs							
Nonfarm payroll employment	78,674	79,333	79,683	80,090	80,927	81,395	81,605p	81,792p
Goods-producing industries	23,142	23,380	23,372	23,440	23,765	24,005	24,163p	24,244p
Service-producing industries	55,532	55,953	56,311	56,650	57,162	57,390	57,442p	57,548p
	Hours of work							
Average weekly hours:								
Total private nonfarm	36.3	36.2	36.1	36.2	36.1	36.3	36.2p	36.3p
Manufacturing	40.3	40.0	39.9	40.0	40.1	40.4	40.2p	40.4p
Manufacturing overtime	3.1	3.0	3.0	3.1	3.3	3.3	3.4p	3.4p

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

Total Employment and Labor Force

Total employment rose for the seventh consecutive month, with an increase of 385,000 in May to 90.4 million, seasonally adjusted. This included a rise of 125,000 in agriculture. (See table A-1.) Employment has grown by 2.8 million over the past year, nearly all of it since last October.

The employment-population ratio--the proportion of the total noninstitutional population that is employed--continued its recent steady advance and, at 57.1 percent, was just 0.3 percentage point below the alltime high last reached more than 3 years earlier.

The civilian labor force rose by 400,000 to 97.2 million in May. The labor force was 2.6 million above its year ago level, with adult women accounting for more than half of the growth. The civilian labor force participation rate--the proportion of the civilian noninstitutional population that is either working or looking for work--edged up to a new high of 62.2 percent, well above the May 1976 level of 61.6 percent. (See table A-1.)

Industry Payroll Employment

Total nonagricultural payroll employment also increased for the seventh consecutive month, advancing by 185,000 in May to 81.8 million, seasonally adjusted. Nearly two-thirds of the industries that comprise the BLS diffusion index of nonagricultural payroll employment posted over-the-month gains in employment. Payroll employment has risen by 2.5 million since last May, with four-fifths of the growth occurring since October. (See tables B-1 and B-6.)

The largest over-the-month gain was in manufacturing, where employment increased by 65,000. Eighty percent of this growth took place in the durable goods industries, a sector which has added 215,000 jobs to its payrolls since February. Fabricated metal products, machinery, and electrical equipment accounted for 45,000 of the April-May increase in durables. Contract construction employment, which had grown substantially between January and April, rose slightly in May (15,000).

In the service-producing sector, employment in State and local government and services each increased by 30,000, while smaller gains occurred in the other major industry divisions.

Hours

The average workweek for production or nonsupervisory workers on private nonagricultural payrolls edged up from 36.2 to 36.3 hours in May, seasonally adjusted. Average hours have been at about this level since February. The manufacturing workweek returned to the March level of 40.4 hours after dipping to 40.2 hours in April. Factory overtime was unchanged from the April level of 3.4 hours. (See table B-2.)

Reflecting the increases in both employment and hours, the index of aggregate hours of production or nonsupervisory workers on private nonagricultural payrolls rose 0.5 percent in May to 116.0 (1967=100). This was 3.6 percent above the year-ago level. The manufacturing index advanced by an even larger amount over the month--1.0 percent--and was up 3.3 percent over the year. (See table B-5.)

Hourly and Weekly Earnings

Both average hourly and weekly earnings of production or nonsupervisory workers on private nonagricultural payrolls increased moderately in May, by 0.6 and 0.9 percent, respectively. Hourly and weekly earnings were each 7.4 percent higher than a year earlier.

Before adjustment for seasonality, average hourly earnings were $5.19, up 4 cents from April and 36 cents from a year earlier. Average weekly earnings were $187.36, an increase of $2.47 over the month and $13.00 from May 1976. (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 196.3 (1967=100) in May, 0.5 percent higher than in April. The index was 6.9 percent above May a year ago. During the 12-month period ended in April, 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,

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					
	May 1976	Apr. 1977	May 1977	May 1976	Jan. 1977	Feb. 1977	Mar. 1977	Apr. 1977	May 1977
TOTAL									
Total noninstitutional population[1]	155,711	157,986	158,228	155,711	157,381	157,584	157,782	157,986	158,228
Armed Forces[1]	2,142	2,132	2,128	2,142	2,137	2,137	2,138	2,132	2,128
Civilian noninstitutional population[1]	153,570	155,854	156,101	153,570	155,248	155,447	155,643	155,854	156,101
Civilian labor force	93,582	95,826	96,193	94,551	95,516	96,145	96,539	96,760	97,158
Participation rate	60.9	61.5	61.6	61.6	61.5	61.9	62.0	62.1	62.2
Employed	87,278	89,258	90,042	87,640	88,558	88,962	89,475	90,023	90,408
Employment-population ratio[2]	56.1	56.5	56.9	56.3	56.3	56.5	56.7	57.0	57.1
Agriculture	3,415	3,140	3,478	3,332	3,090	3,090	3,116	3,260	3,386
Nonagricultural industries	83,863	86,118	86,564	84,308	85,468	85,872	86,359	86,763	87,022
Unemployed	6,304	6,568	6,151	6,911	6,958	7,183	7,064	6,737	6,750
Unemployment rate	6.7	6.9	6.4	7.3	7.3	7.5	7.3	7.0	6.9
Not in labor force	59,988	60,028	59,907	59,019	59,732	59,302	59,104	59,094	58,943
Men, 20 years and over									
Total noninstitutional population[1]	66,087	67,209	67,324	66,087	66,930	67,025	67,114	67,209	67,324
Civilian noninstitutional population[1]	64,398	65,522	65,641	64,398	65,250	65,342	65,423	65,522	65,641
Civilian labor force	51,205	51,909	52,062	51,435	51,842	52,092	52,061	52,089	52,282
Participation rate	79.5	79.2	79.3	79.9	79.5	79.7	79.6	79.5	79.6
Employed	48,498	49,114	49,487	48,542	48,961	49,091	49,267	49,465	49,531
Employment-population ratio[2]	73.4	73.1	73.5	73.3	73.2	73.2	73.4	73.6	73.6
Agriculture	2,468	2,259	2,423	2,418	2,209	2,230	2,208	2,280	2,373
Nonagricultural industries	46,030	46,855	47,064	46,124	46,752	46,861	47,059	47,185	47,158
Unemployed	2,707	2,795	2,575	2,893	2,881	3,001	2,794	2,624	2,751
Unemployment rate	5.3	5.4	4.9	5.6	5.6	5.8	5.4	5.0	5.3
Not in labor force	13,193	13,614	13,579	12,963	13,408	13,250	13,362	13,433	13,359
Women, 20 years and over									
Total noninstitutional population[1]	72,837	73,958	74,081	72,837	73,642	73,746	73,852	73,958	74,081
Civilian noninstitutional population[1]	72,753	73,863	73,987	72,753	73,550	73,654	73,757	73,863	73,987
Civilian labor force	33,845	35,418	35,478	33,999	34,740	34,982	35,295	35,435	35,634
Participation rate	46.5	48.0	48.0	46.7	47.2	47.5	47.9	48.0	48.2
Employed	31,682	33,080	33,299	31,671	32,331	32,477	32,750	32,985	33,288
Employment-population ratio[2]	43.5	44.7	44.9	43.5	43.9	44.0	44.3	44.6	44.9
Agriculture	521	511	641	485	488	495	496	577	597
Nonagricultural industries	31,160	32,570	32,658	31,186	31,843	31,992	32,254	32,408	32,691
Unemployed	2,163	2,337	2,179	2,328	2,409	2,505	2,545	2,470	2,346
Unemployment rate	6.4	6.6	6.1	6.8	6.9	7.2	7.2	7.0	6.6
Not in labor force	38,908	38,446	38,509	38,754	38,810	38,672	38,462	38,408	38,353
Both sexes, 16-19 years									
Total noninstitutional population[1]	16,788	16,819	16,823	16,788	16,810	16,813	16,816	16,819	16,823
Civilian noninstitutional population[1]	16,419	16,468	16,473	16,419	16,448	16,451	16,464	16,468	16,473
Civilian labor force	8,532	8,499	8,653	9,117	8,934	9,071	9,183	9,216	9,242
Participation rate	52.0	51.6	52.5	55.5	54.3	55.1	55.8	56.0	56.1
Employed	7,099	7,063	7,236	7,427	7,266	7,394	7,458	7,573	7,589
Employment-population ratio[2]	42.3	42.0	43.1	44.2	43.2	44.0	44.4	45.0	45.1
Agriculture	426	370	414	429	393	375	412	403	416
Nonagricultural industries	6,672	6,693	6,842	6,998	6,873	7,019	7,046	7,170	7,173
Unemployed	1,434	1,436	1,397	1,690	1,668	1,677	1,725	1,643	1,653
Unemployment rate	16.8	16.9	16.1	18.5	18.7	18.5	18.8	17.8	17.9
Not in labor force	7,886	7,969	7,820	7,302	7,514	7,380	7,281	7,252	7,231
WHITE									
Total noninstitutional population[1]	137,081	138,894	139,089	137,081	138,415	138,575	138,732	138,894	139,089
Civilian noninstitutional population[1]	135,296	137,139	137,337	135,296	136,654	136,810	136,972	137,139	137,337
Civilian labor force	82,924	84,890	85,214	83,668	84,616	85,086	85,482	85,662	85,937
Participation rate	61.3	61.9	62.0	61.8	61.9	62.2	62.4	62.4	62.6
Employed	77,836	79,618	80,373	78,070	78,923	79,365	79,832	80,249	80,603
Employment-population ratio[2]	56.8	57.3	57.8	57.0	57.0	57.3	57.5	57.8	58.0
Unemployed	5,088	5,273	4,841	5,598	5,693	5,721	5,650	5,393	5,334
Unemployment rate	6.1	6.2	5.7	6.7	6.7	6.7	6.6	6.3	6.2
Not in labor force	52,372	52,249	52,123	51,628	52,038	51,724	51,490	51,497	51,400
BLACK AND OTHER									
Total noninstitutional population[1]	18,630	19,091	19,140	18,630	18,966	19,009	19,050	19,091	19,140
Civilian noninstitutional population[1]	18,273	18,714	18,763	18,273	18,594	18,637	18,672	18,714	18,763
Civilian labor force	10,658	10,935	10,979	10,846	11,030	11,163	11,104	11,071	11,171
Participation rate	58.3	58.4	58.5	59.4	59.3	59.9	59.5	59.2	59.5
Employed	9,442	9,640	9,669	9,509	9,648	9,697	9,690	9,711	9,730
Employment-population ratio[2]	50.7	50.5	50.5	51.0	50.9	51.0	50.9	50.9	50.8
Unemployed	1,216	1,295	1,310	1,337	1,382	1,466	1,414	1,360	1,441
Unemployment rate	11.4	11.8	11.9	12.3	12.5	13.1	12.7	12.3	12.9
Not in labor force	7,616	7,779	7,784	7,427	7,564	7,474	7,568	7,643	7,592

[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					
	May 1976	May 1977	May 1976	Jan. 1977	Feb. 1977	Mar. 1977	Apr. 1977	May 1977
Total, 16 years and over	6,911	6,750	7.3	7.3	7.5	7.3	7.0	6.9
Men, 20 years and over	2,893	2,751	5.6	5.6	5.8	5.4	5.0	5.3
Women, 20 years and over	2,328	2,346	6.8	6.9	7.2	7.2	7.0	6.6
Both sexes, 16-19 years	1,690	1,653	18.5	18.7	18.5	18.8	17.8	17.9
White, total	5,598	5,334	6.7	6.7	6.7	6.6	6.3	6.2
Men, 20 years and over	2,379	2,206	5.2	5.0	5.2	4.9	4.6	4.7
Women, 20 years and over	1,893	1,817	6.4	6.3	6.4	6.5	6.1	5.9
Both sexes, 16-19 years	1,326	1,311	16.3	18.1	16.3	16.6	16.1	15.7
Black and other, total	1,337	1,441	12.3	12.5	13.1	12.7	12.3	12.9
Men, 20 years and over	512	563	9.6	10.2	9.9	9.4	8.5	9.9
Women, 20 years and over	472	566	10.4	10.8	12.4	11.6	12.3	11.8
Both sexes, 16-19 years	353	332	37.8	36.1	37.2	40.1	36.2	38.7
Household heads, total	2,632	2,467	4.9	4.8	4.9	4.6	4.4	4.5
Men	2,005	1,812	4.4	4.3	4.5	4.2	3.9	4.0
With relatives	1,601	1,435	4.0	3.8	4.0	3.7	3.5	3.5
Without relatives	404	377	8.3	8.2	8.2	7.8	6.9	7.3
Women	547	578	6.4	7.0	7.1	7.2	7.0	6.3
With relatives	355	361	8.7	9.0	9.4	9.6	9.2	8.4
Without relatives	192	217	4.3	5.1	4.9	5.0	5.0	4.5
Married men, spouse present	1,618	1,445	4.1	3.8	4.1	3.7	3.6	3.6
Married women, spouse present	1,462	1,417	6.7	6.5	6.7	6.7	6.6	6.3
Full-time workers	5,573	5,389	6.9	6.7	6.9	6.7	6.5	6.5
Part-time workers	1,398	1,429	10.1	10.2	10.7	11.1	9.9	9.9
Unemployed 15 weeks and over[1]	2,042	1,836	2.2	2.4	2.3	2.0	1.9	1.9
Labor force time lost[2]	--	--	8.1	8.0	7.9	7.8	7.4	7.5
OCCUPATION[3]								
White-collar workers	2,074	1,994	4.5	4.5	4.6	4.7	4.4	4.3
Professional and technical	425	408	3.1	3.3	3.3	3.1	3.2	2.9
Managers and administrators, except farm	293	270	3.1	3.0	2.8	3.4	2.9	2.8
Sales workers	287	329	4.9	5.7	5.6	5.5	5.1	5.5
Clerical workers	1,069	987	6.3	6.0	6.4	6.5	6.0	5.7
Blue-collar workers	2,870	2,621	9.0	8.4	8.7	8.3	7.8	7.9
Craft and kindred workers	756	703	6.3	6.1	6.5	6.0	4.9	5.6
Operatives, except transport	1,203	1,025	10.6	9.2	9.6	9.2	9.3	8.9
Transport equipment operatives	230	255	6.5	7.2	7.7	6.9	6.0	6.7
Nonfarm laborers	681	638	13.6	12.9	12.8	13.2	12.6	12.5
Service workers	1,079	1,222	8.2	8.6	8.4	7.9	8.1	9.0
Farm workers	138	135	4.6	4.8	6.7	5.4	4.8	4.4
INDUSTRY[3]								
Nonagricultural private wage and salary workers[4]	5,144	5,018	7.5	7.4	7.6	7.4	7.0	7.1
Construction	625	603	14.5	14.9	15.2	14.2	12.0	13.0
Manufacturing	1,569	1,351	7.4	6.9	7.1	6.6	6.7	6.2
Durable goods	928	727	7.3	6.5	7.0	6.1	6.0	5.7
Nondurable goods	641	624	7.5	7.4	7.3	7.3	7.7	7.0
Transportation and public utilities	243	213	5.0	4.7	4.6	5.1	4.4	4.3
Wholesale and retail trade	1,423	1,493	8.2	8.4	8.7	8.4	7.8	8.3
Finance and service industries	1,252	1,330	6.3	6.2	6.2	6.4	6.1	6.6
Government workers	716	644	4.6	4.3	4.5	4.0	4.0	4.1
Agricultural wage and salary workers	186	172	12.5	12.6	13.4	13.2	12.3	11.5
VETERAN STATUS								
Male Vietnam-era veterans:[5]								
20 to 34 years	468	489	7.4	7.6	7.0	6.8	7.3	7.5
20 to 24 years	142	125	15.2	16.8	15.8	17.1	14.4	13.6
25 to 29 years	218	225	6.9	7.9	6.7	6.6	7.7	7.8
30 to 34 years	108	139	4.9	3.6	3.9	3.3	4.3	5.1
Male nonveterans:								
20 to 34 years	1,186	1,119	7.9	8.2	8.6	7.9	6.8	7.2
20 to 24 years	725	696	10.8	10.6	11.6	10.4	10.1	10.2
25 to 29 years	285	268	6.1	7.7	7.3	7.0	5.7	5.4
30 to 34 years	176	155	4.9	4.2	4.8	4.3	4.2	4.1

[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 April 30, 1975.

Table A-3. Selected employment indicators

[Numbers in thousands]

Selected categories	Not seasonally adjusted		Seasonally adjusted					
	May 1976	May 1977	May 1976	Jan. 1977	Feb. 1977	Mar. 1977	Apr. 1977	May 1977
CHARACTERISTICS								
Total employed, 16 years and over	87,278	90,042	87,640	88,558	88,962	89,475	90,023	90,408
Men	52,301	53,525	52,490	52,918	53,046	53,270	53,575	53,722
Women	34,977	36,517	35,150	35,640	35,916	36,205	36,448	36,686
Household heads	51,200	52,366	51,170	51,710	51,729	51,970	52,230	52,314
Married men, spouse present	38,177	38,470	38,196	38,195	38,159	38,294	38,536	38,509
Married women, spouse present	20,260	20,920	20,300	20,511	20,756	20,963	21,076	20,962
OCCUPATION								
White-collar workers	43,478	44,485	43,757	44,521	44,451	44,495	44,851	44,766
Professional and technical	13,235	13,483	13,236	13,444	13,408	13,439	13,591	13,483
Managers and administrators, except farm	9,237	9,428	9,210	9,613	9,502	9,543	9,434	9,400
Sales workers	5,506	5,661	5,539	5,633	5,815	5,617	5,765	5,695
Clerical workers	15,500	15,913	15,772	15,831	15,726	15,896	16,061	16,188
Blue-collar workers	28,931	30,284	29,066	29,634	29,917	30,025	30,193	30,423
Craft and kindred workers	11,234	11,870	11,259	11,626	11,668	11,709	11,896	11,894
Operatives, except transport	10,060	10,393	10,192	10,341	10,351	10,574	10,394	10,530
Transport equipment operatives	3,278	3,534	3,296	3,358	3,448	3,487	3,482	3,552
Nonfarm laborers	4,359	4,487	4,319	4,309	4,450	4,255	4,421	4,447
Service workers	11,955	12,294	12,034	11,874	12,017	12,272	12,254	12,372
Farm workers	2,914	2,981	2,839	2,624	2,663	2,652	2,779	2,904
MAJOR INDUSTRY AND CLASS OF WORKER								
Agriculture:								
Wage and salary workers	1,296	1,325	1,297	1,246	1,280	1,282	1,310	1,325
Self-employed workers	1,697	1,688	1,664	1,490	1,511	1,513	1,548	1,655
Unpaid family workers	422	465	357	334	338	319	366	393
Nonagricultural industries:								
Wage and salary workers	77,447	79,758	78,070	79,205	79,520	79,869	80,306	80,429
Government	14,984	15,196	14,858	15,013	14,913	14,923	14,960	15,075
Private industries	62,463	64,561	63,212	64,192	64,607	64,946	65,346	65,354
Private households	1,315	1,317	1,303	1,391	1,317	1,313	1,320	1,305
Other industries	61,148	63,244	61,909	62,801	63,290	63,633	64,026	64,049
Self-employed workers	5,922	6,219	5,759	5,853	5,854	5,919	5,954	6,050
Unpaid family workers	494	587	463	419	516	536	499	550
PERSONS AT WORK [1]								
Nonagricultural industries	80,099	82,957	78,960	79,832	80,837	81,330	81,005	81,771
Full-time schedules	65,207	67,555	64,877	65,700	66,144	66,659	66,436	67,219
Part time for economic reasons	3,071	3,070	3,287	3,320	3,438	3,276	3,174	3,290
Usually work full time	1,358	1,240	1,438	1,112	1,335	1,212	1,167	1,314
Usually work part time	1,713	1,830	1,849	2,208	2,103	2,064	2,007	1,976
Part time for noneconomic reasons	11,821	12,332	10,796	10,812	11,255	11,395	11,395	11,262

[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					
	May 1976	May 1977	May 1976	Jan. 1977	Feb. 1977	Mar. 1977	Apr. 1977	May 1977
DURATION								
Less than 5 weeks	2,450	2,437	2,795	2,762	2,804	3,005	3,100	2,782
5 to 14 weeks	1,544	1,635	1,978	2,083	2,107	2,098	1,857	2,093
15 weeks and over	2,310	2,078	2,042	2,283	2,182	1,923	1,816	1,836
15 to 26 weeks	1,022	959	850	1,038	947	777	715	800
27 weeks and over	1,289	1,120	1,192	1,245	1,235	1,146	1,101	1,036
Average (mean) duration, in weeks	16.6	16.4	15.1	15.5	14.7	14.0	14.3	14.9
PERCENT DISTRIBUTION								
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than 5 weeks	38.9	29.6	41.0	38.7	39.5	42.8	45.8	41.5
5 to 14 weeks	24.5	19.9	29.0	29.2	29.7	29.9	27.4	31.2
15 weeks and over	36.6	25.3	30.0	32.0	30.8	27.4	26.8	27.4
15 to 26 weeks	16.2	11.7	12.5	14.6	13.4	11.1	10.6	11.9
27 weeks and over	20.4	13.6	17.5	17.5	17.4	16.3	16.3	15.4

HOUSEHOLD DATA

Table A-5. Reasons for unemployment

[Numbers in thousands]

Reasons	Not seasonally adjusted		Seasonally adjusted					
	May 1976	May 1977	May 1976	Jan. 1977	Feb. 1977	Mar. 1977	Apr. 1977	May 1977
NUMBER OF UNEMPLOYED								
Lost last job	3,201	2,774	3,506	3,207	3,396	3,143	2,953	3,038
On layoff	853	664	963	791	1,001	865	754	749
Other job losers	2,348	2,110	2,543	2,416	2,395	2,278	2,199	2,289
Left last job	716	758	892	932	852	919	846	966
Reentered labor force	1,619	1,818	1,775	1,991	1,963	2,013	2,001	1,993
Seeking first job	768	801	860	905	936	1,003	972	893
PERCENT DISTRIBUTION								
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Job losers	50.8	45.1	49.9	45.6	47.5	44.4	43.6	44.2
On layoff	13.5	10.8	13.7	11.2	14.0	12.2	11.1	10.9
Other job losers	37.3	34.3	36.2	34.3	33.5	32.2	32.5	33.3
Job leavers	11.4	12.3	12.7	13.2	11.9	13.0	12.5	13.7
Reentrants	25.7	29.6	25.2	28.3	27.5	28.4	29.5	29.0
New entrants	12.2	13.0	12.2	12.9	13.1	14.2	14.4	13.0
UNEMPLOYED AS A PERCENT OF THE CIVILIAN LABOR FORCE								
Job losers	3.4	2.9	3.7	3.4	3.5	3.3	3.1	3.1
Job leavers	.8	.8	.9	1.0	.9	1.0	.9	1.0
Reentrants	1.7	1.9	1.9	2.1	2.0	2.1	2.1	2.1
New entrants	.8	.8	.9	.9	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					
	May 1976	May 1977	May 1976	Jan. 1977	Feb. 1977	Mar. 1977	Apr. 1977	May 1977
Total, 16 years and over	6,911	6,750	7.3	7.3	7.5	7.3	7.0	6.9
16 to 19 years	1,690	1,653	18.5	18.7	18.5	18.8	17.8	17.9
16 to 17 years	811	779	21.7	21.1	19.8	22.2	19.2	20.4
18 to 19 years	879	873	16.5	17.0	17.5	16.6	16.8	16.3
20 to 24 years	1,572	1,533	11.3	11.4	12.0	11.4	10.8	10.7
25 years and over	3,646	3,565	5.1	5.1	5.2	5.1	4.9	4.8
25 to 54 years	3,064	3,006	5.3	5.3	5.3	5.2	5.1	5.1
55 years and over	606	580	4.3	4.1	4.8	4.3	4.1	4.0
Men, 16 years and over	3,830	3,609	6.8	6.6	6.9	6.5	6.1	6.3
16 to 19 years	937	858	19.2	17.4	18.6	18.7	17.0	17.0
16 to 17 years	459	399	22.6	19.5	19.3	22.2	17.9	18.7
18 to 19 years	478	459	17.0	16.1	17.9	16.1	16.0	16.0
20 to 24 years	869	823	11.3	11.3	12.1	11.2	10.5	10.6
25 years and over	1,984	1,892	4.5	4.6	4.6	4.3	4.1	4.2
25 to 54 years	1,613	1,563	4.6	4.7	4.6	4.3	4.3	4.4
55 years and over	387	343	4.4	4.0	4.7	4.4	3.7	3.9
Women, 16 years and over	3,081	3,141	8.1	8.3	8.4	8.5	8.2	7.9
16 to 19 years	753	795	17.8	20.1	18.4	18.9	18.8	19.0
16 to 17 years	352	380	20.6	23.0	20.4	22.2	20.8	22.5
18 to 19 years	401	414	15.9	18.1	16.9	17.1	17.7	16.6
20 to 24 years	703	710	11.2	11.4	11.9	11.7	11.2	10.9
25 years and over	1,662	1,673	6.0	5.9	6.1	6.1	6.0	5.7
25 to 54 years	1,451	1,443	6.5	6.2	6.3	6.6	6.5	6.1
55 years and over	219	237	4.2	4.3	4.9	4.2	4.6	4.3

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		
	I	II	III	IV	I	Mar.	Apr.	May
U-1—Persons unemployed 15 weeks or longer as a percent of the civilian labor force	2.7	2.2	2.4	2.6	2.2	2.0	1.9	1.9
U-2—Job losers as a percent of the civilian labor force	3.8	3.7	3.9	3.9	3.4	3.3	3.1	3.1
U-3—Unemployed household heads as a percent of the household head labor force	5.0	4.9	5.3	5.3	4.8	4.6	4.4	4.5
U-4—Unemployed full-time jobseekers as a percent of the full-time labor force	7.1	7.0	7.4	7.5	6.8	6.7	6.5	6.5
U-5—Total unemployed as a percent of the civilian labor force (official measure)	7.6	7.4	7.8	7.9	7.4	7.3	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	9.3	9.1	9.5	9.7	9.0	8.9	8.6	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	10.2	10.0	10.3	10.7	9.9	N.A.	N.A.	N.A.

N.A.—not available.

ESTABLISHMENT DATA

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

[In thousands]

Industry	Not seasonally adjusted				Seasonally adjusted					
	May 1976	Mar. 1977	Apr. 1977p	May 1977p	May 1976	Jan. 1977	Feb. 1977	Mar. 1977	Apr. 1977p	May 1977p
TOTAL	79,424	80,547	81,252	81,900	79,319	80,561	80,824	81,395	81,605	81,792
GOODS-PRODUCING	23,245	23,461	23,793	24,106	23,381	23,589	23,701	24,005	24,163	24,244
MINING	775	827	838	848	776	817	823	842	847	849
CONTRACT CONSTRUCTION	3,598	3,451	3,674	3,840	3,605	3,561	3,645	3,759	3,835	3,848
MANUFACTURING	18,872	19,183	19,281	19,418	19,000	19,211	19,233	19,404	19,481	19,547
Production workers	13,571	13,763	13,855	13,997	13,693	13,801	13,810	13,958	14,032	14,120
DURABLE GOODS	11,034	11,246	11,317	11,419	11,062	11,236	11,230	11,370	11,392	11,445
Production workers	7,890	8,025	8,092	8,195	7,916	8,026	8,011	8,128	8,153	8,221
Ordnance and accessories	157.9	155.4	156.4	155.9	160	156	156	156	158	157
Lumber and wood products	600.1	614.0	624.4	640.1	601	625	626	633	637	641
Furniture and fixtures	490.9	498.4	500.5	501.1	496	494	497	503	506	506
Stone, clay, and glass products	628.0	625.9	642.2	649.8	627	631	620	641	650	649
Primary metal industries	1,194.5	1,190.8	1,204.7	1,215.3	1,193	1,183	1,178	1,199	1,207	1,214
Fabricated metal products	1,385.1	1,415.9	1,423.1	1,437.2	1,392	1,413	1,416	1,432	1,433	1,444
Machinery, except electrical	2,063.7	2,148.1	2,140.0	2,155.2	2,068	2,125	2,134	2,142	2,138	2,160
Electrical equipment	1,822.3	1,886.6	1,899.0	1,911.8	1,837	1,874	1,888	1,906	1,916	1,927
Transportation equipment	1,755.2	1,775.4	1,790.4	1,810.2	1,747	1,790	1,766	1,808	1,798	1,801
Instruments and related products	510.6	521.8	520.9	524.4	512	521	524	526	525	525
Miscellaneous manufacturing	425.6	413.5	415.2	417.7	429	424	425	424	424	421
NONDURABLE GOODS	7,838	7,937	7,964	7,999	7,938	7,975	8,003	8,034	8,089	8,102
Production workers	5,681	5,738	5,763	5,802	5,777	5,775	5,799	5,830	5,879	5,899
Food and kindred products	1,652.0	1,661.4	1,659.9	1,659.7	1,712	1,721	1,727	1,734	1,738	1,720
Tobacco manufactures	67.7	63.9	67.2	66.1	76	74	73	68	74	74
Textile mill products	971.9	969.8	977.9	982.1	977	958	964	973	981	987
Apparel and other textile products	1,318.8	1,286.9	1,282.6	1,292.4	1,321	1,278	1,280	1,283	1,288	1,295
Paper and allied products	672.3	682.9	690.0	695.6	679	684	688	688	698	703
Printing and publishing	1,076.1	1,096.4	1,097.3	1,102.5	1,079	1,090	1,095	1,097	1,098	1,106
Chemicals and allied products	1,028.0	1,047.5	1,050.9	1,052.0	1,034	1,044	1,050	1,051	1,057	1,058
Petroleum and coal products	202.8	202.0	206.0	207.5	203	205	205	207	210	208
Rubber and plastics products, nec	568.7	661.4	665.8	672.5	578	656	656	666	678	683
Leather and leather products	280.0	264.8	265.9	268.3	279	265	265	267	267	268
SERVICE-PRODUCING	56,179	57,086	57,459	57,794	55,938	56,972	57,123	57,390	57,442	57,548
TRANSPORTATION AND PUBLIC UTILITIES	4,494	4,522	4,531	4,569	4,503	4,549	4,553	4,568	4,568	4,578
WHOLESALE AND RETAIL TRADE	17,606	17,779	18,017	18,155	17,663	17,981	18,067	18,189	18,194	18,214
WHOLESALE TRADE	4,228	4,310	4,327	4,339	4,258	4,323	4,334	4,354	4,366	4,370
RETAIL TRADE	13,378	13,489	13,690	13,816	13,405	13,658	13,733	13,835	13,828	13,844
FINANCE, INSURANCE, AND REAL ESTATE	4,278	4,422	4,446	4,473	4,282	4,423	4,431	4,453	4,459	4,477
SERVICES	14,654	15,028	15,171	15,293	14,567	15,010	15,068	15,149	15,171	15,202
GOVERNMENT	15,147	15,315	15,294	15,304	14,923	15,009	15,004	15,031	15,050	15,077
FEDERAL	2,735	2,714	2,716	2,722	2,730	2,721	2,721	2,725	2,719	2,717
STATE AND LOCAL	12,412	12,601	12,578	12,582	12,193	12,288	12,283	12,306	12,331	12,360

ppreliminary.

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

Industry	Not seasonally adjusted				Seasonally adjusted					
	May 1976	Mar. 1977	Apr. 1977 p	May 1977 p	May 1976	Jan. 1977	Feb. 1977	Mar. 1977	Apr. 1977 p	May 1977 p
TOTAL PRIVATE	36.1	36.0	35.9	36.1	36.3	35.8	36.3	36.3	36.2	36.3
MINING	42.5	43.7	43.9	43.6	42.4	42.9	43.6	44.4	44.4	43.5
CONTRACT CONSTRUCTION	37.2	36.8	36.9	37.3	37.1	35.4	37.8	37.1	37.2	37.2
MANUFACTURING	40.2	40.2	40.0	40.3	40.3	39.5	40.3	40.4	40.2	40.4
Overtime hours	3.1	3.2	3.1	3.3	3.3	3.2	3.3	3.3	3.4	3.4
DURABLE GOODS	40.9	40.8	40.7	41.1	40.9	40.0	40.8	41.0	40.8	41.1
Overtime hours	3.3	3.3	3.3	3.6	3.4	3.4	3.3	3.4	3.6	3.7
Ordnance and accessories	40.7	40.8	40.9	40.4	40.8	40.5	40.6	40.6	41.1	40.5
Lumber and wood products	40.4	39.8	40.0	40.1	40.1	39.9	40.5	40.1	40.0	39.8
Furniture and fixtures	38.6	38.1	37.8	38.2	39.0	37.0	38.1	38.6	38.3	38.5
Stone, clay, and glass products	41.5	41.2	41.4	42.0	41.4	39.9	41.4	41.4	41.7	41.9
Primary metal industries	40.9	41.0	41.3	41.6	41.0	40.0	40.6	41.1	41.4	41.7
Fabricated metal products	41.0	40.8	40.5	41.0	41.0	39.9	40.8	41.0	40.7	41.0
Machinery, except electrical	41.0	41.5	41.2	41.5	41.2	40.6	41.3	41.5	41.4	41.7
Electrical equipment	40.2	40.2	39.9	40.2	40.2	39.4	40.6	40.3	40.0	40.2
Transportation equipment	42.5	42.4	42.0	42.9	42.4	41.4	41.4	42.8	41.9	42.8
Instruments and related products	40.7	40.3	39.9	40.2	40.8	39.8	40.8	40.4	40.0	40.3
Miscellaneous manufacturing	38.7	39.3	38.8	39.0	38.7	38.2	39.5	39.3	38.8	39.0
NONDURABLE GOODS	39.4	39.3	39.1	39.2	39.5	38.7	39.6	39.5	39.5	39.4
Overtime hours	3.0	2.9	2.9	3.0	3.1	3.0	3.2	3.1	3.2	3.1
Food and kindred products	40.0	39.6	39.4	39.7	40.2	39.5	40.3	40.2	40.1	39.9
Tobacco manufactures	38.1	37.7	37.8	37.6	38.6	36.1	39.4	38.4	38.3	38.1
Textile mill products	40.5	40.5	40.1	40.2	40.6	39.7	40.5	40.8	40.5	40.3
Apparel and other textile products	35.8	35.5	35.0	35.4	36.0	34.2	35.7	35.6	35.1	35.6
Paper and allied products	42.5	42.4	42.8	42.7	42.8	41.9	42.7	42.8	43.3	43.0
Printing and publishing	37.5	37.6	37.4	37.6	37.6	37.4	37.9	37.7	37.7	37.7
Chemicals and allied products	41.6	41.7	41.8	41.5	41.6	41.6	41.7	41.8	41.8	41.5
Petroleum and coal products	42.2	42.6	42.7	42.1	42.2	42.3	42.5	43.0	42.7	42.1
Rubber and plastics products, nec	40.5	41.2	41.0	41.2	40.7	40.9	41.4	41.2	41.2	41.4
Leather and leather products	38.4	36.3	36.4	36.8	38.2	35.3	36.7	36.4	37.1	36.6
TRANSPORTATION AND PUBLIC UTILITIES	39.5	39.9	40.0	40.2	39.7	39.8	40.5	40.3	40.2	40.4
WHOLESALE AND RETAIL TRADE	33.5	33.1	33.1	33.2	33.7	33.2	33.4	33.5	33.5	33.5
WHOLESALE TRADE	38.8	38.7	38.6	38.7	38.8	38.7	39.1	38.9	38.9	38.7
RETAIL TRADE	31.9	31.4	31.5	31.7	32.2	31.6	31.8	31.9	31.9	32.0
FINANCE, INSURANCE, AND REAL ESTATE	36.7	36.6	36.7	36.7	36.8	36.8	36.6	36.7	36.7	36.8
SERVICES	33.4	33.3	33.3	33.3	33.6	33.5	33.6	33.5	33.5	33.5

[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			
	May 1976	Mar. 1977	Apr. 1977 p	May p 1977	May 1976	Mar. 1977	Apr. 1977 p	May p 1977
TOTAL PRIVATE	$4.83	$5.11	$5.15	$5.19	$174.36	$183.96	$184.89	$187.36
Seasonally adjusted	4.84	5.12	5.17	5.20	175.69	185.86	187.15	188.76
MINING	6.35	6.78	6.82	6.80	269.88	296.29	299.40	296.48
CONTRACT CONSTRUCTION	7.61	7.87	7.87	7.88	283.09	289.62	290.40	293.92
MANUFACTURING	5.12	5.48	5.52	5.57	205.82	220.30	220.80	224.47
DURABLE GOODS	5.49	5.84	5.88	5.96	224.54	238.27	239.32	244.96
Ordnance and accessories	5.64	6.12	6.14	6.15	229.55	249.70	251.13	248.46
Lumber and wood products	4.61	4.89	4.92	4.97	186.24	194.62	196.80	199.30
Furniture and fixtures	3.93	4.19	4.21	4.25	151.70	159.64	159.14	162.35
Stone, clay, and glass products	5.26	5.57	5.66	5.72	218.29	229.48	234.32	240.24
Primary metal industries	6.73	7.13	7.22	7.42	275.26	292.33	298.19	308.67
Fabricated metal products	5.40	5.65	5.67	5.73	221.40	230.52	229.64	234.93
Machinery, except electrical	5.69	6.04	6.06	6.10	233.29	250.66	249.67	253.15
Electrical equipment	4.82	5.18	5.21	5.24	193.76	208.24	207.88	210.65
Transportation equipment	6.48	6.99	6.99	7.12	275.40	296.38	293.58	305.45
Instruments and related products	4.81	5.10	5.10	5.14	195.77	205.53	203.49	206.63
Miscellaneous manufacturing	3.99	4.27	4.27	4.30	154.41	167.81	165.68	167.70
NONDURABLE GOODS	4.59	4.95	4.99	5.00	180.85	194.54	195.11	196.00
Food and kindred products	4.90	5.22	5.27	5.30	196.00	206.71	207.64	210.41
Tobacco manufactures	5.13	5.36	5.56	5.53	195.45	202.07	210.17	207.93
Textile mill products	3.57	3.85	3.87	3.87	144.59	155.93	155.19	155.57
Apparel and other textile products	3.38	3.57	3.57	3.57	121.00	126.74	124.95	126.38
Paper and allied products	5.31	5.72	5.79	5.81	225.68	242.53	247.81	248.09
Printing and publishing	5.66	5.97	5.99	6.03	212.25	224.47	224.03	226.73
Chemicals and allied products	5.79	6.21	6.26	6.29	240.86	258.96	261.67	261.04
Petroleum and coal products	7.11	7.68	7.74	7.71	300.04	327.17	330.50	324.59
Rubber and plastics products, nec	4.36	5.03	5.06	5.04	176.58	207.24	207.46	207.65
Leather and leather products	3.42	3.61	3.61	3.62	131.33	131.04	131.40	133.22
TRANSPORTATION AND PUBLIC UTILITIES	6.39	6.71	6.78	6.80	252.41	267.73	271.20	273.36
WHOLESALE AND RETAIL TRADE	3.95	4.20	4.23	4.24	132.33	139.02	140.01	140.77
WHOLESALE TRADE	5.15	5.41	5.48	5.51	199.82	209.37	211.53	213.24
RETAIL TRADE	3.52	3.76	3.78	3.79	112.29	118.06	119.07	120.14
FINANCE, INSURANCE, AND REAL ESTATE	4.36	4.51	4.54	4.58	160.01	165.07	166.62	168.09
SERVICES	4.34	4.62	4.64	4.67	144.96	153.85	154.51	155.51

[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	May 1976	Dec. 1976	Jan. 1977	Feb. 1977	Mar. 1977	Apr.p 1977	May p 1977	Percent change from: May 1976-May 1977	Percent change from: Apr. 1977-May 1977
TOTAL PRIVATE NONFARM:									
Current dollars	183.6	190.6	192.7	193.2	194.1	195.3	196.3	6.9	0.5
Constant (1967) dollars	108.3	109.4	109.7	109.0	108.8	108.6	N.A.	(2)	(3)
MINING	197.0	206.8	207.8	210.1	210.4	212.0	212.1	7.7	(4)
CONTRACT CONSTRUCTION	185.2	189.5	192.4	190.8	191.6	192.6	192.3	3.8	-.2
MANUFACTURING	182.5	191.0	192.3	193.3	194.3	195.4	196.9	7.9	.7
TRANSPORTATION AND PUBLIC UTILITIES	198.1	203.1	205.1	206.2	206.7	208.6	209.1	5.5	.2
WHOLESALE AND RETAIL TRADE	177.2	184.6	186.4	187.6	188.5	189.8	190.4	7.4	.3
FINANCE, INSURANCE, AND REAL ESTATE	170.5	172.9	176.5	175.7	175.9	177.4	179.3	5.2	1.1
SERVICES	187.4	194.6	197.7	197.7	198.7	199.8	200.8	7.2	.5

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

[2] Percent change was 0.3 from April 1976 to April 1977, the latest month available.

[3] Percent change was -0.1 from March 1977 to April 1977, the latest month available.

[4] Less than 0.05 percent.

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 May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1977 Jan.	Feb.	Mar.	Apr.[p]	May[p]
TOTAL	112.0	111.6	111.8	111.8	112.2	112.2	112.8	113.3	112.3	114.2	115.2	115.4	116.0
GOODS-PRODUCING	97.2	96.8	96.5	95.7	95.9	96.0	97.2	96.9	95.2	98.3	100.0	100.5	101.4
MINING	124.7	125.0	127.7	115.6	131.7	131.1	132.6	134.0	130.7	134.6	141.5	141.7	138.6
CONTRACT CONSTRUCTION	104.0	104.0	103.7	102.5	99.4	104.2	105.7	104.3	96.4	105.9	108.1	111.4	111.9
MANUFACTURING	95.1	94.6	94.2	93.9	94.0	93.2	94.5	94.4	93.8	95.7	97.1	97.2	98.2
DURABLE GOODS	94.0	93.8	93.5	93.6	93.2	92.0	93.8	93.6	93.2	94.8	96.8	96.5	98.1
Ordnance and accessories	41.0	40.7	40.0	39.8	38.6	38.5	38.5	39.5	39.0	39.1	38.5	40.7	41.8
Lumber and wood products	96.6	96.1	98.6	97.6	98.2	99.4	100.8	101.9	101.1	103.0	103.4	103.9	104.3
Furniture and fixtures	105.1	103.3	102.3	101.2	102.4	102.2	102.8	103.5	98.5	102.7	105.3	105.5	106.1
Stone, clay, and glass products	99.5	99.7	99.2	98.6	98.9	99.7	100.2	99.1	96.1	97.1	101.5	103.9	104.2
Primary metal industries	88.3	89.2	90.1	89.8	88.8	86.2	85.7	85.0	84.8	85.5	88.5	89.7	91.5
Fabricated metal products	98.7	98.4	98.0	98.6	98.6	96.5	98.1	98.1	97.6	100.0	101.6	101.0	102.7
Machinery, except electrical	94.9	94.5	95.9	95.9	95.9	94.0	96.7	96.0	95.7	97.7	98.6	98.1	100.8
Electrical equipment and supplies	92.2	91.9	90.5	92.2	91.5	92.1	93.4	93.1	91.7	95.5	95.9	95.9	97.3
Transportation equipment	92.8	92.6	90.3	90.7	89.1	86.1	91.5	90.6	93.3	91.3	96.7	94.2	96.2
Instruments and related products	109.6	109.1	110.3	108.1	107.2	107.9	108.5	110.4	108.9	112.4	111.6	110.5	111.3
Miscellaneous manufacturing, Ind.	95.4	94.7	93.1	91.8	92.2	92.0	92.1	91.6	93.1	96.8	96.0	94.5	94.7
NONDURABLE GOODS	96.6	95.8	95.2	94.2	95.2	95.0	95.4	95.5	94.7	97.1	97.6	98.2	98.4
Food and kindred products	96.6	96.8	97.0	96.5	96.4	96.2	96.6	95.5	95.1	97.5	97.9	98.1	96.6
Tobacco manufactures	85.4	83.4	82.3	84.0	82.1	83.0	81.6	81.6	76.1	83.0	75.5	80.7	78.9
Textile mill products	99.9	98.6	98.0	95.5	95.2	95.0	95.6	96.1	95.4	97.9	99.5	99.7	100.0
Apparel and other textile products	92.0	91.4	88.9	87.6	86.2	85.7	86.1	86.3	84.1	88.0	87.9	87.1	88.9
Paper and allied products	98.1	97.3	96.9	96.1	96.5	95.7	97.0	97.2	96.2	98.0	98.3	100.8	101.2
Printing and publishing	93.6	93.1	93.6	92.9	93.1	93.4	93.6	93.7	93.0	94.8	94.3	94.6	95.5
Chemicals and allied products	100.0	99.0	99.4	99.8	100.3	99.4	100.0	100.0	100.4	101.8	102.2	103.2	103.4
Petroleum and coal products	113.9	111.6	112.2	112.4	112.2	112.5	113.1	114.7	115.0	114.7	118.7	120.4	116.2
Rubber and plastics products, nec	108.8	107.0	106.2	105.2	124.3	125.6	125.7	127.6	127.7	129.6	131.7	134.2	135.9
Leather and leather products	79.8	76.0	74.7	72.5	72.1	71.0	70.4	70.5	69.1	71.9	71.9	73.3	72.3
SERVICE-PRODUCING	122.3	121.8	122.5	123.0	123.6	123.5	123.5	124.6	124.1	125.3	125.8	125.8	126.1
TRANSPORTATION AND PUBLIC UTILITIES	101.9	101.6	102.1	102.5	102.9	102.0	103.2	105.0	102.7	104.4	104.2	104.0	104.8
WHOLESALE AND RETAIL TRADE	118.9	118.1	118.9	119.0	119.7	119.3	118.9	120.0	119.1	120.7	121.5	121.5	121.8
WHOLESALE TRADE	114.3	114.1	115.3	114.7	114.9	114.8	114.8	114.8	115.4	117.0	116.9	117.2	116.7
RETAIL TRADE	120.6	119.6	120.3	120.6	121.6	121.0	120.4	122.0	120.4	122.1	123.2	123.1	123.7
FINANCE, INSURANCE, AND REAL ESTATE	126.3	126.3	126.6	127.3	127.7	128.3	129.1	129.8	130.6	130.2	131.1	131.2	132.0
SERVICES	135.3	135.0	135.4	136.6	137.2	137.6	137.7	138.4	138.8	139.7	140.0	140.0	140.1

[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
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	75.0p
November	64.2	53.8	69.8	75.9p
December	68.3	75.9	76.7	
1977				
January	71.5	76.7	89.2p	
February	61.6	84.6	86.6p	
March	79.7	83.1p		
April	70.9p	80.2p		
May	64.2p			
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.

Congressman Long.

Representative LONG. Thank you, Mr. Chairman.

Commissioner, we are pleased to have you with us again and, as Chairman Bolling said, your report today is like one of the proverbial "good news, bad news" jokes, although there is substantially more good news than there is bad news.

The inflation problem continues to plague me, as it does all of us, and as we were discussing a moment ago.

Looking at one aspect of your report, that is, weekly earnings in manufacturing and how they increased during the period. It appears that weekly earnings rose in May at an annual rate of about 22 percent, and, although the Wholesale Price Index increased far less than it has previously, the annualized 22-percent increase in weekly earnings in manufacturing causes me concern.

Give me your views on that. Is this something to be concerned about?

Mr. SHISKIN. Well, we certainly have to be concerned about wage trends. The average contract settlement has been running at about 6½ percent without an adjustment for prices.

If you make one of numerous reasonable assumptions that are possible for prices, it gets the average contract settlement up a couple of points, somewhere in the neighborhood of 8½ percent. This is a fairly high figure, and we have to be concerned about it. I can add little to that statement, Congressman.

Representative LONG. Can you relate it any closer to the whole question of inflation? Is it a part of the buildup in the acceleration of the rate of inflation, or is it not?

Mr. SHISKIN. Well, the rate of inflation declined during 1976, unevenly, but it persistently declined.

We had a rise earlier in the year this year, both in the WPI and in the CPI. Now, that rise, I think, was primarily related to foods and energy products. You can't dismiss food and energy products because they represent almost 30 percent of the weight of the CPI, for example. You have to give them a lot of attention.

But, nevertheless, I think it is fair to say that, particularly in foods, that there were special factors at work.

We do have a problem that costs keep rising, and you reflected that rise by citing the wage figures, and it is a cause for concern.

Representative LONG. Thank you, Commissioner. Thank you, Mr. Chairman.

Representative BOLLING. Congressman Pike.

Representative PIKE. Thank you, Mr. Chairman.

Mr. Commissioner, while the statistics are not very large, or the swing is not very large, the differences between what happened to adult male employment and adult female employment sort of intrigued me. Can you speculate on why it might be that the employment of women dropped while the employment of men rose?

Mr. SHISKIN. They are random fluctuations in my opinion. I cited them, but I wouldn't attribute much significance to them.

Representative PIKE. It wasn't large.

Mr. SHISKIN. I wanted to take this opportunity to make a comment in the chairman's opening statement about the news being mixed because the unemployment didn't drop much, if at all. You can't expect

the unemployment figures to drop every single month during a period of expansion, or rise every single month during a recession. The economy doesn't behave like that, or at least our figures don't. The unemployment figures move down during a rising trend in the economy, but during such a period there will be occasional months when they rise.

So the fact that they were level, virtually level, between the last 2 months, is not a cause for any concern at all. We have had a very substantial improvement in employment, very substantial, and it is particularly noteworthy, as I said a few minutes ago, that this improvement has taken place largely in manufacturing and construction.

That is important, because there is, to use an expression familiar to economists, "a large multiplier" in manufacturing and construction. These are the heavy industries. So I think the desirable trends are appearing in the employment figures. I am very hopeful that these figures on employment will show up in other ways later in the month, when we get figures on capital expenditures and on new orders for durable goods.

With respect to men and women, the heavy goods industries are industries which employ men for the most part, so I don't think the changes you noted in the unemployment rates for men and women, Congressman Pike, are significant.

Representative PIKE. Mr. Chairman, just one additional question.

You say that the food component of the price index is roughly 30 percent?

Mr. SHISKIN. No; the food component—food at home is about 18 percent. Food away from home is about 5 percent. I may be off a little bit on this. Energy is today about 7½ percent.

Let me just take this opportunity for the benefit of many people who follow the CPI revision, to say that when we introduce the new revised CPI late this year, hopefully, or early next year, we are going to change those weights. When we do, the weights for food will be smaller, following historical trends, and the weights for energy will be higher. But the point I was making is that we have these two items in our calculations that represent almost 30 percent of the total weight.

Representative PIKE. The only point I wanted to make was that out of the list of commodities which went down, three of them were coffee, tea, and cocoa, and I think they are all sort of interrelated, and I think we got 1 month's free ride out of the falling prices of coffee. I hope they continue to fall, because it will make quite a difference in the overall picture.

Mr. SHISKIN. Sir, may I say that the main items that are responsible for the decline in farm products were grains and soybeans.

While the prices of tea and coffee have been rising sharply in recent months, it is to be noted that they have very little weight in the index.

Representative PIKE. Good.

Representative BOLLING. Mr. Shiskin, we have been talking over the months about the two-tier nature of the unemployment. We are pretty far along into a recovery if the statistics mean what they seem to mean, and it seems to me that we are getting to the point where it is important to begin to ask the question: Let's say we do continue with a normal recovery, as it appears that we may well do. How

much effect is a normal recovery going to have on this particular type of unemployment among youth and, in particular, blacks and black people? Are we in a situation where we ought to be recognizing that the macroeconomic approach to this kind of unemployment is highly unsatisfactory?

Mr. SHISKIN. OK. Let me, for the benefit of some, just review very briefly the points I made last month.

They are that during this recovery there has been substantial improvement in the unemployment rates for certain kinds of persons, like job losers, adult males and females, and full-time workers, but there has been little or no improvement for teenagers, entrants and reentrants, which is another way of saying more marginal participants in the labor force.

That is a typical cyclical phenomenon. Usually you have similar movements during periods of economic recovery. This time we had a little improvement in teenagers, but if you look at all the entrants to the labor force which includes a lot of women and teenagers, you have had very little movement.

OK. Now, suppose the expansion continues through 1977. What could we normally expect?

Well, if the expansion continues through 1977, it will spread a lot of sunshine, and everybody will feel that sunshine, and it is going to do some good with hard-core groups. My personal judgment, and this may be a controversial position, is that special programs are needed to stop up all the pockets of unemployment. I have mentioned that Secretary Marshall keeps saying this. I heard him say this a few hours ago on television, and I think he is right.

Representative BOLLING. Is there an obvious explanation of this? Is this a question of demographics or is it less obvious?

Mr. SHISKIN. I think the explanation is that it is more economical for the big companies, once a recession is over, or all companies, to take back experienced workers. My view is that experienced workers are cheaper than inexperienced workers, even though you pay them more. You get more for your money.

To bring in inexperienced workers requires training. Their output is smaller because they do not have the skill and speed which comes with years of experience. I think the companies are doing the kinds of things that they have always done; namely, they bring back experienced workers who know how to do their jobs first.

Representative BOLLING. Are there other factors besides the couple that you mentioned, training and experience? Is there an added cost, or added costs of new hires in terms of fringe benefits and so on?

Mr. SHISKIN. They would have to pay those for the experienced workers, too. My impression, and perhaps I am not the best judge of this, is that it is cheaper, more economical, and more efficient, for them to bring back experienced workers than to bring in new inexperienced workers and train them.

Representative BOLLING. Basically, while there will be some improvement in the second tier, we are just stuck with a situation, a very dangerous situation, and there are some of our people who are not going to be reached by the general expansion. Then we have to speed up, really, the attempt to have specific programs to deal with that.

Mr. SHISKIN. Right.

Representative BOLLING. Which is what the Secretary has been saying.

Mr. SHISKIN. I would agree with that.

Representative BOLLING. I have a number of, a variety of questions.

First, there is a series on the price trend, and somebody stop me when my time is up, and I will go back around.

Although the wholesale price index increased far less than in previous months, average weekly earnings in manufacturing increased in May at an annual rate of 22 percent. Is this a cause for alarm?

Mr. SHISKIN. That came up in a different regard a few minutes ago, and I certainly think you had better watch it. What else can one say? We have to be eternally vigilant. It may prove to be a problem.

Now, I think the wage agreements that we are seeing, the settlements, are running about what they have been running.

Representative BOLLING. What did you say, that they are running as they have been running?

Mr. SHISKIN. The wage settlements are running about at the level they have been running in the recent past. We publish a series which shows the average cost in terms of wages and benefits of new contracts completed each quarter, and we publish that quarterly. That is what I am referring to. They are running about what they have been running.

The problem with that series is that the mixture in any quarter can be very different from the following one, because it depends on which contracts are settled in a particular quarter.

So I think we have to watch these data. But at the present time I don't see any major abnormalities developing in this area. There are a lot of things to worry about if you are looking for something to worry about. A lot of people are worried about the big problem of oil imports, our balance-of-payments deficit, and we have been worried about the sluggishness of capital expenditures, and we have to keep watching that, and we have to watch the balance between cost and prices. Unit labor costs have been rising, and that is a cause of some concern, but they always rise in a stage of expansion, and the question is how rapidly they will rise.

So what I see is typical behvior for about 2 years or so into the economic expansion.

Representative BOLLING. I would like to be sure I heard that.

Mr. SHISKIN. I was saying that, as far as I can see, the expansion is proceeding along reasonably typical lines, nd no two expnsions are exactly the same. We have now had 26 months of expansion. We had a pause last year. We often have pauses. Capital expenditures have been sluggish. There is now reason to believe they will speed up.

Our figures are very significant in that respect, the ones on construction and employment. I don't see wage trends as yet out of line. So I think we are about on track.

Representative BOLLING. Let me be sure I know where we are on that track. I understand that no two expansions are alike, but where are we, more or less?

Mr. SHISKIN. Let me try to answer it in these terms.

In the past, I have usually provided a table which compares the level of the current month with the previous cyclical peak. I haven't brought that table up to date this month, but I remember enough

about it from last month, and we are doing very well on employment, and are substantially higher than the previous peak level.

We are also doing better in employment than after, say, the 1957–58 recession, which was a very steep recession as was the 1974–75.

We are not doing quite as well in terms of real GNP, but we are doing well. We are above the previous peak. We are a little above the previous peak level in industrial production and retail trade.

I would say our current recovery is s good or better than the recovery we were having after the steep recession in 1957 and 1958. It is hard to make a simple statement, but I would say we are about on track. It is about on track. It is about what you would expect, though we have problems and causes for concern.

One of the problems you cite is the teenage unemployment problem, and there is the OPEC problem which keeps coming back to haunt us.

We are hopeful that the expected expansion of capital expenditures will materialize. The economic situation changes dramatically at some times. We don't anticipate them too well and we may be missing something now. But I think we are about on track.

Representative BOLLING. What, then, would be the prognostication? If we are about on track, should we continue to have several more months of expansion?

Mr. SHISKIN. Yes. I would say that the prospects—well, let me throw another thing in here, and that is the index of leading indicators. The index of the leading indicators is a useful tool, among many others, in interpreting current conditions and trends. That index has been going up the last few months at a reasonably good clip, and what that suggests is that the expansion of the economy will continue in the next few months.

You have to take a look at it every month. We have to be eternally vigilant in studying the figures every month.

No period of expansion has been trouble free, and this one isn't, either, but we are about on track.

Representative BOLLING. What about the things that we ought to be watching? I know you said something about this already, but what are some of the things that we ought to be watching, in particular, on the inflation end of things?

You have mentioned a good number, but I want to be sure we get them all.

Mr. SHISKIN. On inflation, you have to watch the inflation indexes, price indexes, CPI, WPI, GNP deflator, and so forth. We put out a lot of data on prices. Other officials inside the Government, and other officials outside the Government comment on them.

We dissect them carefully, too. We know what happens to the total CPI, that for foods, that for commodities only, and for fuels, and the WPI the same way. So we have to watch that. That will give us a lot of help.

We have to watch the inventory figures. It is a fact that every recession we have had, at least since the end of World War II, with one exception, was an inventory recession. The exception was in 1969–70.

Now, I personally find that a very unusual recession. There was no inventory adjustment. There is a debate that is still going on as to whether there was really a recession in 1969–70. But if you put the 1969–70 movement aside, every post World War II recession has been an inventory recession.

Now, we have to watch inventories very carefully. Unfortunately, our inventory figures are very poor today, and they come out late. I am glad I am not in charge of them.

I used to be, but I am not anymore. That was an improvement when I changed jobs. But the inventory data require close scrutiny.

I think the OPEC problem is a serious problem. It is a new problem, and nobody is sure where it will end.

I think I have said more than I know, Mr. Chairman.

Representative BOLLING. You are a very honest man.

What about hidden unemployment, the whole question of the discouraged worker, the whole problem of those who get out because they are hopeless and so on? How good are the data on that, and how important a factor is that? Do you know?

Mr. SHISKIN. Well, every month we publish in addition to the regular unemployment figures a table which shows the unemployment rate for seven different categories, identified as U–1 to U–7.

One of the categories does include discouraged workers. Over the last year or two, if you added discouraged workers to the unemployed, that would have raised the unemployment rate by another point or so. In other words, if we included all the discouraged workers in the measure, the rate today would be, not about 7 percent, but closer to 8 percent. So that gives you some notion of the magnitude involved.

We don't know very much about discouraged workers. There are a great many people who say that they are not employed, that they are available for work but they are not looking because they don't think they can find a job. This is the group we refer to as discouraged workers.

When you ask them, some say they are discouraged for personal reasons. Some people feel that, maybe because of their age or appearance, maybe because of their ethnic situation, that they will never be able to get a job, and we classify those as personal reasons.

There are others who say, "I just don't think I can find a job because there are no jobs out there." This is a larger number, but even among those, we don't know how many of them are realistic in their attitude toward a job.

For example, when they say they will accept a job, do they mean at current rates of pay?

In some parts of the United States, there are communities with one or two plants that do all or most of the hiring, and if they are not hiring, there is no use looking for a job. So there is a lot of legitimacy to their statements they are not looking because there are no jobs available.

We have done something to learn more about these people. We have taken a survey in which we asked the people who don't work because they don't think they could find a job some questions like, "What was the last job you were on? What was the salary? When did you last look for work? Have you turned any jobs down? What was the salary offered? Do you intend to look for work in the future?" That survey was done last summer, but we haven't as yet received the tabulated results. We hope to get those results within a few months, and I think they will be very enlightening.

My guess is that it will show a fairly large number of discouraged workers.

On the other hand, Mr. Chairman, I cannot let this opportunity go by without saying that, frequently, when I have testified before various committees in Congress, I have gotten a very different kind of question; namely, "Why do you include, for example, teenagers whose parents work as unemployed? Why do you include full-time students who are looking for part-time jobs?"

If a student comes home for Christmas and tries to find a job during Christmas week and we happen to hit his family and he hasn't found one yet, we will count him as unemployed. There are good reasons for this.

Then, of course, there is the category of persons who voluntarily quit their jobs, who many people think should be excluded. So we get a variety of criticism.

Partly in response to such criticism, we publish seven different measures which give you some notion of the range of unemployment, and reflect different views on attitudes toward unemployment. As you know, we are expecting the President soon to announce the appointment of a commission of distinguished Americans who will look at these questions and give us some answers.

Representative BOLLING. Thank you, very much. My time is up.

Congressman Long.

Representative LONG. Yes, one further question, Mr. Shiskin.

The figures I have been looking at indicate that there were about 2 million persons in the "discouraged workers" category, in 1962, and, at that time the unemployment rate was only about 5.6 percent.

Now, with, of course, a much higher population and a substantially higher labor force than we had at that time, we have only 929,000 "discouraged workers" counted for the first quarter of 1977.

These seem paradoxical to me. Are there fewer people in this category because we have extended unemployment compensation? Does that have any bearing on it?

Mr. SHISKIN. I don't know about the 2 million figure. We were not collecting data on discouraged workers at that time.

Representative LONG. These are not from your figures. They are figures that the Joint Economic Committee staff made on studies that had been made. I think they are reliable figures.

Mr. SHISKIN. We will have to take a look at them, but I cannot comment on the other implications—I just don't know. We will have to study that, and we hope the JEC staff will make their estimate available to us, so we can take a look at them.

Many people raise questions of the kind you just raised, Mr. Congressman, about the impact of unemployment compensation on our figures. More recently, there were two professors from the University of Florida, who have raised questions with us about the impact of the aid for families with dependent children, and the food stamp program on our figures. If you would give me a few minutes, I would be happy to make comments on that, and discuss the question of the comparability of the unemployment figures over the past 20 years. Would you like for me to do that?

Representative LONG. Yes; if the chairman——

Representative BOLLING. I would.

Mr. SHISKIN. OK.

There has been a lot of controversy on the question, are the figures that we are publishing today comparable with the figures of 10 or 20 years ago, and it is not an unimportant issue.

For example, the President has recently set a goal for unemployment for 1981 with the historical record in mind, and he set it in terms of the current definition and current practices. So the question of comparability is a very important one.

We have assembled a list of factors which affect comparability, some of which tend to reduce the level of unemployment and some of which tend to raise it.

Before I go into them, let me say that we are unable to quantify them at this time. Others have made a stab at it, but we cannot say whether they are accurate or inaccurate.

Some of you may have read the June issue of "Fortune," and found a figure cited by a BLS official. We looked into that and our conclusion, as well as that of the BLS official who is quoted there is that there is no quantitative basis for that figure.

Here are three factors that tend to make the present figure lower in terms of comparability in terms of 10 or 20 years ago. One is early retirement.

Some people who are getting close to retirement will, when threatened with the loss of a job, or when he or she loses a job, will accept early retirement rather than look for a new job.

We don't think that is a very substantial number, or involves a substantial amount of people, but it is a factor.

There is another fatcor, which is the kind of work sharing which we have seen in the General Motors collective bargaining agreement. This agreement provides for a greater number of holidays and more annual and sick leave but we don't think that is a substantial figure, either.

A third factor is the Government jobs programs, introduced in the 1960's. The Government has had numerous job programs, the Neighborhood Youth Corps, job training, and public service employment. We count people in those programs as employed.

So these factors have all tended to make our present figure a little lower than the figure for unemployment 10 or 20 years ago.

But there also are numerous factors that have tended to make the present figure higher. One is the changing composition and rapid growth of the labor force. We all know about the much greater participation rate of women and youth and the widely believed increase in the number of illegal aliens.

There are a lot of people coming into the labor force, much more than in the past. If you take a snapshot at the economy at one point in time, which is what we do in our survey, you are going to have a higher unemployment rate because of those groups.

Another factor is one that Congressman Long mentioned, unemployment compensation. In recent years unemployment benefits have been liberalized in terms of the amount, coverage, and duration, and that has given the unemployed more elbow room in selecting, or trying to find a job.

They don't have to take the first job that is offered. They have a little more time, so that may increase the unemployment rate.

Similarly, the new requirement in the aid for families with dependent childrn and food stamps that participants register with the employment security offices may also be a factor in that direction, but we think the study cited in recent weeks greatly exaggerates that.

Another important element is that we have had a large growth in the number of multiearner families.

Last month, for example, more than 50 percent of the unemployed were in families with one or more full-time workers working, and this is much more than was represented 10 years ago.

So all these factors tend to raise the unemployment rate compared to 10 to 20 years ago.

We cannot quantify them. Let me say that again, at this stage.

The one thing that has been comparable over these years, though, is our definition of unemployment. I think it is a fact—a hard fact—that at the present time there are some 6.7 million people out there in real labor markets looking for real jobs. This is a problem that we have to confront today.

You can debate all you want about whether the figures are comparable with those issued 20 years ago, and I think the problem of comparability is one that has to be considered in setting goals. But in terms of the immediate problem, there are 6.7 million people who tell us now that they are actively seeking jobs. So I think that is the record we have to look at.

Representative BOLLING. The fact is that unemployment is at an excessively high rate from the point of view of any standard that anybody has developed. Even Mr. Greenspan, when he came up here on the 19th of January, was talking about 4.9 as full employment, where most people have thought 4.

We have a very substantial number of people that are unemployed, and that is not a soft statistic.

Mr. SHISKIN. That is what they tell us.

Representative BOLLING. Congressman Long wanted to pursue that question he asked you about the 2 million discouraged workers by letter. He had to leave, as did Congressman Pike, because there is a vote on an amendment. I don't think I have any more questions, and you will hear from Congressman Long and the staff on that subject.

We thank you very much.

The committee stands adjourned.

[Whereupon, at 11:43 a.m., the committee adjourned, subject to the call of the Chair.]

EMPLOYMENT–UNEMPLOYMENT

FRIDAY, JULY 8, 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: Senator Proxmire.

Also present: Thomas F. Dernburg, Kent H. Hughes, Katie MacArthur; Morton Schwartz, and Howard Shuman, professional staff members; Mark Borchelt, administrative assistant; and Mark R. Policinski, minority professional staff member.

OPENING STATEMENT OF SENATOR PROXMIRE

Senator PROXMIRE. The committee will come to order.

As you know, we will probably not have other members present because of the recess, but I was delighted to be here during the recess and have a chance to get what is a mixture of good and, perhaps, not so good news this morning.

The wholesale price in the news is excellent. I am very happy about that, the first drop in wholesale prices, as I understand, since last August, and the biggest monthly drop in more than 1 year.

I couldn't find any statistics, but it went down six-tenths of 1 percent in 1 month, so it must be quite a while.

Unemployment, on the other hand, was up 210,000, to, as I understand it, 7 million, and, a mixed picture, a sharp increase in unemployment for women from 6.6 to 7.2 percent. An increase for blacks and other minorities from 12.9 to 13.2, an increase for teenagers from 17.9 to 18.6, but a decline for adult men from 5.3 to 5.0.

The effect, is, as I say, mixed. One of the interesting statistics which you have disclosed in your overall release is the fact that we are close to an all time high for the percentage of noninstitutional population that is employed, in fact, the highest proportion since March of 1974.

I think that is most encouraging. It means that people are more at work now in spite of the fact that we have high unemployment, more at work than there have ever been at almost any time in our history.

The proportion of Americans in the workforce, that is actually at work or seeking work is, as you say, the highest we have ever had in history, 62.5 percent. That is a full percentage point above what it was a year ago. Because so many Americans are now in the work force, it is easier to understand how unemployment is up by 210,000, at the same time employment, the number of people working, is up by 270,000.

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So they both went up because more people who were out of the work force have come into it.

At the same time, there is that puzzling figure that you have on discouraged workers, indicating there were more discouraged workers in the last quarter, more people who would like to work but have lost heart.

I am concerned about the diffusion index which you have developed for us so well over the last few years. That diffusion index suggests that the recovery is, perhaps, not as encouraging as it might be.

Table B–6 in your employment release is particularly impressive. You show that whereas the percentage of industries in which employment increased have been steadily around 60 or 70 percent. January is 71; February, 61; March, 79; April, 79; and May, 65. It is now down to 51.7 percent, indicating that the recovery is not as widespread as it had been.

I am concerned about the failure of hours to improve. They are at a flat level despite the fact that employment is going up. Hours are not improving.

On prices, it seems to me, as I say, that the news is very encouraging and not only encouraging from the standpoint of a 1-month drop, but encouraging also because, as you point out, on page 3 of your release, by stage of processing the future looks good. The crude materials for further processing declined 1.6 percent in June after seasonal adjustment.

That would mean, as we go along in the process, that the price drop should be passed on. The index for intermediate materials had the smallest upward movement for this index since May of 1976, again, good news, and the index for finished goods is down. So that certainly is most encouraging.

I would like to mention real earnings before I hear your opening statement. Why is the level of real earnings about as high now as it was a year ago?

In view of the fact there has been an increase in productivity, that is rather discouraging. The data indicates that over the last 10 years, when we have certainly had a substantial increase in productivity, there has been almost no increase in real weekly earnings. It is about the same now as it was in 1967, a 10-year period in which the American worker has been at the same level.

I am concerned about that. It indicates very little real progress, and that is quite different than the situation we had in the fifties and sixties when there was a rather sharp improvement in real earnings.

As I say, it is quite a bit of news this morning. 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, Mr. Chairman.

In general, I agree with virtually everything you have said about the releases. I would only add one point. You refer to the average hours, perhaps, you were talking about average hours per week——

Senator PROXMIRE. I was talking about the fact that they had not increased as you might expect them to in a recovery period.

Mr. SHISKIN. To be sure we understand each other, the point I was about to make is, despite a rise in employment, the decline in average hours per week, small as it was, was still enough to offset the rise in employment. The result was that aggregate hours, which is the most comprehensive measure of economic activity, went down.

Senator PROXMIRE. Let me take a minute with that. I think that is an easy one to slip by. You say "aggregate hours," when you allow for the fact there was a 270,000 increase in employment, and, then, you correct that with the fact that the people who work are working shorter hours and the total number of hours actually worked didn't change, suggesting that we are not in a sense producing more unless productivity is up, right?

Mr. SHISKIN. Aggregate hours went down. The way we compute that figure is through the payroll survey. It is a figure on nonagricultural employment that I am referring to, and that went up 135,000. It is the payroll survey.

Now, average weekly hours went down very slightly, but it only takes a small decline in average hours to offset a fairly large rise in employment. So the net result of the rise of 135,000 in nonagricultural employment, and the decline of one-tenth in average hours worked per week led to an overall decline in aggregate hours.

I would like to turn, after I read my statement, to your comments on the implications of the data on average real weekly earnings, because I think they are very misleading and your comments based on those figures do not reflect the real situation.

I am coming back to that.

Senator PROXMIRE. All right.

Mr. SHISKIN. As usual, Mr. Stein is here to help me out on the employment and unemployment questions, and Mr. Layng on prices.

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

After sustained and substantial improvement over several quarters, the June employment-unemployment statistics show a mixed picture with both employment and unemployment increasing. The labor force increased by an exceptionally large amount, 483,000; employment rose by 271,000 and unemployment rose by 212,000.

The unemployment rate rose to 7.1 percent. The rise in unemployment was concentrated among adult women with some rise for teenagers, but the rate for adult men declined, as did the rates for household heads, job losers, and the long-term unemployed. The rate for part-time workers rose, while the rate for full-time workers was unchanged. The average duration of unemployment declined. It is to be noted, once again, that by historical standards, all these rates are high for this stage of economic expansion.

At the beginning of this year, BLS began publishing in the monthly release unemployment rates for several different, reasonable definitions of unemployment, labeled U–1, the most restrictive, to U–7, the most inclusive. Although the levels for these various employment series are quite different, they have all moved together over time, particularly

over spans of several months. In June, the changes were all small, but in both directions. U–7, which is available only quarterly, declined from 9.9 to 9.7 percent in the second quarter.

The small differences between May and June and the movements in both directions of these various employment series illustrate the mixed situation in June. Total employment and nonagricultural employment rose, though by less than in recent months. The employment-population ratio edged up close to its alltime high last reached more than 3 years ago.

Reversing the pattern of recent months, the rise in total nonagricultural payroll employment of 135,000 was accounted for mostly by services, while manufacturing employment declines. The diffusion index of 172 industries was 52 in June; thus, about half the industries showed employment gains in June. Average hours of work per week declined slightly. Despite the rise in employment, the decline in average hours per week produced a reduction in aggregate hours, the most comprehensive measure of employment activity.

While the employment-unemployment picture for June is mixed, the wholesale price situation is favorable. The wholesale price index for all commodities decreased 0.6 percent from May to June on a seasonally adjusted basis. The index had moved up 0.4 percent in May and about 1 percent in each of the 3 previous months. The index for farm products moved down more sharply than in May, and prices of processed foods and feeds declined following 4 months of large advances. The industrial commodities index rose, but less than in recent months.

The index for finished goods, which includes both producer and consumer finished goods, edged up 0.1 percent, the lowest figure in almost 1 year. Consumer finished goods less foods rose 0.4 percent, the smallest increase since February.

It is to be emphasized that these comments refer mostly to the changes over one month. As most of us have learned through hard experience, it is imprudent to judge current economic conditions and prospects by a single month's figures.

I would like to observe that while we talk here at these JEC hearings about macro problems, there has been a great deal of concern and interest and controversy over the detailed data on unemployment which we publish for State and local areas.

This week, the Bureau of Labor Statistics has been able to make available a limited amount of analytical data for some central cities for the 2 years, 1970 and 1976. These data include 11 large central cities: New York, Chicago, Philadelphia, Houston, Detroit, Dallas, Baltimore, Washington, D.C., Cleveland, Milwaukee, and St. Louis.

The analytical data available are the overall unemployment rate, the employment-population ratio, and the labor force participation rate. These data are also provided for males, 20 and over, females, 20 and over, and teenagers.

The measurement errors for the unemployment rates are also shown. A summary table is attached. More detailed data for each city are available on request.

With respect to real earnings, let me tell you, first, that the series is derived by dividing total payrolls for production or nonsupervisory workers in the private nonfarm economy by total production

worker employment. The result is average weekly earnings in current dollars. Then we figure the Federal income and social security tax deductions applicable to a married worker with three dependents who earned the average weekly earnings. This figure is deflated by the Consumer Price Index to derive real spendable earnings.

This series has been under very strong attack in recent years; in fact, Senator Proxmire, you have attacked it from the very seat you are sitting in now. A lot of that is justified.

One reason the real earnings series has shown a decline is explainable by the fact that we have had an increasing number of part-time workers, who earn less than full-time workers.

So, as the part-time workers are entered into those figures, the average weekly earnings have gone down. We have been trying to supplement those real spendable earnings figures by publishing annual data which are based on another survey. These other data are based on the same survey as that from which we get the unemployment figure, current population survey (CPS).

These annual data make it possible for us to show breakdowns, for example, families and unrelated individuals.

When you look at those annual figures, you see a very different picture from that shown by the real spendable earnings data. We hope within the next few years to be able also to compile CPS data on a quarterly basis. Those data are designed to provide an estimate of real average annual earnings for different demographic groups.

Thank you.

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

TABLE 1.—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 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	.4
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	.5
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	.4
1976														.2
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														
August														
September														
October														
November														
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—93.7; 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, 16–19 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, 16–19 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 one-half 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–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 (0–4, 5–14, 15+).

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

(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, July 8, 1977.

TABLE 2.—LABOR FORCE MEASURES FOR 11 CENTRAL CITIES, 1970 AND 1976 ANNUAL AVERAGES

Area and population group	Employment-population ratio [1]		Civilian labor force participation rate		Unemployment rate		Error range on unemployment rate 1976 [2]
	1970	1976	1970	1976	1970	1976	
United States:							
Total, 16 yr and over	57.4	56.8	60.4	61.6	4.9	7.7	7.6–7.8
Men, 20 yr and over	79.8	75.1	82.6	79.8	3.5	5.9	5.8–6.0
Women, 20 yr and over	41.2	43.5	43.4	47.0	4.8	7.4	7.3–7.5
Both sexes, 16–19 yr	42.3	44.3	49.9	54.6	15.2	19.0	18.7–19.3
New York:							
Total, 16 yr and over	53.9	48.3	56.6	54.4	4.8	11.2	10.7–11.7
Men, 20 yr and over	75.3	67.3	78.6	75.4	4.2	10.6	9.9–11.3
Women, 20 yr and over	40.0	37.9	41.9	41.8	4.2	9.4	8.6–10.2
Both sexes, 16–19 yr	30.4	21.9	35.7	31.5	15.1	30.3	24.4–36.2
Chicago:							
Total, 16 yr and over	58.8	53.0	61.6	58.3	4.4	9.0	8.2–9.8
Men, 20 yr and over	80.4	70.1	82.8	76.4	3.0	8.3	7.3–9.3
Women, 20 yr and over	45.1	43.9	46.5	47.0	3.0	6.7	5.7–7.7
Both sexes, 16–19 yr	36.9	33.2	44.6	43.4	17.0	24.0	16.9–31.1
Philadelphia:							
Total, 16 yr and over	56.2	44.6	59.5	50.3	5.4	11.3	10.1–12.5
Men, 20 yr and over	76.1	59.3	78.8	67.1	3.4	11.7	10.2–13.2
Women, 20 yr and over	43.4	36.0	45.6	39.0	5.1	7.7	6.2–9.2
Both sexes, 16–19 yr	41.0	27.8	51.1	38.4	19.1	27.1	18.2–36.0
Houston:							
Total, 16 yr and over	65.8	67.0	68.4	71.1	3.7	5.7	4.9–6.5
Men, 20 yr and over	87.7	85.4	89.1	88.6	1.6	3.6	2.6–4.6
Women, 20 yr and over	51.7	54.2	53.5	57.7	3.3	6.0	4.7–7.3
Both sexes, 16–19 yr	41.2	46.8	51.8	56.9	19.9	16.8	11.5–22.1
Detroit:							
Total, 16 yr and over	53.5	44.6	58.3	51.3	8.2	13.1	11.6–14.6
Men, 20 yr and over	72.5	61.9	78.0	68.8	6.7	10.0	8.2–11.8
Women, 20 yr and over	39.8	33.5	42.7	38.2	6.7	12.4	10.1–14.7
Both sexes, 16–19 yr	37.6	25.8	49.5	40.9	23.7	36.1	22.6–49.6
Dallas:							
Total, 16 yr and over	69.5	64.5	72.2	67.7	3.8	4.9	3.9–5.9
Men, 20 yr and over	88.7	81.7	91.0	84.3	2.5	3.1	1.9–4.3
Women, 20 yr and over	55.5	52.0	57.9	54.4	4.2	4.9	3.3–6.6
Both sexes, 16–19 yr	50.9	45.6	59.6	56.1	13.2	20.1	2.4–37.8
Baltimore:							
Total, 16 yr and over	55.6	48.9	58.3	44.5	4.7	10.3	8.8–11.8
Men, 20 yr and over	75.7	66.5	78.9	72.9	4.1	8.7	6.9–10.5
Women, 20 yr and over	44.8	39.9	45.8	43.2	2.8	7.7	5.6– 9.8
Both sexes, 16–19 yr	32.8	23.5	41.8	36.8	19.3	35.8	26.2–45.4
Washington, D.C.:							
Total, 16 yr and over	64.7	59.1	68.1	64.9	4.8	9.1	7.6–10.6
Men, 20 yr and over	77.6	69.6	81.3	76.8	5.2	10.1	8.1–12.1
Women, 20 yr and over	59.1	56.2	61.3	59.6	3.6	5.8	4.3– 7.3
Both sexes, 16–19 yr	39.1	26.1	47.8	39.1	17.7	32.9	21.8–44.0
Milwaukee:							
Total, 16 yr and over	59.4	57.4	62.8	62.8	5.2	8.7	7.2–10.2
Men, 20 yr and over	79.6	75.0	83.3	81.0	5.0	7.4	5.4– 9.4
Women, 20 yr and over	44.0	45.9	45.3	49.3	3.8	7.1	5.0– 9.2
Both sexes, 16–19 yr	48.7	38.3	56.4	51.1	15.0	24.1	12.7–35.5
Cleveland:							
Total, 16 yr and over	52.7	55.2	57.3	61.1	8.4	9.5	7.9–11.2
Men, 20 yr and over	75.7	74.6	80.3	81.6	6.6	7.3	5.3– 9.3
Women, 20 yr and over	37.7	45.0	40.3	48.6	6.5	7.5	5.0–10.0
Both sexes, 16–19 yr	38.1	30.9	50.0	41.8	25.1	27.6	16.5–38.7
St. Louis:							
Total, 16 yr and over	52.6	48.5	56.3	55.6	6.3	12.8	10.7–14.9
Men, 20 yr and over	74.2	59.5	78.6	68.6	4.8	13.3	10.2–16.4
Women, 20 yr and over	39.2	41.7	41.4	46.0	4.2	10.5	7.5–13.5
Both sexes, 16–19 yr	40.0	37.9	51.1	51.7	22.2	24.4	8.4–40.4

See footnotes at end of table.

TABLE 2.—LABOR FORCE MEASURES FOR 11 CENTRAL CITIES, 1970 AND 1976 ANNUAL AVERAGES—Continued

SUMMARY TABLE

Area	Employment–population ratio [1]		Civilian labor force participation rate		Unemployment rate		Error range on unemployment rate 1976 [2]
	1970	1976	1970	1976	1970	1976	
United States	57.4	56.8	60.4	61.6	4.9	7.7	7.6– 7.8
New York	53.9	48.3	56.6	54.4	4.8	11.2	10.7–11.7
Chicago	58.8	53.0	61.6	58.3	4.4	9.0	8.2– 9.8
Philadelphia	56.2	44.6	59.5	50.3	5.4	11.3	10.1–12.5
Houston	65.8	67.0	68.4	71.1	3.7	5.7	4.9– 6.5
Detroit	53.5	44.6	58.3	51.3	8.2	13.1	11–6–14.6
Dallas	69.5	64.5	72.2	67.7	3.8	4.9	3.9– 5.9
Baltimore	55.6	48.9	58.3	54.5	4.7	10.3	8.8–11.8
Washington, D.C.	64.7	59.1	68.1	64.9	4.8	9.1	7.6–10.6
Milwaukee	59.4	57.4	62.8	62.8	5.2	8.7	7.2–10.2
Cleveland	52.7	55.2	57.3	61.1	8.4	9.5	7.9–11.2
St. Louis	52.6	48.5	56.3	55.6	6.3	12.8	10.7–14.9

[1] Employment as a percent of the civilian noninstitutional population.

[2] These data are based on the current population survey (CPS) and hence are subject to sampling variation. The error ranges for the unemployment rates are provided as an indication of the reliability of these rates. The chances are 9 out of 10 that the true estimate, based on a complete census of the population, will fall within the stated range.

News United States Department of Labor

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THE EMPLOYMENT SITUATION: JUNE 1977

Both employment and unemployment increased in June, it was reported today by the Bureau of Labor Statistics of the U. S. Department of Labor. The overall rate of unemployment was 7.1 percent, up slightly from the 6.9-percent rate in May but still below the levels prevailing early in the year.

Total employment--as measured by the monthly survey of households--continued to expand markedly, with an increase of 270,000 in June to 90.7 million. Employment has advanced by 2.9 million over the past 8 months; this strong growth brought the employment-population ratio close to the record highs of early 1974.

Nonagricultural payroll employment--as measured by the monthly survey of establishments--increased by 135,000 in June to 82.1 million. Although not as large as household survey employment gains, establishment survey job growth has also been substantial since October--2.2 million.

Unemployment

After adjustment for seasonality, unemployment rose by 210,000 in June to 7.0 million. The overall unemployment rate edged up from 6.9 percent in May to 7.1 percent in June, after declining almost continuously from the 1976 high of 8.0 percent recorded in November. Most of the June increase took place among adult women, whose jobless rate rose from 6.6 to 7.2 percent; this returned their rate to the February-March levels. There was also a small increase in joblessness among teenagers, likewise a return to levels prevailing earlier this year. The unemployment rate for adult men, on the other hand, declined from 5.3 percent in May to 5.0 percent, the same as the April rate. Whereas unemployment rates for the three major age-sex groups posted over-the-month movements, the rates for full-time workers and job losers held about steady at levels that were a full percentage point below those at the end of 1976. (See tables A-1 and A-2.)

The number of persons looking for work for 15 or more weeks--the long-term unemployed--dropped by 100,000 to 1.7 million in June. Their number has been reduced by 775,000 since the end of last year. In contrast, there was a sizeable May-June increase in the number of those unemployed for less than 5 weeks (275,000). The average (mean) duration of unemployment moved down from 14.9 to 14.4 weeks over the month, about the same as the April level and 2-½ weeks lower than a year ago. (See table A-4.)

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

Selected categories	Quarterly averages					Monthly data		
	1976			1977		1977		
	II	III	IV	I	II	Apr.	May	June
HOUSEHOLD DATA	Thousands of persons							
Civilian labor force	94,544	95,261	95,711	96,067	97,186	96,760	97,158	97,641
Total employment	87,501	87,804	88,133	88,998	90,370	90,023	90,408	90,679
Unemployment	7,043	7,457	7,578	7,068	6,816	6,737	6,750	6,962
Not in labor force	59,032	58,963	59,132	59,379	58,908	59,094	58,943	58,686
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	7.0	6.9	7.1
Adult men	5.7	6.0	6.2	5.6	5.1	5.0	5.3	5.0
Adult women	7.1	7.7	7.6	7.1	6.9	7.0	6.6	7.2
Teenagers	18.8	18.8	19.1	18.6	18.1	17.8	17.9	18.6
White	6.8	7.1	7.2	6.7	6.3	6.3	6.2	6.3
Black and other	12.9	13.1	13.4	12.8	12.8	12.3	12.9	13.2
Household heads	4.9	5.3	5.3	4.8	4.4	4.4	4.5	4.3
Full-time workers	7.0	7.4	7.5	6.8	6.5	6.5	6.5	6.5
ESTABLISHMENT DATA	Thousands of jobs							
Nonfarm payroll employment	79,333	79,683	80,090	80,927	81,887p	81,686	81,921p	82,056p
Goods-producing industries	23,380	23,372	23,440	23,765	24,286p	24,217	24,310p	24,332p
Service-producing industries	55,953	56,311	56,650	57,162	57,601p	57,469	57,611p	57,724p
	Hours of work							
Average weekly hours:								
Total private nonfarm	36.2	36.1	36.2	36.1	36.2p	36.2	36.3p	36.2p
Manufacturing	40.0	39.9	40.0	40.1	40.4p	40.3	40.4p	40.5p
Manufacturing overtime	3.0	3.0	3.1	3.3	3.4p	3.4	3.4p	3.4p

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

Total Employment and the Labor Force

Total employment rose for the eighth consecutive month, increasing by 270,000 in June to 90.7 million, seasonally adjusted. Adult men and teenagers accounted for the over-the-month gain, which took place entirely among workers in nonagricultural industrie (See table A-1.) Employment has advanced by 3.2 million over the past 12 months, more than 70 percent of which has occurred in 1977.

The employment-population ratio--the proportion of the total noninstitutional population that is employed--sustained its recent steady rise and, at 57.2 percent, was just 0.2 percentage point below the alltime high last reached in March 1974.

As usually occurs at this time of year, the civilian labor force rose markedly from May to June. The increase this June was greater than normal, and, after adjustment for seasonality, there was a gain of 480,000 in the labor force to 97.6 million. Since last June, the labor force has grown by 2.9 million, a particularly large over-the-year gain; adult women accounted for 1.4 million of the increase, while the adult male labor force rose by 1.0 million.

The civilian labor force participation rate--the proportion of the civilian noninstitutional population either working or seeking work--rose to a new high of 62.5 percen in June, nearly a full percentage point above the year-earlier 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.

While movements in discouraged workers generally parallel those in unemployment, there was a rise of 130,000 in their number in the second quarter at the same time that unemployment declined by 250,000. At nearly 1.1 million, the discouraged total was the highest since the third quarter of 1975. About 730,000 (or nearly 70 percent) of them indicated job-market factors as their reason for not seeking work, an increase of 80,000 over the quarter. (See table A-8.)

Industry Payroll Employment

Total nonagricultural payroll employment increased by 135,000 in June to 82.1 million, seasonally adjusted. Over-the-month employment gains took place in 52 percent of the industries that comprise the BLS diffusion index of nonagricultural payroll employment. (See tables B-1 and B-6.)

Paralleling the developments in total employment (household data), the number of payroll jobs has risen for 8 consecutive months. Payroll employment has grown by 2.7 million over the past year, with nearly two-thirds of the increase occurring since December.

The largest May-June increase was in services, where employment rose by 75,000; this was in marked contrast to developments ot the prior 3 months, when manufacturing was the largest single contributor to the employment growth. There were also over-the-month gains in government and contract construction. Manufacturing employment, which had shown strong gains since last October, edged down in June. All of the decline occurred in the nondurable goods sector, primarily in food processing.

Hours

The average workweek for production or nonsupervisory workers on private nonagricultural payrolls edged down 0.1 hour to 36.2 hours in June, seasonally adjusted. (See table B-2.) With the exception of last January's weather-induced decline in average hours, the workweek has remained at the 36.2-36.3 level since last November. The manufacturing workweek increased slightly in June, while factory overtime remained at 3.4 hours; both were up by half an hour since October.

The index of aggregate hours of production or nonsupervisory workers on nonagricultural payrolls declined by 0.3 percent in June to 115.7 (1967=100). Despite the drop, the index was 3.7 percent above the year-ago level. The manufacturing index moved up 0.2 percent in June to 98.6 and was up 4.2 percent over the past year. (See table B-5.)

Hourly and Weekly Earnings

Both average hourly and weekly earnings of production or nonsupervisory workers on private nonagricultural payrolls were little cnanged in June on a seasonally-adjusted

basis. Hourly and weekly earnings were, respectively, 7.4 and 7.7 percent higher than a year earlier.

Before adjustment for seasonality, average hourly earnings were $5.20 in June, up 1 cent from May and 35 cents from a year earlier. Average weekly earnings were $189.28, an increase of $1.92 over the month and $12.74 from the June 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 196.9 (1967=100) in June, 0.3 percent higher than in May. The index was 6.8 percent above June a year ago. During the 12-month period ended in May, the Hourly Earnings Index in dollars of constant purchasing power rose 0.1 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

HOUSEHOLD DATA

Table A-1. Employment status of the noninstitutional population

[Numbers in thousands]

Employment status	Not seasonally adjusted			Seasonally adjusted					
	June 1976	May 1977	June 1977	June 1976	Feb. 1977	Mar. 1977	Apr. 1977	May 1977	June 1977
TOTAL									
Total noninstitutional population[1]	155,925	158,228	158,456	155,925	157,584	157,782	157,986	158,228	158,456
Armed Forces[1]	2,137	2,128	2,129	2,137	2,137	2,138	2,132	2,128	2,129
Civilian noninstitutional population[2]	153,788	156,101	156,327	153,788	155,447	155,643	155,854	156,101	156,327
Civilian labor force	96,114	96,193	99,135	94,704	96,145	96,539	96,760	97,158	97,641
Participation rate	62.5	61.6	63.4	61.6	61.9	62.0	62.1	62.2	62.5
Employed	88,460	90,042	91,682	87,533	88,962	89,475	90,023	90,408	90,679
Employment-population ratio[3]	56.7	56.9	57.9	56.1	56.5	56.7	57.0	57.1	57.2
Agriculture	3,780	3,478	3,820	3,313	3,090	3,116	3,260	3,386	3,338
Nonagricultural industries	84,680	86,564	87,862	84,220	85,872	86,359	86,763	87,022	87,341
Unemployed	7,655	6,151	7,453	7,171	7,183	7,064	6,737	6,750	6,962
Unemployment rate	8.0	6.4	7.5	7.6	7.5	7.3	7.0	6.9	7.1
Not in labor force	57,674	59,907	57,192	59,084	59,302	59,104	59,094	58,943	58,686
Men, 20 years and over									
Total noninstitutional population[1]	66,182	67,324	67,431	66,182	67,025	67,114	67,209	67,324	67,431
Civilian noninstitutional population[2]	64,492	65,641	65,743	64,492	65,342	65,423	65,522	65,641	65,743
Civilian labor force	51,851	52,062	52,885	51,492	52,092	52,061	52,089	52,282	52,497
Participation rate	80.4	79.3	80.4	79.8	79.7	79.6	79.5	79.6	79.9
Employed	48,871	49,487	50,308	48,443	49,091	49,267	49,465	49,531	49,859
Employment-population ratio[3]	73.8	73.5	74.6	73.2	73.2	73.4	73.6	73.6	73.9
Agriculture	2,388	2,423	2,536	2,422	2,230	2,208	2,280	2,373	2,372
Nonagricultural industries	46,283	47,064	47,772	46,021	46,861	47,059	47,185	47,158	47,487
Unemployed	2,980	2,575	2,577	3,049	3,001	2,794	2,624	2,751	2,638
Unemployment rate	5.7	4.9	4.9	5.9	5.8	5.4	5.0	5.3	5.0
Not in labor force	12,641	13,579	12,858	13,000	13,250	13,362	13,433	13,359	13,246
Women, 20 years and over									
Total noninstitutional population[1]	72,944	74,081	74,198	72,944	73,746	73,852	73,958	74,081	74,198
Civilian noninstitutional population[2]	72,857	73,987	74,101	72,857	73,654	73,757	73,863	73,987	74,101
Civilian labor force	33,857	35,478	35,263	34,278	34,982	35,295	35,455	35,634	35,675
Participation rate	46.5	48.0	47.6	47.0	47.5	47.9	48.0	48.2	48.1
Employed	31,429	33,299	32,755	31,801	32,477	32,730	32,985	33,288	33,116
Employment-population ratio[3]	43.1	44.9	44.1	43.6	44.0	44.3	44.6	44.9	44.6
Agriculture	596	641	690	487	485	496	577	597	564
Nonagricultural industries	30,833	32,658	32,064	31,314	31,992	32,234	32,408	32,691	32,552
Unemployed	2,428	2,179	2,508	2,477	2,505	2,565	2,470	2,346	2,559
Unemployment rate	7.2	6.1	7.1	7.2	7.2	7.2	7.0	6.6	7.2
Not in labor force	39,000	38,509	38,838	38,575	38,672	38,462	38,408	38,353	38,426
Both sexes, 16-19 years									
Total noninstitutional population[1]	16,799	16,823	16,827	16,799	16,813	16,816	16,819	16,823	16,827
Civilian noninstitutional population[2]	16,439	16,473	16,483	16,439	16,451	16,464	16,468	16,473	16,483
Civilian labor force	10,407	8,653	10,987	8,934	9,071	9,183	9,216	9,242	9,469
Participation rate	63.3	52.5	66.7	54.3	55.1	55.8	56.0	56.1	57.4
Employed	8,160	7,256	8,620	7,289	7,394	7,458	7,573	7,589	7,704
Employment-population ratio[3]	48.6	43.1	51.2	43.4	44.0	44.4	45.0	45.1	45.8
Agriculture	596	414	594	404	375	412	403	416	402
Nonagricultural industries	7,564	6,842	8,025	6,885	7,019	7,046	7,170	7,173	7,302
Unemployed	2,247	1,397	2,367	1,645	1,677	1,725	1,643	1,653	1,765
Unemployment rate	21.6	16.1	21.5	18.4	18.5	18.8	17.8	17.9	18.6
Not in labor force	6,032	7,820	5,495	7,505	7,380	7,281	7,252	7,231	7,014
WHITE									
Total noninstitutional population[1]	137,251	139,089	139,270	137,251	138,575	138,732	138,894	139,089	139,270
Civilian noninstitutional population[2]	135,473	137,337	137,522	135,473	136,810	136,972	137,139	137,337	137,522
Civilian labor force	85,005	85,214	87,530	83,796	85,086	85,482	85,642	85,937	86,268
Participation rate	62.7	62.0	63.6	61.9	62.2	62.4	62.4	62.6	62.7
Employed	78,987	80,373	81,749	78,091	79,365	79,832	80,249	80,603	80,813
Employment-population ratio[3]	57.5	57.8	58.7	56.9	57.3	57.5	57.8	58.0	58.0
Unemployed	6,018	4,841	5,781	5,705	5,721	5,650	5,393	5,334	5,455
Unemployment rate	7.1	5.7	6.6	6.8	6.7	6.6	6.3	6.2	6.3
Not in labor force	50,468	52,123	49,992	51,677	51,724	51,490	51,497	51,400	51,254
BLACK AND OTHER									
Total noninstitutional population[1]	18,674	19,140	19,186	18,674	19,009	19,050	19,091	19,140	19,186
Civilian noninstitutional population[2]	18,315	18,763	18,805	18,315	18,637	18,672	18,714	18,763	18,805
Civilian labor force	11,110	10,979	11,605	10,844	11,163	11,104	11,071	11,171	11,325
Participation rate	60.7	58.5	61.7	59.2	59.9	59.5	59.2	59.5	60.2
Employed	9,473	9,669	9,933	9,388	9,697	9,690	9,711	9,730	9,833
Employment-population ratio[3]	50.7	50.5	51.8	50.3	51.0	50.9	50.9	50.8	51.3
Unemployed	1,637	1,310	1,671	1,456	1,466	1,414	1,360	1,441	1,492
Unemployment rate	14.7	11.9	14.4	13.4	13.1	12.7	12.3	12.9	13.2
Not in labor force	7,206	7,784	7,200	7,471	7,474	7,568	7,643	7,592	7,480

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

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

HOUSEHOLD DATA

Table A-2. Major unemployment indicators, seasonally adjusted

Selected categories	Number of unemployed persons (in thousands)		Unemployment rates					
	June 1976	June 1977	June 1976	Feb. 1977	Mar. 1977	Apr. 1977	May 1977	June 1977
Total, 16 years and over	7,171	6,962	7.6	7.5	7.3	7.0	6.9	7.1
Men, 20 years and over	3,049	2,638	5.9	5.8	5.4	5.0	5.3	5.0
Women, 20 years and over	2,477	2,559	7.2	7.2	7.2	7.0	6.6	7.2
Both sexes, 16-19 years	1,645	1,765	18.4	18.5	18.8	17.8	17.9	18.6
White, total	5,705	5,455	6.6	6.7	6.6	6.3	6.2	6.3
Men, 20 years and over	2,477	2,111	5.4	5.2	4.9	4.6	4.7	4.5
Women, 20 years and over	1,946	1,984	6.6	6.4	6.5	6.1	5.9	6.4
Both sexes, 16-19 years	1,282	1,360	16.0	16.3	16.6	16.1	15.7	16.1
Black and other, total	1,456	1,492	13.4	13.1	12.7	12.3	12.9	13.2
Men, 20 years and over	582	533	10.8	9.9	9.4	8.5	9.9	9.6
Women, 20 years and over	526	569	11.4	12.4	11.6	12.3	11.8	11.9
Both sexes, 16-19 years	348	390	40.0	37.2	40.1	36.2	38.7	39.4
Household heads, total	2,727	2,343	5.1	4.9	4.6	4.4	4.5	4.3
Men	2,134	1,724	4.7	4.5	4.2	3.9	4.0	3.8
With relatives	1,701	1,352	4.2	4.0	3.7	3.5	3.5	3.3
Without relatives	433	372	9.0	8.2	7.8	6.9	7.3	7.2
Women	605	626	7.0	7.1	7.2	7.0	6.3	6.9
With relatives	396	409	9.6	9.4	9.6	9.2	8.4	9.4
Without relatives	209	217	4.7	4.9	5.0	5.0	4.5	4.6
Married men, spouse present	1,707	1,347	4.3	4.1	3.7	3.6	3.6	3.4
Married women, spouse present	1,567	1,531	7.2	6.7	6.7	6.6	6.3	6.8
Full-time workers	5,830	5,401	7.2	6.9	6.7	6.5	6.5	6.5
Part-time workers	1,286	1,524	9.2	10.7	11.1	9.9	9.9	10.7
Unemployed 15 weeks and over[1]	2,173	1,737	2.3	2.3	2.0	1.9	1.9	1.8
Labor force time lost[2]	--	--	7.9	7.9	7.8	7.4	7.5	7.5
OCCUPATION[3]								
White-collar workers	2,033	1,966	4.5	4.6	4.7	4.4	4.3	4.2
Professional and technical	408	419	3.0	3.3	3.1	3.2	2.9	3.0
Managers and administrators, except farm	298	265	3.1	2.8	3.4	2.9	2.8	2.7
Sales workers	304	312	5.3	5.6	5.5	5.1	5.5	5.2
Clerical workers	1,023	970	6.2	6.4	6.5	6.0	5.7	5.7
Blue-collar workers	2,973	2,552	9.3	8.7	8.3	7.8	7.9	7.7
Craft and kindred workers	854	700	7.0	6.5	6.0	4.9	5.6	5.6
Operatives, except transport	1,233	1,072	10.7	9.6	9.2	9.3	8.9	9.4
Transport equipment operatives	263	213	7.2	7.7	6.9	6.0	6.7	5.7
Nonfarm laborers	623	567	12.8	12.8	13.2	12.6	12.5	10.9
Service workers	1,130	1,139	8.6	8.4	7.9	8.1	9.0	8.2
Farm workers	123	144	4.2	6.7	5.4	4.8	4.4	4.8
INDUSTRY[3]								
Nonagricultural private wage and salary workers[4]	5,338	4,871	7.8	7.6	7.4	7.0	7.1	6.9
Construction	722	592	16.3	15.2	14.2	12.0	13.0	12.6
Manufacturing	1,624	1,346	7.6	7.1	6.6	6.7	6.2	6.3
Durable goods	961	707	7.4	7.0	6.1	6.0	5.7	5.6
Nondurable goods	683	639	7.9	7.3	7.3	7.7	7.0	7.3
Transportation and public utilities	239	206	5.0	4.6	5.1	4.4	4.3	4.1
Wholesale and retail trade	1,460	1,433	8.4	8.7	8.4	7.8	8.3	7.9
Finance and service industries	1,256	1,246	6.3	6.2	6.4	6.1	6.6	6.0
Government workers	662	651	4.3	4.5	4.0	4.0	4.1	4.2
Agricultural wage and salary workers	162	170	11.0	13.4	13.2	12.3	11.5	11.0
VETERAN STATUS								
Male Vietnam-era veterans:[5]								
20 to 34 years	537	496	8.5	7.0	6.8	7.3	7.5	7.6
20 to 24 years	183	170	19.2	15.8	17.1	14.4	13.6	18.1
25 to 29 years	238	208	7.6	6.7	6.6	7.7	7.8	7.1
30 to 34 years	116	118	5.2	3.9	3.3	4.3	5.1	4.5
Male nonveterans:								
20 to 34 years	1,191	1,090	7.9	8.6	7.9	6.8	7.2	6.9
20 to 24 years	704	616	10.6	11.6	10.4	10.1	10.2	8.9
25 to 29 years	306	317	6.5	7.3	7.0	5.7	5.4	6.3
30 to 34 years	181	157	5.0	4.8	4.3	4.2	4.1	4.0

[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

[Numbers in thousands]

Selected categories	Not seasonally adjusted		Seasonally adjusted					
	June 1976	June 1977	June 1976	Feb. 1977	Mar. 1977	Apr. 1977	May 1977	June 1977
CHARACTERISTICS								
Total employed, 16 years and over	88,460	91,682	87,533	88,962	89,475	90,023	90,408	90,679
Men	53,389	55,095	52,332	53,046	53,270	53,575	53,722	53,987
Women	35,071	36,587	35,201	35,916	36,205	36,448	36,686	36,692
Household heads	51,214	52,542	51,132	51,729	51,970	52,230	52,314	52,437
Married men, spouse present	38,204	38,659	38,122	38,159	38,294	38,536	38,509	38,582
Married women, spouse present	19,910	20,394	20,334	20,756	20,963	21,076	20,962	20,831
OCCUPATION								
White-collar workers	43,221	44,422	43,583	44,451	44,695	44,851	44,766	44,798
Professional and technical	12,901	13,161	13,363	13,408	13,439	13,591	13,483	13,638
Managers and administrators, except farm	9,220	9,560	9,230	9,502	9,543	9,434	9,400	9,570
Sales workers	5,545	5,752	5,467	5,815	5,617	5,765	5,693	5,673
Clerical workers	15,555	15,949	15,523	15,726	15,896	16,061	16,188	15,917
Blue-collar workers	29,968	31,324	29,132	29,917	30,025	30,193	30,423	30,432
Craft and kindred workers	11,474	12,105	11,268	11,668	11,709	11,896	11,894	11,891
Operatives, except transport	10,360	10,482	10,257	10,351	10,574	10,394	10,530	10,378
Transport equipment operatives	3,371	3,558	3,365	3,448	3,487	3,482	3,552	3,551
Nonfarm laborers	4,764	5,179	4,242	4,450	4,255	4,421	4,447	4,612
Service workers	12,048	12,688	12,058	12,017	12,272	12,234	12,372	12,697
Farm workers	3,222	3,248	2,826	2,663	2,652	2,779	2,904	2,838
MAJOR INDUSTRY AND CLASS OF WORKER								
Agriculture:								
Wage and salary workers	1,533	1,607	1,317	1,280	1,282	1,310	1,323	1,381
Self-employed workers	1,777	1,695	1,671	1,511	1,513	1,568	1,655	1,395
Unpaid family workers	469	519	342	338	319	366	393	378
Nonagricultural industries:								
Wage and salary workers	78,463	81,214	78,117	79,520	79,869	80,306	80,429	80,814
Government	14,537	14,602	14,899	14,913	14,923	14,960	15,075	14,961
Private industries	63,926	66,613	63,218	64,607	64,946	65,346	65,354	65,853
Private households	1,431	1,430	1,389	1,317	1,313	1,320	1,305	1,388
Other industries	62,495	65,183	61,829	63,290	63,633	64,026	64,049	64,465
Self-employed workers	5,748	6,111	5,642	5,854	5,919	5,954	6,050	5,997
Unpaid family workers	469	536	453	516	536	499	550	518
PERSONS AT WORK [1]								
Nonagricultural industries	78,688	81,067	79,331	80,837	81,330	81,005	81,771	81,618
Full-time schedules	65,184	67,462	64,858	66,144	66,659	66,436	67,219	67,126
Part time for economic reasons	3,669	3,938	3,150	3,438	3,276	3,174	3,290	3,368
Usually work full time	1,400	1,416	1,326	1,335	1,212	1,167	1,314	1,341
Usually work part time	2,269	2,522	1,824	2,103	2,064	2,007	1,976	2,027
Part time for noneconomic reasons	9,835	9,667	11,323	11,255	11,395	11,395	11,262	11,124

[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					
	June 1976	June 1977	June 1976	Feb. 1977	Mar. 1977	Apr. 1977	May 1977	June 1977
DURATION								
Less than 5 weeks	3,497	3,917	2,730	2,804	3,005	3,100	2,782	3,058
5 to 14 weeks	1,861	1,699	2,215	2,107	2,098	1,857	2,093	2,023
15 weeks and over	2,297	1,836	2,173	2,182	1,923	1,816	1,836	1,737
15 to 26 weeks	905	809	902	947	777	715	800	798
27 weeks and over	1,392	1,028	1,271	1,235	1,146	1,101	1,036	939
Average (mean) duration, in weeks	15.1	12.9	16.9	14.7	14.0	14.3	14.9	14.4
PERCENT DISTRIBUTION								
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than 5 weeks	45.7	52.6	38.4	39.5	42.8	45.8	41.5	44.9
5 to 14 weeks	24.3	22.8	31.1	29.7	29.9	27.4	31.2	29.7
15 weeks and over	30.0	24.6	30.5	30.8	27.4	26.8	27.4	25.5
15 to 26 weeks	11.8	10.9	12.7	13.4	11.1	10.6	11.9	11.7
27 weeks and over	18.2	13.8	17.9	17.4	16.3	16.3	15.4	13.8

Table A-5. Reasons for unemployment

[Numbers in thousands]

Reasons	Not seasonally adjusted		Seasonally adjusted					
	June 1976	June 1977	June 1976	Feb. 1977	Mar. 1977	Apr. 1977	May 1977	June 1977
NUMBER OF UNEMPLOYED								
Lost last job	3,286	2,687	3,580	3,396	3,143	2,953	3,038	2,927
On layoff	845	677	1,031	1,001	865	754	749	827
Other job losers	2,441	2,011	2,549	2,395	2,278	2,199	2,289	2,100
Left last job	839	894	895	852	919	846	944	954
Reentered labor force	2,244	2,339	1,813	1,963	2,013	2,001	1,993	1,889
Seeking first job	1,286	1,532	831	936	1,003	972	893	1,077
PERCENT DISTRIBUTION								
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Job losers	42.9	36.1	50.3	47.5	44.4	43.6	44.2	42.7
On layoff	11.0	9.1	14.5	14.0	12.2	11.1	10.9	12.1
Other job losers	31.9	27.0	35.8	33.5	32.2	32.5	33.3	30.7
Job leavers	11.0	12.0	12.6	11.9	13.0	12.5	13.7	13.9
Reentrants	29.3	31.4	25.5	27.5	28.4	29.5	29.0	27.6
New entrants	16.8	20.6	11.7	13.1	14.2	14.4	13.0	15.7
UNEMPLOYED AS A PERCENT OF THE CIVILIAN LABOR FORCE								
Job losers	3.4	2.7	3.8	3.5	3.3	3.1	3.1	3.0
Job leavers	.9	.9	.9	.9	1.0	.9	1.0	1.0
Reentrants	2.3	2.4	1.9	2.0	2.1	2.1	2.1	1.9
New entrants	1.3	1.5	.9	1.0	1.0	1.0	.9	1.1

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

Sex and age	Number of unemployed persons (in thousands)		Unemployment rates					
	June 1976	June 1977	June 1976	Feb. 1977	Mar. 1977	Apr. 1977	May 1977	June 1977
Total, 16 years and over	7,171	6,962	7.6	7.5	7.3	7.0	6.9	7.1
16 to 19 years	1,645	1,765	18.4	18.5	18.8	17.8	17.9	18.6
16 to 17 years	771	829	21.2	19.8	22.2	19.2	20.4	21.3
18 to 19 years	846	907	16.2	17.5	16.6	16.8	16.3	16.5
20 to 24 years	1,606	1,516	11.5	12.0	11.4	10.8	10.7	10.5
25 years and over	3,909	3,667	5.4	5.2	5.1	4.9	4.8	5.0
25 to 54 years	3,254	3,137	5.6	5.3	5.2	5.1	5.1	5.3
55 years and over	657	533	4.7	4.8	4.3	4.1	4.0	3.8
Men, 16 years and over	3,931	3,580	7.0	6.9	6.5	6.1	6.3	6.2
16 to 19 years	882	942	18.5	18.6	18.7	17.0	17.0	18.6
16 to 17 years	415	481	21.3	19.3	22.2	17.9	18.7	22.7
18 to 19 years	456	449	16.4	17.9	16.1	16.0	16.0	15.5
20 to 24 years	882	781	11.6	12.1	11.2	10.5	10.6	9.9
25 years and over	2,158	1,843	4.9	4.6	4.3	4.1	4.2	4.1
25 to 54 years	1,742	1,548	5.0	4.6	4.3	4.3	4.4	4.3
55 years and over	411	289	4.7	4.7	4.4	3.7	3.9	3.3
Women, 16 years and over	3,240	3,382	8.4	8.4	8.5	8.2	7.9	8.4
16 to 19 years	763	823	18.3	18.4	18.9	18.8	19.0	18.7
16 to 17 years	356	348	21.1	20.4	22.2	20.8	22.5	19.7
18 to 19 years	390	458	15.9	16.9	17.1	17.7	16.6	17.5
20 to 24 years	724	735	11.4	11.9	11.7	11.2	10.9	11.0
25 years and over	1,751	1,824	6.3	6.1	6.1	6.0	5.7	6.3
25 to 54 years	1,512	1,589	6.7	6.3	6.6	6.5	6.1	6.7
55 years and over	246	244	4.7	4.9	4.2	4.6	4.3	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	Apr.	May	June
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	1.9	1.9	1.8
U-2—Job losers as a percent of the civilian labor force	3.7	3.9	3.9	3.4	3.1	3.1	3.1	3.0
U-3—Unemployed household heads as a percent of the household head labor force	4.9	5.3	5.3	4.8	4.4	4.4	4.5	4.3
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	6.5
U-5—Total unemployed as a percent of the civilian labor force (official measure)	7.4	7.8	7.9	7.4	7.0	7.0	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	8.6	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 A-8. Persons not in the labor force by selected characteristics, quarterly averages

[In thousands]

Characteristics	Not seasonally adjusted		Seasonally adjusted					
			1976				1977	
	II 1976	II 1977	I	II	III	IV	I	II
Total not in labor force	59,186	59,042	59,327	59,032	58,963	59,132	59,379	58,908
Do not want a job now	53,377	52,806	53,831	53,938	54,715	53,991	53,792	53,190
Want a job now	5,809	6,198	5,388	5,426	4,339	5,436	5,663	5,762
Discouraged workers	904	1,039	940	903	827	992	929	1,061
Job-market factors[1]	648	759	649	617	568	762	644	726
Personal factors[2]	257	280	291	286	259	230	285	335
Men	326	316	366	308	281	341	283	316
Women	578	723	574	595	546	651	647	745
White	676	716	700	694	601	755	665	741
Black and other	229	322	233	204	226	250	280	287

[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					
	June 1976	Apr. 1977	May 1977 p	June 1977 p	June 1976	Feb. 1977	Mar. 1977	Apr. 1977	May 1977 p	June 1977 p
TOTAL	80, 142	81, 332	82, 029	82, 868	79, 368	80, 824	81, 395	81, 686	81, 921	82, 056
GOODS-PRODUCING	23, 662	23, 846	24, 171	24, 660	23, 357	23, 701	24, 005	24, 217	24, 310	24, 332
MINING	795	838	843	874	781	823	842	847	844	859
CONTRACT CONSTRUCTION	3, 750	3, 681	3, 859	4, 069	3, 592	3, 645	3, 759	3, 842	3, 867	3, 898
MANUFACTURING	19, 117	19, 327	19, 469	19, 717	18, 984	19, 233	19, 404	19, 528	19, 599	19, 575
Production workers	13, 774	13, 893	14, 023	14, 234	13, 665	13, 810	13, 958	14, 066	14, 148	14, 119
DURABLE GOODS	11, 162	11, 348	11, 446	11, 591	11, 059	11, 230	11, 370	11, 423	11, 473	11, 483
Production workers	7, 994	8, 118	8, 211	8, 334	7, 905	8, 011	8, 128	8, 177	8, 239	8, 240
Ordnance and accessories	157. 5	155. 5	156. 0	154. 6	158	156	156	157	158	155
Lumber and wood products	622. 8	626. 1	637. 8	661. 0	601	626	633	639	638	638
Furniture and fixtures	493. 8	501. 0	503. 8	512. 1	493	497	503	507	509	511
Stone, clay, and glass products	640. 8	643. 6	653. 5	668. 3	628	620	641	651	652	655
Primary metal industries	1, 215. 1	1, 205. 4	1, 218. 4	1, 233. 8	1, 200	1, 178	1, 199	1, 208	1, 217	1, 218
Fabricated metal products	1, 400. 9	1, 423. 4	1, 439. 6	1, 460. 0	1, 390	1, 416	1, 432	1, 433	1, 447	1, 448
Machinery, except electrical	2, 081. 8	2, 152. 1	2, 162. 6	2, 186. 2	2, 069	2, 134	2, 142	2, 150	2, 167	2, 173
Electrical equipment	1, 842. 3	1, 901. 8	1, 914. 3	1, 931. 6	1, 837	1, 888	1, 906	1, 919	1, 930	1, 926
Transportation equipment	1, 760. 8	1, 800. 5	1, 814. 6	1, 826. 9	1, 743	1, 766	1, 808	1, 808	1, 806	1, 809
Instruments and related products	515. 3	522. 2	526. 1	531. 6	513	524	526	526	527	529
Miscellaneous manufacturing	430. 8	416. 5	419. 3	424. 5	427	425	424	425	422	421
NONDURABLE GOODS	7, 955	7, 979	8, 023	8, 126	7, 925	8, 003	8, 034	8, 105	8, 126	8, 092
Production workers	5, 780	5, 775	5, 812	5, 900	5, 760	5, 799	5, 830	5, 889	5, 909	5, 879
Food and kindred products	1, 707. 4	1, 664. 5	1, 671. 6	1, 701. 5	1, 718	1, 727	1, 734	1, 743	1, 732	1, 712
Tobacco manufactures	67. 7	66. 8	63. 2	63. 0	75	73	68	73	71	70
Textile mill products	981. 3	978. 4	984. 5	995. 7	973	964	973	981	989	987
Apparel and other textile products	1, 331. 0	1, 286. 2	1, 294. 4	1, 311. 5	1, 320	1, 280	1, 283	1, 291	1, 297	1, 301
Paper and allied products	684. 7	689. 4	695. 9	709. 4	678	688	688	697	703	702
Printing and publishing	1, 077. 8	1, 100. 5	1, 104. 2	1, 109. 5	1, 077	1, 095	1, 097	1, 102	1, 108	1, 108
Chemicals and allied products	1, 036. 2	1, 053. 2	1, 056. 8	1, 066. 2	1, 029	1, 050	1, 051	1, 060	1, 063	1, 059
Petroleum and coal products	205. 7	206. 4	209. 8	213. 6	202	205	207	211	210	209
Rubber and plastics products, nec	580. 0	667. 7	673. 6	682. 8	577	656	666	680	685	679
Leather and leather products	282. 7	266. 3	268. 8	272. 3	276	265	267	267	268	265
SERVICE-PRODUCING	56, 480	57, 486	57, 858	58, 208	56, 011	57, 123	57, 390	57, 469	57, 611	57, 724
TRANSPORTATION AND PUBLIC UTILITIES	4, 531	4, 538	4, 576	4, 624	4, 482	4, 553	4, 568	4, 575	4, 569	4, 574
WHOLESALE AND RETAIL TRADE	17, 757	18, 026	18, 167	18, 332	17, 664	18, 067	18, 189	18, 203	18, 226	18, 237
WHOLESALE TRADE	4, 280	4, 332	4, 351	4, 407	4, 254	4, 334	4, 354	4, 371	4, 387	4, 381
RETAIL TRADE	13, 477	13, 694	13, 816	13, 925	13, 410	13, 733	13, 835	13, 832	13, 844	13, 856
FINANCE, INSURANCE, AND REAL ESTATE	4, 344	4, 450	4, 477	4, 538	4, 301	4, 431	4, 453	4, 463	4, 481	4, 493
SERVICES	14, 815	15, 182	15, 296	15, 495	14, 610	15, 068	15, 149	15, 182	15, 205	15, 281
GOVERNMENT	15, 033	15, 290	15, 342	15, 219	14, 954	15, 004	15, 031	15, 046	15, 114	15, 13[illegible]
FEDERAL	2, 758	2, 716	2, 728	2, 759	2, 728	2, 721	2, 725	2, 719	2, 723	2, [illegible]
STATE AND LOCAL	12, 275	12, 574	12, 614	12, 460	12, 226	12, 283	12, 306	12, 327	12, 391	12, [illegible]

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					
	June 1976	Apr. 1977	May 1977[p]	June 1977[p]	June 1976	Feb. 1977	Mar. 1977	Apr. 1977	May 1977[p]	June 1977[p]
TOTAL PRIVATE	36.4	36.0	36.1	36.4	36.1	36.3	36.3	36.2	36.3	36.2
MINING	42.8	43.9	43.9	44.2	42.2	43.6	44.4	44.4	43.8	43.6
CONTRACT CONSTRUCTION	37.9	37.0	37.5	37.2	37.3	37.8	37.1	37.3	37.4	36.7
MANUFACTURING	40.4	40.0	40.3	40.7	40.2	40.3	40.4	40.3	40.4	40.5
Overtime hours	3.2	3.1	3.3	3.5	3.2	3.3	3.3	3.4	3.4	3.4
DURABLE GOODS	41.1	40.7	41.0	41.5	40.9	40.8	41.0	40.8	41.0	41.3
Overtime hours	3.4	3.3	3.5	3.7	3.4	3.3	3.4	3.6	3.6	3.7
Ordnance and accessories	41.2	41.0	41.0	41.2	41.1	40.6	40.6	41.2	41.1	41.1
Lumber and wood products	40.6	40.0	40.3	40.7	39.8	40.5	40.1	40.0	40.0	39.9
Furniture and fixtures	39.0	37.9	38.4	38.8	38.6	38.1	38.6	38.4	38.7	38.4
Stone, clay, and glass products	41.7	41.4	41.9	42.2	41.4	41.4	41.4	41.7	41.8	41.9
Primary metal industries	41.3	41.4	41.4	41.7	41.2	40.6	41.1	41.5	41.5	41.6
Fabricated metal products	41.3	40.5	40.9	41.6	41.0	40.8	41.0	40.7	40.9	41.3
Machinery, except electrical	41.2	41.1	41.4	41.9	41.2	41.3	41.5	41.3	41.6	41.9
Electrical equipment	40.3	39.9	40.1	40.6	40.1	40.6	40.3	40.0	40.1	40.4
Transportation equipment	42.8	42.0	42.7	43.3	42.5	41.4	42.8	41.9	42.6	43.0
Instruments and related products	40.5	40.0	40.4	40.8	40.5	40.8	40.4	40.1	40.5	40.8
Miscellaneous manufacturing	38.7	38.9	39.1	39.4	38.5	39.5	39.3	38.9	39.1	39.2
NONDURABLE GOODS	39.4	39.1	39.3	39.7	39.3	39.6	39.5	39.5	39.5	39.6
Overtime hours	3.0	2.9	3.0	3.1	2.9	3.2	3.1	3.2	3.1	3.0
Food and kindred products	40.2	39.6	39.7	40.2	40.1	40.3	40.2	40.3	39.9	40.1
Tobacco manufactures	38.2	37.8	38.0	38.5	38.3	39.4	38.4	38.3	38.5	38.6
Textile mill products	40.7	40.1	40.5	40.8	40.3	40.5	40.8	40.5	40.6	40.4
Apparel and other textile products	35.9	35.0	35.4	36.0	35.8	35.7	35.6	35.1	35.6	35.9
Paper and allied products	42.6	42.8	42.7	43.2	42.4	42.7	42.8	43.3	43.0	43.0
Printing and publishing	37.5	37.4	37.5	37.7	37.5	37.9	37.7	37.7	37.6	37.7
Chemicals and allied products	41.6	41.9	41.7	41.9	41.5	41.7	41.8	41.9	41.7	41.8
Petroleum and coal products	42.2	42.7	42.6	43.1	42.0	42.5	43.0	42.7	42.6	42.9
Rubber and plastics products, nec	40.5	41.0	41.1	41.3	40.3	41.4	41.2	41.2	41.3	41.1
Leather and leather products	37.8	36.7	37.3	38.1	37.0	36.7	36.4	37.4	37.1	37.3
TRANSPORTATION AND PUBLIC UTILITIES	40.0	39.9	40.0	40.4	39.8	40.5	40.3	40.1	40.2	40.2
WHOLESALE AND RETAIL TRADE	33.8	33.1	33.2	33.6	33.5	33.4	33.5	33.5	33.5	33.2
WHOLESALE TRADE	38.9	38.7	38.8	39.0	38.8	39.1	38.9	39.0	38.8	38.9
RETAIL TRADE	32.3	31.5	31.6	32.0	31.9	31.8	31.9	31.9	31.9	31.6
FINANCE, INSURANCE, AND REAL ESTATE	36.6	36.6	36.6	36.6	36.6	36.6	36.7	36.6	36.7	36.6
SERVICES	33.6	33.3	33.3	33.5	33.4	33.6	33.5	33.5	33.5	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			
	June 1976	Apr. 1977	May 1977[P]	June 1977[P]	June 1976	Apr. 1977	May 1977[P]	June 1977[P]
TOTAL PRIVATE	$4.85	$5.15	$5.19	$5.20	$176.54	$185.40	$187.36	$189.28
Seasonally adjusted	4.85	5.17	5.20	5.21	175.09	187.15	188.76	188.60
MINING	6.32	6.80	6.80	6.82	270.50	298.52	298.52	301.44
CONTRACT CONSTRUCTION	7.60	7.88	7.90	7.94	288.04	291.56	296.25	295.37
MANUFACTURING	5.15	5.52	5.56	5.59	208.06	220.80	224.07	227.51
DURABLE GOODS	5.53	5.88	5.95	5.98	227.28	239.32	243.95	248.17
Ordnance and accessories	5.64	6.14	6.19	6.08	232.37	251.74	253.79	250.50
Lumber and wood products	4.76	4.94	4.99	5.00	193.26	197.60	201.10	203.50
Furniture and fixtures	3.96	4.21	4.24	4.26	154.44	159.56	162.82	165.29
Stone, clay, and glass products	5.30	5.66	5.72	5.77	221.01	234.32	239.67	243.49
Primary metal industries	6.77	7.22	7.39	7.40	279.60	298.91	305.95	308.58
Fabricated metal products	5.44	5.67	5.73	5.80	224.67	229.64	234.36	241.28
Machinery, except electrical	5.72	6.07	6.11	6.15	235.66	249.48	252.95	257.69
Electrical equipment	4.84	5.20	5.26	5.29	195.05	207.48	210.93	214.77
Transportation equipment	6.52	7.01	7.09	7.12	279.06	294.42	302.74	308.30
Instruments and related products	4.83	5.11	5.14	5.14	195.62	204.40	207.66	209.71
Miscellaneous manufacturing	3.99	4.27	4.31	4.31	154.41	166.10	168.52	169.81
NONDURABLE GOODS	4.62	4.99	4.99	5.03	182.03	195.11	196.11	199.69
Food and kindred products	4.92	5.26	5.29	5.30	197.78	208.30	210.01	213.06
Tobacco manufactures	5.23	5.59	5.58	5.68	199.79	211.30	212.04	218.68
Textile mill products	3.59	3.87	3.86	3.88	146.11	155.19	156.33	158.30
Apparel and other textile products	3.40	3.57	3.57	3.63	122.06	124.95	126.38	130.68
Paper and allied products	5.39	5.79	5.80	5.87	229.61	247.81	247.66	253.58
Printing and publishing	5.65	5.98	6.01	6.03	211.88	223.65	225.38	227.33
Chemicals and allied products	5.84	6.27	6.29	6.35	242.94	262.71	262.29	266.07
Petroleum and coal products	7.11	7.70	7.69	7.70	300.04	328.79	327.59	331.87
Rubber and plastics products, nec	4.38	5.06	5.04	5.12	177.39	207.46	207.14	211.46
Leather and leather products	3.43	3.61	3.63	3.63	129.65	132.49	135.40	138.30
TRANSPORTATION AND PUBLIC UTILITIES	6.42	6.80	6.83	6.79	256.80	271.32	273.20	274.32
WHOLESALE AND RETAIL TRADE	3.95	4.23	4.24	4.24	133.51	140.01	140.77	142.46
WHOLESALE TRADE	5.14	5.48	5.51	5.48	199.95	212.08	213.79	213.72
RETAIL TRADE	3.53	3.78	3.80	3.80	114.02	119.07	120.08	121.60
FINANCE, INSURANCE, AND REAL ESTATE	4.34	4.54	4.58	4.54	158.84	166.16	167.63	166.16
SERVICES	4.34	4.64	4.67	4.65	145.82	154.51	155.51	155.78

[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	June 1976	Jan. 1977	Feb. 1977	Mar. 1977	Apr. 1977	May p 1977	June p 1977	Percent change from: June 1976-June 1977	Percent change from: May 1977-June 1977
TOTAL PRIVATE NONFARM:									
Current dollars	184.3	192.7	193.2	194.1	195.3	196.3	196.9	6.8	0.3
Constant (1967) dollars	108.3	109.7	109.0	108.8	108.6	108.5	N.A.	(2)	(3)
MINING	196.9	207.8	210.1	210.4	212.1	212.1	213.9	8.6	.8
CONTRACT CONSTRUCTION	185.8	192.4	190.8	191.6	192.6	192.3	194.5	4.7	1.1
MANUFACTURING	183.6	192.3	193.3	194.3	195.4	196.9	198.0	7.9	.6
TRANSPORTATION AND PUBLIC UTILITIES	199.0	205.1	205.2	206.7	208.6	209.1	209.5	5.3	.2
WHOLESALE AND RETAIL TRADE	177.5	186.4	187.6	188.5	189.8	190.4	190.2	7.2	-.1
FINANCE, INSURANCE, AND REAL ESTATE	169.2	176.5	175.7	175.9	177.4	179.3	177.5	4.9	-1.0
SERVICES	188.3	197.7	197.7	198.7	199.7	200.8	201.1	6.8	.1

[1] See footnote 1, table B-2.
[2] Percent change was 0.1 from May 1976 to May 1977, the latest month available.
[3] Percent change was -0.1 from April 1977 to May 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					
	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May p	June p
TOTAL	111.6	111.8	111.8	112.2	112.2	112.8	113.3	112.3	114.2	115.2	115.6	116.1	115.7
GOODS-PRODUCING	96.8	96.5	95.7	95.9	96.0	97.2	96.9	95.2	98.3	100.0	100.9	101.7	101.7
MINING	125.0	127.7	115.6	131.7	131.1	132.6	134.0	130.7	134.6	141.5	142.2	139.2	141.1
CONTRACT CONSTRUCTION	104.0	103.7	102.5	99.4	104.2	105.7	104.3	96.4	105.9	108.1	112.0	113.0	111.7
MANUFACTURING	94.6	94.2	93.9	94.0	93.2	94.5	94.4	93.8	95.7	97.1	97.5	98.4	98.6
DURABLE GOODS	93.8	93.5	93.6	93.2	92.0	93.8	93.6	93.2	94.8	96.8	96.8	98.1	98.7
Ordnance and accessories	40.7	40.0	39.8	38.6	38.5	38.5	39.5	39.0	39.1	38.5	40.8	41.3	40.7
Lumber and wood products	96.1	98.6	97.6	98.2	99.4	100.8	101.9	101.1	103.0	103.4	104.1	104.3	104.2
Furniture and fixtures	103.3	102.3	101.2	102.4	102.2	102.8	103.5	98.5	102.7	105.3	106.0	107.4	106.8
Stone, clay, and glass products	99.7	99.2	98.6	98.9	99.7	100.2	99.1	96.1	97.1	101.5	104.1	104.7	105.4
Primary metal industries	89.2	90.1	89.8	88.8	86.2	85.7	85.0	84.8	85.5	88.5	90.0	90.9	91.2
Fabricated metal products	98.4	98.0	98.6	98.6	96.5	98.1	98.1	97.6	100.0	101.6	101.0	102.7	103.8
Machinery, except electrical	94.5	95.9	95.9	95.9	94.0	96.7	96.0	95.7	97.7	98.6	98.3	100.7	101.5
Electrical equipment and supplies	91.9	90.5	92.2	91.5	92.1	93.4	93.1	91.7	95.5	95.9	96.1	97.3	97.7
Transportation equipment	92.6	90.3	90.7	89.1	86.1	91.5	90.6	93.3	91.3	96.7	94.8	96.2	97.0
Instruments and related products	109.1	110.3	108.1	107.2	107.9	108.5	110.4	108.9	112.4	111.6	111.1	112.9	114.1
Miscellaneous manufacturing, ind.	94.7	93.1	91.8	92.2	92.0	92.1	91.6	93.1	96.8	96.0	95.1	95.3	94.9
NONDURABLE GOODS	95.8	95.2	94.2	95.2	95.0	95.4	95.5	94.7	97.1	9..6	98.5	98.8	98.5
Food and kindred products	96.8	97.0	96.5	96.4	96.2	96.6	95.5	95.1	97.5	97.9	98.8	97.0	95.9
Tobacco manufactures	83.4	82.3	84.0	82.1	83.0	81.6	81.6	76.1	83.0	75.5	80.7	75.7	75.9
Textile mill products	98.6	98.0	95.5	95.2	95.0	95.6	96.1	95.4	97.9	99.5	99.7	100.9	100.1
Apparel and other textile products	91.4	88.9	87.6	86.2	85.7	86.1	86.3	84.1	88.0	87.9	87.3	89.0	90.0
Paper and allied products	97.3	96.9	96.1	96.5	95.7	97.0	97.2	96.2	98.0	98.3	100.8	101.2	101.4
Printing and publishing	93.1	93.6	92.9	93.1	93.4	93.6	93.7	93.0	94.8	94.3	94.9	95.2	95.3
Chemicals and allied products	99.0	99.4	99.8	100.3	99.4	100.0	100.0	100.4	101.8	102.2	103.5	103.8	103.9
Petroleum and coal products	111.6	112.2	112.4	112.2	112.5	113.1	114.7	115.0	114.7	118.7	120.5	120.2	121.0
Rubber and plastics products, nec	107.0	106.2	105.2	124.3	125.6	125.7	127.6	127.7	129.6	131.7	134.7	135.8	133.6
Leather and leather products	76.0	74.7	72.5	72.1	71.0	70.4	70.5	69.1	71.9	71.9	73.9	73.6	73.1
SERVICE-PRODUCING	121.8	122.5	123.0	123.6	123.5	123.5	124.6	124.1	125.3	125.8	125.8	126.0	125.4
TRANSPORTATION AND PUBLIC UTILITIES	101.6	102.1	102.5	102.9	102.0	103.2	105.0	102.7	104.4	104.2	103.9	104.5	104.2
WHOLESALE AND RETAIL TRADE	118.1	118.9	119.0	119.7	119.3	118.9	120.0	119.1	120.7	121.5	121.7	121.7	120.7
WHOLESALE TRADE	114.1	115.3	114.7	114.9	114.8	114.8	114.8	115.4	117.0	116.9	117.8	117.5	117.4
RETAIL TRADE	119.6	120.3	120.6	121.6	121.0	120.4	122.0	120.4	122.1	123.2	123.1	123.2	122.0
FINANCE, INSURANCE, AND REAL ESTATE	126.3	126.6	127.3	127.7	128.3	129.1	129.8	130.6	130.2	131.1	131.0	131.7	131.5
SERVICES	135.0	135.4	136.6	137.2	137.6	137.7	138.4	138.8	139.7	140.0	140.1	140.2	139.8

[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	75.0p
December	68.3	75.9	76.7	75.3p
1977				
January	71.5	76.7	88.4	
February	61.6	84.6	87.2p	
March	79.7	86.0	84.0p	
April	79.1	82.6p		
May	65.4p	73.8p		
June	51.7p			
July				
August				
September				
October				
November				
December				

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

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Wholesale Price Index--June 1977

The Wholesale Price Index for All Commodities decreased 0.6 percent from May to June on a seasonally adjusted basis, the Bureau of Labor Statistics of the U.S. Department of Labor reported today. The index had moved up 0.4 percent in May and about 1 percent in each of the 3 previous months. The index for farm products moved down more sharply than in May, and prices of processed foods and feeds declined following 4 months of large advances. The industrial commodities index rose but less than in recent months. (See table A.) During the 3 months ending in June, the All Commodities Wholesale Price Index moved up at an annual rate of 4.0 percent, following a 10.2 percent rate of advance in the preceding quarter. Most of the slowdown was due to farm products and processed foods and feeds.

The index for farm products decreased 6.3 percent in June on a seasonally adjusted basis, following a 2.3 percent decline in May and large increases during the

Table A. Percent changes in WPI and components, selected periods *

Month	Changes from preceding month								Change in All Commodities From 12 months ago
	All Commodities		Industrial Commodities		Farm products		Processed foods and feeds		
	unadj.	seas. adj.	unadj.	seas. adj.	unadj.	seas. adj.	unadj.	seas. adj.	unadj.
June 1976	0.7	0.5	0.6	0.6	2.0	0.5	1.1	0.3	5.5
July	.7	.4	.7	.6	.2	-.6	.4	-.6	5.0
Aug.	-.3	-.2	.6	.6	-3.7	-3.3	-3.2	-2.5	4.0
Sept.....	.5	.7	.5	.8	1.2	.8	.3	.1	4.0
Oct.	.3	.5	.8	.9	-2.7	-.5	-1.3	-.6	3.6
Nov.	.2	.6	.4	.6	-1.7	-.6	-.1	.4	4.2
Dec.	.8	.6	.2	.3	4.4	2.6	2.4	r1.8	4.7
Jan. 1977	.5	.5	.5	.5	1.0	1.1	.2	r-.1	4.8
Feb.	1.1	.9	.8	.6	2.8	2.2	1.5	1.8	5.9
Mar.	1.0	1.1	.9	.8	1.7	2.5	1.1	1.9	6.8
Apr.	1.3	1.1	.8	.6	2.8	3.4	2.5	2.5	7.2
May	.5	.4	.5	.4	-1.8	-2.3	1.9	1.8	7.3
June	-.4	-.6	.2	.3	-5.2	-6.3	-1.0	-1.7	6.2

r = revised

* Data for December 1976 shown in this release have been revised to reflect the availability of late reports and corrections. Revised data for January 1976 through November 1976 became available earlier. Revised annual average data for 1976 are now available on request from the Bureau of Labor Statistics.

5 previous months. Prices moved down in June for every major category of farm products except fluid milk. Prices fell more than in May for fresh and dried vegetables, grains, tea, and oilseeds. Fresh fruits and cattle turned down sharply after increasing in May. Prices for green coffee, plant and animal fibers, eggs, and live poultry also declined in June, although less than in the previous month.

The processed foods and feeds index fell 1.7 percent in June, after rising about 2 percent in each of the 4 previous months. Prices turned down in June for beef and veal and fats and oils following May increases. Manufactured animal feeds and sugar and confectionery fell more in June than in May. Beverages and beverage materials, cereal and bakery products, and miscellaneous processed foods rose less than in the preceding month. On the other hand, pork prices moved up more sharply than in May.

Prices of industrial commodities moved up 0.3 percent in June. During the second quarter, the rise in industrial prices slowed to an annual rate of 5.3 percent, after a 7.9 percent rate of increase from December to March. Indexes for fuels and power, chemicals, and machinery rose less in June than in May. Prices for the hides and skins and miscellaneous groups turned down after increasing in May. Textile prices moved lower in June after showing no change in the preceding month, and metal prices declined slightly more than in May. On the other hand, prices of lumber and wood

Table B. Percent changes in stage of processing components of WPI, selected periods, seasonally adjusted *

Month	Changes from preceding month								
	Crude materials less some items 1/	Intermed. materials less some items 2/	Finished goods						
			Total	Producer	Consumer				
					Total	Foods	Less foods		
							Total	Durables	Nondurables
June 1976	1.1	0.4	0.2	0.4	0.1	-1.0	0.8	0.4	0.9
July	2.4	.5	-.1	.3	-.2	-1.5	.5	.2	.8
Aug.	.7	.6	-.2	.3	-.4	-2.2	.6	.5	.6
Sept.....	-.5	.9	.5	.5	.5	0	.7	.6	.8
Oct.	3.7	.7	.5	1.0	.2	-.4	.5	.5	.6
Nov.	3.5	.5	.3	.4	.2	-.4	.5	.2	.7
Dec.	-2.1	r.6	1.0	.8	r1.2	r2.8	.2	.1	.2
Jan. 1977	-1.2	r.4	r.6	.4	.6	-.1	1.0	.7	1.1
Feb.	4.0	.6	.7	.5	.9	2.0	.3	.5	.2
Mar.	2.3	.9	.8	.4	.9	1.1	.8	.4	1.0
Apr.	.3	.6	1.1	.6	1.3	2.5	.7	.7	.7
May	.8	.3	.9	.6	1.1	2.1	.5	.4	.5
June	-1.6	.2	.1	.4	-.2	-1.3	.4	.3	.5

1/ Excludes crude foodstuffs and feedstuffs, plant and animal fibers, oilseeds, and leaf tobacco.

2/ Excludes intermediate materials for food manufacturing and manufactured animal feeds.

r = revised

* Data for December 1976 shown in this release have been revised to reflect the availability of late reports and corrections. Revised data for January 1976 through November 1976 became available earlier. Revised annual average data for 1976 are now available on request from the Bureau of Labor Statistics.

products turned up following 2 months of decreases, and price indexes for nonmetallic mineral products, rubber and plastic products, transportation equipment, and furniture and household durables increased more than in most recent months.

In June, the All Commodities Wholesale Price Index declined 0.4 percent before seasonal adjustment to 194.5 (1967=100). This index was 6.2 percent higher than a year earlier. The industrial commodities index was up 7.2 percent over the year. Prices for farm products were 1.4 percent lower in June 1977 than in June 1976, while the processed foods and feeds index was 4.6 percent higher.

Price changes by stage of processing

On a stage of processing basis, the index for crude materials for further processing (excluding foods, feeds, and fibers) declined 1.6 percent in June after seasonal adjustment. (See table B.) This decrease followed increases of 0.8 and 0.3 percent in May and April, respectively. Prices for natural gas and scrap metals fell, but bituminous coal prices moved up.

The index for intermediate materials, supplies, and components (excluding foods and feeds) rose 0.2 percent over the month. This was the smallest upward movement for this index since May 1976. Declines for nonferrous and ferrous metals and inedible fats and oils were more than offset by increases for electric power, plywood, industrial chemicals, paper boxes and containers, fabricated metal products, and plastic products.

The index for finished goods, which includes both consumer and producer finished goods, edged up 0.1 percent in June, seasonally adjusted. The producer finished goods index rose 0.4 percent, slightly less than in May and April but the same as in March. The June advance was primarily due to increases for motor vehicles and some types of machinery. Most major categories of machinery rose less than in recent months, but prices for metalworking and agricultural machinery increased more than in May and April.

The consumer finished goods index was down 0.2 percent over the month because of lower food prices. The index for consumer foods declined 1.3 percent, the first substantial decrease in this index this year. Prices of beef and veal, fresh and dried fruits and vegetables, and sugar and confectionery moved down, while pork, dairy products, and roasted coffee prices advanced. The index for consumer finished goods other than foods rose 0.4 percent, compared with increases of 0.5 and 0.7 percent in May and April, respectively. The consumer nondurables index moved 0.5 percent higher in June as advances for sanitary papers and health products, apparel, and pharmaceutical preparations more than offset a decrease for gasoline. Increases for passenger cars, major appliances, mobile homes, and household furniture were primarily responsible for the 0.3 percent rise in the consumer durables index.

Changes before seasonal adjustment

Before seasonal adjustment, the All Commodities Wholesale Price Index decreased 0.4 percent to 194.5 (1967=100). The index for farm products declined 5.2 percent, and processed foods and feeds moved down 1.0 percent. The industrial commodities index edged up 0.2 percent.

Prices were sharply lower in June for a broad range of farm products, including fresh and dried fruits and vegetables, grains, cattle, oilseeds, green coffee, and raw cotton. Hog prices rose.

Within the processed foods and feeds group, lower prices for manufactured animal feeds, beef and veal, sugar and confectionery, and most fats and oils outweighed advances for pork, processed fruits and vegetables, and beverages and beverage materials.

Ten of the 13 major industrial groups rose from May to June. The largest increase was a 0.8 percent rise in the nonmetallic mineral products index, led by advances for gypsum products, structural clay products, and insulation materials. Within the fuels and related products and power group, higher prices for propane, gasoline, and electric power were partly offset by declines for residual fuels and natural gas. Prices advanced for building paper and board and converted paper and paperboard products. Higher prices for most major categories of plastic products were responsible for most of the advance in the rubber and plastic products group. The 0.5 percent rise in the furniture and household durables index was largely due to increases for furniture and small electric appliances.

Within the machinery and equipment grouping, the metalworking category registered the largest upward movement. Motor trucks, motor vehicle parts, and passenger cars accounted for most of the 0.3 percent rise in the index for transportation equipment. The textile products and apparel index moved up, principally because of higher prices for synthetic fibers, processed yarns and threads, and apparel; gray and finished fabrics decreased. Among chemicals and allied products, advances for pesticides, drugs and pharmaceuticals, and plastic resins and materials more than offset declines for inedible fats and oils and fertilizer materials. Within the miscellaneous products group, an increase in mobile home prices outweighed a decrease in jewelry prices.

Three major industrial groups moved down over the month. Sharply lower prices for cattle hides and cattlehide leather led to a drop in the index for hides, skins, leather, and related products. Among metals and metal products, decreases for scrap and nonferrous metals were partly offset by advances for some fabricated metal products. Lower prices for softwood lumber outweighed upward movements for most other types of wood products.

Brief Explanation of the WPI

The Wholesale Price Index (WPI) measures average changes in prices of commodities sold in primary markets in the United States. "Wholesale," as used in the title of the index, refers to sales in large quantities by producers, not to prices received by wholesalers, jobbers, or distributors.

The WPI is based on a sample of about 2,700 commodities and 9,000 respondents selected to represent the movement of prices of all commodities produced in the manufacturing, agriculture, forestry, fishing, mining, gas and electricity, and public utilities sectors. The universe includes all commodities produced or imported for sale in commercial transactions in primary markets in the United States. The WPI is organized along two basic classification structures—commodity line and stage of processing. Under the commodity classification structure, products are grouped by similarity of end-use or material composition. Under the stage of processing framework, commodities are grouped by degree of fabrication (i.e., crude materials, intermediate or semifinished goods, and finished goods).

To the extent possible, prices used in the index apply to the first significant commercial transaction in the United States, from the f.o.b. production or central marketing point. Price data are collected monthly, primarily by mail questionnaire. Respondents are asked to supply net prices or to provide all applicable discounts. Most prices are obtained directly from producing companies on a voluntary and confidential basis, but some prices are taken from trade publications or are obtained from other Government agencies. Prices generally are reported for Tuesday of the week containing the 13th day of the month.

In calculating the index, price changes for the various commodities are averaged together with weights which represent their importance in the total net selling value of all commodities as of 1972. The detailed data are aggregated to produce indexes for summary groupings and the All Commodities Wholesale Price Index. The index measures price changes from a reference period—1967—which equals 100.0, designated by the Office of Management and Budget. An increase of 22 percent, for example, is shown as 122.0. This change can also be expressed in dollars as follows:

The price of a representative sample of commodities sold in primary markets of the United States has risen from $100 in 1967 to $122.

A Note About Calculating Index Changes

Movements of the indexes from one month to another are usually expressed as percent changes rather than changes in index points because index point changes are affected by the level of the index in relation to its base period while percent changes are not. The following example illustrates the computation of index point and percent changes. (See box.)

Seasonally adjusted percent changes in the All Commodities Wholesale Price Index are based on seasonal adjustment factors and seasonally adjusted indexes carried to two decimal places. This procedure helps to eliminate rounding error in the percent changes.

Percent changes for 3-month and 6-month periods are expressed as annual rates that are computed according to the standard formula for compound growth rates. These data indicate what the percent change would be if the current rate were maintained for a 12-month period. BLS does not publish annualized data for 1 month.

Index Point Change

WPI	123.8
Less previous index	123.2
equals index point change	0.6

Percent Change

Index point difference,	0.6
divided by the previous index,	123.2
equals	0.005
result multiplied by one hundred	0.005 x 100
equals percent change:	0.5

A Note on Seasonally Adjusted Data

Because price data are used for different purposes by different groups, the Bureau of Labor Statistics publishes seasonally adjusted as well as unadjusted changes each month.

For analyzing general price trends in the economy, seasonally adjusted data usually are preferred since they eliminate the effect of changes that normally occur at about the same time and in about the same magnitude every year—such as price movements resulting from normal weather patterns, regular production and supply cycles, model changeovers, seasonal discounts, and holidays. Seasonally adjusted data are subject to revision when seasonal factors are revised.

The unadjusted data are of principal interest to users who need information which can be related to the actual dollar values of transactions. Individuals requiring this information include marketing specialists, purchasing agents, budget and cost analysts, contract specialists, and commodity traders. Unadjusted data generally are used in escalating contracts such as purchase agreements or real estate leases.

Table 1. Wholesale price indexes for major commodity groups and special groupings, June 1977 *

	Relative importance[1]	Unadjusted indexes (1967=100 unless otherwise noted)		Unadjusted percent change to June 1977 from:		Seasonally adjusted percent change between: 1977		
	Dec. 1976	May 1977	June 1977	June 1976	May 1977	Mar.-Apr.	Apr.-May	May-June
All commodities	100.000	195.2	194.5	6.2	-0.4	1.1	0.4	-0.6
All commodities (1957-59=100)	---	207.1	206.4	---	---	---	---	---
Commodity Groups								
Farm products, and processed foods and feeds	21.566	196.8	191.8	2.3	-2.5	2.9	.3	-3.4
Farm products	7.949	204.3	193.7	-1.4	-5.2	3.4	-2.3	-6.3
Processed foods and feeds	13.616	192.0	190.1	4.6	-1.0	2.5	1.8	-1.7
Industrial commodities	78.434	194.2	194.6	7.2	.2	.6	.4	.3
Textile products and apparel	5.758	154.0	154.4	4.1	.3	1.0	0	-.5
Hides, skins, leather, and related products	.804	181.9	179.7	6.9	-1.2	-.2	1.3	-.8
Fuels and related products and power[3]	10.711	302.3	304.0	16.7	.6	1.4	1.4	.4
Chemicals and allied products[3]	7.051	193.8	193.9	3.5	.1	.6	.8	.3
Rubber and plastic products	2.907	166.4	167.4	6.6	.6	.8	.3	.8
Lumber and wood products	2.561	229.3	228.7	14.4	-.3	-1.5	-1.7	1.7
Pulp, paper and allied products 3	5.317	186.1	187.3	4.3	.6	.8 3/	.5 3/	.6 3/
Metals and metal products	13.071	208.6	207.8	5.7	-.4	.4	-.3	-.5
Machinery and equipment 3	12.002	180.0	180.8	6.1	.4	.3 3/	.7 3/	.4 3/
Furniture and household durables 3	3.427	150.5	151.3	4.1	.5	.3 3/	.3 3/	.5 3/
Nonmetallic mineral products	2.874	198.9	200.4	7.6	.8	.9	.6	1.4
Transportation equipment (Dec. 1968=100)	8.778	159.0	159.4	6.8	.3	.6	.4	.6
Miscellaneous products	3.171	163.1	163.5	5.9	.2	1.0	.2	-.2
Industrial commodities less fuels and related products and power	67.723	182.5	182.8	5.8	.2	.5	.3	.2
Special Groupings								
Consumer finished goods	29.055	179.3	179.3	6.2	0	1.3	1.1	-.2
Foods	10.378	192.4	190.7	4.7	-.9	2.5	2.1	-1.3
Finished goods, excluding foods	18.677	171.0	171.9	7.0	.5	.7	.5	.4
Nondurable	11.537	184.6	185.8	8.0	.7	.7	.5	.5
Durable	7.140	150.8	151.3	5.4	.3	.7	.4	.3
Producer finished goods	12.081	182.4	183.1	6.4	.4	.6	.6	.4
Manufactured goods	84.350	190.2	190.4	6.4	.1	1.0	.5	0
Durable	44.053	186.1	186.6	6.8	.3	.4	.2	.3
Intermediate materials, supplies and components, excluding selected items[4]	45.342	201.6	202.1	7.0	.2	.6	.3	.2
Crude materials for further processing, excluding selected items[5]	3.785	284.5	279.6	12.5	-1.7	.3	.8	-1.6

[1] Comprehensive relative importance figures are computed once each year in December.

[2] Prices for most items in this grouping are lagged and refer to one or two months earlier than the index month. See component footnotes in Table 3 for specific lag intervals.

[3] Not seasonally adjusted.

[4] Excludes intermediate materials for food manufacturing and manufactured animal feeds.

[5] Excludes crude foodstuffs and feedstuffs, plant and animal fibers, oilseeds, and leaf tobacco.

* Data for December 1976 shown in this release have been revised to reflect the availability of late reports and corrections. Revised data for January 1976 through November 1976 became available earlier. Revised annual average data for 1976 are now available on request from the Bureau of Labor Statistics.

Table 2. Percent changes in wholesale price indexes and components, June 1977*

Month	From previous month		At compound annual rates from—		12 months ago (unadjusted)	From previous month		At compound annual rates from—		12 months ago (unadjusted)
	Unadjusted	Seasonally adjusted	3 months ago (s.a.)	6 months ago (s.a.)		Unadjusted	Seasonally adjusted	3 months ago (s.a.)	6 months ago (s.a.)	
	All commodities					Industrial commodities				
1976:										
June	0.7	0.5	6.6	3.9	5.5	0.6	0.6	4.8	5.0	6.3
July	.7	.4	4.5	4.2	5.0	.7	.6	5.4	4.8	6.7
August	-.3	-.2	2.9	4.2	4.0	.6	.6	7.3	5.6	6.7
September	.5	.7	3.5	5.1	4.0	.5	.8	8.0	6.4	6.8
October	.3	.5	4.0	4.2	3.6	.8	.9	9.3	7.4	6.6
November (revised)	.2	.6	7.2	5.0	4.2	.4	.6	9.5	8.4	6.7
December (revised)	.8	.6	7.1	5.3	4.7	.2	.3	7.6	7.8	6.4
1977:										
January	.5	.5	7.1	5.5	4.8	.5	.5	5.9	7.6	6.2
February	1.1	.9	8.4	7.8	5.9	.8	.6	5.9	7.7	6.6
March	1.0	1.1	10.2	8.6	6.8	.9	.8	7.9	7.7	7.0
April	1.3	1.1	13.1	10.1	7.2	.8	.6	8.5	7.2	7.3
May	.5	.4	10.9	9.7	7.3	.5	.4	7.6	6.7	7.6
June	-.4	-.6	4.0	7.0	6.2	.2	.3	5.3	6.6	7.2
	Farm products and processed foods and feeds					Consumer foods				
1976:										
June	1.4	.4	13.4	1.0	2.8	-.6	-1.0	13.2	-1.3	1.0
July	.4	-.6	.9	1.5	-.1	.1	-1.5	-7.0	-1.9	-1.4
August	-3.4	-2.9	-11.9	-1.2	-3.9	-2.4	-2.2	-16.9	-2.5	-3.3
September	.7	.3	-12.0	-.1	-3.9	.2	0	-13.6	-1.1	-4.5
October	-1.9	-.6	-11.7	-5.6	-5.8	-.6	-.4	-9.8	-8.4	-5.5
November (revised)	-.7	0	-.9	-6.5	-4.2	-.6	-.4	-3.1	-10.3	-5.1
December (revised)	3.1	2.2	6.6	-3.2	-1.1	2.8	2.8	8.4	-3.2	-2.5
1977:										
January	.5	.3	10.1	-1.4	.1	.3	-.1	9.9	-.4	-1.2
February	1.9	2.0	19.2	8.7	3.6	1.9	2.0	20.8	8.2	2.7
March	1.3	2.1	19.1	12.6	6.1	.8	1.1	12.7	10.5	4.5
April	2.6	2.9	31.8	20.5	6.6	1.0	2.5	24.6	17.0	3.6
May	.5	.3	23.0	21.1	6.5	2.1	2.1	25.1	22.9	5.0
June	-2.5	-3.4	-1.7	8.2	2.3	-.9	-1.3	13.8	13.3	4.7
	Consumer finished goods, total					Consumer goods, excluding foods				
1976:										
June	.2	.1	6.9	1.6	3.9	.8	.8	3.6	3.3	5.7
July	.4	-.2	1.0	1.2	2.8	.6	.5	5.4	2.8	5.7
August	-.5	-.4	-1.9	1.8	2.1	.6	.6	7.7	4.2	5.5
September	.4	.5	-.5	3.1	1.6	.4	.7	7.7	5.6	5.4
October	.4	.2	.9	1.0	1.0	1.0	.5	7.9	6.6	5.2
November (revised)	.1	.2	3.4	.7	1.2	.4	.5	7.6	7.7	5.1
December (revised)	1.1	1.2	6.3	2.9	2.1	.2	.2	5.2	6.4	4.9
1977:										
January	.6	.6	8.0	4.4	2.8	.7	1.0	7.0	7.4	5.1
February	1.0	.9	11.0	7.1	4.4	.5	.3	5.9	6.8	5.5
March	.7	.9	9.9	8.1	5.6	.6	.8	8.5	6.8	6.2
April	.8	1.3	13.1	10.5	5.7	.7	.7	7.4	7.2	6.9
May	1.0	1.1	14.0	12.5	6.4	.4	.5	8.1	7.0	7.3
June	0	-.2	9.2	9.5	6.2	.5	.4	6.5	7.5	7.0

NOTE: s.a.=season ly adjusted

* Data for December 1976 shown in this release have been revised to reflect the availablity of late reports and corrections. Revised data for January 1976 through November 1976 became available earlier. Revised annual average data for 1976 are now available on request from the Bureau of Labor Statistics.

Table 3. Wholesale price indexes for commodity groups and subgroups, June 1977*

(1967=100 unless otherwise indicated)

Code	Grouping	Indexes			Percent change to June 1977 from:	
		1976 June	1977 May	1977 June	1 year ago	1 month ago
01	Farm products	196.5	204.3	193.7	-1.4	-5.2
01-1	Fresh and dried fruits and vegetables	160.7	201.8	176.2	9.6	-12.7
01-2	Grains	225.1	171.2	157.7	-29.9	-7.9
01-3	Livestock	185.1	180.2	172.3	-6.9	-4.4
01-4	Live poultry	174.9	183.1	182.7	4.5	-.2
01-5	Plant and animal fibers	235.9	238.6	228.3	-3.2	-4.3
01-6	Fluid milk	190.2	198.3	199.3	4.8	.5
01-7	Eggs	165.8	144.4	141.4	-14.7	-2.1
01-8	Hay, hayseeds, and oilseeds	219.5	289.8	270.2	23.1	-6.8
01-9	Other farm products	224.4	357.5	341.1	52.0	-4.6
02	Processed foods and feeds	181.8	192.0	190.1	4.6	-1.0
02-1	Cereal and bakery products	173.7	172.0	171.3	-1.4	-.4
02-2	Meats, poultry, and fish	190.0	183.8	183.4	-3.5	-.2
02-3	Dairy products	167.2	174.2	174.3	4.2	.1
02-4	Processed fruits and vegetables	168.8	185.8	187.8	11.3	1.1
02-5	Sugar and confectionery	197.4	184.4	176.3	-10.7	-4.4
02-6	Beverages and beverage materials	172.8	206.0	207.7	20.2	.8
02-71	Animal fats and oils	189.0	307.7	279.9	48.1	-9.0
02-72	Crude vegetable oils	148.6	248.6	229.6	54.5	-7.6
02-73	Refined vegetable oils	170.3	228.9	219.2	28.7	4.2
02-74	Vegetable oil end products	170.6	214.1	216.3	26.8	1.0
02-8	Miscellaneous processed foods	172.7	192.4	192.9	11.7	.3
02-9	Manufactured animal feeds	213.0	239.6	225.7	6.0	-5.8
03	**Textile products and apparel**	148.3	154.0	154.4	4.1	.3
03-1	**Synthetic fibers (Dec. 1975=100)**	102.5	107.0	109.5	6.8	2.3
03-2	**Processed yarns and threads (Dec. 1975=100)**	99.7	102.3	103.4	3.7	1.1
03-3	**Gray fabrics (Dec. 1975=100)**	106.6	105.1	104.5	-2.0	-.6
03-4	**Finished fabrics (Dec. 1975=100)**	101.4	104.9	104.5	3.1	-.4
03-5	**Apparel**	139.8	146.6	147.2	5.3	.4
03-6	**Textile housefurnishings**	158.9	169.7	169.7	6.8	0
04	Hides, skins, leather, and related products	168.1	181.9	179.7	6.9	-1.2
04-1	Hides and skins	261.1	313.0	288.8	10.6	-7.7
04-2	Leather	191.2	210.7	202.1	5.7	-4.1
04-3	Footwear	158.7	168.2	168.6	6.2	.2
04-4	Other leather and related products	152.2	163.7	163.7	7.6	0
05	Fuels and related products and power[1]	260.5	302.3	304.0	16.7	.6
05-1	Coal	366.6	386.9	390.6	6.5	1.0
05-2	Coke	346.0	375.1	386.1	11.6	2.9
05-3	Gas fuels[2]	275.9	390.2	386.6	40.1	-.9
05-4	Electric power[2]	206.3	230.7	234.4	13.6	1.6
05-81	Crude petroleum[3]	248.1	271.0	271.8	9.6	.3
05-7	Petroleum products, refined[3]	270.6	310.1	311.6	15.2	.5
06	Chemicals and allied products[4]	187.3	193.8	193.9	3.5	.1
06-1	Industrial chemicals[4]	218.4	224.0	224.1	2.6	0
06-21	Prepared paint	173.9	181.7	182.3	4.8	.3
06-22	Paint materials	190.5	210.1	209.3	9.9	-.4
06-3	Drugs and pharmaceuticals	134.4	139.7	140.8	4.8	.8
06-4	Fats and oils, inedible	243.5	337.5	318.8	30.9	-5.5
06-5	Agricultural chemicals and chemical products	188.1	187.7	189.0	.5	.7
06-6	Plastic resins and materials	195.2	196.6	197.6	1.2	.5
06-7	Other chemicals and allied products	172.3	175.9	176.0	2.1	.1
07	Rubber and plastic products	157.1	166.4	167.4	6.6	.6
07-1	Rubber and rubber products	159.4	172.3	172.9	8.5	.3
07-11	Crude rubber	163.7	169.7	171.4	4.7	1.0
07-12	Tires and tubes	155.5	167.8	167.8	7.9	0
07-13	Miscellaneous rubber products	160.7	176.3	177.3	10.3	.6
07-21	Plastic construction products (Dec. 1969=100)	126.1	130.5	134.1	6.3	2.8
07-22	Unsupported plastic film and sheeting (Dec. 1970=100)	154.9	159.6	160.3	3.5	.4
07-23	Laminated plastic sheets, high pressure (Dec. 1970=100)	129.2	142.2	142.4	10.2	.1

See footnotes at end of table.

Table 3. Wholesale price indexes for commodity groups and subgroups,—continued*

(1967=100 unless otherwise indicated)

Code	Grouping	Indexes			Percent change to June 1977 from:	
		1976 June	1977 May	1977 June	1 year ago	1 month ago
08	Lumber and wood products	199.9	229.3	228.7	14.4	-0.3
08-1	Lumber	224.2	267.8	264.6	18.0	-1.2
08-2	Millwork	178.1	191.5	192.4	8.0	.5
08-3	Plywood	176.7	200.0	202.6	14.7	1.3
08-4	Other wood products	165.3	184.4	185.4	12.2	.5
09	Pulp, paper, and allied products	179.6	186.1	187.3	4.3	.6
09-1	Pulp, paper, and products, excluding building paper and board	181.0	187.3	188.4	4.1	.6
09-11	Woodpulp	285.7	286.8	285.7	0	-.4
09-12	Wastepaper	199.7	185.3	186.3	-6.7	.5
09-13	Paper	181.8	194.1	194.3	6.9	.1
09-14	Paperboard	177.3	179.0	179.5	1.2	.3
09-15	Converted paper and paperboard products	169.7	175.7	177.4	4.5	1.0
09-2	Building paper and board	139.5	151.3	153.8	10.3	1.7
10	Metals and metal products	196.6	208.6	207.8	5.7	-.4
10-1	Iron and steel	218.2	227.9	226.9	4.0	-.4
10-13	Steel Mill products	210.4	225.3	225.4	7.1	0
10-2	Nonferrous metals	183.1	200.9	197.3	7.8	-1.8
10-3	Metal containers	203.4	216.8	216.9	6.6	0
10-4	Hardware	172.9	183.6	184.5	6.7	.5
10-5	Plumbing fixtures and brass fittings	174.9	184.9	186.1	6.4	.6
10-6	Heating equipment	157.0	164.0	164.5	4.8	.3
10-7	Fabricated structural metal products	192.0	204.2	205.0	6.8	.4
10-8	Miscellaneous metal products	185.5	193.3	194.9	5.1	.8
11	Machinery and equipment	170.4	180.0	180.8	6.1	.4
11-1	Agricultural machinery and equipment	182.1	195.1	196.0	7.6	.5
11-2	Construction machinery and equipment	197.8	213.0	213.2	7.8	.1
11-3	Metalworking machinery and equipment	182.1	195.7	197.9	8.7	1.1
11-4	General purpose machinery and equipment	189.9	200.2	201.5	6.1	.6
11-6	Special industry machinery and equipment	187.8	200.9	202.1	7.6	.6
11-7	Electrical machinery and equipment	146.0	152.7	153.0	4.8	.2
11-9	Miscellaneous machinery	171.3	179.2	179.4	4.7	.1
12	Furniture and household durables	145.3	150.5	151.3	4.1	.5
12-1	Household furniture	153.0	161.1	162.2	6.0	.7
12-2	Commercial furniture	174.5	184.9	186.7	7.0	1.0
12-3	Floor coverings	131.4	135.5	135.8	3.3	.2
12-4	Household appliances	139.1	143.2	144.5	3.9	.9
12-5	Home electronic equipment	91.2	88.4	88.3	-3.2	-.1
12-6	Other household durable goods	177.6	189.2	189.5	6.7	.2
13	Nonmetallic mineral products	186.3	198.9	200.4	7.6	.8
13-11	Flat glass	151.3	159.8	161.6	6.8	1.1
13-2	Concrete ingredients	187.5	198.9	199.1	6.2	.1
13-3	Concrete products	179.5	190.5	190.9	6.4	.2
13-4	Structural clay products excluding refractories	162.1	174.2	180.2	11.2	3.4
13-5	Refractories	180.4	194.9	196.1	8.7	.6
13-6	Asphalt roofing	237.6	243.1	246.2	3.6	1.3
13-7	Gypsum products	153.5	175.9	187.1	21.9	6.4
13-8	Glass containers	197.2	218.3	218.3	10.7	0
13-9	Other nonmetallic minerals	232.1	247.8	250.4	7.9	1.0
14	Transportation equipment (December 1968=100)	149.2	159.0	159.4	6.8	.3
14-1	Motor vehicles and equipment	151.8	161.3	161.8	6.6	.3
14-4	Railroad equipment	215.6	231.1	232.0	7.6	.4
15	Miscellaneous products	154.4	163.1	163.5	5.9	.2
15-1	Toys, sporting goods, small arms, ammunition	150.4	154.4	154.8	2.9	.3
15-2	Tobacco products	161.9	175.3	175.3	8.3	0
15-3	Notions	164.5	172.4	172.4	4.8	0
15-4	Photographic equipment and supplies	137.1	139.9	140.4	2.4	.4
15-9	Other miscellaneous products	154.5	167.3	167.1	8.2	-.1

[1] Prices for most items in this grouping are lagged and refer to one or two months earlier than the index month. See component footnotes for specific lag intervals.

[2] Prices for gas, except L.P.G. (05-31) are lagged two months.

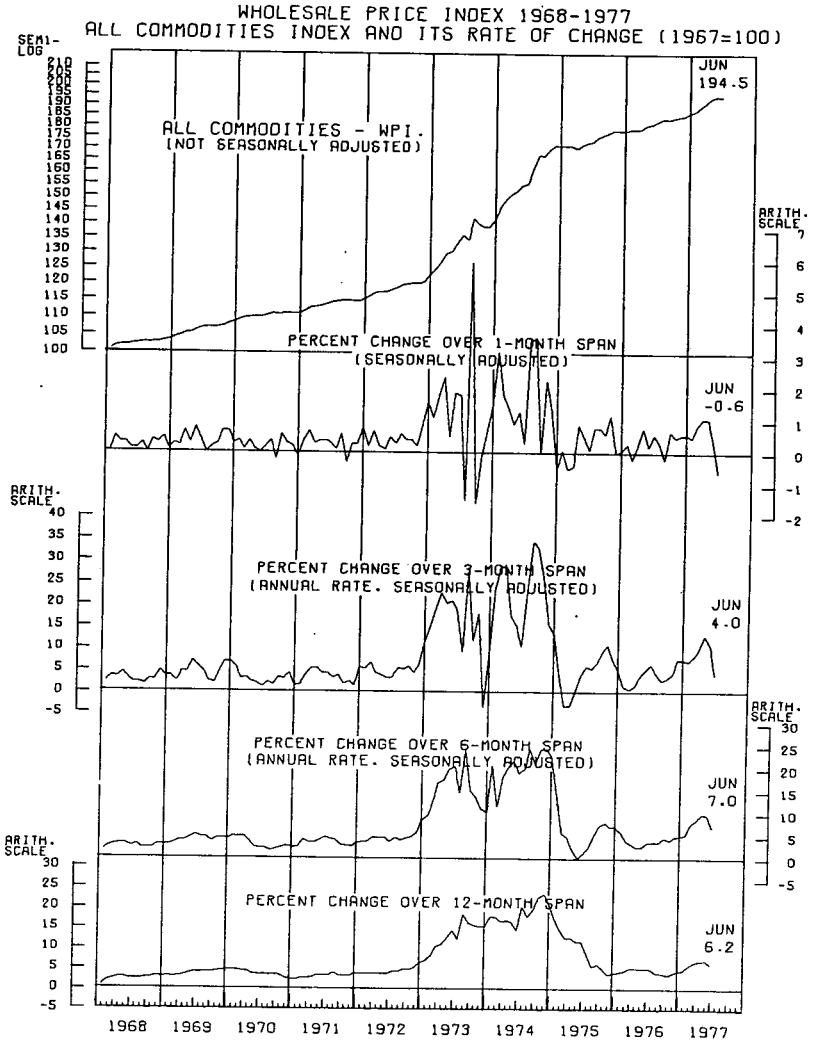
[3] The one month lag in the electric power indexes and average prices was eliminated in June 1977. The June index reflects two months' change.

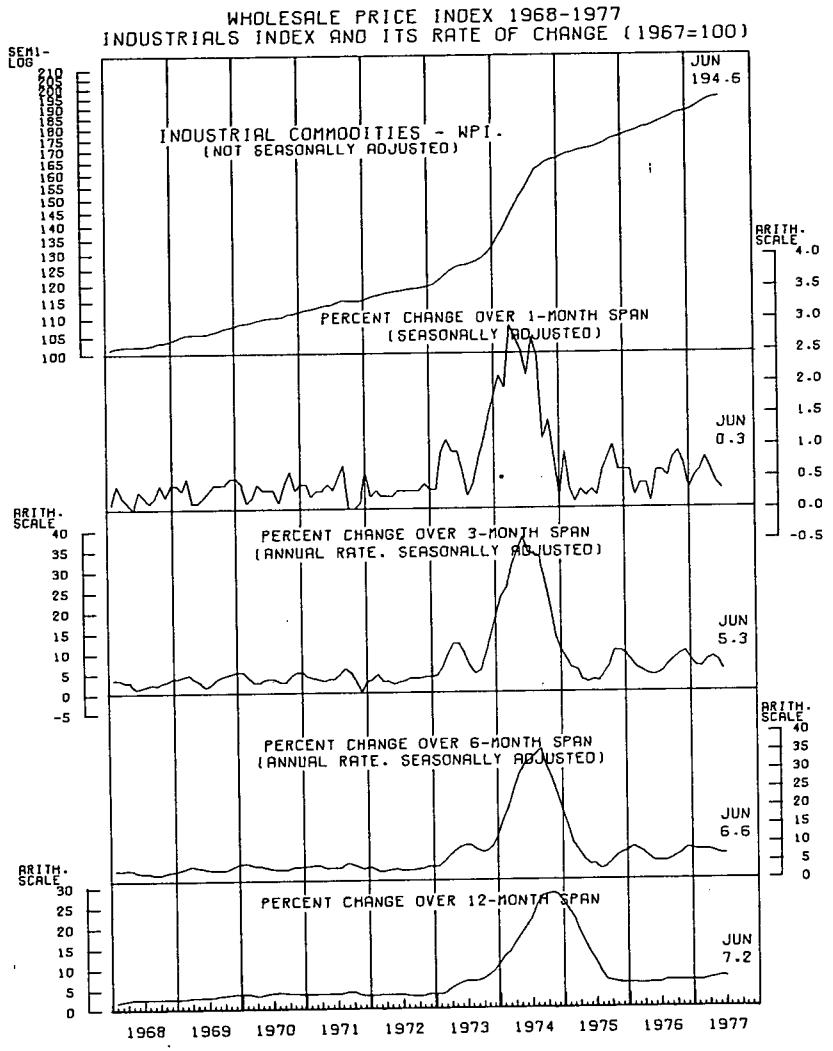
[4] Includes only domestic production.

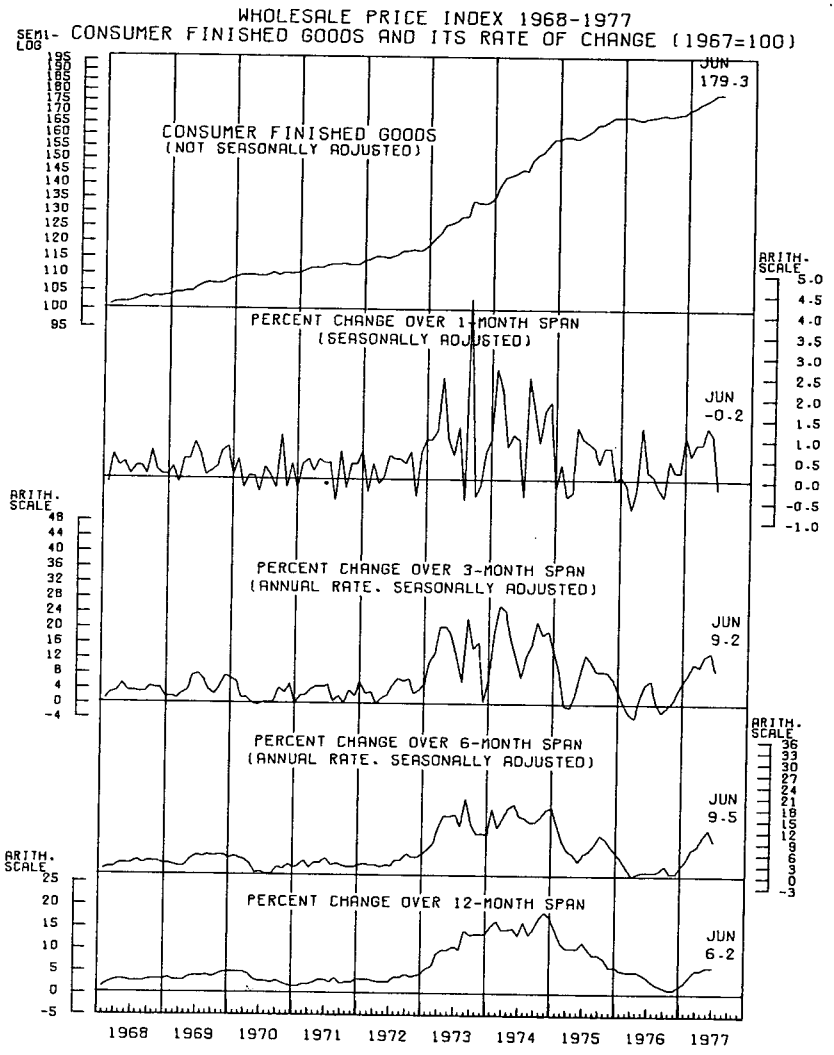
[5] Prices for gasoline (05-71), light distillate (05-72), middle distillate (05-73), and residual fuels (05-74) are lagged one month.

[6] Prices for the industrial chemicals component (06-1) are lagged one month.

*Data for December 1976 shown in this release have been revised to reflect the availability of late reports and corrections. Revised data for January 1976 through November 1976 became available earlier. Revised annual average data for 1976 are now available on request from the Bureau of Labor Statistics.


WHOLESALE PRICE INDEX 1968-1977
ALL COMMODITIES INDEX AND ITS RATE OF CHANGE (1967=100)
SEMI-LOG
ALL COMMODITIES - WPI.
(NOT SEASONALLY ADJUSTED)
JUN
194.5
ARITH. SCALE
PERCENT CHANGE OVER 1-MONTH SPAN
(SEASONALLY ADJUSTED)
JUN
-0.6
ARITH. SCALE
PERCENT CHANGE OVER 3-MONTH SPAN
(ANNUAL RATE, SEASONALLY ADJUSTED)
JUN
4.0
ARITH. SCALE
PERCENT CHANGE OVER 6-MONTH SPAN
(ANNUAL RATE, SEASONALLY ADJUSTED)
JUN
7.0
ARITH. SCALE
PERCENT CHANGE OVER 12-MONTH SPAN
JUN
6.2
1968
1969
1970
1971
1972
1973
1974
1975
1976
1977


WHOLESALE PRICE INDEX 1968-1977
INDUSTRIALS INDEX AND ITS RATE OF CHANGE (1967=100)
SEMI-LOG
INDUSTRIAL COMMODITIES - WPI.
(NOT SEASONALLY ADJUSTED)
JUN
194.6
PERCENT CHANGE OVER 1-MONTH SPAN
(SEASONALLY ADJUSTED)
ARITH. SCALE
JUN
0.3
PERCENT CHANGE OVER 3-MONTH SPAN
(ANNUAL RATE, SEASONALLY ADJUSTED)
JUN
5.3
PERCENT CHANGE OVER 6-MONTH SPAN
(ANNUAL RATE, SEASONALLY ADJUSTED)
JUN
6.6
PERCENT CHANGE OVER 12-MONTH SPAN
JUN
7.2
1968
1969
1970
1971
1972
1973
1974
1975
1976
1977


WHOLESALE PRICE INDEX 1968-1977
SEMI-LOG
CONSUMER FINISHED GOODS AND ITS RATE OF CHANGE (1967=100)
CONSUMER FINISHED GOODS
(NOT SEASONALLY ADJUSTED)
JUN
179.3
PERCENT CHANGE OVER 1-MONTH SPAN
(SEASONALLY ADJUSTED)
JUN
-0.2
ARITH. SCALE
PERCENT CHANGE OVER 3-MONTH SPAN
(ANNUAL RATE, SEASONALLY ADJUSTED)
JUN
9.2
PERCENT CHANGE OVER 6-MONTH SPAN
(ANNUAL RATE, SEASONALLY ADJUSTED)
JUN
9.5
PERCENT CHANGE OVER 12-MONTH SPAN
JUN
6.2
1968
1969
1970
1971
1972
1973
1974
1975
1976
1977

Senator PROXMIRE. Let me ask you about that. I have in my hand here the Economic Indicators for June of 1977, and it shows total private nonagricultural weekly earnings in constant 1967 dollars. In 1968, gross weekly earnings were $103.39; in 1976, $103.40. They were essentially the same; 1 cent difference.

Now, that is over a period of 8 years. They don't go back to 1966, they go back to 1968. Are you saying the principal explanation for that is that there are more part-time workers?

Mr. SHISKIN. Yes, sir. That can be amplified by saying there are not only more part-time workers—I think that is the principal explanation—or at least one of the principal explanations, but there are also a lot of young people.

Another way to look at it is to look at the industry mix, and as you know, manufacturing has not grown much over that period, but the service industries have grown a great deal. The service producing industries find it convenient to hire part-time people. So there has been a decline in relative importance of industries with high average earnings (manufacturing) and a rise in relative importance of industries with lower average earnings and shorter average workweeks.

However, we are working on an alternative-type approach which we hope will produce estimates which can be associated with different kinds of families.

Senator PROXMIRE. I don't want to spend much time on this particular point because it is aside from our principal concern this morning, but I want to point out there were some years in which the real earnings went up.

They went up by 1.5 percent in 1968, 1 percent in 1969, and they went down 1.6 percent in 1970. They went down 4.3 percent in 1974. They went down 2.56 percent n 1975, up 1.7 in 1976.

It is hard for me to understand how you can explain that, how you can explain that in terms of fluctuations in part-time workers. In fact, you notice that they went down during recession periods, it seems, down in 1974 and down in 1975.

It would seem that would reflect a dropoff, if anything, in part-time workers in the recession period.

Mr. SHISKIN. What I was explaining initially was the secular decline over the 10-year period. It is true, I think, that the changing industry mix which has been accommodated by a changing mix in the labor force and particularly an increase in part-time workers and young workers is one reason for a decline in real earnings.

Now, that is the longer term movement. But in the short term, when there is a recession, the series goes down. And when there is an expansion, the series tends to rise. So you have both of these movements over the 10-year period.

If you look at the short term, you will occasionally see a rise, but the question you addressed to me initially was over the longer period.

Senator PROXMIRE. Let me get into the employment figures. In the important categories of adult men and heads of household, there has been a drop in unemployment in the last month, 0.3 in the former and 0.2 in the latter.

The total employment is up for the eighth straight month and on the other hand, hours of work seem to be stuck at the 36.2 hour level.

The smaller categories of employment—adult women, teenagers,

blacks—see increases in unemployment. Furthermore, there is a somewhat ominous rise in the amount of discouraged workers to the total of 1.1 million.

Would you agree, therefore, that the situation this month is mixed, and indicates, perhaps, a slowdown in the vigor of the recovery?

Mr. SHISKIN. Well, I would certainly agree that it is mixed, but I think that I would be more hesitant to say that it has implications for the future.

The reason is that we often have long periods of improvement which are then followed by a month or two of slowdown. You will recall last year when we were all here we had a very long slowdown.

Unfortunately, there was a pause, and we were all concerned about that with good reason.

Now, whether this month's movement is significant or not is very hard to tell. You have a lot of very different movements this month. I would be hesitant about drawing any implications for the rest of the year from the figures here.

Senator PROXMIRE. Let's take a broader picture. Let's take a picture over the last year and a half or so. The third and fourth quarters of last year, the unemployment rate averaged just under 8 percent.

The first 3 months of this year seem to be just under 7.5 percent.

Now, the last 3 months is roughly at the 7 percent level, 7. So we seem to have reached a new plateau. Do you see it that way and do you think we can reasonably expect the rate to remain at the 7 percent level or drop?

Mr. SHISKIN. No, sir; I don't think we have reached a plateau. If the economy continues to expand, as we have every reason to believe it will, I expect that to show up in the employment indicators and the unemployment indicators, so I don't think that this month's data can as yet be taken as a very serious adverse sign for the future.

Senator PROXMIRE. What I am saying, however, if there is a trend. The trend is for unemployment to diminish, diminish from 8 to 7½ to 7.

Does that seem to be a reasonable trend to continue?

Mr. SHISKIN. If the economy continues to improve, I would say it would. I would not say it would continue at that rate. The rate of improvement may slow down, but if the economy continues to improve, I think the unemployment rate will also improve.

As you said a little earlier, as you pointed out, and I did, too, we have some good news here too. I think we have to be very cautious about the good news as well as the bad news.

We have had one very good month on wholesale prices. Last month was pretty good, too. Still it is a long way from a new pattern.

Senator PROXMIRE. You are anticipating my question. My next question was going to be about the effect of this drop in wholesale prices on employment.

Many people feel the principal problem we have with the recovery is the fear of inflation, both for capital investment and for consumer activity and if prices moderate, we are going to get continuued growth.

Do you think that is a reasonable, logical conclusion and do you think that the latest figures would indicate that the upward trend that we have had over the last 3 or 4 months in wholesale prices is moderating?

Mr. SHISKIN. They are very hopeful. Let me point out, however, that most of the improvement has been in food prices, and food prices in a sense live a life of their own. It is the industrial prices——

Senator PROXMIRE. I would agree, there is no question about that. But the industrial prices have been most encouraging. That was an increase of only 0.3 percent as I recall in June, and it is a rather steady diminution in the rate of increase in industrial prices.

Mr. SHISKIN. Yes, and that is very encouraging. We have to hope for the best. It is promising. Again, we are dealing here with rates of change. We have 2 good months and I am just urging a little caution and not going overboard with these price figures just as we shouldn't go overboard because the unemployment figures rose some.

Senator PROXMIRE. How do you account for the increase in the number of discouraged workers at a time when the work force is expanding in a major way?

Mr. SHISKIN. First of all, the number of discouraged workers is substantially below what the number was toward the end of 1975, when we were in the worst part of the recession. So we are well below that.

However, the number of discouraged workers has increased slightly. I don't make much of it at all, Senator. A slight increase, well, I don't like it but I don't think it has much importance.

Senator PROXMIRE. When you put the discouraged workers together with the fact that the hours of work are not increasing, is rather stable, staying at the same level, does that indicate that the recovery is running out of steam?

Mr. SHISKIN. I would certainly not conclude from that that the recovery is running out of steam.

I would ask this kind of a question. I think it has equal merit as the one you asked. Does the fact that employment has increased for the eighth consecutive month—and we have had quite a big increase in the past month, over 300,000—imply that we are going to have a vigorous recovery in the months ahead?

I say this is a mixed picture. There are good things about it and bad things about it, and I would be a little cautious in putting too much emphasis on the figures for 1 month.

In terms of thinking about the future and the rest of this year, I think probably it would be more worthwhile to look at inventory and new investment data. They have more significance for that purpose.

As you know, like some of the figures I talked about a while ago, the inventory figures are not the best, they come out late, and they are very erratic. We had an inventory buildup right after the pause, and that accounted for a lot of the vigorous increase in the economy in the first two quarters. It looks as though that inventory upward adjustment has spent itself. So we may not get much more from inventories.

To me the new capital investment situation seems to be improving. I think that right now we should look more to those series than the 1-month figures for employment.

May I take just another minute to make a comment on just how careful you have got to be in attributing so much significance to the 1-month figures.

Two months ago, I regret to say you were not here, I presented a new chart which I referred to as, "two-tier unemployment." In one category, I had the adult workers and in the other category, I had the youngsters.

Now I also showed similar data for full-time and part-time workers, and also for job losers, on the one hand, and newcomers and job leavers, on the other.

When I made up that chart, it was a few days before I got the data for the last month. Then, it was very clearly a two-tier pattern, and I think it still is. It was clear that the adults, the job losers, the full-time workers were getting their jobs back, and as the recovery continued, it was likely they would continue to get their jobs back. But little progress was being made on teenagers or newcomers.

A day or two later I got the figures to put in the chart for the current month and it showed a sharp drop in the unemployment rate for teenagers, about a point, and it kind of took me back, shook me up a little bit, but I presented the charts anyway.

I said, "Well, maybe it is wrong." Last month I looked very carefully at the teenager figures and, again, they were down, but this month they are just right back to where they were 2 months ago.

I think the true unemployment rate for teenagers is what is shown this month, they are just right back to where they were 2 months ago.

I think the true unemployment rate for teenagers is what is shown this month and my own guess, and that is all it is, is the figures for the two preceding months were not correct, so I think that two-tier pattern is a very solid finding.

Again, the point I am making is that you just have to be very careful in taking figures for a given month in a sample survey like this and attributing a great deal of significance to them.

Senator PROXMIRE. This month, June, has been a tough month for us. Last year and the year before, we had a lot of trouble with June. We were very concerned about the June figure and you kept saying wait until July or wait until August where we can see whether or not there is some distortion involved here.

Have you taken care of all that seasonal June problem, do you think? Are you fairly confident you can technically correct it and you can rely on these figures that you have today?

Mr. SHISKIN. Let me put it this way. We have a very large surge in the number of students that enter the market looking for jobs in June. Now, several years ago, we changed our seasonal method.

Senator PROXMIRE. And you make a difference of a few days when you pick it up. Because when they come out of high school and college, it throws the whole thing off.

Mr. SHISKIN. I think the change we made several years ago improved this, but it is still not perfect and it never will be. I think it is a pretty good adjustment. I don't say this from the top of my head, but we have made a very intensive study of the nature of this change.

What we did, and I realize that what I'm going to say is technical, but I will be glad to make available the backup charts to your staff. We made an analysis of each of the four sectors, adult males, adult females, teenage males, and teenage females.

We made up a chart for each of these categories for the last 10 years. It compares the absolute level of change before seasonal adjustment with the employment rates, seasonally adjusted.

I realize I am getting into technical ground and I don't expect many people to understand this, but I want to show we made a very deep study on this. We have these four charts. If the relationship is averaged for teenagers, then there would be a horizontal line. I could make similar comments about the others.

Let me summarize by saying we made a very careful technical survey of the May–June changes and while I don't say the seasonal adjustment is perfect, I think it is a good seasonal adjustment.

Senator PROXMIRE. To get back to what you were talking about before we got into this, the number of workers per family obviously has increased; in some families there is no increase, others it has, but that is what the participation rate means, the wife has gone to work, the oldest daughter has gone to work.

So what I have said about the fact that real wages have been fairly static over the last 10 years is partly explained by what you said in terms of the impact on the family, there are more people working, at least in some families, if not all, may be substantially better off.

Mr. SHISKIN. Sure, but they have a lower average wage.

Senator PROXMIRE. The lower average wage, but, obviously, if the wife was working when she wasn't before, they would at least have more income. That is one of the biggest measures of the great increase in the participation rate in the work force?

Mr. SHISKIN. Yes; Senator, it is.

Senator PROXMIRE. A number of economic indicators are starting to send us troublesome signals. Last week, the leading indicators were down 0.2 percent. Today, there are reports in the newspapers that the rate of growth of retail sales for the large chain stores declined in June.

Now, you tell us that unemployment has increased. I am troubled by the sharp decline in the diffusion index, as I indicated, which reports the number of industries in which employment increased. That figure has declined from 79.1 percent—in April—to 51.7 percent.

Would you like to comment on the mix of figures?

Mr. SHISKIN. I think what you say is true. I think those figures that you cited are correct, and as a person who has followed leading indicators for a generation, I think they are very useful. That is troublesome. I wish the unemployment rate had gone down. It would make it a lot easier for me, among other things.

Another comment in this context is that our expansion is now 27 months old and it has reached an advanced stage. I think there may be troubles ahead. This may be the beginning of very serious troubles and we want to be very vigilant and watch the situation all the time. But I don't think the expansion is over, by any means.

Senator PROXMIRE. Considerable improvement appears to be occurring in the reduction of long-term unemployment. Can you tell us whether this is a genuine improvement reflected in more jobs or whether it results in discouraged workers dropping out of the labor force as might be indicated by a substantial increase in discouraged workers in the second quarter?

Mr. SHISKIN. I don't think the increase in discouraged workers was very substantial. It was a relatively small increase and still is lower than levels 2 years ago.

Senator PROXMIRE. In a recovery, should we have any increase in discouraged workers? Shouldn't it decline?

Mr. SHISKIN. It is an unfavorable thing, but I don't think it is that significant.

Senator PROXMIRE. Is it significant enough to have an effect on long-term unemployment? After 26 weeks on unemployment, a guy says, "To heck with it, I am not going to apply for a job."

Mr. SHISKIN. I think the long-term unemployment figures are truly down, and they are down substantially. The average duration of unemployment was 14.3 weeks 2 months ago, 14.9 weeks last month, and 14.4 weeks this month. But they are all down substantially from 1 year ago.

I think that it is a real decliine. Obviously, that is one of the good things.

Senator PROXMIRE. Over the last year, civilian employment, as measured by the household survey, increased 3.2 million. Over the same period, establishment data showed a gain of over 2.7 million jobs and there was a discrepancy this month as I recall of 270,000 increase in household survey for employment and about half that in the establishment figures.

Those two surveys are becoming more pronounced in the discrepancy in recent months. Since April, for example, household employment has risen by 300,000 or about 77 percent more than the establishment employment.

How do you explain the difference?

Mr. SHISKIN. I cannot explain it. I have observed it and studied it in the last few days just as you have and we are troubled. This was a more serious problem a year or two ago and we took numerous measures to bring the two series closer together and we did bring them closer together, but, now, they are drifting apart again.

As you know, those two series are conceptually different. One series, the payroll series, for example, includes multiple jobholders; many people hold two jobs. It also includes youngsters 14 and 15 years old. The household survey does not include these categories. There are many other differences.

We have a reconciliation table which tries to eliminate the differences in concept but not all of the difference is explained.

Let me only say that the difference between those two figures is smaller when you make an adjustment for the conceptual differences, about 200,000 plus now. But I don't know why they are drifting apart now.

They may be drifting apart for the same reason that they drifted apart earlier and which we thought we corrected. But maybe we didn't make enough of a correction. We make a correction in the payroll survey, the survey on nonagricultural employment reported on payrolls, for the fact that we don't pick up new births effectively.

We have a birth adjustment factor in there, but it may be inadequate. One of the speculations in BLS is that the construction may be going up more rapidly than we are reporting it, because of the difficulty in allowing for more births there.

That was true when we made our adjustment last time. This makes quite a difference, but that is just a guess at this point.

Senator PROXMIRE. Let me get you into something else for a few minutes.

Today we met at 10 a.m. instead of 11 a.m. That change is due to your change in the time of your release of the unemployment statistics.

Now, the press reports indicated you have done this to avoid any possibility that those who had the figures early might use them to speculate on the markets. Let me ask you some questions about that, because I am just as anxious as you are to make certain that the integrity of the figures is left untouched and there is no question about the absolute integrity which you have earned.

First, who are the officials, by name, who would receive the figures early?

Mr. SHISKIN. Receive the figures early—well, first of all, the President receives them somewhere between 24 and 36 hours early through the Chairman of the Council of Economic Advisers. I call Mr. Schultze up as soon as I have these figures.

Senator PROXMIRE. You have them 24 to 36 hours early and you call Charlie Schultze?

Mr. SHISKIN. I have them on Wednesday afternoon. I get a trickle of figures a little earlier, but we are never quite sure the figures are right early in the week. As the week comes to the end, close to the end, we check and doublecheck the figures, but, usually, by late Wednesday or early Thursday, we are pretty sure of the figures and at that point, I call Mr. Schultze.

Senator PROXMIRE. And he gives them to the President?

Mr. SHISKIN. I don't know what he does with them, but he is supposed to give them to the President.

Senator PROXMIRE. You say the President has them?

Mr. SHISKIN. The OMB order, which I might say is the order which I believe I wrote when I was in OMB, says those figures should go to the President through the Chairman of the Council of Economic Advisers. So I give them to Mr. Schultze.

Senator PROXMIRE. Now, let me make sure I understand. They go from you to the Chairman of the Council of Economic Advisers and then the Chairman of the Council of Economic Advisers, you understand on the basis of the orders which you think are still in effect——

Mr. SHISKIN. I know they are still in effect.

Senator PROXMIRE. You know they are in effect, then they go to the President? Does that mean they go to the President plus anybody on his staff?

Mr. SHISKIN. Sir, you will have to ask Mr. Schultze. I have been very cautious not to answer that question over the years.

Senator PROXMIRE. How about the Secretary of the Treasury?

Mr. SHISKIN. He does not get them at that time. Neither does Arthur Burns.

Now, let me make another point I don't want to miss, and I must say it is to the credit of every Secretary of Labor that I have worked for, that they did not get the figures at the same time. Secretary Marshall does not get them at that time.

Senator PROXMIRE. How about Director Lance?

Mr. SHISKIN. He does not get them from me.

Senator PROXMIRE. Arthur Burns?

Mr. SHISKIN. He does not get them from me. I give them to Mr. Schultze, period.

Senator PROXMIRE. And you are sure there is no change in the directive under which Mr. Schultze operates under these figures?

Mr. SHISKIN. No change.

Senator PROXMIRE. They go to the President.

Mr. SHISKIN. Right.

Senator PROXMIRE. Is the President speculating in the market?

Mr. SHISKIN. You will have to ask the President.

Senator PROXMIRE. What is the indication of a leak between 9 and 10 a.m.

Mr. SHISKIN. Now, let's go to the next stage.

Senator PROXMIRE. Was there a problem of a leak here or wasn't there? Was that a misstatement?

Mr. SHISKIN. We have only gone through part of the early release program. The rest of the early release program occurs hour before the figures are released to the public. A lot of people get the figures, for example, you get the figures. I learned—I was amazed by this—several months ago that the JEC was getting 120 copies of the release 1 hour before the release was made public, and you were getting more copies than anybody else.

Senator PROXMIRE. So our committee got 120 copies of the release at 10 a.m. Were those made available to the press at 10 a.m. for release at 11 a.m.?

Mr. SHISKIN. Yes, sir.

Senator PROXMIRE. Not only did I get them, but all the members of the press got them?

Mr. SHISKIN. Exactly. We gave copies——

Senator PROXMIRE. So there are all kinds of prospects for speculating in the market.

Mr. SHISKIN. We also gave copies to the following officials, Mr. Marshall, Mr. Lance, Mr. Blumenthal, Mr. Burns, and Mrs. Kreps. So they all got the figures an hour early.

Now I began to hear that—this was a long time ago—I began to hear a long time ago that there were leaks, and that the information was being used to make money in the market.

My first reaction was that was probably not true. The explanation was something else again, namely, and here is what I thought the explanation was, that there are numerous business services who will estimate these figures for you a day or two in advance.

In fact, I think it was the AP, though I must be very careful, it might have been the UPI, that published the story yesterday in which they estimated the WPI and the unemployment rate, and the estimates were pretty good.

Senator PROXMIRE. Were they accurate?

Mr. SHISKIN. The estimate for the WPI was down 0.4, and the estimate for unemployment rate was 7.2 or 7.1, and that is pretty good. There are people who make money by providing this kind of information to their customers.

Senator PROXMIRE. They were good that month, but they could be off, too.

Mr. SHISKIN. As a matter of fact, Alan Greenspan used to play a game with me when he was the Chairman of the Council. I used to call him to give him the figures for the President, and he would say to me, "Before you give me the figure, I will give you the figure," and he would estimate it, and you know, he was pretty good. It was rare that he was off by much.

If the figure went down sharply, he knew it went down sharply. Incidentally, his figure might have been better than our figure. Our figures are not always exactly right. They are estimates, too.

Senator PROXMIRE. Supposing you had a spectacular change in the unemployment figures or in the CP, how do you make money in the market? What do you do? Do you buy IBM?

Whatever you buy, there is no way that this is likely to make that stock go up or down that much so you can clean up and get out. On a short-range basis, I don't see how you can do it, do you?

Mr. SHISKIN. I will come to that in a minute, if you will allow me.

What happened over the last 6 months, and it accelerated during the last few months, was that I was getting complaints from outside the Government and from inside the Government that the figures were leaking between 9 and 10 a.m., and that orders were——

Senator PROXMIRE. Between when?

Mr. SHISKIN. 9 and 10 a.m.

Senator PROXMIRE. We didn't get them until 10 a.m.

Mr. SHISKIN. The figures came out at 10 a.m., so you got them at 9 a.m. We made the 1-hour rule and that explains why we didn't have the hearings until 11 a.m. Now you get them at 8 a.m.

By the way, that has caused more groans than anything BLS has done in the last 4 years, because a lot of people have to get up an hour early. But we always get up early to go to BLS, so it doesn't bother us.

If you had gotten the figure at 9 a.m., now you get the figure at 8 a.m.

Here was the charge, and I can only repeat the charge—as I say, I didn't corroborate it. I don't know if it is true. The allegation was that people, someone or more than one person who was getting the figure at 9 a.m. was leaking it.

Now the person who got it at the other end would immediately place orders on the market. Let's say it was a very favorable move. He would place orders to buy certain sensitive stocks, stocks that move easily. When the market opened, his orders would be immediately placed. So he would get the stocks at the opening price.

By an hour later, because of the favorable news we had released at 10 a.m., the price of these stocks would rise. So he would have a gain, if he bought enough stocks that could amount to something, he would have a gain in the first hour.

He might sell the stocks again at 12 noon, and he would realize a gain. That was the allegation.

Senator PROXMIRE. You are saying this actually did take place?

Mr. SHISKIN. I am saying it was alleged to me that it was taking place.

Senator PROXMIRE. By whom?

Mr. SHISKIN. It seems to me——

Senator PROXMIRE. Who alleged it?

Mr. SHISKIN. I had officials from the Council of Economic Advisers, officials from the Treasury Department, in both administrations, the Ford administration as well as the Carter administration, allege this.

Senator PROXMIRE. Were they top officials?

Mr. SHISKIN. Yes, sir, not the Secretaries but down below them.

Senator PROXMIRE. Can you tell us who they were?

Mr. SHISKIN. Well, sir, perhaps it would be better not to have it included in the record.

Senator PROXMIRE. Why not?

Mr. SHISKIN. I guess they would not mind. I called them the other day because someone else called me for their names and I asked them if they would mind if I passed their names on and they said, no, they wouldn't mind.

The man in the Treasury was Daniel Brill, who is the Assistant Secretary for Economic Affairs, and the man in the CEA was Lyle Gramley. While I was giving Mr. Schultze the figures, he also mentioned it.

I had called and they told me that they had been called also. It might have been one mischievous person calling all of us, I don't know. But it seems to me the prudent thing for BLS to do, if we could, was to change our procedures in such a way as to preclude the possibility.

So we thought the simplest way to do that, after considering numerous alternatives, was to release the figures at 9 a.m. and to give advance figures to high Government officials at 8 a.m. and that meant by 9 a.m., everybody, the public, would have the figures.

Senator PROXMIRE. Was the allegation by Brill, Gramley, Schultze, that a particular individual was making money and did they identify the individual?

Mr. SHISKIN. I would not say an individual.

Senator PROXMIRE. Or a group?

Mr. SHISKIN. Brokers, banks.

Senator PROXMIRE. You didn't ask who they were?

Mr. SHISKIN. No, sir. There are some things you are better off not knowing and I figure that was one of the things I was better off not knowing.

Senator PROXMIRE. Was there any indication that any public official was speculating?

Mr. SHISKIN. No, sir.

Senator PROXMIRE. Was there any indication that no public official was speculating?

Mr. SHISKIN. I didn't have any such indication.

Senator PROXMIRE. You have no indication one way or the other?

Mr. SHISKIN. Pardon me.

Senator PROXMIRE. You have no indication one way or the other?

Mr. SHISKIN. I didn't investigate it. It seemed to me the thing to do was to change the procedures and it turned out to be an easy thing to do. We hope this works. I got one letter on this since we changed the rules, a letter from a man, very polite, very pleasant, but he said I was being unfair to people in Hawaii and Alaska because for them to be able to compete, they would have to get up at 4 a.m. and order stocks at 4 a.m.

In answer to that letter, I don't know quite what to tell him. This seemed like a good thing for us to do. I didn't see any reason for investigating it. I don't see any big problem in advancing the time of the release by 1 hour.

In any event, the OMB rule is that you should get out the figures as early as possible. So we just changed the hour and we now get them

out 1 hour earlier and that is as much background as I can give you.

Senator PROXMIRE. Was there any indication that there was a newspaper reporter or a television reporter speculating?

Mr. SHISKIN. None whatsoever. I don't even know if it was anybody.

Senator PROXMIRE. I think you have done exactly the right thing. But I want to be sure I understand this completely. The procedure you follow now because you come out an hour earlier, because you release these figures at 9 a.m., in your judgment there is no basis for any speculation.

You still have a situation where the President and the Chairman of the Council of Economic Advisers has this information a day in advance or so, the stock market was not closed on Thursday, obviously, but there is no massive release of the kind that you had had before the market opened, but when the general public would not know, so that now everybody knows at once except the President and the Chairman of the Council of Economic Advisers, who know 24 hours in advance, is that right?

Mr. SHISKIN. Yes, sir. The only additional point I would make, because of the time differences, there are problems with people in California and the West. They will get the figures at the same moment in time, but they are on an earlier time schedule than we are.

Senator PROXMIRE. Isn't it true of past Chairmen of the Council of Economic Advisers, that they let a number of people in the administration know of the unemployment figures?

Mr. SHISKIN. I certainly didn't let anyone else know. I gave them to Herb Stein, Alan Greenspan, and Charles Schultze, when they served as Chairmen of CEA, and that is all I have done.

Senator PROXMIRE. And you say there is a provision that these figures will only be released by the Chairman of the Council to the President period, is that right?

Mr. SHISKIN. Yes. The OMB circular says the release is to be made to the President through the Chairman of the Council of Economic Advisers. There are other figures involved, you know, like retail sales and GNP and industrial production, and, obviously, you cannot have a lot of officials like me calling the President all the time. So the Chairman of the Council is assigned that role.

Senator PROXMIRE. It has become common to subtract certain violatile elements such as food and fuel from the CPI to calculate an underlying or basic rate of inflation.

People talk about the fact that we have a 6- or 6½-percent basic rate of inflation. I see two immediate problems with that approach. First, we all pay the real rate of inflation, not some underlying rate, and, second, the technique seems to contain the possibility of some public policy sleight of hand.

Take food. Falling prices may look good on the CPI, but they increase the pressure on the Government to raise price support programs. Consumers are in danger of losing at the tax table what he appears to have gained in the supermarket.

Do you have any thoughts on the use of the basic rate of inflation approach?

Mr. SHISKIN. Well, it is troublesome. I can understand exactly what is going on, I think. Very often in my presentations, when I look back at material I have written before I assumed this position, I would

cover nonagricultural employment, nonagricultural production, and so on.

The reason was and is that food prices and farm employment do not move in conformity with the business cycle, and it was important for us to make a judgment about the underlying trend of the business cycle.

So what he did, and I go back to the work of Wesley Mitchell and Arthur Burns, they just put agriculture outside the area that we were studying. We had separate studies of agriculture.

Now, more recently, there has been another kind of problem; namely, the energy problem, and energy prices rising for special reasons. So I can understand why economists, who watch and study the basic trends or the underlying trends in the economy should put aside these two sectors.

However, as you put it, as you quite correctly put it, we all buy food and energy and when all of these dollars are transferred on the basis of the CPI, the transfers are made with energy and food prices in it. But for analytical purposes, I think that approach does have some advantage.

Senator PROXMIRE. Let me go back just a minute, because something occurred to me. I didn't quite clean up that leak problem. What would be wrong with letting the President have this like everybody else?

President Carter walked in the inaugural parade, he abolished limousines, he wants to be like everybody else. Why not give him information at the same time the rest of us get it?

What can the President do in that 24 hours with respect to policy that would have any effect? Why not release it for everybody at 9 a.m. on Friday morning?

Mr. SHISKIN. Sir, that is not my decision to make. Two Presidents in a row have ruled on this question. They both ruled to have the figures in advance, President Ford and President Carter.

I follow their orders. I work for the Secretary of Labor, who in turn works for the President, and if the President says I should give him the figures early, I do.

Senator PROXMIRE. I have complete faith in the integrity of Alan Greenspan and President Ford and Charlie Schultze and President Carter, but I think it puts them in a difficult position, and they have to make judgments as to whether or not their staff people should have it or not.

If they don't give it to them, what good is it?

Mr. SHISKIN. This particular question was put to both of these Presidents, and I am following their orders.

Senator PROXMIRE. Maybe we ought to write President Carter and suggest he get them like everybody else.

There is a growing debate in the Congress over the impact of manufactured imports on domestic employment. Yet, since 1969, the Bureau of Labor Statistics has not measured the impact of imported goods either on overall employment levels or on employment within specific industrial sectors.

As you know, there is a lot of concern in the country about the effects of shoe imports and radio and TV imports. Why has the BLS

been so reluctant to deal with the relations between imports and employment?

Mr. SHISKIN. As you pointed out, the BLS has not published any data on the impact of imports on employment and unemployment since 1969. The BLS staff has a strong view, which I have discussed with them, that the estimation of the employment impact of imports is very different from the usual kind of thing we do.

It involves a much greater margin of error than the preparation of our other estimates. Their position is if we provide data that are as uncertain as the ones on the employment impact of imports, this would reflect unfavorably on the more reliable data we have elsewhere.

This became an urgent issue in the Department of Labor about 2 or 2½ years ago. At that time we had a meeting at the very top level of high Department of Labor officials.

I was present, and the decision was made to transfer that work or to assign that work, I should say, to the International Labor Affairs Bureau in the Department of Labor.

Now, one of your staff phoned us yesterday, I believe, about this question, and I checked this morning with the new Assistant Secretary for International Labor Affairs at Labor, Mr. Howard Samuel.

He says they are working on it. They are preparing estimates, and these data will be available publicly in a few months.

Senator PROXMIRE. I have a followup question on that, but I want to ask it for the record. So we will expect an answer in writing.

The problem of unemployment has not been limited to the United States. Almost all of the major industrial countries are suffering from high levels of unemployment among young workers.

Are some of the other industrial countries doing a bit better than we are, and is there anything we could learn from the foreign experience that might ease our problem of youth employment?

Mr. SHISKIN. I don't know much about that question. I just happened to read an article about it last night in one of the magazines. They are beginning to have serious troubles of high unemployment rates of youngsters in other industrial countries, but I just don't know enough to comment significantly on it.

Perhaps Mr. Stein may.

Mr. STEIN. Our work in that area has been concentrated on trying to develop figures that are comparable across countries, and that in itself is a pretty difficult undertaking.

Mr. SHISKIN. We have overall unemployment rates for the different countries, though not for teenage unemployment. The most current figures show that things are changing. For example, last month, when our rate was about 7 percent, the Canadian rate was 7.9 and had been 8.3; Great Britain, 6.8; the rate of unemployment seems to be rising above ours in some other countries.

Senator PROXMIRE. That is unusual. We used to have the highest unemployment rate of any of the industrial countries.

Mr. SHISKIN. That is right, except for Germany, West Germany, we still have the lowest inflation rate of all those countries. You may wish to have this for the record, a set of these tables.

Senator PROXMIRE. We would like that for the record.

[The tables referred to follow:]

UNEMPLOYMENT RATES IN 8 COUNTRIES, ADJUSTED TO U.S. CONCEPTS, SEASONALLY ADJUSTED, 1970–77

Period	United States	Canada	Japan	France	Germany	Italy [1]	Sweden	United Kingdom [2]
1970	4.9	5.7	1.2	2.8	0.8	3.5	1.5	3.1
1971	5.9	6.2	1.3	3.0	.8	3.5	2.6	3.9
1972	5.6	6.2	1.4	[3] 3.0	.8	4.0	2.7	4.2
1973	4.9	5.6	1.3	[3] 2.9	.8	3.8	2.5	3.2
1974	5.6	5.4	1.4	[3] 3.1	1.7	3.2	2.0	[3] 3.2
1975	8.5	6.9	1.9	[3] 4.3	[3] 3.7	3.7	1.6	[3] 4.7
1976	7.7	7.1	2.0	[3] 4.6	[3] 3.6	4.0	1.6	[3] 6.4
I	7.6	6.9	2.0	4.5	3.7	3.7	1.6	6.2
II	7.4	7.1	2.1	4.6	3.6	4.0	1.6	6.5
III	7.8	7.3	2.1	4.7	3.5	4.2	1.6	6.6
IV	7.9	7.4	1.9	4.6	3.4	4.1	1.6	6.6
1977:								
I	7.4	7.8	1.9	4.8	3.4	----------	1.7	6.8
March	7.3	8.1	2.0	4.9	3.4	----------	1.7	6.9
April	7.0	8.3	1.9	5.1	3.4	----------	1.6	6.6
May	6.9	7.9	----------	5.0	3.5	----------	----------	6.8

[1] Quarterly rates are for the 1st month of the quarter.
[2] Great Britain only.
[3] Preliminary.

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

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

CONSUMER PRICES IN 8 COUNTRIES, PERCENT CHANGE FROM SAME PERIOD OF PREVIOUS YEAR, 1970–77

Period	United States	Canada	Japan	France	Germany	Italy	Sweden	United Kingdom
1970	5.9	3.3	7.7	5.2	3.4	4.9	7.0	6.4
1971	4.3	2.9	6.3	5.5	5.3	4.8	7.4	9.4
1972	3.3	4.8	4.9	6.2	5.5	5.7	6.0	7.1
1973	6.2	7.5	11.7	7.3	6.9	10.8	6.8	9.2
1974	11.0	10.9	23.2	13.7	7.0	19.1	9.9	16.0
1975	9.1	10.8	11.7	11.8	6.0	17.0	9.8	24.2
I	11.0	11.7	15.2	13.9	5.9	22.5	8.6	20.3
II	9.7	10.5	13.3	12.2	6.2	19.7	10.1	24.3
III	8.7	10.9	10.3	10.9	6.1	15.1	11.5	26.6
IV	7.3	10.2	8.7	9.0	5.5	11.5	8.9	25.3
1976	5.8	7.5	9.4	9.6	4.5	16.8	10.3	16.5
I	6.4	9.3	8.9	9.6	5.4	12.2	10.9	22.5
II	8.1	8.5	9.4	9.4	4.9	16.1	11.2	16.0
III	5.5	6.5	9.7	9.6	4.2	17.1	9.5	13.7
IV	5.0	5.9	9.5	10.0	3.8	21.1	9.6	14.9
January	6.8	9.6	8.7	9.6	5.3	11.0	10.9	23.4
February	6.3	9.1	9.3	9.5	5.5	11.8	10.7	22.9
March	6.1	9.0	8.7	9.6	5.4	13.9	11.1	21.2
April	6.1	8.9	9.4	9.6	5.2	15.4	11.7	18.9
May	6.2	8.9	9.2	9.5	5.0	16.7	10.9	15.4
June	5.9	7.8	9.6	9.2	4.5	16.3	11.1	13.8
July	5.4	6.8	9.9	9.4	4.1	16.5	9.9	12.9
August	5.6	6.2	9.4	9.5	4.6	17.0	9.4	13.8
September	5.5	6.5	9.8	9.7	4.0	18.0	9.3	14.3
October	5.3	6.2	8.7	9.9	3.8	20.1	9.7	14.7
November	5.0	5.6	9.2	10.1	3.7	21.3	9.4	15.0
December	4.8	5.8	10.5	9.9	3.9	22.0	9.6	15.1
1977:								
I	5.8	6.8	9.4	9.0	4.0	21.7	9.4	16.5
January	5.2	6.1	9.4	9.0	4.1	22.3	9.0	16.6
February	6.0	6.7	9.3	9.0	4.0	21.9	9.5	16.2
March	6.4	7.4	9.5	9.1	3.9	21.0	9.5	16.7
April	6.8	7.6	----------	[1] 9.5	3.8	19.4	----------	17.5
May	6.7	7.6	----------	----------	[1] 3.8	----------	----------	[1] 17.1

[1] Preliminary estimate.

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

Mr. SHISKIN. It shows our unemployment rate is still very high. But it is no longer the highest.

Senator PROXMIRE. Mr. Shiskin, I want to thank you, very much for, as usual, a very responsive and interesting briefing that you have given us on the unemployment figures and the price figures. A fine job.

The committee stands adjourned.

[Whereupon, at 11:10 a.m., the committee adjourned, subject to the call of the Chair.]

EMPLOYMENT–UNEMPLOYMENT

FRIDAY, AUGUST 5, 1977

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

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

Present: Senators Proxmire and Javits.

Also present: Timothy M. Barnicle, G. Thomas Cator, Thomas F. Dernburg, Kent H. Hughes, Katie MacArthur, and Deborah Norelli, 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. Shiskin and colleagues, we are delighted to have you this morning. We have, unfortunately, or fortunately, depending on your viewpoint, a really mixed picture. The big statistic, of course, is the good news that unemployment is down from 7.1 percent to 6.9 percent. It is back to where it had been in May, and that is encouraging. It is certainly in the right direction.

At the same time, the household data certainly gives off very mixed signals. It indicates a series of things that seem to be contradictory. There seem to be fewer jobs, a drop of 181,000 in the number of jobs in July compared to June, according to the household data. In the second place, we have a substantial drop in the labor force, a drop of 335,000.

We also have a drop in hours worked for the third consecutive month according to the statistics we have before us this morning. All of that is pessimistic.

On the other hand, the payroll data, is all favorable. There we have an increase in employment that is rather substantial. The total number of jobs went from 82,085,000 to 82,351,000, an increase of over 250,000 jobs.

We certainly would like to get an explanation as we go on of that sharp difference.

I might just make one other point, Mr. Shiskin, before we hear your statement. You are going to be followed by one of the most distinguished economists in the country, Mr. Richard Ruggles, who is very concerned about the wholseale price index as a factor in economic policy.

He has a most provocative statement, and I hope you will forgive me if I pick up some of his statements and challenge you, and your colleagues, to give us some answers on whether or not the statistics we are getting distort economic policy, and may have persuaded the President and the Congress to follow policies which have increased unemployment, because the statistics were not understood and because the inflation that was reported was not as extensive as the statistics would seem to indicate.

Mr. SHISKIN. Fine.

Senator PROXMIRE. Having said that, it is obvious that we will have a provocative and interesting morning, so 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, Mr. Chairman. I have Mr. Stein and Mr. Layng with me. After we finish discussion of the employment situation, Mr. Layng and I will try our best to make some constructive comments on Mr. Ruggles' paper.

I might say in opening that, by and large, we are very sympathetic with it, and I will follow that up a little later.

I have a short 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 July, the labor force declined by 336,000; the unemployment level declined by 218,000, and total employment declined by 118,000. The unemployment rate declined slightly to the May figure of 6.9 percent.

It is to be noted that the late survey week in June—June 12–18—explains in large part the big shift in direction of the recent labor force changes—+483,000 in June and −336,000 in July. It also appears to explain the June rises in the seasonally adjusted teenage and total unemployment rates, since the unadjusted unemployment figures for June are higher than average when the survey week comes later—seasonal factors adjust only for the average rise.

For the last few months, the labor markets have shown some slowdown in the rate of growth. Aggregate nonfarm hours, the most comprehensive measure of labor activity, has shown only a small rise over the April–July period. Nonfarm payroll employment has risen, but at a somewhat slower pace than in the previous 3 months. Furthermore, these recent rises in nonfarm employment were about offset by declines in the average workweek. While the employment-population ratio in July continued close to alltime peak levels, it remained at about the same as in each of the previous 3 months.

This comparatively lackluster performance of the labor market is consistent with that shown by certain other major indicators: the recent small declines in the leading indicator index and the declines in real retail sales. In this context, it is to be noted, however, that certain key indicators that were sluggish during the early months of this expansion have been stronger in recent months. This is particularly the case for fixed capital investment, as new contracts and orders for plant and equipment have been rising vigorously, order backlogs are building up, and employment in the machinery industries has been expanding steadily.

Like the overall unemployment rate, the rates for adult men and adult women have been fluctuating on a fairly horizontal plane for the last few months. This has been true for the teenage rate as well, though the July rate was at its lowest point in nearly 3 years. The rate for full-time workers has now been identical for 4 months. The rate for job losers rose in July, but is not that much different from that of the last 3 months. The rate for whites has been fairly stable in recent months, but the rate for blacks appears to be creeping up.

Manufacturing employment, both in durables and nondurables, has risen over the past few months at about the same pace as has employment in the service-producing industries.

Although 72 percent of the industries showed rising employment between June and July, a small percentage—66—improved between April and July. However, the average workweek in these industries has declined slightly.

In summary, 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.

Since our wholesale price index will not be released until next week because of the work associated with building up our sample in July, I shall not try to provide a description of recent price changes last month. Let me only say that I believe there were several reasons why the sharp drop in the wholesale price index for farm products and processed foods in June did not show up in the Consumer Price Index released 2 weeks ago. One reason is that food prices at the processors' level rose sharply from January through May before declining in June; and these increases were still being passed on at the retail level. Another reason for the lag is that the food data for the CPI are collected at the beginning of the reference month.

In the revised CPI to be released at the beginning of next year, the collection of food prices will be spread over the whole month. In June, rates of consumer price increases for commodities less foods declined again to the lowest rate in almost 4 years, while the rise in charges for services remained at about the same level as in preceding months this year.

We are now ready to try to answer your questions.

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

UNEMPLOYMENT RATES BY ALTERNATIVE 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 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	7.3	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														
September														
October														
November														
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 aggregting 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, 16–19 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, 16–19 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–March 1976. The rates are as fiirst 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 (0–4, 5–14, 15+).

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

(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, August 5, 1977.

News
United States Department of Labor
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TRANSMISSION OF MATERIAL IN THIS RELEASE IS EMBARGOED UNTIL 9:00 A. M. (EDT), FRIDAY, AUGUST 5, 1977

THE EMPLOYMENT SITUATION: JULY 1977

Total employment was about unchanged in July and unemployment dropped back to May levels, it was reported today by the Bureau of Labor Statistics of the U. S. Department of Labor. The Nation's unemployment rate was 6.9 percent, compared with 7.1 percent in June.

Total employment--as measured by the monthly survey of households--was 90.6 million in July, little changed from June after advancing for 8 consecutive months. Employment has grown by 2.8 million over the past 12 months--a 2.9 million increase in nonagricultural industries and a 140,000 decline in agriculture.

Nonagricultural payroll employment--as measured by the monthly survey of establishments--did show further growth in July, rising by 255,000 to 82.4 million. Over the past year, nonfarm payroll jobs have increased by 2.9 million, and thus, at least for this period, the two employment series have exhibited equivalent growth. Prior to July, the household employment series had been showing the larger gains.

Unemployment

The number of unemployed persons declined by 220,000 in July to 6.7 million, seasonally adjusted. The overall unemployment rate edged down from June, returning to the May rate of 6.9 percent. The jobless rate has been close to the 7-percent mark since April, after declining from late 1976.

All of the over-the-month decrease took place among teenagers and adult women. At 17.4 percent, the jobless rate for teenagers was at its lowest point since October 1974; this decline was confined to white youth, as the rate for black teenagers (40.7 percent) remained extremely high. The rate for adult women was 6.9 percent, compared with 7.2 percent in June and 6.6 percent in May. The jobless rate for adult men was about unchanged at 5.1 percent. (See table A-2.)

The average (mean) duration of joblessness declined from 14.4 weeks in June to 14.1 weeks in July. (See table A-4.) There has been a general downward trend in average duration of unemployment since early 1976.

Total Employment and the Labor Force

Total employment was little changed in July at 90.6 million, seasonally adjusted, after rising for 8 consecutive months. Reflecting the 2.8 million growth in employment over the past year, the employment-population ratio--the proportion of the total noninstitutional population that is employed--has increased substantially. Although marginally below the June level, the July ratio of 57.1 percent remained close to the alltime high of 57.4 percent last recorded in March 1974.

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

Selected categories	Quarterly averages					Monthly data		
	1976			1977		1977		
	II	III	IV	I	II	May	June	July
HOUSEHOLD DATA	Thousands of persons							
Civilian labor force	94,544	95,261	95,711	96,067	97,186	97,158	97,641	97,305
Total employment	87,501	87,804	88,133	88,998	90,370	90,408	90,679	90,561
Unemployment	7,043	7,457	7,578	7,068	6,816	6,750	6,962	6,744
Not in labor force	59,032	58,963	59,132	59,379	58,908	58,943	58,686	59,242
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	6.9	7.1	6.9
Adult men	5.7	6.0	6.2	5.6	5.1	5.3	5.0	5.1
Adult women	7.1	7.7	7.6	7.1	6.9	6.6	7.2	6.9
Teenagers	18.8	18.8	19.1	18.6	18.1	17.9	18.6	17.4
White	6.8	7.1	7.2	6.7	6.3	6.2	6.3	6.1
Black and other	12.9	13.1	13.4	12.8	12.8	12.9	13.2	13.2
Full-time workers	7.0	7.4	7.5	6.8	6.5	6.5	6.5	6.5
ESTABLISHMENT DATA	Thousands of jobs							
Nonfarm payroll employment	79,333	79,683	80,090	80,927	81,901p	81,921	82,095p	82,351p
Goods-producing industries	23,380	23,372	23,440	23,765	24,291p	24,306	24,351p	24,424p
Service-producing industries	55,953	56,311	56,650	57,162	57,609p	57,615	57,744p	57,927p
	Hours of work							
Average weekly hours:								
Total private nonfarm	36.2	36.1	36.2	36.1	36.2p	36.3	36.2p	36.1p
Manufacturing	40.0	39.9	40.0	40.1	40.4p	40.4	40.5p	40.3p
Manufacturing overtime	3.0	3.0	3.1	3.1	3.4p	3.4	3.4p	3.3p

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

The civilian labor force declined by 340,000 from June to July, seasonally adjusted. Nearly all of this reduction occurred among teenagers, who had registered an unusually large increase in the previous month. It is likely that the reduction in the labor force in July was due to the lateness of the reference week for June (the 12th through the 18th). Thus, some youth who otherwise would have been recorded as July entrants were counted in June. The total civilian labor force has shown strong gains throughout most of 1977 and over the past 12 months has grown by 2.1 million.

The civilian labor force participation rate returned to the May level of 62.2 percent but was still above the rate that prevailed a year ago. (See table A-1.)

Industry Payroll Employment

Total nonagricultural payroll employment registered its ninth consecutive monthly advance in July, rising 255,000 to 82.4 million, seasonally adjusted. This increase approximated the average monthly gain since last July, as the number of payroll jobs has grown 2.9 million during this 12-month period. Over-the-month employment gains took place in 72 percent of the industries comprising the BLS diffusion index of nonagricultural payroll employment. (See tables B-1 and B-6.)

Nearly three-fourths of the total payroll job increase occurred in the service-producing sector, in which all industries experienced gains. Pacing this advance were trade and services, each of which added about 60,000 jobs.

Manufacturing employment rose by 70,000 in July to 19.7 million. This increase was about evenly divided between the durable and nondurable goods sectors, with machinery and textiles posting the largest advances. Since October, growth in manufacturing has been strong, totaling 750,000.

Elsewhere in the goods-producing industries, employment in contract construction rose 35,000 in July, about half of which resulted from strike settlements. After remaining at about 3.6 million throughout 1976, construction jobs have increased by 310,000 thus far in 1977. An over-the-month decline of 35,000 in mining employment was due to strike activity.

Hours

The average workweek for production or nonsupervisory workers on private nonagricultural payrolls edged down a tenth of an hour for the second consecutive month, to 36.1 hours in July, seasonally adjusted. Average hours had been above this level since November, except in January when the workweek was affected by unusual weather conditions. The manufacturing workweek decreased 0.2 hour to 40.3. Manufacturing overtime edged down 0.1 hour, after holding at 3.4 hours for 3 months. (See table B-2.)

Despite the decline in the average workweek, the index of aggregate weekly hours of production or nonsupervisory workers on nonagricultural payrolls moved up slightly, reflecting increases in the service-producing sector. The index advanced 0.1 percent over the month to 115.8 (1967=100), 3.6 percent above last year's level. The manufacturing index declined 0.3 percent to its May level of 98.5, still 4.6 percent higher than last July. (See table B-5.)

Hourly and Weekly Earnings

Seasonally-adjusted average hourly and weekly earnings of production or nonsupervisory workers on private nonagricultural payrolls rose slightly in July. Both hourly and weekly earnings were 7.6 percent above their levels 12 months earlier.

On an unadjusted basis, average hourly earnings were $5.23 in July, up 2 cents from June and 37 cents from a year earlier. Average weekly earnings were $190.90, an increase of $1.26 over the month and $13.02 from the July 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 198.5 (1967=100) in July, 0.5 percent higher than in June. The index was 6.9 percent above July a year ago. During the 12-month period ended in June, the Hourly Earnings Index in dollars of constant purchasing power rose 0.2 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	7.8	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	8.7	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					
	July 1976	June 1977	July 1977	July 1976	Mar. 1977	Apr. 1977	May 1977	June 1977	July 1977
TOTAL									
Total noninstitutional population[1]	156,142	158,456	158,682	156,142	157,782	157,986	158,228	158,456	158,682
Armed Forces[2]	2,140	2,129	2,135	2,140	2,138	2,132	2,128	2,129	2,135
Civilian noninstitutional population[1]	154,002	156,327	156,547	154,002	155,643	155,854	156,101	156,327	156,547
Civilian labor force	97,185	99,135	99,314	95,189	96,539	96,760	97,158	97,641	97,305
Participation rate	63.1	63.4	63.4	61.8	62.0	62.1	62.2	62.5	62.2
Employed	89,608	91,682	92,372	87,783	89,475	90,023	90,408	90,679	90,561
Employment-population ratio[3]	57.4	57.9	58.2	56.2	56.7	57.0	57.1	57.2	57.1
Agriculture	3,931	3,820	3,790	3,333	3,116	3,260	3,386	3,338	3,213
Nonagricultural industries	85,677	87,862	88,582	84,450	86,359	86,763	87,022	87,341	87,348
Unemployed	7,577	7,453	6,941	7,406	7,064	6,737	6,750	6,962	6,744
Unemployment rate	7.8	7.5	7.0	7.8	7.3	7.0	6.9	7.1	6.9
Not in labor force	56,817	57,192	57,234	58,813	59,104	59,094	58,943	58,686	59,242
Men, 20 years and over									
Total noninstitutional population[1]	66,279	67,431	67,537	66,279	67,114	67,209	67,324	67,431	67,537
Civilian noninstitutional population[1]	64,586	65,743	65,845	64,586	65,423	65,522	65,641	65,743	65,845
Civilian labor force	52,068	52,885	52,902	51,675	52,061	52,089	52,282	52,497	52,494
Participation rate	80.6	80.4	80.3	80.0	79.6	79.5	79.6	79.9	79.7
Employed	49,143	50,308	50,379	48,544	49,267	49,465	49,531	49,859	49,794
Employment-population ratio[3]	74.1	74.6	74.6	73.2	73.4	73.6	73.6	73.9	73.7
Agriculture	2,596	2,536	2,464	2,429	2,208	2,280	2,373	2,372	2,305
Nonagricultural industries	46,547	47,772	47,916	46,115	47,059	47,185	47,158	47,487	47,489
Unemployed	2,925	2,577	2,522	3,131	2,794	2,624	2,751	2,638	2,700
Unemployment rate	5.6	4.9	4.8	6.1	5.4	5.0	5.3	5.0	5.1
Not in labor force	12,518	12,858	12,943	12,911	13,362	13,433	13,359	13,246	13,351
Women, 20 years and over									
Total noninstitutional population[1]	73,053	74,198	74,315	73,053	73,852	73,958	74,081	74,198	74,315
Civilian noninstitutional population[1]	72,966	74,101	74,217	72,966	73,757	73,863	73,987	74,101	74,217
Civilian labor force	33,769	35,263	34,918	34,487	35,295	35,455	35,634	35,675	35,667
Participation rate	46.3	47.6	47.0	47.3	47.9	48.0	48.2	48.1	48.1
Employed	31,126	32,755	32,456	31,853	32,750	32,985	33,288	33,116	33,212
Employment-population ratio[3]	42.6	44.1	43.7	43.6	44.3	44.6	44.9	44.6	44.7
Agriculture	632	690	683	486	496	577	597	564	525
Nonagricultural industries	30,494	32,064	31,772	31,367	32,254	32,408	32,691	32,552	32,687
Unemployed	2,643	2,508	2,462	2,634	2,545	2,470	2,346	2,559	2,455
Unemployment rate	7.8	7.1	7.1	7.6	7.2	7.0	6.6	7.2	6.9
Not in labor force	39,196	38,838	39,299	38,479	38,462	38,408	38,353	38,426	38,550
Both sexes, 16-19 years									
Total noninstitutional population[1]	16,811	16,827	16,830	16,811	16,816	16,819	16,823	16,827	16,830
Civilian noninstitutional population[1]	16,450	16,483	16,485	16,450	16,464	16,468	16,473	16,483	16,485
Civilian labor force	11,348	10,987	11,494	9,027	9,183	9,216	9,242	9,469	9,144
Participation rate	69.0	66.7	69.7	54.9	55.8	56.0	56.1	57.4	55.5
Employed	9,339	8,620	9,537	7,386	7,458	7,573	7,589	7,704	7,555
Employment-population ratio[3]	55.6	51.2	56.7	43.9	44.4	45.0	45.1	45.8	44.9
Agriculture	704	594	643	418	412	403	416	402	383
Nonagricultural industries	8,635	8,025	8,894	6,968	7,046	7,170	7,173	7,302	7,172
Unemployed	2,008	2,367	1,957	1,641	1,725	1,643	1,653	1,765	1,589
Unemployment rate	17.7	21.5	17.0	18.2	18.8	17.8	17.9	18.6	17.4
Not in labor force	5,102	5,495	4,992	7,423	7,281	7,252	7,231	7,014	7,341
WHITE									
Total noninstitutional population[1]	137,424	139,270	139,450	137,424	138,732	138,894	139,089	139,270	139,450
Civilian noninstitutional population[1]	135,643	137,522	137,698	135,643	136,972	137,139	137,337	137,522	137,698
Civilian labor force	85,850	87,530	87,616	84,254	85,482	85,642	85,937	86,268	85,968
Participation rate	63.3	63.6	63.6	62.1	62.4	62.4	62.6	62.7	62.4
Employed	79,856	81,749	82,331	78,295	79,832	80,249	80,603	80,813	80,752
Employment-population ratio[3]	58.1	58.7	59.0	57.0	57.5	57.8	58.0	58.0	57.9
Unemployed	5,993	5,781	5,285	5,959	5,650	5,393	5,334	5,455	5,216
Unemployment rate	7.0	6.6	6.0	7.1	6.6	6.3	6.2	6.3	6.1
Not in labor force	49,793	49,992	50,082	51,389	51,490	51,497	51,400	51,254	51,730
BLACK AND OTHER									
Total noninstitutional population[1]	18,719	19,186	19,232	18,719	19,050	19,091	19,140	19,186	19,232
Civilian noninstitutional population[1]	18,359	18,805	18,850	18,359	18,672	18,714	18,763	18,805	18,850
Civilian labor force	11,335	11,605	11,697	10,868	11,104	11,071	11,171	11,325	11,236
Participation rate	61.7	61.7	62.1	59.2	59.5	59.2	59.5	60.2	59.6
Employed	9,752	9,933	10,042	9,464	9,690	9,711	9,730	9,833	9,758
Employment-population ratio[3]	52.1	51.8	52.2	50.6	50.9	50.9	50.8	51.3	50.7
Unemployed	1,584	1,671	1,656	1,404	1,414	1,360	1,441	1,492	1,478
Unemployment rate	14.0	14.4	14.2	12.9	12.7	12.3	12.9	13.2	13.2
Not in labor force	7,024	7,200	7,152	7,491	7,568	7,643	7,592	7,480	7,614

[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					
	July 1976	July 1977	July 1976	Mar. 1977	Apr. 1977	May 1977	June 1977	July 1977
CHARACTERISTICS								
Total, 16 years and over	7,406	6,744	7.8	7.3	7.0	6.9	7.1	6.9
Men, 20 years and over	3,131	2,700	6.1	5.4	5.0	5.3	5.0	5.1
Women, 20 years and over	2,634	2,455	7.6	7.2	7.0	6.6	7.2	6.9
Both sexes, 16-19 years	1,641	1,589	18.2	18.8	17.8	17.9	18.6	17.4
White, total	5,959	5,216	7.1	6.6	6.3	6.2	6.3	6.1
Men, 20 years and over	2,561	2,137	5.5	4.9	4.6	4.7	4.5	4.6
Women, 20 years and over	2,084	1,910	7.0	6.5	6.1	5.9	6.4	6.2
Both sexes, 16-19 years	1,314	1,169	16.2	16.6	16.1	15.7	16.1	14.3
Black and other, total	1,404	1,478	12.9	12.7	12.3	12.9	13.2	13.2
Men, 20 years and over	566	553	10.6	9.4	8.5	9.9	9.6	10.1
Women, 20 years and over	526	518	11.4	11.6	12.3	11.8	11.9	10.9
Both sexes, 16-19 years	312	407	34.2	40.1	36.2	38.7	39.4	40.7
Married men, spouse present	1,743	1,365	4.4	3.7	3.6	3.6	3.4	3.4
Married women, spouse present	1,628	1,464	7.4	6.7	6.6	6.3	6.8	6.6
Women who head families	424	403	10.2	9.6	9.2	8.4	9.4	9.3
Full-time workers	5,878	5,407	7.3	6.7	6.5	6.5	6.5	6.5
Part-time workers	1,500	1,304	10.6	11.1	9.9	9.9	10.7	9.2
Unemployed 15 weeks and over[1]	2,247	1,834	2.4	2.0	1.9	1.9	1.8	1.9
Labor force time lost[2]	--	--	8.1	7.8	7.4	7.5	7.5	7.4
OCCUPATION[3]								
White-collar workers	2,168	1,900	4.7	4.7	4.4	4.3	4.2	4.0
Professional and technical	430	400	3.1	3.1	3.2	2.9	3.0	2.8
Managers and administrators, except farm	327	260	3.4	3.4	2.9	2.8	2.7	2.6
Sales workers	310	326	5.4	5.5	5.1	5.5	5.2	5.4
Clerical workers	1,101	914	6.6	6.5	6.0	5.7	5.7	5.4
Blue-collar workers	3,119	2,684	9.7	8.3	7.8	7.9	7.7	8.2
Craft and kindred workers	881	705	7.2	6.0	4.9	5.6	5.6	5.6
Operatives, except transport	1,270	1,160	11.1	9.2	9.3	8.9	9.4	10.1
Transport equipment operatives	294	277	8.2	6.9	6.0	6.7	5.7	7.5
Nonfarm laborers	574	542	13.4	13.2	12.6	12.5	10.9	10.7
Service workers	1,140	1,034	8.6	7.9	8.1	9.0	8.2	7.7
Farm workers	129	108	4.3	5.4	4.8	4.4	4.8	3.8
INDUSTRY[3]								
Nonagricultural private wage and salary workers[4]	5,515	4,824	8.0	7.4	7.0	7.1	6.9	6.8
Construction	752	561	17.0	14.2	12.0	13.0	12.6	12.1
Manufacturing	1,675	1,446	7.8	6.6	6.7	6.2	6.3	6.7
Durable goods	946	779	7.5	6.1	6.0	5.7	5.6	6.1
Nondurable goods	729	667	8.4	7.3	7.7	7.0	7.3	7.6
Transportation and public utilities	245	238	5.2	5.1	4.4	4.3	4.1	4.7
Wholesale and retail trade	1,519	1,378	8.6	8.4	7.8	8.3	7.9	7.7
Finance and service industries	1,283	1,162	6.4	6.4	6.1	6.6	6.0	5.7
Government workers	702	615	4.5	4.0	4.0	4.1	4.2	3.9
Agricultural wage and salary workers	175	137	11.8	13.2	12.3	11.5	11.0	9.7
VETERAN STATUS								
Male Vietnam-era veterans:[5]								
20 to 34 years	529	517	8.3	6.8	7.3	7.5	7.6	7.9
20 to 24 years	193	154	20.4	17.1	14.4	13.6	18.1	16.3
25 to 29 years	210	207	6.8	6.6	7.7	7.8	7.1	7.2
30 to 34 years	126	156	5.5	3.3	4.3	5.1	4.5	5.8
Male nonveterans:								
20 to 34 years	1,323	1,204	8.7	7.9	6.8	7.2	6.9	7.6
20 to 24 years	734	680	10.9	10.4	10.1	10.2	8.9	9.9
25 to 29 years	404	341	8.4	7.0	5.7	5.4	6.3	6.8
30 to 34 years	185	183	5.1	4.3	4.2	4.1	4.0	4.6

[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					
	July 1976	July 1977	July 1976	Mar. 1977	Apr. 1977	May 1977	June 1977	July 1977
CHARACTERISTICS								
Total employed, 16 years and over	89,608	92,372	87,783	89,475	90,023	90,408	90,679	90,561
Men	54,264	55,677	52,507	53,270	53,575	53,722	53,987	53,900
Women	35,344	36,696	35,276	36,205	36,448	36,686	36,692	36,661
Married men, spouse present	38,261	38,549	38,146	38,294	38,536	38,509	38,582	38,434
Married women, spouse present	19,624	20,096	20,353	20,963	21,076	20,962	20,831	20,846
OCCUPATION								
White-collar workers	43,179	44,765	43,503	44,495	44,851	44,766	44,798	45,105
Professional and technical	12,712	13,253	13,291	13,439	13,591	13,483	13,638	13,863
Managers and administrators, except farm	9,298	9,660	9,226	9,543	9,434	9,400	9,570	9,583
Sales workers	5,473	5,750	5,442	5,617	5,765	5,695	5,673	5,716
Clerical workers	15,695	16,102	15,544	15,896	16,061	16,188	15,917	15,943
Blue-collar workers	30,634	31,652	29,100	30,025	30,193	30,423	30,432	30,063
Craft and kindred workers	11,816	12,398	11,329	11,709	11,896	11,894	11,891	11,887
Operatives, except transport	10,353	10,496	10,131	10,574	10,394	10,530	10,378	10,270
Transport equipment operatives	3,326	3,451	3,275	3,487	3,482	3,552	3,551	3,397
Nonfarm laborers	5,139	5,307	4,365	4,255	4,421	4,447	4,612	4,509
Service workers	12,416	12,706	12,178	12,272	12,254	12,372	12,697	12,460
Farm workers	3,379	3,249	2,861	2,652	2,779	2,904	2,838	2,743
MAJOR INDUSTRY AND CLASS OF WORKER								
Agriculture:								
Wage and salary workers	1,665	1,620	1,306	1,282	1,310	1,325	1,381	1,271
Self-employed workers	1,805	1,672	1,686	1,513	1,548	1,655	1,595	1,561
Unpaid family workers	461	499	336	319	366	393	378	363
Nonagricultural industries:								
Wage and salary workers	79,425	81,987	78,250	79,869	80,306	80,429	80,814	80,738
Government	14,478	14,662	14,942	14,923	14,960	15,075	14,961	15,131
Private industries	64,947	67,326	63,308	64,946	65,346	65,354	65,853	65,607
Private households	1,453	1,465	1,433	1,313	1,320	1,305	1,388	1,465
Other industries	63,494	65,861	61,875	63,633	64,026	64,049	64,465	64,162
Self-employed workers	5,807	6,073	5,640	5,919	5,954	6,050	5,997	5,896
Unpaid family workers	445	521	447	536	499	550	518	523
PERSONS AT WORK [1]								
Nonagricultural industries	74,347	77,467	79,257	81,330	81,005	81,771	81,618	82,572
Full-time schedules	62,257	64,745	65,261	66,659	66,436	67,219	67,126	67,867
Part time for economic reasons	3,803	4,074	3,136	3,276	3,174	3,290	3,368	3,371
Usually work full time	1,191	1,309	1,311	1,212	1,167	1,314	1,341	1,440
Usually work part time	2,612	2,765	1,825	2,064	2,007	1,976	2,027	1,931
Part time for noneconomic reasons	8,287	8,648	10,860	11,395	11,395	11,262	11,124	11,334

[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					
	July 1976	July 1977	July 1976	Mar. 1977	Apr. 1977	May 1977	June 1977	July 1977
DURATION								
Less than 5 weeks	3,066	2,960	2,931	3,005	3,100	2,782	3,058	2,830
5 to 14 weeks	2,401	2,258	2,093	2,098	1,857	2,093	2,023	1,969
15 weeks and over	2,111	1,724	2,247	1,923	1,816	1,836	1,737	1,834
15 to 26 weeks	805	717	1,058	777	715	800	798	917
27 weeks and over	1,306	1,007	1,189	1,146	1,101	1,036	939	917
Average (mean) duration, in weeks	14.9	13.5	15.6	14.0	14.3	14.9	14.4	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	40.5	42.6	40.3	42.8	45.8	41.5	44.9	42.7
5 to 14 weeks	31.7	32.5	28.8	29.9	27.4	31.2	29.7	29.7
15 weeks and over	27.9	24.8	30.9	27.4	26.8	27.4	25.5	27.6
15 to 26 weeks	10.6	10.3	14.6	11.1	10.6	11.9	11.7	13.8
27 weeks and over	17.2	14.5	16.4	16.3	16.3	15.4	13.8	13.8

Table A-5. Reasons for unemployment

[Numbers in thousands]

Reasons	Not seasonally adjusted		Seasonally adjusted					
	July 1976	July 1977	July 1976	Mar. 1977	Apr. 1977	May 1977	June 1977	July 1977
NUMBER OF UNEMPLOYED								
Lost last job	3,505	2,869	3,758	3,143	2,953	3,038	2,927	3,075
On layoff	978	787	1,142	865	754	749	827	919
Other job losers	2,527	2,082	2,616	2,278	2,199	2,289	2,100	2,156
Left last job	1,000	879	957	919	846	944	954	841
Reentered labor force	1,945	1,886	1,879	2,013	2,001	1,993	1,889	1,822
Seeking first job	1,128	1,308	794	1,003	972	893	1,077	974
PERCENT DISTRIBUTION								
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Job losers	46.3	41.3	50.9	44.4	43.6	44.2	42.7	45.8
On layoff	12.9	11.3	15.5	12.2	11.1	10.9	12.1	13.7
Other job losers	33.4	30.0	35.4	32.2	32.5	33.3	30.7	32.1
Job leavers	13.2	12.7	13.0	13.0	12.5	13.7	13.9	12.5
Reentrants	25.7	27.2	25.4	28.4	29.5	29.0	27.6	27.1
New entrants	14.9	18.8	10.7	14.2	14.4	13.0	15.7	14.5
UNEMPLOYED AS A PERCENT OF THE CIVILIAN LABOR FORCE								
Job losers	3.6	2.9	3.9	3.3	3.1	3.1	3.0	3.2
Job leavers	1.0	.9	1.0	1.0	.9	1.0	1.0	.9
Reentrants	2.0	1.9	2.0	2.1	2.1	2.1	1.9	1.9
New entrants	1.2	1.3	.8	1.0	1.0	.9	1.1	1.0

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

Sex and age	Number of unemployed persons (In thousands)		Unemployment rates					
	July 1976	July 1977	July 1976	Mar. 1977	Apr. 1977	May 1977	June 1977	July 1977
Total, 16 years and over	7,406	6,744	7.8	7.3	7.0	6.9	7.1	6.9
16 to 19 years	1,641	1,589	18.2	18.8	17.8	17.9	18.6	17.4
16 to 17 years	786	752	20.8	22.2	19.2	20.4	21.3	19.9
18 to 19 years	832	815	15.9	16.6	16.8	16.3	16.5	15.3
20 to 24 years	1,598	1,522	11.4	11.4	10.8	10.7	10.5	10.6
25 years and over	4,229	3,679	5.9	5.1	4.9	4.8	5.0	5.0
25 to 54 years	3,493	3,076	6.0	5.2	5.1	5.1	5.3	5.2
55 years and over	683	552	4.9	4.3	4.1	4.0	3.8	3.9
Men, 16 years and over	4,020	3,538	7.1	6.5	6.1	6.3	6.2	6.2
16 to 19 years	889	838	18.3	18.7	17.0	17.0	18.6	16.9
16 to 17 years	430	424	20.8	22.2	17.9	18.7	22.7	20.2
18 to 19 years	461	417	16.6	16.1	16.0	16.0	15.5	14.7
20 to 24 years	921	833	12.0	11.2	10.5	10.6	9.9	10.6
25 years and over	2,221	1,874	5.1	4.3	4.1	4.2	4.1	4.2
25 to 54 years	1,847	1,551	5.2	4.3	4.3	4.4	4.3	4.3
55 years and over	372	319	4.2	4.4	3.7	3.9	3.3	3.6
Women, 16 years and over	3,386	3,206	8.8	8.5	8.2	7.9	8.4	8.0
16 to 19 years	752	751	18.0	18.9	18.8	19.0	18.7	17.9
16 to 17 years	356	328	20.8	22.2	20.8	22.5	19.7	19.5
18 to 19 years	371	398	15.2	17.1	17.7	16.6	17.5	16.0
20 to 24 years	677	689	10.6	11.7	11.2	10.9	11.0	10.5
25 years and over	2,008	1,805	7.1	6.1	6.0	5.7	6.3	6.2
25 to 54 years	1,648	1,525	7.2	6.6	6.5	6.1	6.7	6.4
55 years and over	313	233	5.9	4.2	4.6	4.3	4.6	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		
	II	III	IV	I	II	May	June	July
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	1.9	1.8	1.9
U-2—Job losers as a percent of the civilian labor force	3.7	3.9	3.9	3.4	3.1	3.1	3.0	3.2
U-3—Unemployed household heads as a percent of the household head labor force	4.9	5.3	5.3	4.8	4.4	4.5	4.3	4.3
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	6.5
U-5—Total unemployed as a percent of the civilian labor force (official measure)	7.4	7.8	7.9	7.4	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	9.1	9.5	9.7	9.0	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	10.0	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					
	July 1976	May 1977	June 1977[P]	July 1977[P]	July 1976	Mar. 1977	Apr. 1977	May 1977	June 1977[P]	July 1977[P]
TOTAL	79,242	82,029	82,903	82,159	79,513	81,395	81,686	81,921	82,095	82,351
GOODS-PRODUCING	23,446	24,167	24,676	24,585	23,344	24,005	24,217	24,306	24,351	24,424
MINING	804	844	870	835	791	842	847	845	855	821
CONTRACT CONSTRUCTION	3,821	3,853	4,048	4,144	3,608	3,759	3,842	3,861	3,877	3,913
MANUFACTURING	18,821	19,470	19,758	19,606	18,945	19,404	19,528	19,600	19,619	19,690
Production workers	13,470	14,021	14,259	14,089	13,618	13,958	14,066	14,145	14,144	14,200
DURABLE GOODS	10,958	11,442	11,597	11,492	11,034	11,370	11,423	11,469	11,490	11,527
Production workers	7,787	8,207	8,336	8,226	7,878	8,128	8,177	8,233	8,241	8,280
Ordnance and accessories	156.8	155.2	156.5	153.5	156	156	157	157	157	153
Lumber and wood products	623.4	637.0	661.4	663.0	605	633	639	638	638	643
Furniture and fixtures	478.4	504.1	511.1	502.9	490	503	507	509	510	515
Stone, clay, and glass products	641.8	655.7	671.5	675.4	631	641	651	654	658	663
Primary metal industries	1,208.8	1,217.8	1,233.5	1,220.4	1,206	1,199	1,208	1,217	1,218	1,218
Fabricated metal products	1,374.0	1,440.1	1,463.1	1,447.3	1,387	1,432	1,433	1,447	1,451	1,460
Machinery, except electrical	2,064.9	2,161.0	2,180.6	2,171.9	2,084	2,142	2,150	2,165	2,168	2,192
Electrical equipment	1,806.3	1,915.1	1,937.7	1,926.2	1,815	1,906	1,919	1,931	1,932	1,936
Transportation equipment	1,679.8	1,811.0	1,828.1	1,793.9	1,728	1,808	1,808	1,802	1,810	1,801
Instruments and related products	510.3	525.4	530.3	527.6	512	526	526	526	528	529
Miscellaneous manufacturing	413.1	419.9	423.4	410.3	420	424	425	423	420	417
NONDURABLE GOODS	7,863	8,028	8,161	8,114	7,911	8,034	8,105	8,131	8,129	8,163
Production workers	5,683	5,814	5,923	5,863	5,740	5,830	5,889	5,912	5,903	5,920
Food and kindred products	1,749.5	1,673.9	1,722.4	1,758.5	1,719	1,734	1,743	1,735	1,733	1,727
Tobacco manufactures	73.2	63.2	65.0	65.2	80	68	73	71	72	71
Textile mill products	951.3	983.5	995.7	980.6	970	973	981	988	987	1,000
Apparel and other textile products	1,255.0	1,295.9	1,317.5	1,269.3	1,299	1,283	1,291	1,298	1,307	1,314
Paper and allied products	678.7	696.0	707.9	703.0	680	688	697	703	701	704
Printing and publishing	1,076.4	1,105.4	1,111.4	1,108.0	1,082	1,097	1,102	1,109	1,110	1,114
Chemicals and allied products	1,041.9	1,056.4	1,068.2	1,073.0	1,037	1,051	1,060	1,063	1,061	1,068
Petroleum and coal products	207.1	209.8	214.2	215.8	201	207	211	210	210	210
Rubber and plastics products, nec.	564.8	673.9	684.6	675.1	572	666	680	685	681	684
Leather and leather products	265.0	269.7	274.2	265.5	271	267	267	269	267	271
SERVICE-PRODUCING	55,796	57,862	58,227	57,574	56,169	57,390	57,469	57,615	57,744	57,927
TRANSPORTATION AND PUBLIC UTILITIES	4,540	4,577	4,626	4,615	4,508	4,568	4,575	4,586	4,576	4,583
WHOLESALE AND RETAIL TRADE	17,723	18,176	18,322	18,297	17,737	18,189	18,203	18,235	18,227	18,285
WHOLESALE TRADE	4,297	4,353	4,399	4,412	4,271	4,354	4,371	4,384	4,373	4,386
RETAIL TRADE	13,426	13,823	13,923	13,885	13,466	13,835	13,832	13,851	13,854	13,899
FINANCE, INSURANCE, AND REAL ESTATE	4,368	4,476	4,533	4,565	4,312	4,453	4,463	4,480	4,488	4,506
SERVICES	14,825	15,288	15,454	15,473	14,664	15,149	15,182	15,197	15,241	15,305
GOVERNMENT	14,340	15,345	15,292	14,624	14,948	15,031	15,046	15,117	15,212	15,248
FEDERAL	2,775	2,728	2,765	2,782	2,723	2,725	2,719	2,723	2,735	2,730
STATE AND LOCAL	11,565	12,617	12,527	11,842	12,225	12,306	12,327	12,394	12,477	12,518

[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					
	July 1976	May 1977	June 1977[p]	July 1977[p]	July 1976	Mar. 1977	Apr. 1977	May 1977	June 1977[p]	July 1977[p]
TOTAL PRIVATE	36.6	36.1	36.4	36.5	36.1	36.3	36.2	36.3	36.2	36.1
MINING	42.7	44.1	44.6	44.0	42.6	44.4	44.4	44.0	44.0	43.9
CONTRACT CONSTRUCTION	37.9	37.5	37.4	37.7	36.9	37.1	37.3	37.4	36.8	36.7
MANUFACTURING	40.0	40.3	40.8	40.1	40.1	40.4	40.3	40.4	40.5	40.3
Overtime hours	3.1	3.3	3.5	3.3	3.1	3.3	3.4	3.4	3.4	3.3
DURABLE GOODS	40.5	41.0	41.5	40.6	40.9	41.0	40.8	41.1	41.2	41.0
Overtime hours	3.2	3.5	3.7	3.5	3.3	3.4	3.6	3.6	3.7	3.6
Ordnance and accessories	40.5	41.0	41.0	39.9	40.9	40.6	41.2	41.1	40.9	40.3
Lumber and wood products	40.4	40.3	40.7	40.2	40.6	40.1	40.0	40.0	39.9	40.4
Furniture and fixtures	38.2	38.4	39.2	38.5	38.6	38.6	38.4	38.7	38.8	38.9
Stone, clay, and glass products	41.2	41.8	42.0	41.6	41.0	41.4	41.7	41.7	41.7	41.4
Primary metal industries	41.0	41.5	41.7	40.6	41.2	41.1	41.5	41.6	41.6	40.8
Fabricated metal products	40.6	41.0	41.6	40.6	41.0	41.0	40.7	41.0	41.3	41.0
Machinery, except electrical	40.8	41.4	41.9	41.2	41.5	41.5	41.3	41.6	41.9	42.0
Electrical equipment	39.5	40.1	40.6	39.7	40.1	40.3	40.0	40.1	40.4	40.3
Transportation equipment	42.0	42.8	43.2	41.9	42.0	42.8	41.9	42.7	42.9	41.9
Instruments and related products	40.3	40.3	40.7	40.3	40.8	40.4	40.1	40.4	40.7	40.8
Miscellaneous manufacturing	38.4	39.0	39.3	38.3	38.8	39.3	38.9	39.0	39.1	38.7
NONDURABLE GOODS	39.2	39.3	39.7	39.3	39.1	39.5	39.5	39.5	39.6	39.3
Overtime hours	3.0	3.0	3.2	3.0	2.9	3.1	3.2	3.1	3.1	2.9
Food and kindred products	40.4	39.7	40.1	40.1	40.0	40.2	40.3	39.9	40.0	39.7
Tobacco manufactures	33.8	38.1	38.5	36.9	35.0	38.4	38.3	38.6	38.6	38.2
Textile mill products	39.9	40.6	40.9	40.2	40.2	40.8	40.5	40.7	40.5	40.5
Apparel and other textile products	35.6	35.5	36.1	35.6	35.5	35.6	35.1	35.7	36.0	35.5
Paper and allied products	42.3	42.7	43.1	42.5	42.3	42.8	43.3	43.0	42.9	42.5
Printing and publishing	37.6	37.5	37.7	37.7	37.7	37.7	37.7	37.6	37.7	37.8
Chemicals and allied products	41.3	41.7	42.0	41.5	41.4	41.8	41.9	41.7	41.9	41.6
Petroleum and coal products	42.6	42.6	42.9	43.5	42.2	43.0	42.7	42.6	42.7	43.1
Rubber and plastics products, nec	39.9	41.1	41.3	40.2	40.3	41.2	41.2	41.3	41.1	40.6
Leather and leather products	37.4	37.3	38.1	37.1	37.0	36.4	37.4	37.1	37.3	36.7
TRANSPORTATION AND PUBLIC UTILITIES	40.2	40.0	40.1	40.5	39.8	40.3	40.1	40.2	39.9	40.1
WHOLESALE AND RETAIL TRADE	34.5	33.2	33.6	34.1	33.6	33.5	33.5	33.4	33.3	33.3
WHOLESALE TRADE	39.3	38.7	39.0	39.0	39.1	38.9	39.0	38.7	38.9	38.8
RETAIL TRADE	33.0	31.6	32.1	32.7	32.0	31.9	31.9	31.9	31.7	31.7
FINANCE, INSURANCE, AND REAL ESTATE	36.7	36.6	36.6	36.7	36.6	36.7	36.6	36.7	36.6	36.6
SERVICES	34.0	33.3	33.5	33.9	33.4	33.5	33.5	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			
	July 1976	May 1977	June 1977 p	July 1977 p	July 1976	May 1977	June 1977 p	July 1977 p
TOTAL PRIVATE	$4.86	$5.19	$5.21	$5.23	$177.88	$187.36	$189.64	$190.90
Seasonally adjusted	4.88	5.20	5.22	5.25	176.17	188.76	188.96	189.53
MINING	6.39	6.81	6.84	6.81	272.85	300.32	305.06	299.64
CONTRACT CONSTRUCTION	7.68	7.91	7.95	7.97	291.07	296.63	297.33	300.47
MANUFACTURING	5.20	5.56	5.60	5.63	208.00	224.07	228.48	225.76
DURABLE GOODS	5.55	5.95	6.00	6.00	224.78	243.95	249.00	243.60
Ordnance and accessories	5.75	6.16	6.15	6.16	232.88	252.56	252.15	245.78
Lumber and wood products	4.81	4.97	5.01	5.07	194.32	200.29	203.91	203.81
Furniture and fixtures	3.97	4.23	4.27	4.26	151.65	162.43	167.38	164.01
Stone, clay, and glass products	5.33	5.73	5.78	5.83	219.60	239.51	242.76	242.53
Primary metal industries	6.83	7.39	7.43	7.48	280.03	306.69	309.83	303.69
Fabricated metal products	5.42	5.73	5.81	5.80	220.05	234.93	241.70	235.48
Machinery, except electrical	5.75	6.10	6.15	6.18	234.60	252.54	257.69	254.62
Electrical equipment	4.90	5.23	5.28	5.29	193.55	209.72	214.37	210.01
Transportation equipment	6.50	7.10	7.18	7.14	273.00	303.88	310.18	299.17
Instruments and related products	4.88	5.13	5.14	5.21	196.66	206.74	209.20	209.96
Miscellaneous manufacturing	4.02	4.31	4.31	4.32	154.37	168.09	169.38	165.46
NONDURABLE GOODS	4.69	4.99	5.03	5.09	183.85	196.11	199.69	200.04
Food and kindred products	4.96	5.28	5.29	5.33	200.38	209.62	212.13	213.73
Tobacco manufactures	5.00	5.58	5.83	5.81	169.00	212.60	224.46	214.39
Textile mill products	3.71	3.86	3.90	4.03	148.03	156.72	159.51	162.01
Apparel and other textile products	3.39	3.56	3.61	3.58	120.68	126.38	130.32	127.45
Paper and allied products	5.47	5.80	5.87	5.97	231.38	247.66	253.00	253.73
Printing and publishing	5.67	6.02	6.06	6.07	213.19	225.75	228.46	228.84
Chemicals and allied products	5.92	6.29	6.33	6.41	244.50	262.29	265.86	266.02
Petroleum and coal products	7.13	7.69	7.72	7.76	303.74	327.59	331.19	337.56
Rubber and plastics products, nec	4.40	5.05	5.12	5.15	175.56	207.56	211.46	207.03
Leather and leather products	3.41	3.63	3.64	3.63	127.53	135.40	138.68	134.67
TRANSPORTATION AND PUBLIC UTILITIES	6.46	6.83	6.85	6.89	259.69	273.20	274.69	279.05
WHOLESALE AND RETAIL TRADE	3.96	4.25	4.26	4.27	136.62	141.10	143.14	145.61
WHOLESALE TRADE	5.17	5.52	5.51	5.55	203.18	213.62	214.89	216.45
RETAIL TRADE	3.54	3.80	3.81	3.82	116.82	120.08	122.30	124.91
FINANCE, INSURANCE, AND REAL ESTATE	4.36	4.58	4.55	4.58	160.01	167.63	166.53	168.09
SERVICES	4.32	4.67	4.66	4.67	146.88	155.51	156.11	158.31

[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	July 1976	Feb. 1977	Mar. 1977	Apr. 1977	May 1977	June P 1977	July P 1977	Percent change from: July 1976-July 1977	Percent change from: June 1977-July 1977
TOTAL PRIVATE NONFARM:									
Current dollars	185.6	193.2	194.1	195.3	196.5	197.4	198.5	6.9	0.5
Constant (1967) dollars	108.5	109.0	108.8	108.6	108.6	108.5	N.A.	(2)	(3)
MINING	199.1	210.1	210.4	212.1	213.1	214.3	215.1	8.0	.3
CONTRACT CONSTRUCTION	188.0	190.8	191.6	192.6	193.1	194.6	195.6	4.0	.5
MANUFACTURING	185.4	193.3	194.3	195.4	196.8	198.4	199.5	7.6	.6
TRANSPORTATION AND PUBLIC UTILITIES	199.9	206.2	206.7	208.6	210.1	211.3	211.7	5.9	.2
WHOLESALE AND RETAIL TRADE	178.8	187.6	188.5	189.8	190.7	191.0	192.4	7.6	.7
FINANCE, INSURANCE, AND REAL ESTATE	170.8	175.7	175.9	177.4	179.0	177.5	179.5	5.1	1.1
SERVICES	188.3	197.7	198.7	199.7	200.7	201.6	202.3	7.4	.4

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

[2] Percent change was 0.2 from June 1976 to June 1977, the latest month available.

[3] Percent change was -0.1 from May 1977 to June 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 July	Aug.	Sept.	Oct.	Nov.	Dec.	1977 Jan.	Feb.	Mar.	Apr.	May	June P	July P
TOTAL	111.8	111.8	112.2	112.2	112.8	113.3	112.3	114.2	115.2	115.6	116.1	115.7	115.8
GOODS-PRODUCING	96.5	95.7	95.9	96.0	97.2	96.9	95.2	98.3	100.0	100.9	101.7	101.8	101.5
MINING	127.7	115.6	131.7	131.1	132.6	134.0	130.7	134.6	141.5	142.2	140.2	141.8	134.6
CONTRACT CONSTRUCTION	103.7	102.5	99.4	104.2	105.7	104.3	96.4	105.9	108.1	112.0	112.7	111.4	112.4
MANUFACTURING	94.2	93.9	94.0	93.2	94.5	94.4	93.8	95.7	97.1	97.5	98.5	98.8	98.5
DURABLE GOODS	93.5	93.6	93.2	92.0	93.8	93.6	93.2	94.8	96.8	96.8	98.1	98.7	98.5
Ordnance and accessories	40.0	39.8	38.6	38.5	38.5	39.5	39.0	39.1	38.5	40.8	41.3	41.1	39.9
Lumber and wood products	98.6	97.6	98.2	99.4	100.8	101.9	101.1	103.0	103.4	104.1	104.1	104.0	106.1
Furniture and fixtures	102.3	101.2	102.4	102.2	102.8	103.5	98.5	102.7	105.3	106.0	107.4	107.7	109.0
Stone, clay, and glass products	99.2	98.6	98.9	99.7	100.2	99.1	96.1	97.1	101.5	104.1	104.7	105.5	105.9
Primary metal industries	90.1	89.8	88.8	86.2	85.7	85.0	84.8	85.5	88.5	90.0	91.1	91.0	89.7
Fabricated metal products	98.0	98.6	98.6	96.5	98.1	98.1	97.6	100.0	101.6	101.0	103.1	104.2	103.9
Machinery, except electrical	95.9	95.9	95.9	94.0	96.7	96.0	95.7	97.7	98.6	98.3	100.5	101.2	103.3
Electrical equipment and supplies	90.5	92.2	91.5	92.1	93.4	93.1	91.7	95.5	95.9	96.1	97.3	98.0	97.8
Transportation equipment	90.3	90.7	89.1	86.1	91.5	90.6	93.3	91.3	96.7	94.8	96.2	97.0	94.2
Instruments and related products	110.3	108.1	107.2	107.9	108.5	110.4	108.9	112.4	111.6	111.1	112.3	113.2	113.8
Miscellaneous manufacturing, Ind	93.1	91.8	92.2	92.0	92.1	91.6	93.1	96.8	96.0	95.1	95.0	94.1	92.2
NONDURABLE GOODS	95.2	94.2	95.2	95.0	95.4	95.5	94.7	97.1	97.6	98.5	98.9	98.9	98.5
Food and kindred products	97.0	96.5	96.4	96.2	96.6	95.5	95.1	97.5	97.9	98.8	97.2	97.3	95.5
Tobacco manufactures	82.3	84.0	82.1	83.0	81.6	81.6	76.1	83.0	75.5	80.7	77.2	78.6	75.1
Textile mill products	98.0	95.5	95.2	95.0	95.6	96.1	95.4	97.9	99.5	99.7	101.1	100.3	101.5
Apparel and other textile products	88.9	87.6	86.2	85.7	86.1	86.3	84.1	88.0	87.9	87.3	89.4	90.7	89.9
Paper and allied products	96.9	96.1	96.5	95.7	97.0	97.2	96.2	98.0	98.3	100.8	101.0	100.4	100.0
Printing and publishing	93.6	92.9	93.1	93.4	93.6	93.7	93.0	94.8	94.3	94.9	95.4	95.2	95.6
Chemicals and allied products	99.4	99.8	100.3	99.4	100.0	100.0	100.4	101.8	102.2	103.5	103.7	104.0	103.8
Petroleum and coal products	112.2	112.4	112.2	112.5	113.1	114.7	115.0	114.7	118.7	120.5	120.2	120.5	123.4
Rubber and plastics products, nec	106.2	105.2	124.3	125.6	125.7	127.6	127.7	129.6	131.7	134.7	135.8	133.9	132.7
Leather and leather products	74.7	72.5	72.1	71.0	70.4	70.5	69.1	71.9	71.9	73.9	73.9	73.7	74.1
SERVICE-PRODUCING	122.5	123.0	123.6	123.5	123.5	124.6	124.1	125.3	125.8	125.8	126.6	125.3	125.7
TRANSPORTATION AND PUBLIC UTILITIES	102.1	102.5	102.9	102.0	103.2	105.0	102.7	104.4	104.2	103.9	104.4	103.4	103.9
WHOLESALE AND RETAIL TRADE	118.9	119.0	119.7	119.3	118.9	120.0	119.1	120.7	121.5	121.7	121.7	121.0	121.2
WHOLESALE TRADE	115.3	114.7	114.9	114.8	114.8	114.8	115.4	117.0	116.9	117.8	117.3	117.3	117.1
RETAIL TRADE	120.3	120.6	121.6	121.0	120.4	122.0	120.4	122.1	123.2	123.1	123.3	122.4	122.8
FINANCE, INSURANCE, AND REAL ESTATE	126.6	127.3	127.7	128.3	129.1	129.8	130.6	130.2	131.1	131.0	131.6	131.5	131.9
SERVICES	135.4	136.6	137.2	137.6	137.7	138.4	138.8	139.7	140.0	140.1	140.2	139.4	140.2

[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	75.9 p
1977				
January	71.5	76.7	88.4	80.5 p
February	61.6	84.6	86.6	
March	79.7	86.0	84.3 p	
April	79.1	83.7	82.3 p	
May	68.9	74.1 p		
June	54.7 p	66.0 p		
July	72.1 p			
August				
September				
October				
November				
December				

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

p = preliminary.

Senator PROXMIRE. Mr. Shiskin, can you confirm my impression, that it is a mixed picture? In your statement, you say that the fairly lackluster performance of the labor market is consistent with that shown by certain other major indicators.

You seem to feel that, even though we had a drop in unemployment and even though the payroll data seem favorable. There is clearly a slowdown on the basis of whatever we have seen in the last 2 or 3 months in the labor market. Is that right?

Mr. SHISKIN. Yes. I don't think it is much, but there is some.

Let me repeat one comment on the unemployment figures. I think that the June figure was too high. Now, it was too high, as I said in my statement, because the week came late. The reference week came as late as it possibly can in the month. When that happens, there is more time for students to get into the labor market.There is more time for students who have finished school earlier to get jobs, so you can have more employment and more unemployment at the same time.

Senator PROXMIRE. You seem to indicate in your statement that the lateness of the reference week in June—the fact that it was a week later than usual—explains what seems to the layman to be a very, very contradictory situation. Having one very elaborate, very expensive, very detailed data system based on household surveys, probably the most comprehensive that any country in the world has, showing a reduction in employment, and then on the other hand you have the payroll data—which is also rather comprehensive, and certainly includes the overwhelming number of jobs, over 80 million—showing an increase in employment.

Mr. SHISKIN. Well, OK.

Senator PROXMIRE. It seems to me that it is unsatisfactory just to say that it was a week later. Let's clarify the picture.

Mr. SHISKIN. All right. To begin with, I never expect the month-to-month changes in these two major surveys to be the same. It is too much to ask of any statistical system.

Senator PROXMIRE. I can't understand why not. You have an enormous number of observations in both surveys. You have a very high probability of accuracy on the basis of the great number you survey. It is not just 1,700 as the Gallup poll, but you have thousands, is that right?

So, it should be reliable. You are looking for the same kind of information, and you want to know how many jobs there are, how many people are unemployed. I cannot understand why there should be that sharp a difference.

Mr. SHISKIN. Well, the month-to-month changes in almost all economic series have a substantial element of irregularity attached to them. Part of it arises from the measurement process.

Senator PROXMIRE. Arises from what?

Mr. SHISKIN. From the measurement process. The payroll survey is a great survey, but the number of plants that we have in the survey each month is somewhere in the neighborhood of 160,000. The total number of plants runs into millions.

Similarly, in the case of households. We are now dealing with a sample of 47,000 households, so there is a measurement error. There are also elements of irregularity in the economy. Things don't always move exactly the same way.

Third, the surveys aren't quite the same. They are not comparable exactly conceptually. So I think you have to expect some differences in the month-to-month changes.

What is significant, I think, is that for some months we were looking at a growing disparity between total employment as measured in the household survey and total nonagricultural employment as measured in the payroll survey, and the recent movements bring them together.

What happened? The household survey has been rising more rapidly, but this month, the household survey didn't show any rise in nonagricultural employment, and the business survey did. So these movements brought the series close together.

On unemployment, that is a marvelous survey. There is a tremendous fund of information in the data compiled, but the fact is that it covers only 1 week a month. The rule we use is that the survey covers the weeks including the 12th. It is not a fixed part of the month. It is affected by the calendar, and it is also affected by the weather.

Senator PROXMIRE. So, you think if we had had a survey a week earlier in June, you might have had a rather stable situation in May, June, and July?

Mr. SHISKIN. Yes, sir.

Senator PROXMIRE. And that that particular week distorted the entrants because of the seasonal elements you have to put in, and that if this had not happened the unemployment rate would probably have been 6.9 percent during May, June, and July?

Mr. SHISKIN. Exactly. If we may ask you to look at our seasonal table, the attachment to my statement, first of all, the differences in the seasonally adjusted rate produced by these 11 methods are so very small this month. It is only——

Senator PROXMIRE. What table are you referring to?

Mr. SHISKIN. This is the usual table I attach to my release.

Senator PROXMIRE. I see. Seasonal adjustment is shown there.

Mr. SHISKIN. Yes. There are 11 different methods, and they all give almost identical results. Three of them show 6.8 and the others show 6.9. My judgment about the true unemployment rate, I think, really, is best revealed by column 13, the composite index, which shows that you have had a decline in the first part of the year, after that bump due to bad weather in February, and then it has been flat.

Senator PROXMIRE. Well, that looks as if the recovery has slowed down, at least as far as unemployment is concerned, and it looks as if it has stabilized around 7 percent.

Mr. SHISKIN. In terms of unemployment.

Senator PROXMIRE. What is that?

Mr. SHISKIN. In terms of unemployment. The employment picture is still better.

Senator PROXMIRE. The employment picture is good, but at the same time, the employment picture does show in the last month a slowdown at best, and conceivably, the data show the number of jobs diminishing.

Mr. SHISKIN. Yes. I think the best single measure, as I have said many times, of the overall employment situation is shown in our table B–5, the establishment table on aggregate hours. These are what used

to be called man-hours. It is average hours worked per week times employment.

If you look at that table, table B–5, and particularly if you look at the total, the April figure—and these are indexes of aggregate hours based on the year 1967 as 100—the April figure is 115.6. The May figure is 116.1. It seems that at that time we were experiencing vigorous recovery that we had been having in earlier months, but then we got 115.7, and now 115.8. So, the difference between April and July is two-tenths.

In the case of this series, two-tenths is a lot. It is more than 100,000 employees. But it is not as much as we had in earlier months, so I think there has been some slowdown.

I might say, Senator Proxmire, if you will give me another minute, that this really has been a very vigorous expansion. In the early days of the expansion, there was a lot of debate about whether it was vigorous and a lot of confusion about it.

Senator PROXMIRE. Isn't it true, according to all your data, household data and industrial, that the growth of jobs over the last 12 months has been something like 8 million, a tremendous growth and improvement. That really has outpaced the other indications of growth in the economy. We have not had proportional growth, have we, in the rest of the economy? Doesn't that suggest that we could expect something of a slowdown about now?

Mr. SHISKIN. Let me give you a few comparative figures. I used to attach a table showing cyclical changes in key economic indicators to my statement, but I have not done it in recent months because it didn't seem necessary. I have it here with me. This is the table which compares the performance in this economy from the previous peak level to the current month, for our principal indicators.

What this table shows is that total civilian employment is now 105 percent of what it was at the peak level.

Senator PROXMIRE. It was the what?

Mr. SHISKIN. Total civilian employment is 5 percent over what it was at the previous peak level.

Let me give you a comparative figure for that. The last time we had a sharp recession, comparable to the 1973–74 recession, was in 1958. The best we were able to do in the following recovery was to come up to 102.5 percent of the previous peak level. So, we are doing much better than in 1958–59.

Your question was, how about the other indicators? Well, let me give you a few others. Nonagricultural payroll employment, by the way, is very close, 104.5 of the previous peak times.

Let's look at some of the other key series: GNP, 107.2; personal income less transfer payments, 105.8; industrial production, 104.3; and retail sales, 104.0.

These are the June figures. All the indications we have for retail sales is that July turned up again. We will have to wait to see, but that is what the weekly figures are showing. So, I think the employment figures are reasonably consistent with the other figures, Mr. Chairman.

Senator PROXMIRE. All right. Let me take a little further look at the labor market itself before we get into some other things. The average workweek for production and nonsupervisory workers went down

for the second consecutive month. I know, also, that the number of full-time workers declined and the number of part-time workers increased.

Doesn't that also indicate some easing, some reduction in the rate of growth?

Mr. SHISKIN. Yes, and that is exactly what I have been saying, that the figures that we have this month, and for the few preceding months, suggest we have a slowdown in the rate of growth. The economy is certainly not declining, but there is an indication here of a slowdown in the growth rate.

Now, when you ask yourself what the explanation is, I think the most instructive date to look at are those for inventories.

Senator PROXMIRE. Is what?

Mr. SHISKIN. Inventories. The most instructive variable or indicator to look at is inventories. We have had a huge increase in inventories in the second quarter. I think what is going on is a minor inventory adjustment. This is not a hard fact, but a judgment, an economic and analytical judgment that we are having a very modest inventory adjustment.

Senator PROXMIRE. Well, just in the last few weeks, I think the inventories have tended to be reduced some, and that may explain the slowdown we have observed in the household data.

Mr. SHISKIN. I think that is exactly what is going on. That seems to be what is going on, and the business community, the private sector, keeps making adjustments in the inventory situation.

Senator PROXMIRE. Let me ask you about another contradiction. The evidence that you stress and that both releases stresse is that the payroll data indicates an improvement in the number of jobs in manufacturing and construction. At the same time, the household data shows that the unemployment has been increasing in blue-collar workers, or for blue-collar workers, from 7.7 percent in June to 8.2 percent in July. That would show to me that factory unemployment went up and yet the industrial data does not show that. How do you explain that contradiction?

Mr. SHISKIN. Your question is why the data on blue-collar workers shows increasing unemployment, but that the total factory employment went up?

Senator PROXMIRE. That is right.

Mr. SHISKIN. I cannot think of anything to answer that with. Mr. Stein, do you know?

Mr. STEIN. No.

Senator PROXMIRE. Let me see if I can get a clearer picture of the kind of unemployment we are suffering right now. The reasons for unemployment which we have over on table A–5, are "Lost last job," and while that dropped in June, it went up in July, went from 2,927,000 who lost their last job to 3,075,000.

Now, on the reasons for unemployment. "Left last job," that is, the quitters, went down. "Reentered labor force," that went down. "Seeking first job," went down. So, it seemed that more people were fired or laid off, fewer quit, and fewer were entering the work force. Is that an accurate picture?

Mr. SHISKIN. It seems to be, yes.

Senator PROXMIRE. Now, that would seem to be a characteristic of a more sluggish labor market, right?

Mr. SHISKIN. Right.

Senator PROXMIRE. Now, let me get into something that you touched on that concerns everything these days. A few weeks ago we had the specter of rampant looting in New York City, and this riveted the attention of the American people on the inner core of American cities. Many people argue that it is because of very heavy unemployment, particularly unemployment among teenagers in the inner-city areas.

It was reported yesterday that the jobless rate for teenagers is very bad in the District of Columbia, but, you know, in reading the article that it is just about as bad in New York City, and in Detroit and Baltimore it is worse. In fact, Baltimore has the worst teenage unemployment.

It has been theorized for a long time that unemployment is a principal cause of crime, though it is hard to get statistics that support that.

Now, some people would feel we have some solid evidence that unemployment among central city youths has risen dramatically over the past decade, and the proportion of teenagers holding jobs has fallen in 10 out of 11 major American cities, according to the figures released by your organization on Monday.

I would like to know what accounts for the sharp increase in teenage unemployment in New York as well as Philadelphia, Washington, and other cities, and if you have any information which might link looting and other crime with excessive unemployment?

Mr. SHISKIN. Well, I have nothing to say about the causes of the looting and the crime, but I think the data we put together, which, incidentally, I gave this committee the first preview of last month, are very important and dramatic indeed. They do show that the unemployment rate in the central cities is very high, as we all knew already. It is particularly high in the Northeast cities, and it is especially high among teenagers.

Senator PROXMIRE. And particularly high among black teenagers.

Mr. SHISKIN. And especially high among black teenagers. Yes.

Now, we also provided another measure at that time, the employment-population ratio, which we have been using, and these data show that in these big cities, the percentage of people working, and particularly teenagers working, is very low, and that is a very serious problem.

One of my colleagues, Mr. Bienstock, who is in charge of our New York office, was quoted in the newspaper the other day as saying that New York is the nonworking capital of the world, and that is what he meant, that the employment-population ratio is so low.

The analysis should not be limited to the cities where the situation is so deplorable, that is, the Northeast cities. If you look at some of the Southern cities, Houston and Dallas, the situation is much better.

But you have also to look at the outer ring. You have to look at the situation in the metropolitan areas, particularly the suburban areas, and there the situation is much better.

So what you have here is a phenomenon where the employment problem is worse by far in the central cities.

Senator PROXMIRE. You refer to the outer ring. Is there a clear correlation in the looting, for example, in New York City with the level of unemployment in the area where the looting took place?

Mr. SHISKIN. Sir, I have no hard information about the relationship between looting and unemployment. But——

Senator PROXMIRE. Well, if anybody has the statistics, you have them. You are the No. 1 expert in the country on data and statistics, and you are the one who reported, as I say, on Monday on the level of unemployment among youths and young people in our 11 major cities.

Mr. SHISKIN. Well, I can give you some comparative figures on that, and that may be helpful.

Let me use in this context the employment-population ratio. You know, if you take a very broad view of the labor force, you can ask yourself the question, "How many people are working, what percentage of the people are working, and what percentage are dependent on the people who work?"

So you take the population ratio and the difference between that and 100, and you can see how many people are working and how many people in a sense are dependent on those workers.

If you look at the United States as a whole, and I am going to talk in response to your question, about the 16 to 19 year olds. The employment-population ratio for that group is 44.9 percent in the United States as a whole.

In New York City, it is 22 percent. It is just half.

Senator PROXMIRE. New York City is what percent?

Mr. SHISKIN. Twenty-two percent.

Senator PROXMIRE. Twenty-two percent of the 16 to 19 years olds are working in New York City compared to 44 percent in the country as a whole?

Mr. SHISKIN. Yes. Many of them, you know, are in school, and some of them are sick and disabled, some of them are in the armed forces, but we can use as a standard what is the situation for the United States as a whole.

Senator PROXMIRE. New York doesn't have the worst problem. The report I have here indicates the worst are Baltimore and Detroit. Washington is third, and New York is in there with Washington. New York is the biggest city of all, of course.

Mr. SHISKIN. The employment-population ratio for Baltimore is 23.5. The employment-population ratio for Washington, D.C., is 26.1.

If you look at the unemployment rates, they are very closely correlated. But, sir, let me just, if I may, add two more figures.

In New York City, Baltimore, and Washington, the ratio of employment—the number of teenagers working, that is—to the working-age population of teenagers is 25 percent or a little lower.

Now, in Dallas, it is 46 percent, and in Houston, it is 47 percent. So, this seems to be a phenomenon of the Northeastern cities, and perhaps Midwestern cities. Chicago is a little higher—33 percent. It is a very deplorable problem, and it is an unsolved problem so far.

Senator PROXMIRE. Senator Javits.

Senator JAVITS. No questions at this time, Mr. Chairman.

Senator PROXMIRE. I have a number of other questions that I would like to get into, and we can come back to this a little later.

Senator Javits, you just entered on cue. Your timing is the best of anybody I have seen. I just started talking about New York and in comes the distinguished Senator from New York.

But I would like to get into another area which I think is particularly appropriate this morning. As I said, Mr. Shiskin, you are going to be followed by a very distinguished economist, Professor Ruggles, and I have had the opportunity to read Professor Ruggles remarkable statement. I hope if you will forgive me if I go ahead and ask questions referring to that.

First, however, let me defer to Senator Javits, who may have questions on the employment situation, and then we will get into this other area.

Senator JAVITS. Thank you, Mr. Chairman. You are very gracious, and I shall be very brief.

I came here this morning, Mr. Shiskin, because I am so interested in your findings about this very matter that you are referring to now.

Do I understand that your figures differ from the newspaper figures, so that New York City really is the most disproportionate in terms of the proportion of youths which are employed to the youths which don't have regular jobs?

Mr. SHISKIN. If you look at the employment-population ratio for the 11 cities for which we published data, New York has the lowest ratio.

Senator JAVITS. Which is what?

Mr. SHISKIN. For 1976, the exact figure we got is 21.9.

Senator JAVITS. 21.9.

Mr. SHISKIN. Twenty-two percent, let's say, of the teenagers of New York were employed in 1976, and this compares with the national average just twice that, 44.9.

Senator JAVITS. Now, as the definition, Mr. Commissioner, relates to regular employment, so the young person who is delivering groceries from a store and gets $1 or $2 or $3 for every load he delivers——

Mr. SHISKIN. Oh, no. He is included. He is employed. We would count him as employed.

Senator JAVITS. Now, this also, does it not, include those who have simply given up looking for work?

Mr. SHISKIN. It does not include them.

Senator JAVITS. It does not include those who are discouraged. It is a true unemployment figure?

Mr. SHISKIN. There is a great debate about what is a true unemployment figure, and I hesitate to say. As you know, we publish several alternative definitions of unemployment. I can tell you what the official figure is.

Senator PROXMIRE. If the Senator would yield, it seems to me that when you said 22 percent, you were talking about those employed with respect to the total teenage population.

Mr. SHISKIN. I was.

Senator PROXMIRE. Then the discouraged workers would be part of the teenage population, aren't they?

Mr. SHISKIN. Yes, but they are not included in the 22 percent.

Senator PROXMIRE. But they are included in the 100 percent?

Mr. SHISKIN. Let's try to look at this in a different way. The unemployment rate for teenagers is 17.4 percent for the United States. It is 30 percent for New York. Now, the discouraged workers are not included in that 30 percent.

Senator PROXMIRE. All right. I am sorry.

Mr. SHISKIN. So, we have these two measures, and I have commented in recent months, in the past year, I found the employment-population ratio a very helpful supplementary measure to the unemployment rate, because it gives you this relationship. That is, how many people are working, and how many people are dependent on those who are working, in a very broad sense.

So, if I may just comment on the unemployment figures, particularly in connection with Senator Javits remarks, the teenage unemployment rate for New York is 30 percent.

The unemployment rate for Baltimore is 36 percent, and for Washington, 33 percent. So, the relationships aren't exactly the same as those shown by the employment-population ratio. If you look at one, you get a slightly different picture from what the other shows. But the one thing that is crystal clear is that the situation in the central cities is very bad.

Senator JAVITS. Is the same thing true in Baltimore and Philadelphia?

Mr. SHISKIN. Yes.

Philadelphia's employment-population ratio is 28 percent. Their unemployment rate also happens to be 27 percent, about the same. It is a somewhat smaller city and the sampling errors are higher. So all the big Northern cities, central cities, have very high unemployment rates, especially for teenagers, and they have very low employment-population ratios, especially for teenagers.

Senator JAVITS. Mr. Chairman, it is really a devastating figure, and explains a great deal. It also indicates where the principal effort needs to be.

The President this morning signed a youth employment bill, which will account for about 200,000 jobs, some in these major cities, but really that figure probably needs to be tripled, or quadrupled. I think we have not only a major economic, but a major social question in this country.

While you don't have bread lines, because we are a little more advanced than we were in the 1930's, we certainly have the same conditions, which are concentrated in several cities, but nonetheless the same conditions, and as usual I am deeply indebted to the Commissioner for bringing the facts out so vividly.

He has given us the first lead into action, which is an analysis of the situation. In other days the bringers of bad tidings were quite unpopular with those to whom they brought bad tidings. I think in this day and age we should be grateful to those who reveal our ills, so that we can really try to apply whatever surgery is needed to deal with them.

I think you have rendered all of us a great service by highlighting this very, very dreadful situation.

Mr. SHISKIN. Thank you, Senator Javits. I must say that I greatly appreciate the Joint Economic Committee's attitudes. It is clear to me from numerous actions and statements that they do not confuse the message with the messenger.

Senator JAVITS. I appreciate that very much, Mr. Commissioner. This is one of the great committees of the Congress, thanks to such Members as Senator Proxmire, Representative Bolling, who chairs it now, and Senator Humphrey, who has served it so gloriously in the past.

The other question I would like to ask you is this: Could we have a comparison respecting the number of jobs added in this period since the recovery began, whatever is the appropriate date in 1975, with the two preceding recoveries, in order to see whether the rate of job creation is, as claimed, really unusually high for this period?

Because there is something to be learned from success as well as something to be learned from failure.

Mr. SHISKIN. In other words, what you would like for us to do is provide a comparison of job creation during this expansion with previous periods of expansion?

Senator JAVITS. Two or three, just to give us an idea.

Mr. SHISKIN. We shall certainly do that. It is not very difficult, and I can tell you that the record in this expansion is exceptionally good in terms of job creation.

The figure I cited earlier, and you may not have yet arrived, was that the 1958 expansion, the best we were able to do—and let me interrupt myself to say that the expansion which began in this country in 1958 followed a very sharp recession, and roughly similar to what we had in 1973 and 1974, though not quite so deep.

Now, the best we were able to do, then, was to bring employment up to 2.7 percent above the previous peak level.

If you think of the previous business cycle, or peak, we were 2.7 percent higher than our best point in the 1958 expansion. Today, we are 5 percent above.

Senator JAVITS. So we have done twice as well in job creation?

Mr. SHISKIN. In that sense. We have done much better at job creation in that matter.

I will provide more data for the record.

[The information referred to follows:]

COMPARISON OF TOTAL CIVILIAN EMPLOYMENT DURING THE CURRENT BUSINESS CYCLE EXPANSION WITH PREVIOUS POST-WORLD WAR II EXPANSIONS: 28 MOS AFTER SPECIFIC TROUGH, 1948-77

[Numbers in thousands]

Specific peaks and troughs						
Prior peak (date and number)	Trough (date and number)	Trough plus 28 mos. (date and number)	Increase[1]	Average monthly[3]	Percent[2]	Percent[3]
(1)	(2)	(3)	(4)	(5)	(6)	(7)
July 1948 (58,968)	June 1949 (57,172)	October 1951 (60,010)	+2,838	+101	+5.0	+1.8
March 1953 (62,010)	July 1954 (59,643)	November 1956 (63,796)	+4,153	+148	+7.0	+2.9
July 1957 (64,540)	April 1958 (62,631)	August 1960 (65,895)	+3,264	+117	+5.2	+2.1
September 1960 (66,267)	April 1961 (65,374)	August 1963 (67,908)	+2,534	+91	+3.9	+2.5
April 1970 (78,894)	March 1971 (78,346)	July 1973 (84,567)	+6,221	+222	+7.9	+7.2
July 1974 (86,213)	March 1975 (84,243)	July 1977 (90,561)	+6,318	+226	+7.5	+5.0

[1] From prior trough.
[2] Increase from prior trough.
[3] Increase from prior peak.

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

Senator JAVITS. Will you do the same thing with the unemployment record? Because I think there the figures might show we have done twice as bad.

Mr. SHISKIN. Perhaps I can give you the 1958 figures. After the 1957–58 recession the unemployment rate declined 36 percent from

July 1958 to February 1960. In this recovery, it has declined 19 percent.

Furthermore, the peak rate in 1958 was lower than it was this time.

Senator JAVITS. It seems to me, Mr. Commissioner, that you put your finger right there on the paradox of the modern economy, and if we can't deal with it, then we have a grave failure of brains and initiative on how to handle the public business in this country, but it seems to me that this is what afflicts our Nation, and there is no reason why it should. It is a challenge to us. If we don't meet that challenge, we are very gravely at fault.

I thank you very much.

I ask unanimous consent, Mr. Chairman, that that table may be made part of the record. And may I make, also, the request, Mr. Chairman, that when that table is received, that it be publicly released?

Senator PROXMIRE. Yes, indeed. There is no objection.

[The information referred to follows:]

COMPARISON OF TOTAL CIVILIAN UNEMPLOYMENT DURING THE CURRENT BUSINESS CYCLE EXPANSION WITH PREVIOUS POST-WORLD WAR II EXPANSIONS: 26 MOS AFTER SPECIFIC PEAK, 1948–77

[Numbers in thousands]

Specific peaks and troughs						
Prior trough (date and number)	Peak (date and number)	Peak plus 26 mos (date and number)	Decrease[1]	Average monthly[2]	Percent[3]	Percent[3]
(1)	(2)	(3)	(4)	(5)	(6)	(7)
January 1948 (2,034)	October 1949 (4,916)	December 1951 (1,960)	−2,956	−114	−60.1	−3.6
May 1953 (1,596)	September 1954 (3,927)	November 1956 (2,861)	−1,066	−41	−27.1	+79.3
March 1957 (2,509)	July 1958 (5,079)	September 1960 (3,884)	−1,195	−46	−23.5	+54.8
February 1960 (3,329)	May 1961 (5,003)	July 1963 (4,051)	−952	−37	−19.0	+21.7
December 1968 (2,685)	November 1971 (5,141)	January 1974 (4,519)	−622	−24	−12.1	+68.3
October 1973 (4,163)	May 1975 (8,314)	July 1977 (6,744)	−1,570	−60	−18.9	+62.0

[1] From prior peak.
[2] Decrease from prior peak.
[3] Change from prior trough.

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

Senator PROXMIRE. Let me follow up on what Senator Javits has been asking about.

During the month of July the number of teenagers in the labor force fell by over 300,000. The unemployment rate for all teenagers fell from 18.6 to 17.4 percent. But the unemployment among black teenagers rose from 39 to 44 percent. How do you explain that shift? Why do you have a drop in overall employment for teenagers, but an increase in black teenage unemployment? Why should you have that?

Mr. SHISKIN. First let me say that your description is quite correct, that the situation has improved for white teenagers, but not for black teenagers.

Senator PROXMIRE. It has gotten worse for black teenagers.

Mr. SHISKIN. As I said in my statement, the situation for all blacks appears to be getting somewhat worse.

How to explain it? Maybe the explanation is that so many blacks today live in the central cities, which are in such a deplorable situation.

Senator JAVITS. And that they are also generally new job entrants, the most unskilled, and in addition they are still suffering, and heaven

knows how we can ever justify that, from prejudice, and the combination is obviously devastating.

Doesn't it indicate to you, Mr. Chairman—and I will ask the witness—that Government programs are really needed, because that is what brings these new entrants into the work force, where they don't have to undergo the tough competition with other unemployed?

After all, there are also white unemployed double the normal rate, that is, around 17 percent.

Senator PROXMIRE. I will be happy to try to get into this.

You refer to prejudice. Obviously that is an element here. There is prejudice against minorities and blacks, and as you point out, Mr. Commissioner, these groups are concentrated in our inner cities where employment is hard to get.

What is appalling to me is that in the last 20 years since I have been in the Senate, we have passed a whole series of civil rights bills, including the fair employment practices bill, including improvements in education. All these measures we have acted on were supposed to have been far reaching, and have been hailed everywhere, and yet we have a situation where for two decades the unemployment rate for black teenagers has been increasing. It must be close to a record high of 40 percent now.

I think Senator Javits is right in saying we need more specific programs for minority teenagers, but why has what we have had so far failed so dismally to provide jobs? It obviously hasn't made the situation better, it hasn't improved the situation.

Mr. SHISKIN. Let me say this, without going into past history. I work closely with Secretary Marshall. He is fully aware of this situation. In fact, he was the first high official to see these tables other than the BLS staff. I distributed them at a staff meeting about the time we released them and he has called several times to get copies of the tables, which he has been using in speeches.

He is fully aware of this.

I think you should also bear in mind, and now I am talking for Secretary Marshall, not myself, in a sense, that the program the Secretary has proposed, calls for at the present time, 1.4 million public service jobs. The figure you cited of a few hundred thousand is just the first step. He is fully aware of this. So is the leadership in the Department today. I talked to Ernie Green, who is head of our Employment Training Administration, and he was very much impressed with the availability of the city data, which he had never had before in this detail, and he told me that he was directing his program to the central cities.

So what I am saying is that there is an awareness of the situation in the top management in the Labor Department.

Senator PROXMIRE. Can you give us a summary of how young people have fared this summer as compared to previous summers?

Has the entry in the labor force of young people been as rapid as you would have liked?

Mr. SHISKIN. I will ask Mr. Stein to comment on that.

Mr. STEIN. I think their entry has been fairly similar to previous years, except for the problem we had in June of trying to assess the seasonal movements between May and June and then June and July, but overall it has been pretty much what we expected.

Senator PROXMIRE. Then could I ask, can you see any long-term trend for young workers in the labor force? It has been getting worse for black teenagers, and still is outrageously bad for teenagers generally; 17 or 18 percent should be unacceptable. Do you see any abatement in what has been the generally high level of unemployment of young people? Is this something we can achieve without the new kind of policies that Senator Javits has been calling for?

Mr. STEIN. Over the course of the next several years we would expect some slowdown in the labor force growth of teenagers.

Senator PROXMIRE. Because of demographic factors?

Mr. STEIN. That is right.

Senator PROXMIRE. There will be fewer teenagers in the population?

Mr. STEIN. Yes. By 1980 the numbers will probably level off, and this might make it a little easier to absorb a higher proportion. That, probably, by itself wouldn't change the situation that drastically.

Senator PROXMIRE. In other words, we do need additional policies to provide jobs for young people if we are going to solve this problem. Otherwise, it is going to aggravate us, and we are going to continue to have rising crime rates and all the problems that relate to it.

Yesterday President Carter announced the broad outlines of a new policy toward illegal aliens. Under the Carter plan, illegal aliens entering the United States will be granted permanent status, and be permitted to move toward full citizenship. Those who came to America after 1970 will be granted temporary work permits for 5 years.

Can you give us any idea, Mr. Shiskin, of how President Carter's proposal may affect the size of the civilian labor force and the rate of employment and unemployment? It is a big factor. How many are there, 6 million, or 8 million?

Mr. SHISKIN. It is anybody's guess.

Senator PROXMIRE. There are millions, we know that, right? Or don't we?

Mr. SHISKIN. We have looked very carefully at the figures on the labor force for the Southwest, for example, and California, and the Northeast, where the illegal aliens are supposed to be coming in.

We can't see a big jump anywhere. There are guesses of between 6 and 12 million. We have no separate guesses. When we take a survey, we don't ask people the question whether they are illegal aliens.

Senator PROXMIRE. Where do these figures come from? A responsible publication, U.S. News & World Report, has an estimate of 6 million. If anybody is an expert in this area, you are.

Mr. SHISKIN. Not in this area. We just ask people if they are working or not working.

Senator PROXMIRE. Who can you go to for accurate information on this? You certainly are the expert in the area of unemployment.

Mr. SHISKIN. Right.

Senator PROXMIRE. Employment, including minority unemployment. Does anybody keep statistics on this, or is it possible to keep them?

Mr. SHISKIN. Well, it is difficult, I would say, because, you know, we have a tradition in the United States of collecting data on a voluntary basis. We go into a household and we think that, if we were to ask any questions about citizenship or how people got into the country or whether they were making their money illegally, we wouldn't get

any reply at all. So we very carefully avoid questions like that. This is an area where we can't be helpful, sir.

Senator PROXMIRE. Have you any notion how we can develop accurate statistics so we can develop policies to meet this problem and know how to react to President Carter's proposal? We are going to be faced with a challenge of modifying, amending, or defeating, or ratifying and passing his proposal.

Mr. SHISKIN. I certainly can't this morning. We can give it some thought, and may have useful suggestions. This is a very difficult area to collect statistics in, especially on a voluntary basis. I am not optimistic about anyone's ability to collect reliable data.

The figures I have heard range from 6 to 12 million. If I had to turn out a figure like that on unemployment, I would be routed out of this room.

Senator PROXMIRE. This is the first Friday in August. Maybe by the first Friday in September you can give us at least an understanding of what we have to do to get these statistics.

Mr. SHISKIN. Yes, we will give it some thought.

Senator PROXMIRE. One of the most controversial proposals to come out of any administration in the last 20 years is the notion that we might increase the retirement age for people on social security from 65 to 68, and I can tell you that got quite a reaction in my State. I am sure it did all over the country. Can you give us a notion of what effect that might have on employment and unemployment if we increase the age of retirement under social security from 65 to 68?

Mr. SHISKIN. At the present time, we count anyone 16 and over, who is not working, as employed, not working and looking for work.

Senator PROXMIRE. My point, of course, is that people who now retire on social security, and who are then not in the labor force, are not considered unemployed, is that right?

Mr. SHISKIN. Right.

Senator PROXMIRE. If those people were not on social security, they would have to be working or looking for a job.

Mr. SHISKIN. I am sorry to say, again, that I can't be helpful on this question this morning, but we can give that thought and may come up with useful comments.

It is an analytical job, and I might say as a preface to what I am sure will take place in the next hour, that we should encourage analytical studies on this.

Senator PROXMIRE. We would like to have as much as you can give us on that, too.

Throughout the recovery, the participation rate for adult women has continued to rise. It is now almost 2 percent above the level of July 1976. Do you expect women's participation to continue to rise?

Mr. SHISKIN. Yes, I do.

Senator PROXMIRE. What effect do you think that will have on employment and unemployment figures?

Mr. SHISKIN. Hopefully, it will raise the employment figures. I think it is a good thing that many women are coming into the market, though one of the impacts will be that it will raise the employment figures. However, the total GNP will also be raised. The effect should raise total employment. I think that will be one effect.

I think it will also raise unemployment, or will tend to raise it. The reason is that the path toward employment is usually as follows: People are not in the labor force. Then, they enter the labor force as unemployed, and then they become employed.

When you have a lot more people entering the labor force, the unemployment rate tends to be higher.

Some people have put this in terms that I don't like as much; namely, what they say is that women have higher unemployment rates than men, but I think a better way to look at that is that, when you have a large surge of any group into the labor force, their unemployment rate is bound to be higher.

Senator PROXMIRE. Isn't it possible that, if the Carter program works, if we can stem the inflow of illegal aliens, keep them out, that might help reduce the unemployment rate and make it more possible for women entering the labor force to get jobs?

Mr. SHISKIN. It is possible, but I don't know. There are many different arguments on that. In the early part of this century, we are having millions of immigrants and employment was rising all the time.

Senator PROXMIRE. Now, let me ask you questions about the Wholesale Price Index.

Mr. SHISKIN. Do you want to have Mr. Ruggles here?

Senator PROXMIRE. I would like both of you to respond to this.

Mr. Ruggles points out that the major deficiencies in the Wholesale Price Index are as follows: No. 1, the weighting system used; No. 2, the scope and coverage of wholesale price data; No. 3, the classification system on which the Wholesale Price Index is based; and, No. 4, the nature of change in the prices obtained from producers.

I want to ask Mr. Shiskin for his reactions before he leaves.

Mr. Ruggles says:

> That what is called wholesale prices actually is confined to industrial sector prices, and steps should be taken to develop new sets of price data for other sectors of the economy. Even within the industrial sector, wholesale price data now collected cover adequately only 25 percent of the 4-digit SIC industries, accounting for somewhat under half of the production in mining and manufacturing.

The impression is that the index covers virtually all our mining and manufacturing, but Ruggles shows that it does not.

Second, he says that, "In some instances, whole price data fail to capture true changes in transaction prices."

The index does not capture actual changes in discounts or rebates offered. The published wholesale price, in other words, may be one thing, and the prices charged, particularly in a recession, may be lower, and therefore the transaction prices may be lower.

Professor Ruggles also states that:

> Quality improvements which do not cause equivalent cost increases are not taken into account. Similarly, new products are not introduced into the price index in such a way that they are linked to the products which they are replacing, and therefore the effect of product improvement due to the introduction of new products is excluded.

This has a tendency to exaggerate the rise in the wholesale prices.

He says that at present, order and shipment prices are intermingled in the Wholesale Price Index. Current order prices are clearly not suit-

able for evaluating current shipments if an appreciable order-to-shipment lag exists.

In addition to these problems, Ruggles suggests that the entire Wholesale Price Index suffers from conceptual obsolescence. It remains a general price index developed without references to other economic data.

Ruggles emphasizes the importance of combining data gathering and reporting with interpretation and analysis. He says:

> In the field of price statistics, the lack of adequate analysis has had serious effects in limiting our understanding of what has been happening in the economy. Although careful analysis of specific sectors and industries could have made it possible to distinguish the effects of demand pressures on prices from cost pressures, such analyses were not done, except by private researchers.

He points out that the notion that we had for a long time of the offset between inflation and unemployment; that is, that the way to ease inflation is to slow down the expansion a little bit and let unemployment rise, and then the pressure on prices might not be as much, can well be misleading without adequate price statistics.

In other words, we have the problem that the Phillips curve analysis which underlies much of the policy designed to contain inflation, is not backed up by the kind of price, wage, and employment data that are needed to test this hypothesis.

In short, the statistical agencies have been seriously delinquent in providing decisionmakers with information which is directly relevant to the central questions of economic policy.

As a result Professor Ruggles says that he is convinced that publication of the Wholesale Price Index in its deficient state, unaccompanied by any analysis of price behavior, has been extremely costly in terms of its encouragement of misguided economic policy. Such policy, pursued in 1974, has resulted in massive unemployment, substantial loss in output, slower long-term growth, and intensified inflationary pressures.

Professor Ruggles said that:

> An analysis of the wholesale price index would have clearly pointed out that the price increases, in 1974, were primarily due to rises in the prices of oil and agricultural products on the world market, neither of which could be brought down by restrictive domestic monetary and fiscal policy.

This is a very serious indictment, and it is one, it seems to me, that you as the principal statistical official of the country should be challenged to answer.

Mr. SHISKIN. OK.

First, let me say that we are fully aware of the limitations of the Wholesale Price Index.

In fact, until Mr. Ruggles' report came out, I used to say that the best criticism of the WPI appeared in our budget requests. You can find almost all these points, though we don't have this kind of evaluation, in the budget statements for the past few years.

For the first part of the 1970's the BLS price staff has been concentrating on improving the CPI.

Fortunately, in a short period of time, early next year, we will have a new CPI, which will be one of the best indexes in the world, if not the very best.

We also at the same time have developed a plan for providing the users with a similar high-quality index of wholesale prices. That plan

has now been laid out and covers a long period of time. By and large, it is very consistent with Mr. Ruggles' proposals. He worked very closely with us when he was writing that report, and there was general agreement between us. In time, with budget authority, we will produce a WPI of good quality which will not be subject to the criticisms you just described. That will be in 4 or 5 years.

In the meantime, however, I want to call to your attention and everybody else's that we have been publishing for many years a very good index of what you might call for a moment, "wholesale prices," and that is the index of the price of finished goods. We publish an index of the price of finished goods every month in our release. We have a breakdown on that, including producers and consumer finished goods. We also show similar indexes for intermediate materials and raw materials.

Those indexes are all unduplicated indexes, and, while they have limitations of their own in terms of the quality of the data and the size of the sample, they do not suffer from the——

Senator PROXMIRE. If I could interrupt.

Mr. SHISKIN. If I could, I would first like to add only one remark. A few years ago, we added to our release a text table which shows the finished goods index along with others, along with the components.

Starting in another month or two, probably in September, we are going to try to emphasize even more the finished goods index. So, in summary, we are very well aware of Professor Ruggles' criticisms. We agree with them by and large. We have a long-term plan which I think will solve all or most of the problems that the criticisms are directed to, and we have a short-term plan which will at least deemphasize the WPI as it is published today.

Senator PROXMIRE. That is a very comforting and helpful reponse. At the same time, I am just wondering if, in view of the deficiencies that you agree appear in the Wholesale Price Index, whether we should continue publishing it.

Wouldn't it be wise—well, you say we have a Consumer Price Index coming on soon which will be the best, you think, anywhere. We have a GNP deflator. I don't know the quality of that. I haven't heard an analysis of that.

The Wholesale Price Index, if it is as bad and deceptive and mischievous in its effect on stabilization policy, it seems to me we would be wiser to drop it.

Mr. SHISKIN. That may be true. There are two points of view that I have been hearing in discussions of that very question. Bear in mind we do have a very good unduplicated index, the index of finished goods prices.

Senator PROXMIRE. The index of finished goods prices. Will you take a minute to explain how that is different in concept from the Wholesale Price Index? How comprehensive is that, in the first place? What does it include, and what does it exclude?

Obviously it excludes what is in the Consumer Price Index. It excludes services; right?

Mr. SHISKIN. It excludes services, but what it includes is the prices of finished goods produced in the mining, manufacturing, and agriculture industries.

But these are just finished goods. Now, we have been publishing this index all along. What it shows is a much slower rate of increase during periods of rapid inflation, and, of course, a slower rate of decline during periods when the rate of increase is slowing down.

We have been publishing that index, but haven't been able to bring it to people's attention adequately.

The official WPI, on the other hand, includes prices at different stages of production, so it includes raw goods prices, up to finished goods prices. When they all move together, there is no problem. But sometimes they don't all move together. So when you get rapid rises in some parts, more rapid than in others, you tend to exaggerate the total increase.

We are well aware of that, and as I started to say, we have been considering two strategies, or maybe three strategies.

One of them is to very quickly eliminate the WPI official index and substitute for it the finished goods index and its components.

Now, there is a problem with that, which is that the public is not only very familiar with the WPI, but it is very widely used in escalation.

Senator PROXMIRE. I think as Mr. Ruggles said, historical review is most helpful. He points out the WPI goes back to 1890. It is our oldest price index. To abandon it requires a decision by the President of the United States, himself. But, as I say, if it is misleading us; if we are following the wrong kinds of economic policies; if we have very heavy unemployment because of it; perhaps we ought to drop it now. Maybe that dramatic step would call attention to the past mistakes we have made and help us to correct our policies.

Mr. SHISKIN. That is one option we are considering.

The second option is to phase it out.

That is, as this program we have for improving the data, so that we can come up with an unduplicated index, develops, we can emphasize more the new components of the index and again the finished goods prices index, so that we can slowly phase out the WPI.

The third option that we have thought about is, in the next 6 to 9 months, let's say, to make a crash effort to come out with an index that is analogous in coverage to the WPI, but doesn't have the duplication. We refer to that as a net output price index.

So these options are under very active consideration, and we have had extensive discussions with Professor Ruggles, and we have had extensive discussions with the top economists in the Federal Government.

Senator PROXMIRE. One more question on this.

Mr. SHISKIN. It is not something we are not aware of and aren't giving a great deal of attention to.

Senator PROXMIRE. Could you make this crash change in the next 6 to 9 months without additional appropriations?

Mr. SHISKIN. My experience is that my staff tells me we can't do anything without additional appropriations, so let my staff answer that.

Senator PROXMIRE. Mr. Layng.

Mr. LAYNG. I don't think it is necessarily a money problem. It is a people problem. It is finding the trained people who can do that kind of work in that kind of time frame, recognizing that we would have

to continue publication of the Wholesale Price Index during that period, and a substantial amount of our resources do go into that effort. So I don't think it is a large expenditure of funds, but it is a question of a limited number of qualified people who can do that kind of work quickly.

Senator PROXMIRE. Mr. Shiskin, we were delighted to have you, and we would be happy to have you stay.

Mr. SHISKIN. I would like to stay.

Senator PROXMIRE. Mr. Ruggles, I apologize for kind of scooping you, but I couldn't resist it. We had Mr. Shiskin here, and I thought we ought to challenge him, and I think he made a helpful and constructive response.

We would like you to take over. Go ahead.

STATEMENT OF RICHARD RUGGLES, PROFESSOR OF ECONOMICS, YALE UNIVERSITY

Mr. RUGGLES. First, I want to make it clear that the statement I am presenting is not the same as the review and evaluation which was done for the Council on Wage and Price Stability, and in fairness to Mr. Shiskin, I think it should be pointed out that many of the things I am about to say derive more from asking what difference it makes that the WPI has had the characteristics that it has had. These are not matters that were in the report. They are my own views, not technical criticisms.

As Mr. Shiskin indicated, my technical criticisms have been discussed with the BLS, and I think we are in general agreement on them. I don't think Mr. Shiskin is to blame at all for the present state of affairs. It is quite like the story told by President Carter about a drunk who, when he was arrested for setting fire to his bed, admitted that he was drunk, but claimed that the bed was on fire when he got into it. And I am sure the wholesale price was on fire.

Mr. SHISKIN. I don't admit anything like that. [Laughter.]

Mr. RUGGLES. Would you wish me to present my statement, or should I just answer questions?

Senator PROXMIRE. Why don't you present your statement. I have read a few parts of it, but I think it is an excellent statement. We will print it in full in the record.

If you would like to summarize it, you may.

Mr. RUGGLES. The Wholesale Price Index is one of the oldest statistical series published by the Federal Government. It was authorized by the Senate Finance Committee in an attempt to get some measure of how foreign trade prices were affecting the domestic economy; and I think it is interesting to note that this question has never been answered, which is, indeed, unfortunate.

Senator PROXMIRE. That is one of the questions I had that the staff had prepared for me to ask Mr. Shiskin, but I figured that there was no way that he could give us an answer to that. Maybe there is, and if he would like to later on, perhaps he can. It is interesting that that goes way back to 1890.

Mr. RUGGLES. That is right. Originally, as you pointed out, the WPI included only about 200 commodities, and their prices were simply averaged on the ground that this would reflect the price level. In the

early years of the index's existence the Fisher theory of money was popular and this entailed a concept of the price level around which all prices in economy revolved. It was believed that any sample of prices would show what the change in the price level was.

Over time, the WPI did evolve. A weighting system was introduced around World War I, and the number of commodities was gradually increased so that today there are approximately 2,700 commodities and 9,000 observations. But it is still true that the concept of the Wholesale Price Index is true to its origins, and to what it was around World War I some 60 years ago.

In 1961, the Stigler committee reported to this Joint Committee on its review of price statistics. That committee made specific recommendations. I was on that committee, and the suggestions made at that time regarding the WPI never were adopted. Many of the suggestions are the same suggestions that BLS is now considering putting into effect, some 15 years later.

I think it would be a mistake to abandon the Wholesale Price Index. As Mr. Shiskin has indicated, this index is widely used. Incidentally, the GNP implicit deflator is based on it and so are most other measures of real output. It is the only game in town and everybody relies on the wholesale price data.

Senator PROXMIRE. It is not quite the "only game in town." You have the Consumer——

Mr. RUGGLES. But if you want to refer to whole sectors of the economy where you want to measure real output——

Senator PROXMIRE. Mr. Ruggles, if we are getting misinformation from it, as you allege so strongly as you go along, and if we follow mischievous policies that slow growth and increase unemployment, it seems to me we might be better off without it.

Mr. RUGGLES. Abolishing information dosen't necessarily solve your problems.

Senator PROXMIRE. I am not saying "abolish information," but to go to other information which we know is more accurate and more reliable.

Mr. RUGGLES. Yes; I think there is something to be said for that, and I would like to see a conversion to a net output-weighted index as soon as possible. I think this would be useful, because I think it would reduce the noise in the system.

Let me go through some of the deficiencies that I did note in my report to the Council on Wage and Price Stability. The system of weighting which we have been discussing was one of the central ones.

Because the value of shipments is used as the basis for weighing, it does mean that those commodities that are sold after some processing and then sold again after more processing are counted in the index much more heavily than they should be. This means that crude materials, agricultural products and so on, are unduly weighted.

Now, what really should be done is that in order to construct appropriate indexes for different levels of aggregation—such as the product or the product class, the 4-digit industry and the 2-digit industry—a system of weights should be developed based on sales outside the grouping for which the index is being compiled.

I don't think that this is a very difficult process. It is hard to get this information, but even an approximation of it, I think, would be

far better than the present system. With a well-constructed set of wholesale price information, or I would prefer to call it "industrial sector price information," we would be in a much better position to analyze the degree to which a given industry is absorbing, passing along, or initiating price changes, and I think this is crucial to the analysis of inflation.

The scope of the Wholesale Price Index, I have also suggested, has been somewhat inadequate. The index, even by BLS's own definition, covers only those commodities sold in commercial transactions in the primary markets of the United States, and in practice this is limited to agriculture, mining and manufacturing. The agricultural prices are supplied by the Department of Agriculture for the most part, so that really what BLS collects are the commodities in mining and manufacturing. Within this area they report only 25 percent of the SIC industries, but since these industries are the more important ones, they account for about half the output of mining and manufacturing. However, that means about half the output of mining and manufacturing is not really covered at all.

Now, in terms of the actual prices collected, BLS uses what is euphemistically referred to as "judgmental data collection," which means that they do not do systematic probability sampling, and this prevents the estimation of sampling errors. It reduces the efficiency of the collection effort and results in coverage which is often uneven, redundant or inadequate.

As a matter of fact, one of the difficulties I had in determining the reliability of the index was the fact there was no sampling basis and it was not really possible to make tests. BLS has indicated that they are launching a program of probability sampling. They do face the difficulty of getting an adequate sample frame, and I think for this they will have to get the cooperation of other statistical agencies.

I also think, and this is a point on which BLS may not fully agree, that there are many different needs for price information, some monthly, some quarterly, and some annual, and that different kinds of price data are needed for different purposes. For example, the annual data very often are used for analysis of productivity, which is difficult to do on a quarterly or monthly basis. Since different kinds of price information are needed for different purposes, I feel a strategy of collecting price data needs to be designed.

The classification system which the WPI uses is unique. Again, they are not really to be blamed for this, because the index is so old. They started trying to work out detailed price specifications before the SIC code was available. It is very difficult to make transformations between the BLS 8-digit code and the 7-digit Standard Industrial Classification which all the other Government agencies use.

This means that it is very difficult to relate the wholesale price data and other related data. Again, BLS is aware of this, and I think this is one of the things that they are expecting to change.

Ideally, what one would like to have are the prices at which transactions are taking place. This is a very difficult thing to measure, and BLS is not to be faulted for having difficulty with it. In many cases there is no satisfactory solution, but it does seem to me that greater effort can be made to develop alternative measures, to do research and development in this area as to what differences alternative procedures make.

This is also true with quality change and the introduction of new products. The errors here, especially over long periods of time, may be very large indeed. Robert Gordon, who has been doing a study at the National Bureau on this, estimates that the differences in price measurement may be as much as 3 percent a year between the current measure and a measure which would take quality change and new products fully into account.

Senator PROXMIRE. So instead of the 7-percent inflation rate, we might have a 4 percent?

Mr. RUGGLES. That is correct or, more bluntly, over the period from 1947 to 1967, when the Wholesale Price Index was reporting price increases, there was, in fact, a very substantial price decline.

Senator PROXMIRE. A price decline?

Mr. RUGGLES. Yes.

Senator PROXMIRE. When was this?

Mr. RUGGLES. Over the 20-year period 1947 to 1967.

Senator PROXMIRE. That is certainly interesting. The prices went down and we didn't know it?

Mr. RUGGLES. That is correct. That is at least Gordon's conclusion, though other people take issue with that. My own feeling is that this question is so highly subjective that it would not be too difficult to make estimates that were even more extreme than Gordon's.

Senator PROXMIRE. Let me interrupt to ask for an example of that. Would you say an example might be in the improvement in television, an improvement in automobiles?

Mr. RUGGLES. And in the use of printed circuits to produce calculators. These would be brought in as a new product, and no price change would be recorded despite the fact that a $10 electronic calculator might be replacing a $300 mechanical calculator.

Senator PROXMIRE. But how could this be big enough? Not many bought calculators.

Mr. RUGGLES. But it refers to lots of things, to things like tires, to fabrics, and it is widespread throughout the economy wherever new products and quality changes come into being.

Senator PROXMIRE. The service where you buy foods ready to prepare?

Mr. RUGGLES. That is another thing, substitution of new products for previous techniques or processes are an important dimension of quality change. But you did mention this problem of order and shipment prices. This was, in fact, somewhat of a shock to me, and I think to the Bureau of Labor Statistics themselves, when we drew a sample and we found that, in fact, different price reporters were giving quite different kinds of prices. Some of them were giving the figure at which they had been making current shipments of goods that had been ordered in the past, and the others were giving prices on goods ordered new for shipment in the future. Where the order to shipment timelag is zero, obviously these two prices coincide, but in many areas there might be as much as a year between the order and the shipment, so that, in fact, two prices currently being reported might refer to periods as much as a year apart, and when this information is pooled, the exact timing of the price measurement is highly ambiguous.

I think, though, the thing that disturbs me most is perhaps something that did not come out fully in the report, and that is the con-

ceptual obsolescence of the Wholesale Price Index. It is still really drawn up as if it measured the price level of the economy, and is developed independently of other price information.

Now, since the origin of the Wholesale Price Index other price measurements have been developed, such as the Consumer Price Index; import-export prices, and, of course, the GNP deflator. But unfortunately there is no system of prices in which the various kinds of price measurements are fitted together and can be related to each other and reconciled. Rather, each set of price indexes has been developed independently.

I know that it is very often said that changes in the Wholesale Price Index are likely to be reflected in changes in consumer prices in subsequent periods, but BLS has not in fact systematically related the prices collected at the wholesale price level to the consumer price data, nor the import and export price indexes to either the wholesale price data or consumer price data.

In analytic terms, the objective of price measurement should be to partition the changes in current transaction values into their price and quantity components. Consistent price and quantity measures would require that the change in price and the change in quantity taken together should fully explain the change in current values, but when price measurements are developed without reference to either value or quantity data, no such consistency is assured, and serious errors in measurement can occur.

Perhaps equally as serious as the separation of price, quantity and value data is the development of price data independently from other economic data which are directly relevant to an understanding of price behavior. Data on new orders, inventories, employment, wages are all needed to understand the causes of price changes and assess their impact on the economy. Unfortunately, the method of collecting price data, the methods now used, make it almost impossible to obtain any insight into the relationship among prices, wages, output and employment. The compilation of aggregate price data separately from other economic data, using different producers operating under different conditions in different parts of the country, destroys the very information that is required for such analysis. These separate collection efforts by different statistical agencies for related economic data not only destroy the comparability and usefulness of the data collected but also add to the reporting burden on the private sector and to the load on the data processing resources of the Federal statistical agency. Thus the poorly coordinated, duplicative, and haphazard nature of Federal statistical activities results in poor data obtained at high cost.

One of the central problems of Federal statistical activities has been the lack of sufficient analysis and evaluation. Raw data are not information. Careful analysis and evaluation are required to make data relevant to policy decisionmaking.

The lack of analysis has often been defended on the ground that analysis could be politically motivated, and that in order to assure confidence in the integrity of the system, analysis should be separated from collection. But the real problem may be that there has been too much misplaced confidence and not enough questioning of the data published.

The agencies collecting and processing the original data should have the responsibility for analyzing it, since they originate the basic data, are most familiar with it, and are in the best position to process and analyze it. Thoughtful analysis in conjunction with research and development on the data base itself is the best way of improving the quality and usefulness of the information generated.

But analysis at the collection point is not sufficient. The collection agency has an obligation to provide the data in such a manner that independent analysis can be carried out both by other government agencies and by private business, academic and research groups outside of the Government. It is only through the possibility of alternative analyses that the integrity of Federal statistics can be assured. Absence of analysis by a collection agency is not a good insurance of integrity.

In the field of price statistics, the lack of adequate analysis has had serious effects in limiting our understanding of what has been happening in the economy. Although careful analysis of specific sectors and industries could have made it possible to distinguish the effects of demand pressures on prices from cost pressures, such analyses were not done except by private researchers. Nor has the wage-price spiral been adequately examined. It is quite apparent that rising prices do affect wages and, conversely, rising wage costs are often passed along as price increases. But relevant information has not been brought to bear on this question.

Similarly, the tradeoff between the effects of unemployment and wage increases on prices has not been assessed in quantitative terms. The Phillips curve analysis underlies much of policy designed to contain inflation, but the kind of price, wage and employment data required to test this hypothesis has not been developed. In short, the statistical agencies have been seriously delinquent in providing decisionmakers with information which is directly relevant to the central questions of economic policy.

It may be argued that true answers to questions involving price measurement are not possible, and that the statistical agencies should be responsible for reporting only the facts. The history of the past decade suggests that such a view is a gross simplification of the situation, and is primarily to be interpreted as an excuse for not providing the kind of information which is required.

I am convinced that publication of the Wholesale Price Index in its deficient state, unaccompanied by any analysis of price behavior, has been extremely costly in terms of its encouragement of misguided economic policy, which in turn has resulted in massive unemployment, substantial loss in output, slow long-term growth, and intensified inflationary pressures. The double-digit rise of the Wholesale Price Index in 1973 and 1974 was taken as evidence of an economy-wide inflationary process which required strict monetary controls and cutbacks of Government spending. Although a number of reasons were put forth for the price inflation, including the Vietnam war expenditures 7 or 8 years earlier, excessive Federal expenditures and the Federal deficit, none of these were, in fact, significant factors. The recession of 1970 had already intervened since the peak Vietnam war expenditures. Federal expenditures had been declining in real terms since 1969. And the Federal budget was in balance at the end of 1973. The deficits did not

become significant until the recession of 1975 caused a serious decline in Government receipts.

An analysis of the Wholesale Price Index would have clearly pointed out that the price increases were primarily due to rises in the prices of oil and agricultural products on the world market, neither of which could be brought down by restrictive domestic monetary and fiscal policy. At the time Charles Schultze and William Nordhaus, both of whom are now on the Council of Economic Advisers, independently made such analyses of the price behavior of the economy. But the official Wholesale Price Index, which gave undue weight to both agricultural products and oil, was used as an indicator of inflation around which traditional anti-inflationary forces rallied. As a consequence, what were intended as anti-inflation measures operated instead to restrict output and employment, resulting in the sharpest recession since the Great Depression of the 1930's.

Slowing down the economy, furthermore, prevented the normal increase in productivity from taking place; that productivity increase, if it had taken place, could have ameliorated the effects of external price increases. Instead, declining productivity exacerbated the increase in costs and prices. In terms of long-run economic growth, the emergence of excess capacity and the low levels of profits combined to reduce capital formation, thus reducing potential future growth.

In summary, Federal statistical agencies should be expected to provide relevant and valid information. Publication of large masses of conceptually inadequate, confusing, and irrelevant data should not be tolerated. To the casual observer, such a situation may appear to constitute an information overload, but to those responsible for making decisions in both the legislative and executive branches of the Government, the lack of consistent, coherent, and relevant information may be a serious barrier to developing sound and useful policies.

[The prepared statement of Mr. Ruggles follows:]

PREPARED STATEMENT OF RICHARD RUGGLES

THE HISTORY OF THE WHOLESALE PRICE INDEX AND ITS CURRENT ROLE

The wholesale price index is one of the oldest statistical series published by the Federal Government. It was authorized in 1891 by the Senate Committee on Finance for the purpose of investigating the effect of the tariff laws on trade, domestic production, and prices. It was first published in 1902, covering the years 1890–1901. Initially it was an unweighted average of price relatives, covering approximately 200 commodities. Although the interest in establishing a wholesale price index originated in the relation of international trade to the domestic economy, the prevailing climate of economic theory was such that the goal which was in fact sought was a single number for the value of money: a measure of prices in general. Neither the selection nor the weighting of commodities was considered important, since it was thought that even a random sample of unweighted items would adequately reveal the central tendency of price changes.

Since those early days, the wholesale price index has continued to evolve. By World War I, a weighting system had been introduced, and the index was calculated by building up aggregates of values based on fixed quantity weights. By 1940 the number of commodities had expanded to approximately 900, and the index was based on 2,000 individual price quotations. Now, the index covers about 2,700 commodities and is based on more than 9,000 observations. Despite the increase in the number of series and observations, however, the wholesale price index is conceptually still remarkably similar to what it was 60 years ago. The major reorientation of the index urged by the Price Statistics Review Committee in 1961 never took place, and the index has continued to evolve along the lines previously established.

Even though the wholesale price index is conceptually obsolete, it is nevertheless still one of the central economic indicators used to measure the health of the economy, and the indexes for specific commodities and industries constitute the basis for the deflation of the current value data of the national accounts to derive real output measures. It is not that the wholesale price data are ideally suited for these tasks, but rather that they are the only game in town. The present staff of the Bureau of Labor Statistics are not to blame for this state of affairs. They inherited the wholesale price index, and demand from users for continuity coupled with the difficulty of change has perpetuated the situation. The basic problem lies in the nature of the statistical system as a whole. Insufficient attention is devoted to research and development in the area of statistical measurement, the collection of data is sharply separated from its analysis, and there is a general lack of flexibility on the part of statistical agencies in meeting the changing needs of government.

MAJOR DEFICIENCIES OF THE WHOLESALE PRICE INDEX

Although the wholesale price index has a considerable number of detailed technical deficiencies, these can be broadly grouped into four major classes which seriously affect the use of the index as a valid measure of price change. These relate to (1) The weighting system used; (2) the scope and coverage of wholesale price data; (3) the classification system on which the wholesale price index is based; and (4) the nature of the prices obtained from producers.

The system of weighting.—The system of weighting wholesale price data which is used by BLS results in overall price indexes which are misleading. The use of value of shipments weights to combine commodity price data into aggregate price indexes overweights raw material inputs and intermediate outputs. As a consequence, the behavior of the general wholesale price index unduly reflects the behavior of these commodities. This feature has been particularly important in periods when agricultural prices, oil prices, and prices of imported raw materials have fluctuated widely. The importance of such price changes in the total domestic economy has been exaggerated, and other price changes taking place at the same time have been obscured. In order to construct appropriate indexes for different levels of aggregation—product, product class, 4-digit industry, and 2-digit industry—a system of net output weights should be developed which would weight the commodity price data by the amount of the commodities sold outside the grouping for which the index is being compiled. At the more highly disaggregated levels, such net output weights would correspond quite closely to the gross output weights now used. At higher levels of aggregation, however, the duplication of raw materials and intermediate products would be eliminated. It would also be useful to compile input price indexes at a fairly detailed industry level. Such price indexes would be important for analyzing the degree to which a given industry is absorbing, passing along, or initiating price changes. They are also a necessary ingredient in the process of measuring real value added by industry and in the development of productivity measures.

The scope and coverage of the wholesale price index.—The wholesale price index is not a general price index; even in terms of the BLS definition it is only intended to cover prices of "commodities sold in commercial transactions in primary markets of the United States." Essentially this has meant in practice that coverage is limited to producers' prices in agriculture, mining and manufacturing. Agricultural prices are supplied for the most part by the Department of Agriculture, so that the wholesale prices which BLS collects refer almost entirely to mining and manufacturing. This should be explicitly recognized, by renaming the set of wholesale price data collected by BLS "industrial sector prices," and steps should be taken to develop new sets of price data for the other sectors of the economy. Even within the industrial sector, wholesale price data now collected cover adequately only 25 percent of the 4-digit SIC industries, accounting for somewhat under half of the production in mining and manufacturing. A substantial increase in price collection is required if the objective of adequate coverage is to be achieved even for industrial sector prices.

Within the present scope of price collection, the use of judgmental data collection rather than probability sampling prevents statistical estimation of sampling errors and reduces the efficiency of the collection effort, and results in coverage that is uneven and often inadequate. Unfortunately, since the sampling is not done on a probability basis, it has not been possible to determine how

efficient the present system of collection is. For the same reason, the BLS has no way of determining where it should concentrate its efforts in order to improve the sampling reliability of the wholesale price data. A sampling frame is needed as the basis for developing a probability sample. This already exists in other statistical agencies of the Federal Government, and it should be obtained through cooperation with them.

Finally, the current method of price collection involves collecting the same number of series each month. It should be recognized that the needs for benchmark, annual, quarterly, and monthly price indexes are different, and the samples for these different periods should be designed accordingly.

Classification system.—The classification system on which the wholesale price index is based is inappropriate. The wholesale price commodity classification system is unique, and is not directly related to the Standard Industrial Classification (SIC) system which is used in other Federal Statistical agencies. This makes it difficult to relate wholesale price data to other economic data, and seriously impairs the usefulness and relevancy of the wholesale price program. The SIC should be used as the basic classification system. This can be done within the input-output framework, so that price behavior can be traced through the economy to link raw material and intermediate price changes to price changes of final ouput.

The nature of the prices collected by BLS.—In some instances wholesale price data fail to capture true changes in transactions prices. Although BLS tries to obtain actual transactions prices, the prices which are reported to them often do not fully reflect changes in discounts and rebates or special prices which may be offered. As a result, in some cases the wholesale price index does not show the softening of price increases which may occur in a period of oversupply or declining economic activity, and conversely it may underestimate the increase in prices with increasing economic activity and the tightening up of supplies. Numerous studies seem to suggest that this is a serious deficiency of the present wholesale price index. Unfortunately, there does not appear to be any simple or straightforward solution to this problem. Recourse to purchaser prices may introduce into the producer price index fluctuations in prices which occur at other points in the distribution system, and the current practice of averaging the reports from different kinds of sources into one commodity series prevents the user from knowing what type of information the price measurement is based on. Nor do unit values necessarily provide a measure of change in transaction prices, because of product mix effects. Net realized prices may be useful where these are available on a narrow enough basis, but here again the resulting change in price may be due to the change in the mix of customers who pay different prices. Although no single type of information can be relied upon to provide transactions prices, monitoring of a number of different types of price information can help in keeping track of the direction and magnitude of the bias from this source. For this reason it is important that in areas where there is likely to be a major difference between the wholesale price data and actual transaction prices, additional collection of other kinds of data should be undertaken to provide a basis for explicit adjustment of the reported prices.

A second problem arises in connection with the use of specification pricing and the manner in which new products are brought into the wholesale price index. The methods used result in measures which omit most of the quality change which takes place. Specification pricing is used by BLS to insure that the same product is priced in each of the two periods being compared. When products do not change in quality and no new products are introduced, this procedure results in correct price measurement. When changes in product specifications result in a corresponding change in the price of the product, BLS introduces a price adjustment so that the change in specification does not result in a price change. However, if specification changes do not appear to be directly related to price changes, no adjustment is made. Therefore quality improvements which do not cause equivalent cost increases are not taken into account. Similarly, new products are not introduced into the price index in such a way that they are linked to the products which they are replacing, and therefore the effect of product improvement due to the introduction of new products is excluded. It is very difficult to find appropriate methods of taking quality change and new products adequately into account. Hedonic price indexes are useful where prices can be attached to the different characteristics of products. For many types of quality change, however, this is not possible. In other areas, functional specifications rather than physical specifications may be found helpful. But here again, functional

specifications are often highly subjective and where a product has many different uses the importance of its different attributes may differ in these different uses. As in the case of the transactions price problem, what is required in this area is exploration of a number of different methods of developing adjustment factors. At the present time there is no general consensus on appropriate methods. But in view of the overwhelming importance of this problem, systematic research should be undertaken on how best to measure quality change due to product change and the introduction of new products.

Finally, a problem is presented by the present intermingling of order and shipment prices in the wholesale price index. Current order prices are not suitable for deflating current shipments if an appreciable order-to-shipment lag exists. Shipment prices may not serve well as an early warning price inflation. Combining the two types of data into one index is no solution, however. As a first step, the BLS needs to determine for each price series whether it is, in fact, an order price or a shipment price. The lag between orders and shipments is different at different stages of the business cycle, and it is important to obtain information on the order-to-shipment lag in various industries as a part of the analysis of price behavior. Ideally, one would like to have both order and shipment prices for each product in each industry. Where the order-to-shipment lag is nonexistent only a single price is needed, and where the lag is very short it may be possible to adjust order prices by the order-to-shipment time lags to obtain valid current price deflators. Where the lag is lengthy and variable, however, it may be necessary to collect both order and shipment prices, since changed economic conditions may lead to different discounts, rebates, or other conditions of sale between the initial order and final billing. To the extent that more and more contracts are subject to escalation, the discrepancy between the current shipment prices and order prices may be expected to narrow. It is not possible *a priori* to judge what specific areas will require both shipment and order prices, but a study on a pilot basis would be helpful in determining this.

CONCEPTUAL OBSOLESCENCE OF THE WHOLESALE PRICE INDEX

The wholesale price index remains true to its original conception—it is a general price index developed without reference to other economic data. Essentially, the wholesale price index is conceived as measuring the price level of the economy, despite the fact that the meaning of such a general measurement is open to serious question. As time has passed, other price measurements such as the consumer price index, import and export price indexes, and the implicit gross national product deflators have been developed. But unfortunately there is no system of price indexes within which the various types of price measurements can be related to each other and reconciled; rather, each set of price indexes has been developed independently. In reporting on the wholesale price index, radio and television commentators often suggest that the changes in wholesale prices will be reflected in consumer prices in subsequent periods. But within the BLS the price data collected for the wholesale price index are not in fact systematically related to the data collected for the consumer price index. Nor are price data collected for import and export price indexes systematically related to either wholesale price data or consumer price data.

In analytic terms, the objective of price measurement should be to partition the changes in current transaction values into price and quantity components. Consistent price and quantity measures would require that the two elements together fully explain changes in current values. But when price measurements are developed without reference to either value or quantity data, no such consistency is assured and serious errors in measurement can and do occur.

Perhaps equally as serious as the separation of price, quantity, and value data is the development of price data independently from other economic data which are directly relevant to an understanding of price behavior. Data on new orders, inventories, employment, and wage behavior are all needed to understand the causes of price changes and assess their impact on the economy. Unfortunately the methods of collecting price data now used make it almost impossible to obtain any insight into the interrelationships of prices, wages, output, and employment. The aggregation of price data separately from other economic data for different producers operating under different conditions in different parts of the country destroys the very information that is required for such analyses. The mounting of independent collection efforts by different statistical agencies for related economic data not only destroys the comparability and usefulness of

the data collected; it also adds to the reporting burden which is placed on the private sector of the economy and on the data processing resources of Federal statistical agencies. Thus, the poorly coordinated, duplicative, and haphazard nature of Federal statistical activities results in poor data obtained at high cost.

One of the central problems of Federal statistical activities has been the lack of sufficient analysis and evaluation. Raw data is not information. Careful analysis and evaluation are required to make data relevant to policy decision making. The lack of analysis has often been defended on the grounds that analysis could be politically motivated, and that in order to insure confidence in the integrity of the system analysis should be separated from collection. But the real problem may well have been that there has been too much misplaced confidence and not enough questioning of the meaning of the data published by statistical agencies.

The agencies collecting and processing the original data should have the responsibility for analyzing it, since they originate the basic data, are most familiar with it, and are in the best position to process and analyze it. Thoughtful analysis in conjunction with research and development of the data base itself is the best way of improving the quality and usefulness of the information generated. But analysis at the collection point is not sufficient. The collection agency has an obligation to provide the data in such a manner that independent analysis can be carried out both by other government agencies and by private business, academic, and research groups outside of the government. It is only through the possibility of alternative analyses that the integrity of Federal statistics can be assured. Absence of analysis by a collection agency is not a good substitute for integrity.

In the field of price statistics, the lack of adequate analysis has had serious effects in limiting our understanding of what has been happening in the economy. Although careful analysis of specific sectors and industries could have made it possible to distinguish the effects of demand pressures on prices from cost pressures, such analyses were not done, except by private researchers. Nor has the wage-price spiral been adequately examined. It is quite apparent that rising prices do affect wages, and conversely rising wage costs are often passed along as price increases. But relevant information has not been brought to bear on this question. Similarly, the effect of the tradeoff between unemployment and wage increases on prices has not been assessed in quantitative terms. The Phillips curve analysis underlies much of the policy designed to contain inflation, but the kind of price, wage, and employment data required to test this hypothesis has not been developed. In short, the statistical agencies have been seriously delinquent in providing decision makers with information which is directly relevant to the central questions of economic policy.

THE IMPORTANCE OF PRICE INFORMATION

It may be argued that true answers to questions involving price measurement are not possible, and that the statistical agencies should be responsible for reporting only the facts. The history of the past decade suggests that such a view is a gross oversimplification of the situation, and is primarily to be interpreted as an excuse for not providing the kind of information which is required. I am convinced that publication of the wholesale price index in its deficient state, unaccompanied by any analysis of price behavior, has been extremely costly in terms of its encouragement of misguided economic policy, which in turn has resulted in massive unemployment, substantial loss in output, slower long term growth, and intensified inflationary pressures. The double digit rise of the wholesale price index in 1973 and 1974 was taken as evidence of an economy-wide inflationary process which required strict monetary controls and cutbacks of Government spending. Although a number of reasons were put forth for the price inflation, including the Vietnam War expenditures 7 or 8 years earlier, excessive Federal expenditures and the Federal deficit, none of these were in fact significant factors. The recession of 1970 had already intervened since the peak Vietnam war expenditures. Federal expenditures had been declining in real terms since 1969. And the Federal budget was in surplus at the end of 1973—the deficits did not become significant until the recession of 1975 caused a serious decline in government receipts. An analysis of the wholesale price index would have clearly pointed out that the price increases were primarily due to rises in the prices of oil and agricultural products on the world market, neither of which could be brought down by restrictive domestic monetary and fiscal policy. At the

same time, Charles Schultze and William Nordhaus, both of whom are now on the Council of Economic Advisers, did make such analyses of the price behavior of the economy. But the official wholesale price index, which gave undue weight to which traditional anti-inflationary forces rallied. As a consequences, what were intended as anti-inflation measures operated instead to restrict output and employment, resulting in the sharpest recession since the great depression of the 1930s. Slowing down the economy, furthermore, prevented the normal increase in productivity from taking place; that productivity increase, if it had taken place, could have ameliorated the effects of external price increases. Instead, declining productivity exacerbated the increase in costs and prices. In terms of long run economic growth, the emergence of excess capacity and the low levels of profits combined to reduce capital formation, thus reducing potential future growth.

In summary, Federal statistical agencies should be expected to provide relevant and valid information. Publication of large masses of conceptually inadequate, confusing, and irrelevant data should not be tolerated. To the casual observer, such a situation may appear to constitute an information overload, but to those responsible for making decisions in both the legislative and executive branches of the Government, the lack of consistent, coherent and relevant information may be a serious barrier to developing sound and useful policies.

Senator PROXMIRE. Thank you very much, Professor Ruggles.

Professor Ruggles, I want to make sure I understand what you are saying here. It is a pretty devastating charge.

Mr. RUGGLES. But it is not directed at BLS.

Senator PROXMIRE. You are saying that the people who gathered these statistics and have given these statistics to us should give us an analysis?

Mr. RUGGLES. That is correct.

Senator PROXMIRE. If they do, I can see perhaps Julius Shiskin taking on Arthur Burns. Arthur Burns was the leader of this period telling us that the Government fiscal policy was too extravagant, that we were spending too much, and the deficit was responsible for much of our inflation. Mr. Shiskin would have the unenviable job of serving as factgatherer and then interpreting his statistics to argue that this inflation was not caused primarily by too much demand, but rather by rises in oil prices and agricultural prices. To do that, you would put Mr. Shiskin or whoever occupied his position, in a tough position inviting challenges to the integrity of the figures. It might seem that he is gathering these figures and putting an interpretation on them to serve his own value judgment.

Wouldn't it be better to have Mr. Shiskin give us the facts and then have the Council on Economic Advisers—outside experts and so on—take these facts and give us an analysis of what they mean. We can then have a debate and Congress and the public can make up their minds.

Mr. RUGGLES. There is a difference between analysis and what I consider to be political judgments. What I am suggesting is that the wholesale price information should have been laid out in such a way as to bring out the nature of the price change that was taking place.

Now, in a sense, they do this. In more recent years, they have begun to compile stage-of-processing price indexes. I would suggest that this is analysis. What I am really asking is what kind of information needs to be provided to Mr. Burns in order for him to make the judgments. Now, it requires analysis to figure out what is the relevant and pertinent information. The Wholesale Price Index from any analytic point of view is quite unsatisfactory for this purpose.

Senator PROXMIRE. Here you had a situation, where William Simon, Secretary of the Treasury, Arthur Burns, Chairman of the Federal Reserve Board, Richard Nixon, and then Gerald Ford as President of the United States, and Alan Greenspan as head of the Council of Economic Advisers, all convinced that the trouble with our economy was that the Government was spending too much money and that our monetary policy was too extravagant.

If Mr. Shiskin or anybody in this office had tried to challenge that view by putting his own interpretation on his statistics, which it seems to me is what you are asking, he would be right in the middle of a big policy fight. It also seems to me it would be a perfectly understandable reaction to get somebody in there who is going to reflect the Greenspan-Simon-Nixon-Ford view of the economy. I wonder then if all of us would be served by the analysis that you propose?

Mr. RUGGLES. Let me say this. Until we had unemployment figures, it was anybody's guess what the unemployment was in the economy. We did not get unemployment figures until the depression of the 1930's made it necessary. Without unemployment figures, policymakers could say, "Well, we don't really have unemployment. There are no facts to prove it," and they could essentially base their policies on certain assumptions, or preconceptions. When useful information that is relevant to policy decisions is provided, the decisionmakers have to take this into account, and build it into their analysis. I am not suggesting that the collecting agencies develop policy, but that they provide the kind of information that is necessary to analyze the situation.

Senator PROXMIRE. Mr. Shiskin.

Mr. SHISKIN. I said earlier that we agree with Professor Ruggles on the need to improve the WPI itself, and I am willing to repeat that, and do agree with him. We have a program as I said, laid out in our budget, a plan over a 5- or 6-year period which could achieve his ends. However, I must say I part company with Mr. Ruggles once he gets beyond that.

Just a few comments that occur to me: One is that we do provide a lot of industry detail. We provide data on farm product and oil and the energy industries. We have a lot of detail. It is deficient and we intended to correct those deficiencies.

A second point is that there is no lack of analysis. As far as I can see, the city is full of analysts. There is an analytical staff in the Federal Reserve Board. They study prices. In fact, they have a competitive index of sensitive prices, which may be better than ours. There is an analytical staff on the Council of Economic Advisers. There is an analytical staff in the Department of Commerce, both in the division that prepares the GNP accounts and the other parts of the Department.

There are many private analysts. If there is one thing I think we are not short of, it is analysis of the economy. No sooner do we issue our figures than all kinds of analyses and interpretations of them appear in the newspapers and magazines and bank letters and so on. I don't see a shortage of analysis.

Senator PROXMIRE. The announcement you made this morning on unemployment went out on the air at 9 o'clock and it will be on the news tonight and in the newspaper tomorrow morning and then we will move on to other things. The analysis you make, the time you issue statistics is critical in the judgment that the Congress and the public

make, and the President and others make as to the way our economy is moving. The timing is very important.

Mr. SHISKIN. Yes.

Senator PROXMIRE. To the extent that you can give us the analysis, and I know it is awfully hard, but analysis that comes from a fair-minded and competent expert, it seems to me, as Mr. Ruggles says, would be helpful.

Mr. SHISKIN. I am in favor of more analysis, and especially we should be doing more coordination, and we have been discussing how we should achieve those ends. But bear in mind that I got these figures yesterday morning and, you know, you cannot do much analysis in a few hours that is worth much, particularly when it is done in a crash production period.

On the other hand, the policy decisions are being made by the Council of Economic Advisers, by the Federal Reserve Board, and by the Treasury, and they aren't being made tonight, or the day the figures come out. They are going to be made a little later, and they have very good analytical staffs doing it.

One rhetorical question, and I do want to get to the question of statistics. It is a question to point up the issue. If there is such a need for our analysis, how is it that all these top economic policymakers that I have been dealing with now for 10 years or longer don't ask us to do it?

Senator PROXMIRE. They don't want to have you horning in on their power.

Mr. SHISKIN. I don't really think that is it. In the past few weeks, I have had three or four meetings with the members of the CEA, with Nordhaus, and Gramley especially, with some participation from Schultze, and that is not what they are asking us to do at all. They want more basic data which they can analyze, and I think that is a reasonable position.

Let me make one other kind of comment. Mr. Ruggles' comments on the way statistics are gathered is too simplistic. The way I understand him, is that the overwhelming objective is to get data on wages, prices, and output that are all comparable. Now, that certainly is a highly desirable objective. However, the pressure we get is to get data out faster most of the time, better and faster. That is the main pressure that I am subject to.

Now, to get data out faster, you cannot collect all the data together because they are not ready in the companies at the same time. The data that are ready first are the data on sales and payrolls. We could get those data out fast. Now, we put out the payroll figures today, and the employment figures today, and a few days from now the Census Bureau will put out the data on retail sales. Two weeks later, you will get the manufacturers' shipments and orders. Two weeks after that, you will get the data on inventories. My point is that policymakers don't want to wait around until we can get all these data nicely put together and make sure they are comparable and then analyze them. They want them as soon as they can get them.

By the way, there may be ways of coping with that problem, and I think one way, for example, that I have been playing around with, and I have had some discussions with the OMB people about, is to have a comprehensive form—I will give you an idea of how the problem could be solved.

This shuttle form, and by that, I mean a form that goes back and forth between the BLS and the respondents. So you would have this shuttle form and have perforated sections. In the first section, you have payrolls. So, when it gets the payroll data the respondent tears that section off and sends it to us.

The second section is, let's say, sales. When he gets the sale data, he fills that in, tears it off and sends it to us, and so forth. In the meantime, he has a file copy, and is tearing off parts of the sheet and sending them to us. So that whenever he looks at the data that he is sending in at a given moment in time, he also has the data he has already sent us earlier to look at. One of the points is that you want him to make sure that the data are comparable.

Sir, I think there are ways of solving these problems, but I think that Professor Ruggles' view that the Government, and I am not talking about BLS, is sorely deficient in analysis is defective. I think the objective of getting comparable data, while it is a highly desirable objective, involves a tradeoff with timing, or has up to now. These are extremely complex problems that we have all been aware of, and we are struggling with them. In general, we have not provided as much good data——

Senator PROXMIRE. Yes, but how about the central criticism that Mr. Ruggles makes, that the wholesale price index overstated the inflation in 1974?

Mr. SHISKIN. I think it did.

Senator PROXMIRE. Overstated it to the extent, perhaps, of maybe even 50 percent or 75 percent. If it did so, we may well have pursued policies that aggravated unemployment, slowed down growth, and cost millions of jobs.

Mr. SHISKIN. I think that is farfetched, that the whole fault of the economic——

Senator PROXMIRE. You began to agree with me when I started asking that question. You nodded when I said it overstated——

Mr. SHISKIN. It did, but we had the finished goods index all the time.

Senator PROXMIRE. You don't remember Arthur Burns or the Chairman of the Council of Economic Advisers ever referring to the finished goods index.

Mr. SHISKIN. They had the CPI, which is an unduplicated index. It is not that that is all they had to rely on. There are a lot of data and a lot of great analysts around.

The Chancellor of the Exchequer arrived in this country some years ago and he asked why we had no balance of payments problems in the 19th century, and he was told that that was because we didn't have any balance of payments statistics in the 19th century. There are a lot of price statistics around, a lot of wage data around; we do relate them, and study the relations between them. We can improve that; I know that. Many of us in all the different agencies have been discussing ways of improving our work. But to say that the deficiencies in the WPI are responsible for the failures of economic policy, such as they were in the past, is farfetched.

Senator PROXMIRE. Could I ask you, Mr. Ruggles, the June wholesale price index showed an increase of 7.5 percent over a year or so ago. Is it possible that that rise could have been 3 or 4 percent based on your analysis?

Mr. RUGGLES. To tell you the truth, I worked on the previous period. I have not looked at the price change in recent months. I think Mr. Shiskin would be in a better position to answer that than I.

Mr. SHISKIN. I have here in this pile of papers the finished goods index, and we have made up a dummy release of how we might change the present WPI, and emphasize more than finished goods index. I don't seem to be able to find that, but believe me, it is in here. I brought it along.

As I remember it, what that shows is, as we all know, the finished goods index, and I am thinking about a column there which shows over-the-year changes. For most over-the-year changes, the finished goods index shows a substantially smaller rate of increase than the WPI. That has been available to everybody, and the policymakers do look at that.

The newspapers have not featured that, obviously, but the policymakers are fully aware of it, we discuss it with them when we meet with them.

Senator PROXMIRE. Where do you think the policymakers get their information; the policymakers in the Congress? Most of us get it from the newspapers, or watching it on television, or hearing it on radio. We get it the way everybody else does.

Mr. SHISKIN. But the people who make policy look at these tables. They have staff reports and they look at them.

Senator PROXMIRE. They have to see people and live with them.

Mr. SHISKIN. That is why we publish the WPI, sir.

Senator PROXMIRE. Mr. Ruggles, would you have the same criticism of the GNP deflator?

Mr. RUGGLES. The GNP deflator has a nonduplicative weighting system, and it is consistent with the other economic information, but it does suffer from many of the same problems as the WPI, such as whether it reports transaction prices and the time lags between shipments and orders. So, it does inherit many of the faults that are basic to the WPI price data.

I would like to just add something about the kind of analysis I am suggesting, because I think there is perhaps a misunderstanding here. I am not suggesting the kind of analysis that is done by the CEA or others for policy purposes, or what you might consider judgment. By analysis, I mean that the collection agencies should be responsible for obtaining relevant information that is pertinent to understanding what is going on. As a matter of fact, much of your interrogation with respect to the unemployment figures typical of what I had in mind. In other words, we need information to elucidate why a certain thing is happening, or to break it down into its component parts.

Senator PROXMIRE. If, for example, at the time Mr. Shiskin had given us the statistics on the whole price index, in 1973, 1974 or 1975, in that period if he had accompanied it with an indication of how enormous the effect of the oil price increase was, and food price increases, to the extent that he could——

Mr. RUGGLES. Yes; a paper was prepared by Nordhaus that indicated that 90 percent of the wholesale price rise in the 1973–74 period was due to agriculture, oil, and the prices that were passed along by industries using these particular things. I think this sort of information is extremely useful for people in a policy position.

Senator PROXMIRE. I understand that a principal reason for the difference we have is the confidentiality issue.

Could you explain how the issue of confidentiality in reporting data is related to the Wholesale Price Index? Why can't we have a central directory so that the reports can at least be matched up? Wouldn't that solve a big part of the problem?

Mr. RUGGLES. Well, I think it would help. One of the problems, as you know, is that the industrial directory is put together by the Bureau of the Census on the basis of their reports, and they feel because it is based upon confidential data they cannot release it to other Government agencies. Therefore, as a coordinating device, it becomes difficult to use.

I think there are two comments I might make on this. One is that if in fact we had a Federal statistical system in which the statistical agencies all had the same disclosure rules, it seems to me that such information might be shared among them, just as it now is within the Bureau of the Census. In other words, the industry division and the wholesale-retail trade division, and so forth, in Census all have access to the industrial directory, but, say, BLS does not.

The other question is whether all information that is given to the Census Bureau should actually be considered confidential. In this country, we do have things like marriage records, births, divorces, property records, all of which are in the public domain. Many States publish a directory of companies and businesses operating within that State. It may well be that we should consider that such a directory is public information, that the name and address and activity of the company is really public information.

This would help in allowing the different Federal statistical agencies to bring information together and to use the same system of classification for establishments, companies, and so on, so that the data would fit together better than they do now.

I think these are questions that should be debated in the Congress. It obviously is a matter for decision by the legislative branch.

Senator PROXMIRE. Mr. Ruggles, you give us a counsel of despair. You seem to indicate that there are some things we just cannot do, and it is a matter of recognizing that we have to accept this. You complain, for example, about the lack of attention to quality improvements, but you don't show much enthusiasm for the kind of index that would take into account the quality improvement.

Absent that, the index will show an inflationary bias, will it not? What can we do about that?

Mr. RUGGLES. If we get people to understand it——

Senator PROXMIRE. But you are not going to get people to understand it. They will look at it, and a few people may compensate for it in their mind, but the general public, which I think is most important in the inflation reporting, are not going to do it.

Mr. RUGGLES. The last time I was before this committee on the subject of prices, I made the suggestion that you should arbitrarily subtract 2 or 3 percent from the figures every year, not on the ground that such a subtraction was right, but that it would warn people that the figures were arbitrary, and the result would probably be better than the unadjusted figures. When people complained that this would

destroy confidence in the figures, my reply was that was what it was intended to do, that one should not have confidence in such figures.

Senator PROXMIRE. If it is one thing people don't like to get, it is good news. The worst thing you can tell a farmer is that he is doing well. If you tell a housewife that prices aren't going up, and she has it better than her mother and grandmother, they don't want to hear that. They want to hear it is tough, and life is grim. Unfortunately, that is the way we are constructed.

Mr. RUGGLES. Yes.

Senator PROXMIRE. You said the agency that collects and processes and reports the data should be responsible for analyzing it. I don't think I asked you this fully. Wouldn't this tend to destroy the credibility and objectivity which Mr. Shiskin and his predecessor have enjoyed?

Mr. RUGGLES. No; I don't think so. What I am really asking for is research and development on their own data. In other words, they should know more about the meaning of their own information and how it relates to other information. This does not mean that they should make forecasts. It does not mean they should make major policy decisions. But they should know their business. They shouldn't go out and collect a lot of figures and toss them in a publication and say that anybody who wants to analyze them can do so. In the first place, no one else has access to the microdata, to disaggregations in terms of geography, to its relationship to particular establishments, and the other things needed to process the data intelligently. An analysis group in the collecting organization that can go over the data and ask, "Are these things we are reporting really meaningful? Are they statistically valid? Are they conceptually correct? What other information can we get that would check these results?" This is what I mean by analysis. I don't mean that the collecting agency should publish something that says, "The Secretary of the Treasury is completely wrong in his view about the economy." That is not an analysis.

Senator PROXMIRE. Mr. Shiskin, how much of this can you do?

Mr. SHISKIN. We do a lot of it now. Let's take the area that we have been discussing——

Senator PROXMIRE. Obviously Mr. Ruggles does not think you do enough.

Mr. SHISKIN. Let me respond to that. Let's consider the subject that we have been discussing in the last few years. I submit that there is nobody or nearly nobody in the United States who knows more about employment and unemployment figures, what they mean, what their significance is, than the BLS staff. The articles in the Monthly Labor Review are superlative. They receive a great deal of attention. They have analyzed the figures.

What we do here is far more than just recite the figures. We go into all kinds of questions about their meaning and significance.

Now, let us come to prices. Well, we used to do a lot of analysis in prices. In the last few years, Mr. Layng and his immediate staff, who are outstanding analysts, in my judgment, were preoccupied first with doing the CPI and now in building up the new WPI. But we are aware of the need to do more and better analysis at BLS.

We do such work, but we don't do quite as much as we would like to. I hope we can do more in the next few years, but we do do it, and

we will do more, and let me say again not only do we do it, but a great many other people do it.

Let me say again that in terms of the principal point of Mr. Ruggles' report to the council on wage and price stability, the need to improve the WPI, we are with him there. We agree with him.

Senator PROXMIRE. I think this has been a most constructive hearing, and I want to thank both of you gentlemen very much. You have given us a much better picture of where we should be going and how. I think you have done a splendid job.

At this point I would like to insert in the hearing record an exchange of correspondence relating to this hearing between Professor Ruggles and myself.

[The correspondence follows:]

U.S. SENATE,
Washington, D.C., June 15, 1977.

Professor RICHARD RUGGLES,
Yale University,
Department of Economics,
New Haven, Conn.

DEAR PROFESSOR RUGGLES: Thanks so much for your letter and your excellent suggestion that we should hold hearings soon on price measurement.

Your assertion that the changes in the BLS will, at best, be marginal and be felt only in the long run that the most pressing problems of integrating price data with corresponding output, employment and productivity data will remain unchanged is very troubling.

We'll get right to work on this and arrange the hearings as soon as possible.

Sincerely,

WILLIAM PROXMIRE.

YALE UNIVERSITY,
DEPARTMENT OF ECONOMICS,
New Haven, Conn., June 3, 1977.

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

DEAR SENATOR PROXMIRE: In June 1975 when Albert Rees was Director of the Council on Wage and Price Stability, he asked me to undertake a review and evaluation of the Wholesale Price Index. I agreed to do this provided that I had (1) the full cooperation of the Bureau of Labor Statistics; and (2) the support of the National Bureau of Economic Research. Both these conditions were met; I have now completed this review and have given the final report to the Council on Wage and Price Stability.

From my past appearances in testifying in hearings before you, I know that you are deeply concerned about the adequacy of the statistical data on which our economic policy is based. I also understand that you bear responsibility for the review of the operation of the Council on Wage and Price Stability and have been involved with matters relating to the Bureau of Labor Statistics. I am writing to you, therefore, to raise questions which I feel should be brought to the attention of the Congress and the public—questions which will otherwise be buried within the executive branch by day to day operating problems and by the conflicts of interest of the different federal agencies which are involved.

A brief summary of my findings is enclosed, but this summary does not go into the implications of the findings as they relate to current economic policy, or how price measurement can be improved given the very real problems of privacy, reporting burden and the decentralized nature of the federal statistical system.

In light of my recent conversations with the Council on Wage and Price Stability, the Bureau of Labor Statistics, the Council of Economic Advisers, the Statistical Policy Division of OMB, and the Bureau of the Census, I do not see any prospect of significant action to correct the major existing deficiencies in the measurement and analysis of the inflationary process. The BLS is currently in the process of improving the Wholesale Price Index through better coverage and the use of probability sampling, and will, I feel certain, use the findings of the study I have just completed as support for obtaining additional funds. But the

effects of the changes being undertaken by the BLS will at best be marginal, and they will be felt only in the long run (i.e. 5 to 10 years). The central and most pressing problem of integrating price data with corresponding output, employment and productivity data will remain untouched.

Certainly one of today's central problems is how to develop economic policies which will, on the one hand, reduce inflation, and, on the other hand, increase employment and stimulate economic growth. The existing wholesale price index does considerable damage because it provides the public with misleading information, and this in turn results in support for economic policies which may result in more inflation, more unemployment and slower growth.

For these reasons, I would hope that Congressional hearings could again be held on the problem of price measurement. You may recall that in the first session of the Eighty-seventh Congress (January 1961) hearings were held by the Sub-committee on Economic Statistics on the report of the "Price Statistics Review Committee" of the National Bureau of Economic Research. This report was known as the "Stigler" report. George Stigler was chairman, and both Rees and I served on the committee. I had been responsible for writing the section of the report dealing with the Wholesale Price Index. Although many of the recommendations relating to consumer prices were later implemented by BLS, the recommendations relating to wholesale prices were generally ignored. It was on this basis that Rees asked me to take another look 15 years later.

If Joint Economic Committee hearings could be held at this time, they would not only serve to focus much needed attention on the problem of price measurement in its relation to economic policy, but they would also be useful to the Congress in its review of the statistical programs of the different agencies.

In all fairness to both the Council on Wage and Price Stability and the Bureau of Labor Statistics, I would like to acknowledge that they have been highly cooperative and extremely helpful in the review and evaluation of the Wholesale Price Index. The unfortunate reality that no appropriate action can be expected to take place is primarily a result of the decentralized nature of the federal statistical system, rather than the failure of any single agency; it is no one's specific responsibility.

I am, of course, writing this letter as a private individual, rather than as either a consultant to federal agencies or a staff member of the National Bureau of Economic Research. My concern arises from my belief that, unless some outside forces are brought to bear, price measurement by federal agencies will not be substantially changed, and therefore economic policies which are based upon these price measurements may be seriously flawed.

Should you wish any additional information, I am at the disposal of you and your staff. I understand that the Council on Wage and Price Stability will be sending you a complete copy of my report as soon as it is reproduced.

Sincerely yours,

RICHARD RUGGLES.

Enclosure.

SUMMARY OF THE REVIEW AND EVALUATION OF THE WHOLESALE PRICE INDEX

(By Richard Ruggles)

A draft of "The Review and Evaluation of the Wholesale Price Index" was submitted to an NBER advisory committee which met to discuss it on January 15, 1977. On the basis of their comments and additional comments provided by the Bureau of Labor Statistics and the draft report was revised and was given to the Council on Wage and Price Stability on March 15, 1977.

The report concluded that the wholesale price index and the price data on which it is based are widely used and constitute a centrally important set of economic data. It was further concluded, however, that there was a number of major deficiencies which seriously impair the usefulness of the index. These are as follows:

1. The scope and coverage of the wholesale price index is inadequate for the uses made of it. The index currently covers agriculture, mining and manufacturing prices; most of the agriculture prices are provided by the Department of Agriculture and only about 25 percent of the 4-digit SIC industries—constituting about half of total production—are adequately covered. The wholesale price index should be changed to be an industrial sector price index covering only mining and manufacturing and the collection of price data should be expanded to provide adequate coverage.

2. The classification system used for the wholesale price index is inappropriate. Rather than using a unique classification system for the wholesale price index which can only be transformed into the Standard Industrial Classification System with some difficulty and ambiguity, the Bureau of Labor Statistics (*a*) should move directly to the Standard Industrial Classification System and (*b*) should develop a stage-of-processing sectoring based on input-output relationships.

3. The lack of integration between wholesale data and other economic data, such as production, employment, orders and inventories, impairs the analytical usefulness of these related bodies of data published by the various agencies in the Federal statistics system. A systematic effort is needed to integrate these various series at the micro and aggregate level.

4. The present intermingling of shipment and order prices results in data which are difficult to interpret. As is shown in the table below some of the price data refer to order prices and some to shipment prices and the order-to-shipment lags very considerably.

RELATION OF SHIPMENT AND ORDER PRICES [1] TO TIME LAG BETWEEN ORDERS AND SHIPMENTS

	Order prices	Shipment prices	Unknown	Tota
Spot or shelf	16	7	8	31
1 week to 1 month	51	86	7	144
1 mo to 3 mo	113	103	33	249
3 mo to 6 mo	42	4	11	57
6 mo to 1 yr	34	0	0	34
1 yr or more	12	0	0	12
Unknown	17	51	34	102
Total	285	251	93	629

[1] Based on 1-14 sample drawn from WPI observations—mid 1976.

This suggests that Bureau of Labor Statistics needs to give greater attention to whether it is collecting order prices or shipment prices and additional information is also needed on order to shipment lags. It is not correct to deflate current shipment values by current order prices and conversely shipment prices may not serve as early warnings of price inflation if there is a lengthy order to shipment lag and no escalation provision.

5. In some instances wholesale price data fail to capture changes in transaction prices. As a result in some cases the wholesale price index does not show the softening of price increases which may occur in a period of over supply or declining economic activity and conversely, it may underestimate the increase in price with increasing economic activity and tightening up of supplies. Although no single source of information can be relied upon to provide transaction prices, monitoring a number of different types of price information—i.e., purchasers' prices, net realized prices, unit values, etc.—can help keep track of the direction and magnitude of the bias involved.

6. The current use of specification pricing and the manner in which new products are brought into the wholesale price index results in measures which deal inadequately with quality change taking place in various commodities. Hedonic price measurements and the use of functional specifications may in certain cases be helpful, but as in the case of transaction price indexes what is required is the exploration of a number of different methods which can be used to develop adjustment factors. In view of the growing use of price indexes for escalation of contracts and wages, an understatement of quality change and the consequent overstatement of price change may have serious effects on the behavior of the economic system.

7. The system of weighting wholesale price data by the Bureau of Labor Statistics results in general price indexes which are misleading. The use of value of shipment weights to combine commodity price data into aggregate price indexes results in overweighting raw material input and intermediate outputs. As a consequence the behavior of the general wholesale price index unduly reflects the behavior of these commodities. In order to develop appropriate price indexes for different levels of aggregation—e.g., 7-digit, 5-digit product class, 4-digit industry and 2-digit industry, a system of net output weights should be used which would weight the commodity price data by the amount of the com-

modity sold outside of the grouping for which the price index is being compiled. In addition to indexes based on net output weighting it would also be useful to compile value added price indexes from input prices and output prices at a fairly detailed industry level.

8. The use of judgmental data collection by the Bureau of Labor Statistics rather than probability sampling prevents statistical estimation of sampling errors and reduces the efficiency of the collection effort. A sampling frame is needed as a basis for developing a probability sample; this already exists in other statistical agencies of the Federal Government and it should be obtained through cooperation with them.

Senator PROXMIRE. The committee will stand adjourned.

[Whereupon, at 12:15 p.m., the committee adjourned, subject to the call of the Chair.]

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