S. HRG. 100-445, PT. 33

EMPLOYMENT-UNEMPLOYMENT

HEARINGS

BEFORE THE

JOINT ECONOMIC COMMITTEE
CONGRESS OF THE UNITED STATES

ONE HUNDREDTH CONGRESS

SECOND SESSION

PART 33

SEPTEMBER 2, OCTOBER 7, NOVEMBER 4, AND DECEMBER 2, 1988

Printed for the use of the Joint Economic Committee

U.S. GOVERNMENT PRINTING OFFICE

98-835 WASHINGTON : 1989

For sale by the Superintendent of Documents, Congressional Sales Office
U.S. Government Printing Office, Washington, DC 20402

98-835 - 89 - 1

JOINT ECONOMIC COMMITTEE

[Created pursuant to sec. 5(a) of Public Law 304, 79th Congress]

CONTENTS

WITNESSES AND STATEMENTS

FRIDAY, SEPTEMBER 2, 1988

FRIDAY, OCTOBER 7, 1988

FRIDAY, NOVEMBER 4, 1988

FRIDAY, DECEMBER 2, 1988

SUBMISSIONS FOR THE RECORD

FRIDAY, SEPTEMBER, 2, 1988

EMPLOYMENT-UNEMPLOYMENT

FRIDAY, SEPTEMBER 2, 1988

CONGRESS OF THE UNITED STATES,
JOINT ECONOMIC COMMITTEE,
Washington, DC.

The committee met, pursuant to notice, at 9:30 a.m., in room SD-628, Dirksen Senate Office Building, Hon. Paul S. Sarbanes (chairman of the committee) presiding.

Present: Senators Sarbanes and Proxmire.

Also present: William Buechner, professional staff member.

OPENING STATEMENT OF SENATOR SARBANES, CHAIRMAN

Senator SARBANES. The committee will come to order.

I am very pleased once again to welcome Commissioner Janet Norwood before the Joint Economic Committee to discuss the latest employment and unemployment figures, in this instance for the month of August.

Let me simply make this observation. We meet today as the Nation approaches its annual observation of Labor Day, and I think it might serve us well to take just a moment to think in a broader context of what Labor Day really means and how durable an institution it is.

The first celebration of Labor Day took place more than a century ago, in 1882. It consisted of a march of 10,000 workers in New York, followed by an afternoon of speeches and an evening of fireworks and dancing.

The holiday officially dates back nearly a century, to 1894, when President Grover Cleveland signed into law a bill formally designating the first Monday in September as the Federal Labor Day holiday.

For working America in particular, 1988 marks several important anniversaries. It was 75 years ago that President Wilson established the Labor Department as a separate government agency with Cabinet membership.

The first Secretary of Labor was William B. Wilson, an immigrant who had left school at the age of 9 to work in the coal mines, went on to become a union organizer and then a Member of Congress.

Since Secretary Wilson there have been 18 Secretaries of Labor, including the current Secretary, Anne McLaughlin.

Further, 1988 is the 50th anniversary of the enactment of the Fair Labor Standards Act, landmark legislation passed in 1938 which restricted the use of child labor and established the minimum wage.

So, I think it is important to pause and think for a moment about Labor Day. Of course we will be focusing this morning on the unemployment figures, and in the questioning I also want to address the status of our working people in our economy currently.

Finally, I do not want to let this week draw to a close and our own Labor Day weekend begin without commenting very briefly on recent developments with respect to the Solidarity trade union movement in Poland.

Eight years ago this week the Solidarity movement, reflecting the aspirations and determination of Polish working men and women for a better, fuller, and freer life, was established. Less than a year after its founding, it was brutally and ruthlessly suppressed; but the principles which led to Solidarity were not extinguished, and in recent days we have seen a courageous and eloquent reassertion of those principles.

There is a powerful reminder in the current Polish experience that a nation's working men and women are its most precious resource, the backbone of its economy, and that a free and vigorous trade union movement is an integral and indispensable part of our modern industrial democratic society.

Senator Proxmire, do you have any opening comments?

OPENING STATEMENT OF SENATOR PROXMIRE

Senator PROXMIRE. Thank you, Mr. Chairman. Mr. Chairman, I will be very brief.

I just wanted to point to the fact that we have what seems to be a very slight, but nevertheless a steady increase over the last 3 months of the unemployment figures. They have gone from 5.2 percent, seasonally adjusted, in June to 5.4 percent in July to 5.5 percent in August. They are now above what they were in the second quarter of 1988, and it seems that some people think that the fact that unemployment is increasing is good news.

What makes me say that is that the New York Times in an article explaining what happened to the stock market yesterday said that stock prices plunged across a broad front yesterday, leaving the Dow Jones Industrial Average barely above the 2,000 mark. The traders said stocks were hurt throughout the session by a nervousness before today's release of U.S. unemployment data for August and about developments for the Tokyo market and by some program trading late in the day.

I can't recall a time in the 17 years we have been holding this every single month when the newspapers have said the Dow Jones Index went up or down because of the anticipation—now it may go up or down on Monday because of what you are revealing today—but anticipation of what you might have, and I am interested in knowing and I will ask about what I think has been the excellent job you have done in concealing this information until it is released to everybody at the same time.

And then I also want to ask you about that remarkable statement by the Vice President of the United States in his speech before the Republican Convention that we could have 30 million new jobs in the next 8 years.

Senator SARBANES. Thank you, Senator Proxmire.

I have written opening statements by Congressmen Wylie and Fish and Senators Symms and D'Amato to be included in the record, and they will be so included.

[The written opening statements follow:]

WRITTEN OPENING STATEMENT OF REPRESENTATIVE WYLIE

GOOD MORNING, COMMISSIONER NORWOOD.

ONCE AGAIN I WELCOME YOUR APPEARANCE BEFORE THE JOINT ECONOMIC COMMITTEE. I DON'T THINK THERE'S A MEMBER OF THIS CONGRESS WHO DOESN'T PRIZE AND RESPECT YOUR OBJECTIVE AND TIMELY REPORTS ON THE U.S. LABOR MARKET. YOU ARE THE RIGHT PERSON, AT THE RIGHT PLACE, AT THE RIGHT TIME AS THE CONGRESS AND THE PUBLIC STRUGGLE TO UNDERSTAND DEVELOPMENTS IN OUR LABOR MARKET. YOUR CONSISTENTLY NON-PARTISAN APPROACH TO THIS OFTEN CONTROVERSIAL ISSUE IS A STANDARD TO BE PURSUED BY ALL GOVERNMENT AGENCIES.

ALONG THIS LINE I WANT TO ADDRESS MY REMARKS THIS MORNING TO A RECENTLY RELEASED STUDY PREPARED FOR THE JOINT ECONOMIC COMMITTEE BY ROBERT M. COSTRELL OF THE UNIVERSITY OF MASSACHUSETTS. THE STUDY IS TITLED, "THE EFFECTS OF INDUSTRY EMPLOYMENT SHIFTS ON WAGE GROWTH: 1948-1987."

I ADMIT, AS RANKING REPUBLICAN MEMBER OF THE JOINT ECONOMIC COMMITTEE, THAT THE TIMING, THE SOURCE, AND THE SPONSORSHIP OF THIS STUDY CONCERNS ME. I RECALL AN EARLIER STUDY COMING FROM MASSACHUSETTS UNDER THE SAME SPONSORSHIP ON ESSENTIALLY THE SAME TOPIC. THIS "BLUESTONE STUDY" WAS SUBSEQUENTLY TOTALLY DISCREDITED BY THE DEPARTMENT OF LABOR AMONG OTHER EXPERTS.

LIKE ITS INFAMOUS PREDECESSOR, THE OBJECTIVE OF THIS LATEST MASSACHUSETTS STUDY IS TO CONVINCE THE AMERICAN ELECTORATE THAT THE 16 MILLION JOBS CREATED BY THE ECONOMY DURING THE REAGAN ECONOMIC EXPANSION HAVE BEEN LOW-PAYING, MENIAL JOBS.

IN A "NUT" SHELL, THE COSTRELL STUDY ASSERTS THAT BETWEEN 1981 AND 1987 CERTAIN CONTRACTING INDUSTRIES HAVE "LOST" ALMOST TWO MILLION JOBS PAYING AN AVERAGE OF $32,387 PER YEAR WHILE CERTAIN EXPANDING INDUSTRIES GAINED IN EMPLOYMENT ALMOST EIGHT MILLION JOBS PAYING AN AVERAGE OF $21,983 PER YEAR. IN OTHER WORDS, BETWEEN 1981 AND 1987, FOR EVERY ONE JOB "LOST" PAYING $32,387, FOUR WERE CREATED PAYING $21,983. (PARENTHETICALLY, THE FIGURE $21,983 CONFIRMS THE ESTIMATE VICE PRESIDENT BUSH USES IN GAUGING THE VALUE OF NEWLY CREATED JOBS.)

I'M CONFIDENT THAT IN THE WEEKS TO COME THIS COSTRELL-MASSACHUSETTS STUDY WILL DRAW A GREAT DEAL OF ATTENTION BY THE ECONOMIC PROFESSION AND EVENTUALLY WRONGS OF OMISSION AND COMMISSION WILL BE RIGHTED. UNFORTUNATELY THESE REVELATIONS, AS WAS THE CASE WITH THE BLUESTONE-MASSACHUSETTS STUDY, WILL BE INVISIBLE RELATIVE TO THIS MORNING'S HEADLINES.

FOR MY PART, AT THIS TIME I WISH TO RAISE BUT TWO CONCERNS REGARDING THE METHODOLOGY OF THE COSTRELL-MASSACHUSETTS STUDY. AS IS VIRTUALLY ALWAYS THE CASE, CONCLUSIONS CAN BE HIGHLY INFLUENCED BY THE CHOICE OF THE TIME PERIOD TO BE ANALYZED. MR. COSTRELL CHOSE 1981-1987 WHICH, OF COURSE, INCLUDES THE RECESSION YEAR OF 1982 DURING WHICH UNEMPLOYMENT ROSE DRAMATICALLY, AND EXCLUDES THE SUBSTANTIAL EMPLOYMENT GAINS REALIZED THUS FAR IN 1988. I STRONGLY SUSPECT THAT THE COSTRELL ANALYSIS USING THE TIME PERIOD 1982 TO JULY, 1988 WOULD REVEAL COMPLETELY DIFFERENT RESULTS. SINCE THE RECESSION, EMPLOYMENT IN GOODS-PRODUCING INDUSTRIES -- WHICH INCLUDES MANY OF COSTRELL'S CONTRACTING INDUSTRIES -- HAS RISEN BY 2.2 MILLION.

AND ALL THE ECONOMETRIC ANALYSIS IN THE WORLD -- FROM MASSACHUSETTS OR ANY OTHER PLACE -- CANNOT

TAKE AWAY THE REAL AND SUBSTANTIAL ACCOMPLISHMENTS OF OUR FREE ENTERPRISE SYSTEM. IT'S A FACT THAT BETWEEN 1980 AND JULY 1988, THE U.S. ECONOMY CREATED 15.8 MILLION JOBS. IT'S A FACT THAT SINCE RONALD REAGAN BECAME PRESIDENT THAT PERSONAL INCOME IS UP 79 PERCENT; WAGE AND SALARY DISBURSEMENTS ARE UP 77 PERCENT; AND AVERAGE GROSS WEEKLY EARNINGS IN MANUFACTURING INDUSTRIES IS UP 45 PERCENT.

FACTS ARE STUBBORN THINGS.

ALSO, THE COSTRELL STUDY FAILS TO ADJUST FOR THE IMPACT ON LABOR MARKETS OF THE COMING OF AGE OF THE "BABY BOOM" GENERATION. THIS IS A PROFOUND FLAW THAT CRITICALLY DISABLES THE STUDY AS A PROFESSIONAL PRESENTATION.

FOR MILLIONS OF YOUNG WORKERS GRADUATING FROM HIGH SCHOOL AND COLLEGE AND ENTERING THE LABOR FORCE THE CHALLENGE TO THE ECONOMY AND OUR FREE ENTERPRISE SYSTEM WAS TO PROVIDE FULL-TIME EMPLOYMENT AT WAGES AND SALARIES YOUNG WORKERS WOULD ACCEPT FOR THE OPPORTUNITY TO BEGIN THEIR WORK CAREERS.

MR. COSTRELL WOULD HAVE US BELIEVE THAT THESE YOUNG PEOPLE WERE SHORT CHANGED BECAUSE THEY TOOK JOBS THAT PAID BELOW AVERAGE WAGES. IN HIS CONCLUSION HE STATES, "...MUCH OF THIS SHIFT EFFECT MAY REPRESENT THE LOSSES OF THE YOUNGER GENERATION WHO ARE UNABLE TO ENTER OR MOVE UP TO THE JOBS OF THEIR RETIRING PARENTS." [P.19]. THE IMPLIED NOTION THAT 18-25 YEAR OLDS SHOULD BE PAID AVERAGE ANNUAL WAGES OR BETTER IS NOT ACCEPTABLE TO THEIR PARENTS OR GRANDPARENTS, AT LEAST FROM WHERE I COME.

WRITTEN OPENING STATEMENT OF REPRESENTATIVE FISH

I WOULD LIKE TO MAKE A FEW COMMENTS ON THE STUDY RELEASED LAST NIGHT BY THE DEMOCRATS OF THE JOINT ECONOMIC COMMITTEE OF CONGRESS ENTITLED "THE EFFECTS OF INDUSTRY EMPLOYMENT SHIFTS ON WAGE GROWTH: 1948-1987" BY ROBERT COSTRELL.

AMID THE FLURRY OF STATISTICS ONE FACT IS PARAMOUNT: BETWEEN 1980 AND JULY 1988 THE U.S. ECONOMY HAS CREATED 15.8 MILLION JOBS, 90% OF WHICH ARE FULL TIME.

WHOEVER THE NEXT PRESIDENT IS, FORECASTS SHOW THAT EMPLOYMENT GROWTH WILL BE IN SERVICE INDUSTRIES. THESE JOBS CAN BE TECHNICAL AND REQUIRE HIGHLY SOPHISTICATED SKILLS. WITH DECLINING SMOKESTACK INDUSTRIES AND A RISE IN SERVICE INDUSTRIES, IT IS NOT SURPRISING THAT AT LEAST SOME OF THE NEW JOBS WILL NOT START AT A PAY SCALE REFLECTING THE BENEFITS ACHIEVED OVER 30 YEARS BY ORGANIZED LABOR.

THE COSTRELL STUDY'S MAIN CONCLUSION IS THAT DURING THE PERIOD 1981-1987, INDUSTRIES WITH EXPANDING SHARES OF EMPLOYMENT PAID AN AVERAGE OF $10,404 LESS PER YEAR THAN INDUSTRIES WHOSE EMPLOYMENT SHARES WERE CONTRACTING. THE BASIC IMPLICATION I GET FROM THE STUDY IS THAT BECAUSE OF INDUSTRIAL SHIFTS DURING THE 1980S, NEW JOBS CREATED DURING THE CURRENT EXPANSION ARE "BAD" JOBS BECAUSE THEY PAY LESS THAN OLD JOBS. IT IS MY BELIEF THAT THE RESULTS CONTAINED IN THIS REPORT CANNOT BEGIN TO SUPPORT THAT CONCLUSION.

FIRST IT SHOULD BE NOTED THAT PRECISE FIGURES DO NOT EXIST ON THE PAY OF INDIVIDUALS WHO GAINED AND LOST JOBS DURING THE CURRENT EXPANSION. WE HAVE THE FINEST LABOR STATISTICS IN THE WORLD, BUT THEY DO NOT REACH THAT LEVEL OF DETAIL.

AS A RESULT, ANALYSTS ARE FORCED TO COME UP WITH OTHER WAYS OF ESTIMATING COMPENSATION FOR NEW EMPLOYEES. THE COSTRELL REPORT USES AVERAGE PAY LEVELS FOR VARIOUS INDUSTRY GROUPINGS. THERE ARE TWO PROBLEMS WITH THIS APPROACH. FIRST WE HAVE NO IDEA WHETHER EMPLOYMENT GAINS IN AN INDUSTRY ARE A RESULT OF EMPLOYED WORKERS CHANGING CAREERS OR NEW WORKERS ENTERING THE LABOR FORCE.

THE OTHER MORE SERIOUS PROBLEM IS THAT WE DO NOT KNOW WHAT THE NEW WORKERS WERE HIRED TO DO. WE DO NOT KNOW WHETHER THEY WERE PAID ABOVE OR BELOW THE AVERAGE WAGE FOR THE INDUSTRY. A

CEO AND A SECRETARY RECENTLY HIRED BY A COMPUTER COMPANY WILL BOTH BE RECORDED AS ENTERING "BUSINESS SERVICES"--A LOW WAGE INDUSTRY.

TELLING US THAT A LOT OF PEOPLE ENTERED LOW WAGE INDUSTRIES DOES NOT SAY ANYTHING ABOUT THEIR OCCUPATIONS, WHAT THEIR CAREER PROSPECTS ARE OR WHAT THEY ARE BEING PAID. IN FACT ACCORDING TO MR. COSTRELL'S OWN FIGURES, REAL AVERAGE COMPENSATION GROWTH DURING THE 1980S WAS $126 PER YEAR COMPARED WITH $80 PER YEAR FOR THE PERIOD 1973-1981. WITH SO MANY WORKERS ENTERING LOW WAGE INDUSTRIES, WHY IS THIS FIGURE RISING?

IN CONCLUSION I WOULD ADVISE CAUTION IN INTERPRETING THESE RESULTS AND HOPE THAT ELECTION YEAR ENTHUSIASM DOES NOT IMPEDE SOUND ECONOMIC JUDGEMENTS.

WRITTEN OPENING STATEMENT OF SENATOR SYMMS

As always, it is a pleasure for this committee to receive the testimony and good counsel of Dr. Janet Norwood.

The Census Bureau reported Wednesday, in the Current Population Report on "Consumer Income" that inflation-adjusted median family income in 1987 is at the highest level in history. The Carter stagflation years robbed American families of thousands of dollars of purchasing power and burdensome tax increases. We reversed those trends plain and simple, and prosperity is the result. And we have 16 million productive, meaningful and well paying new jobs to prove it, and an economy growing at a 4.2 percent annual pace for six straight years.

This hearing today coincides with the release of a publication entitled, "The Effects of Industry Employment Shifts on Wage Growth, 1948-1987," written by Robert Costrell of the University of Massachusetts. For the record, the Republican members of the committee were not consulted, nor were our comments or recommendations for such a study sought. Consequently, we are in no position to endorse the document.

This report appears to be yet another attempt to cloak the Reagan era economic expansion as a sham. The focus of this one is alleged compensation disparagement. In the last few years, this committee has engaged in subsequently disclaimed, disputed studies alleging only low-paying, menial job creation. Another study alleged a flagrant increase in the concentration of wealth in America. The deliberate attempts to deride a record-breaking economic expansion extend way beyond the bounds of partisan politics. As students of economics, we must always be alert to a famous quotation from Mark Twain about statistics.

In the spirit of open, rigorous debate, I offer my initial reaction to the Costrell study. Let's start first with the "loss" of two million jobs. How many of these positions are the result of natural attrition? For example, since 1981, millions of workers have retired. Are they job "losers?" There are many painful stories about factory closings and mine shut-downs, but a study such as the one released today cannot be taken as "proof" that the "plant closing problem" has somehow been given a firm statistical foundation. How many of the report's job losses are authentic, in terms of abrupt termination? It doesn't tell us.

Furthermore, the alleged $10,000 pay gap is the illusory result of a fancy econometric model. However, this data cannot actually trace compensation trends of individuals in job

transition. That is the only true test of pay gaps, and this study fails on that ground.

The crucial question in economic policy is whether workers are better off than they were before. Look at Table A4 in the Appendix of the study: Line 8, "Average Compensation Growth" says the average worker is better off in this decade, and I agree with that. The table shows compensation growth of $80 per year from 1973 to 1981. In the Reagan years, however, that growth accelerated, increasing by 50 percent, to $126 per year.

Costrell's own data suggest that even if a worker lost a $32,000 job, that doesn't prove he is worse off today. That "average" worker also has an "average" many years of work experience making him a more valuable worker. Contracting and expanding industries alike have improved compensation to their employees over the years. To the point, again using Costrell's data, of the 28 contracting industries specified in the report, at least 24 improved their compensation over the period. Of the 30 industries whose employment share expanded or remained the same, 20 significantly improved compensation to their employees. The growing sectors of our economy, where most of the new jobs are, are also increasing wages and benefits rapidly. Again, American workers are better off today than they were in 1981.

Next, let's examine the time intervals of the study. The author suggests that they represent comparable business cycles. Yet the peculiar stagflation-recession period of 1979-82 is arbitrarily divided. If 1982 had been chosen as the beginning of the last interval, many of the "contracting" industries would have to be moved to the "expanding" column.

A year-by-year pay gap analysis would reveal a vastly different picture from the impression of this document, which is based on those arbitrary intervals.

My main concern about the study goes well beyond what it says. It's what goes unsaid -- the political interpretations that this study will feed. After creating an alarming crisis on paper, it provides no recommended public policy course of action to remedy the problem -- nor does it allege any public policy failures that the Reagan Administration has committed. It is clear that the Costrell study is just another general thematic appeal for government "management" or "planning" to "do things differently" from the free market. It is another tub-thump for a government-imposed and regulated industrial policy. This time, it zeroes in solely on the allocation and function of labor resources in the economy.

Changes in economic inputs and outputs have occurred since the wheel was invented. Technology is at the heart of industrial change. The U.S. economy is the largest, strongest and most efficient because of our free market principles. Mobility of resources is the key -- both labor and capital -- to be used in their most economic, most "demanded" capacities. America is more productive because its laborers are equipped with tools that make them more proficient. Impeding technology to justify policies to "stabilize" industrial employment can only impair our economy and lower our standard of living, permanently.

I would be remiss in my constructive criticism without recommending a different approach to this employment shift issue. This important issue was discussed at length in the Republican Views of the 1988 Joint Economic Report. Using industrial classification to analyze the workforce is becoming increasingly inaccurate. For example, the economic activity of a custodian working for General Motors appears in the manufacturing category. If instead GM contracted out its custodial services, that same custodian's activity would appear in a service industry category. For this reason, an analysis based on **occupation** is more relevant for policymakers. Perhaps the chairman would consider a follow-up study pursuing the pay gap between "contracting" and "expanding" occupations. There would be the opportunity for bipartisan support of that endeavor.

WRITTEN OPENING STATEMENT OF SENATOR D'AMATO

MR. CHAIRMAN, I WOULD LIKE TO WELCOME DR. NORWOOD TO THE JOINT ECONOMIC HEARING THIS MORNING. COMMISSIONER NORWOOD, I LOOK FORWARD TO HEARING YOUR OBSERVATIONS ON AUGUST'S EMPLOYMENT FIGURES.

AT LAST MONTH'S HEARING, YOU REPORTED TO THE COMMITTEE THAT THE EMPLOYMENT SITUATION CONTINUED TO LOOK BRIGHT. AT 5.4 PERCENT, JULY'S UNEMPLOYMENT RATE REMAINED NEAR JUNE'S LOW RATE OF 5.3 PERCENT. CIVILIAN EMPLOYMENT STAYED AT THE PREVIOUS MONTH'S RECORD HIGH OF 115 MILLION.

FOR THE MONTH OF AUGUST, THE OVERALL JOBLESS RATE EDGED UP ONE PERCENT TO 5.5 PERCENT. THE NUMBER OF EMPLOYED PERSONS, AS SHOWN BY BUSINESS PAYROLLS, INCREASED BY 220,000. CIVILIAN EMPLOYMENT REMAINED NEAR 115 MILLION.

THE CONTINUED ROBUST PERFORMANCE OF OUR NATION'S ECONOMY AND STEADY EMPLOYMENT GROWTH ARE ENCOURAGING. THE INCREASE PARTICULARLY IN JOBS REQUIRING HIGHER SKILLS AND EDUCATION IS LIKELY TO IMPROVE THE EARNING POWER AND WELL-BEING OF WORKERS FOR DECADES TO COME. WE ARE NOW IN THE SEVENTIETH MONTH OF THE LONGEST PEACETIME ECONOMIC EXPANSION IN OUR NATION'S

HISTORY, AFFORDING UNPRECEDENTED OPPORTUNITIES FOR AMERICAN WORKERS. SIXTEEN MILLION JOBS HAVE BEEN CREATED DURING THIS PERIOD. WHO CAN ARGUE WITH SUCH SUCCESS?

WELL, APPARENTLY, SOME TRY TO. A JOINT ECONOMIC STUDY RELEASED JUST LAST NIGHT ATTEMPTS TO REFUTE THE FACTS OF PROSPERITY. THE STUDY, "THE EFFECTS OF INDUSTRY EMPLOYMNET SHIFTS ON WAGE GROWTH, 1948-1987," WRITTEN BY ROBERT COSTRELL OF THE UNIVERSITY OF MASSACHUSETTS, IS FURTHER PROOF, IF ANY WERE NEEDED, THAT WITH SUFFICIENTLY STRAINED STATISTICAL ANALYSIS, UP CAN BE MADE DOWN, AND WHITE BLACK - AND THE EARTH ONCE AGAIN PROVES TO BE FLAT. THE REPUBLICAN MEMBERS OF THIS COMMITTEE WERE NOT CONSULTED ABOUT THE PREPARATION OF THIS STUDY. THE NATURE OF THIS STUDY AND THE TIMING OF ITS RELEASE SUGGEST A TRANSPARENT - AND DEEPLY DISAPPOINTING - PARTISANSHIP.

THE COSTRELL STUDY MAINTAINS THAT THERE IS A TREND TOWARDS LOW-PAYING JOBS THAT SIMPLY DOES NOT EXIST. ALTHOUGH "DECLINING " INDUSTRIES" LOST TWO MILLION JOBS PAYING AN AVERAGE OF $32,000 BETWEEN 1981 AND 1987, "EXPANDING" INDUSTRIES CREATED FOUR JOBS PAYING $22,000 A YEAR.

A $22,000 PER YEAR JOB IS HARDLY LOW-PAYING, PARTICULARLY IF THE HOLDER OF IT HAS BEEN PREVIOUSLY UN-OR UNDEREMPLOYED.

THE STUDY EXCLUDES THE REMARKABLE GAINS WE HAVE SEEN IN THE PAST TWELVE MONTHS. NINETY-ONE PERCENT OF THE JOBS CREATED HAVE BEEN IN MEDIUM AND HIGH-PAYING JOBS.

IT IS TRUE THAT WE HAVE SEEN SHIFTS IN EMPLOYMENT FROM THE MANUFACTURING TO THE SERVICE SECTORS. THIS IS AN INEVITABLE RESULT OF ADVANCES IN TECHNOLOGY AND REFLECTS A GLOBAL PHENOMENON. AMERICA IS MORE PRODUCTIVE THAN EVER BEFORE. SHOULD ADVANCES IN TECHNOLOGY HAVE BEEN IGNORED SO THAT MANUFACTURING EMPLOYMENT COULD HAVE REMAINED STABLE?

THE BOTTOM LINE IS: "ARE WORKERS BETTER OFF NOW THAN THEY WERE IN 1980?" THE ANSWER IS CLEAR: MORE PEOPLE ARE EMPLOYED TODAY THAN IN OUR NATION'S HISTORY; PERSONAL INCOME IS UP 79 PERCENT SINCE 1980; MEDIAN FAMILY INCOME IS AT AN HISTORIC HIGH; UNEMPLOYMENT IS AT A FOURTEEN YEAR LOW.

I LOOK FORWARD TO DR. NORWOOD'S TESTIMONY THIS MORNING AND HOPE IT WILL CONTAIN EVEN MORE ENCOURAGING EMPLOYMENT INFORMATION.

THANK YOU, MR, CHAIRMAN.

Senator SARBANES. Please proceed, Commissioner Norwood.

STATEMENT OF HON. JANET L. NORWOOD, COMMISSIONER, BUREAU OF LABOR STATISTICS, DEPARTMENT OF LABOR, ACCOMPANIED BY KENNETH V. DALTON, ASSOCIATE COMMISSIONER, OFFICE OF PRICES AND LIVING CONDITIONS; THOMAS J. PLEWES, ASSOCIATE COMMISSIONER, OFFICE OF EMPLOYMENT AND UNEMPLOYMENT STATISTICS; AND GEORGE L. STELLUTO, ASSOCIATE COMMISSIONER, OFFICE OF WAGES AND INDUSTRIAL RELATIONS

Mrs. NORWOOD. Thank you very much, Mr. Chairman.

Ken Dalton and Tom Plewes and I are all pleased to be here to add just a few comments to our news release and perhaps also to point out that just 2 years after that first get-together for a Labor Day celebration the Bureau of Labor, which has become the Bureau of Labor Statistics, was established in 1884 to try to find out about the working conditions of men and women in this country.

Employment grew modestly in August, and the number of unemployed persons rose. The increase in payroll jobs in the business survey was 220,000, considerably less than the monthly average during the first half of the year.

Employment in the household survey, which has been outpaced all year by the business survey, changed very little from July to August. The overall unemployment rate was 5.5 percent in August, and the civilian worker rate was 5.6 percent; both rates had been 5.4 percent in July.

Growth in the private nonfarm sector was relatively weak, only about 150,000. For the first time since last January, no over-the-month employment gain occurred in the goods-producing industries.

Continued job gains in such export-related manufacturing as electrical equipment and machinery were offset by small declines in 12 of the 20 manufacturing industries for whch we publish data in our release.

Jobs were lost in the oil and gas component of the mining industry, and construction employment was unchanged over the month.

The growth in payroll employment from July to August was concentrated in the service sector, where job increases were fairly widespread and about in line with the average monthly gains of the nearly 6 years of the current expansion.

Employment in retail trade and in finance, insurance and real estate was little changed over the month, an important exception to the service sector trend.

The relatively slow employment growth in August was accompanied by a reduction in weekly hours. The average workweek in the private nonfarm economy fell by three-tenths of an hour to 34.6 hours. This decline resulted in a broad-based reduction in the index of aggregate weekly hours.

The factory workweek and overtime in manufacturing also declined, but both of these important indicators remain at extremely high levels by the standards of the past two decades.

In the household survey, the lack of real movement in employment reflected a gain among adult women that was largely offset by a small decline among men and teenagers. The proportion of working-age persons holding jobs remained at its record level of 62.3 percent.

Among the employed, the number working part time involuntarily returned to the bottom of the 5.2 to 5.6 million range within which it has been fluctuating for more than a year.

While overall growth in the household surveys has been slow throughout most of this year, the payroll survey grew rapidly through June and has shown slower growth during the last 2 months.

The number of persons unemployed rose by 225,000 in August. Most of this increase occurred among adult men; there was little change in employment among women and teenagers.

Among the major racial and ethnic groups, the number of unemployed whites rose, whereas neither black nor Hispanic workers saw much change.

The unemployment rate—perhaps the most closely watched of our labor market indicators—has edged up over the past 2 months. Looked at over a somewhat longer period, however, the rate has hovered in the 5.3 to 5.6 percent range since last March and was four-tenths of a percentage point below the level of a year ago.

In summary, the labor market showed less strength in August than earlier in the year. Unemployment moved up slightly. Factory and construction employment held steady, but we continue to see job growth in several of the key export-led manufacturing industries. Employment in services continued to grow, maintaining its expansion period pace.

We would be glad to try to answer any questions you may have.

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

Unemployment rates of all civilian workers by alternative seasonal adjustment methods

Month and year	Unadjusted rate	X-11 ARIMA method							X-11 method (official method before 1980)	Range (cols. 2-9)
		Official procedure	Concurrent (as first computed)	Concurrent (revised)	Stable	Total	Residual	12-month extrapolation		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1987										
August.....	5.8	6.0	6.0	6.0	6.0	6.1	6.1	6.0	6.0	.1
September...	5.7	5.9	5.9	5.9	6.0	5.9	5.9	5.9	5.9	.1
October.....	5.7	6.0	6.0	6.0	6.0	5.9	6.0	6.0	6.0	.1
November....	5.6	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	-
December....	5.4	5.8	5.8	5.8	5.7	5.7	5.8	5.8	5.8	.1
1988										
January.....	6.3	5.8	5.8	5.8	5.8	5.8	5.6	5.8	5.8	.2
February....	6.2	5.7	5.7	5.7	5.8	5.7	5.6	5.7	5.8	.2
March.....	5.9	5.6	5.6	5.6	5.7	5.6	5.5	5.6	5.6	.2
April.....	5.3	5.4	5.5	5.5	5.5	5.4	5.4	5.4	5.4	.1
May.....	5.4	5.6	5.6	5.6	5.6	5.6	5.8	5.6	5.6	.2
June.....	5.5	5.3	5.4	5.4	5.3	5.4	5.4	5.3	5.3	.1
July.....	5.5	5.4	5.4	5.4	5.4	5.5	5.4	5.4	5.4	.1
August.....	5.4	5.6	5.6	5.6	5.5	5.6	5.7	5.6	5.6	.2

SOURCE: U.S. DEPARTMENT OF LABOR
Bureau of Labor Statistics
September 1988

(1) Unadjusted rate. Unemployment rate for all civilian workers, not seasonally adjusted.

(2) Official procedure (X-11 ARIMA method). The published seasonally adjusted rate for all civilian workers. Each of the 3 major civilian labor force components—agricultural employment, nonagricultural employment and unemployment—for 4 age-sex groups—males and females, ages 16-19 and 20 years and over—are seasonally adjusted independently using data from January 1974 forward. The data series for each of these 12 components are extended by a year at each end of the original series using ARIMA (Auto-Regressive, Integrated, Moving Average) models chosen specifically for each series. Each extended series is then seasonally adjusted with the X-11 portion of the X-11 ARIMA program. The 4 teenage unemployment and nonagricultural employment components are adjusted with the additive adjustment model, while the other components are adjusted with the multiplicative model. The unemployment rate is computed by summing the 4 seasonally adjusted unemployment components and calculating that total as a percent of the civilian labor force total derived by summing all 12 seasonally adjusted components. All the seasonally adjusted series are revised at the end of each year. Extrapolated factors for January-June are computed at the beginning of each year; extrapolated factors for July-December are computed in the middle of the year after the June data become available. Each set of 6-month factors are published in advance, in the January and July issues, respectively, of Employment and Earnings.

(3) Concurrent (as first computed, X-11 ARIMA method). The official procedure for computation of the rate for all civilian workers using the 12 components is followed except that extrapolated factors are not used at all. Each component is seasonally adjusted with the X-11 ARIMA program each month as the most recent data become available. Rates for each month of the current year are shown as first computed; they are revised only once each year, at the end of the year when data for the full year become available. For example, the rate for January 1984 would be based, during 1984, on the adjustment of data from the period January 1974 through January 1984.

(4) Concurrent (revised, X-11 ARIMA method). The procedure used is identical to (3) above, and the rate for the current month (the last month displayed) will always be the same in the two columns. However, all previous months are subject to revision each month based on the seasonal adjustment of all the components with data through the current month.

(5) Stable (X-11 ARIMA method). Each of the 12 civilian labor force components is extended using ARIMA models as in the official procedure and then run through the X-11 part of the program using the stable option. This option assumes that seasonal patterns are basically constant from year-to-year and computes final seasonal factors as unweighted averages of all the seasonal-irregular components for each month across the entire span of the period adjusted. As in the official procedure, factors are extrapolated in 6-month intervals and the series are revised at the end of each year. The procedure for computation of the rate from the seasonally adjusted components is also identical to the official procedure.

(6) Total (X-11 ARIMA method). This is one alternative aggregation procedure, in which total unemployment and civilian labor force levels are extended with ARIMA models and directly adjusted with multiplicative adjustment models in the X-11 part of the program. The rate is computed by taking seasonally adjusted total unemployment as a percent of seasonally adjusted total civilian labor force. Factors are extrapolated in 6-month intervals and the series revised at the end of each year.

(7) Residual (X-11 ARIMA method). This is another alternative aggregation method, in which total civilian employment and civilian labor force levels are extended using ARIMA models and then directly adjusted with multiplicative adjustment models. The seasonally adjusted unemployment level is derived by subtracting seasonally adjusted employment from seasonally adjusted labor force. The rate is then computed by taking the derived unemployment level as a percent of the labor force level. Factors are extrapolated in 6-month intervals and the series revised at the end of each year.

(8) 12-month extrapolation (X-11 ARIMA method). This approach is the same as the official procedure except that the factors are extrapolated in 12-month intervals. The factors for January-December of the current year are computed at the beginning of the year based on data through the preceding year. The values for January through June of the current year are the same as the official values since they reflect the same factors.

(9) X-11 method (official method before 1980). The method for computation of the official procedure is used except that the series are not extended with ARIMA models and the factors are projected in 12-month intervals. The standard X-11 program is used to perform the seasonal adjustment.

Methods of Adjustment: The X-11 ARIMA method was developed at Statistics Canada by the Seasonal Adjustment and Times Series Staff under the direction of Estela Bee Dagum. The method is described in The X-11 ARIMA Seasonal Adjustment Method, by Estela Bee Dagum, Statistics Canada Catalogue No. 12-564E, February 1980.

The standard X-11 method is described in X-11 Variant of the Census Method II Seasonal Adjustment Program, by Julius Shiskin, Allan Young and John Musgrave (Technical Paper No. 15, Bureau of the Census, 1967).

News United States Department of Labor

Bureau of Labor Statistics Washington, D.C. 20212

Technical information: (202) 523-1371
523-1944
523-1959
Media contact: 523-1913

USDL 88-430

TRANSMISSION OF MATERIAL IN THIS RELEASE IS EMBARGOED UNTIL 8:30 A.M. (EDT), FRIDAY, SEPTEMBER 2, 1988

THE EMPLOYMENT SITUATION: AUGUST 1988

The number of nonfarm payroll jobs grew moderately in August, and unemployment edged up, the Bureau of Labor Statistics of the U.S. Department of Labor reported today. The overall jobless rate was 5.5 percent and the civilian worker rate 5.6 percent, compared with 5.4 percent for both measures in July.

Nonagricultural payroll employment, as measured by the monthly survey of business establishments, increased by 220,000 in August to 106.5 million, substantially less than the average monthly gain so far this year. Total civilian employment, as measured by the monthly survey of households, was about unchanged at 115.2 million in August.

Unemployment (Household Survey Data)

Both the number of unemployed persons and the unemployment rate edged up in August. About 6.9 million persons were unemployed, and the civilian worker jobless rate was 5.6 percent, seasonally adjusted. Since March, the rate has moved within the narrow range of 5.3 to 5.6 percent. (See table A-2.)

Most of the over-the-month increase in joblessness occurred among adult men, whose unemployment rate rose 0.4 percentage point to 4.9 percent. In contrast, the rate for adult women edged down to 4.8 percent. The incidence of joblessness rose slightly for whites to 4.9 percent, while it was little changed for blacks (11.3 percent), teenagers (15.8 percent), and Hispanics (8.4 percent). (See tables A-2 and A-3.)

Civilian Employment and the Labor Force (Household Survey Data)

Civilian employment was about unchanged at 115.2 million in August, and the employment-population ratio remained at its high of 62.3 percent. The civilian labor force rose substantially--by almost 350,000--as the labor force participation rate edged up to 66.0 percent, matching the high reached in February. (See table A-2.)

Industry Payroll Employment (Establishment Survey Data)

Employment in nonagricultural establishments increased moderately in August, as payroll jobs rose by 220,000 to a level of 106.5 million, seasonally adjusted. This gain, and July's increase of 200,000, followed larger increases during the first half of the year. Employment in private nonfarm industries rose only modestly (155,000), and the goods-producing sector did not increase for the first time since January. (See table B-1.)

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

Category	Quarterly averages		Monthly data			July-Aug. change
	1988		1988			
	I	II	June	July	Aug.	
HOUSEHOLD DATA						
	Thousands of persons					
Labor force 1/.....	122,882	122,968	123,157	123,357	123,723	366
Total employment 1/..	115,954	116,352	116,703	116,732	116,872	140
Civilian labor force...	121,142	121,258	121,472	121,684	122,031	347
Civilian employment..	114,214	114,642	115,018	115,059	115,180	121
Unemployment.....	6,928	6,616	6,455	6,625	6,851	226
Not in labor force.....	62,825	63,131	63,090	63,045	62,799	-246
Discouraged workers..	1,027	910	N.A.	N.A.	N.A.	N.A.
	Percent of labor force					
Unemployment rates:						
All workers 1/.....	5.6	5.4	5.2	5.4	5.5	0.1
All civilian workers.	5.7	5.5	5.3	5.4	5.6	.2
Adult men.....	5.0	4.7	4.6	4.5	4.9	.4
Adult women.....	5.0	4.9	4.9	5.1	4.8	-.3
Teenagers.....	16.0	15.0	13.6	15.2	15.8	.6
White.....	4.8	4.6	4.5	4.7	4.9	.2
Black.....	12.5	12.0	11.5	11.4	11.3	-.1
Hispanic origin....	7.9	9.1	9.0	8.0	8.4	.4
ESTABLISHMENT DATA						
	Thousands of jobs					
Nonfarm employment.....	104,670	105,609	106,057	p106,257	p106,476	p219
Goods-producing.....	25,260	25,498	25,592	p25,655	p25,647	p-8
Service-producing....	79,410	80,111	80,465	p80,602	p80,829	p227
	Hours of work					
Average weekly hours:						
Total private.....	34.7	34.8	34.7	p34.9	p34.6	p-0.3
Manufacturing.....	41.0	41.1	41.1	p41.2	p41.0	p-.2
Overtime.....	3.8	3.9	3.9	p3.9	p3.8	p-.1

1/ Includes the resident Armed Forces. N.A.=not available.
p=preliminary.

After 4 months of fairly strong growth, factory employment was unchanged in August, on a seasonally adjusted basis. Although job gains were registered in the machinery, electrical equipment, and printing and publishing industries, these were offset by a drop in textile employment and smaller declines in 11 other industries. Elsewhere in the goods-producing sector, employment in the oil and gas component of the mining industry edged down. Construction industry employment, which has risen rather vigorously over the past year, was unchanged in August.

In the service-producing sector, the services industry rose by 95,000 in August, about in line with the recent average for that industry. Both business and health services, however, posted below-average increases. Wholesale trade added 20,000 jobs, nearly all in its durable goods component. Over the year, employment in that industry has risen by 300,000, more than three-fourths of which was in durable-goods distribution. After 2 months of strong growth, employment in retail trade showed little over-the-month movement, as only food stores posted a substantial job increase. Similarly, employment in the other private service sector industries--transportation and public utilities and finance, insurance, and real estate--was little changed in August.

Weekly Hours (Establishment Survey Data)

The average workweek for production or nonsupervisory workers on private nonagricultural payrolls dropped by 0.3 hour to 34.6 hours in August, seasonally adjusted. The factory workweek declined by 0.2 hour to 41.0 hours, and manufacturing overtime edged down 0.1 hour to 3.8 hours. The average workweek in manufacturing has been at or above 41 hours throughout most of 1987 and 1988, quite high by historical standards. (See table B-2.)

As a result of the August drop in the workweek, the index of aggregate weekly hours of production or nonsupervisory workers on private nonagricultural payrolls, at 125.5 (1977=100), declined 0.7 percent, seasonally adjusted. The index for manufacturing was also down, by 0.5 percent to 96.1. (See table B-5.)

Hourly and Weekly Earnings (Establishment Survey Data)

Average hourly earnings of private production or nonsupervisory workers were unchanged in August, seasonally adjusted. Average weekly earnings fell 0.9 percent, reflecting the decline in the average workweek. Prior to seasonal adjustment, average weekly earnings dropped 92 cents to $323.40, while average hourly earnings were unchanged at $9.24. (See table B-3.)

The Hourly Earnings Index (Establishment Survey Data)

The Hourly Earnings Index (HEI) was 179.4 (1977=100) in August, seasonally adjusted, an increase of 0.1 percent from July. For the 12 months ended in August, the increase was 3.1 percent. In dollars of constant purchasing power, the HEI decreased 0.5 percent during the 12-month period ended in July. The HEI is computed so as to exclude the effects of two types of changes unrelated to underlying wage rate movements--fluctuations in manufacturing overtime and interindustry employment shifts. (Beginning in 1989, the Hourly Earnings Index will no longer be published in this release.) (See table B-4.)

The Employment Situation for September 1988 will be released on Friday, October 7, at 8:30 A.M. (EDT).

Explanatory Note

This news release presents statistics from two major surveys, the Current Population Survey (household survey) and the Current Employment Statistics Survey (establishment survey). The household survey provides the information on the labor force, total employment, and unemployment that appears in the A tables, marked HOUSEHOLD DATA. It is a sample survey of about 55,800 households that is conducted by the Bureau of the Census with most of the findings analyzed and published by the Bureau of Labor Statistics (BLS).

The establishment survey provides the information on the employment, hours, and earnings of workers on nonagricultural payrolls that appears in the B tables, marked ESTABLISHMENT DATA. This information is collected from payroll records by BLS in cooperation with State agencies. The sample includes over 300,000 establishments employing over 38 million people.

For both surveys, the data for a given month are actually collected for and relate to a particular week. In the household survey, unless otherwise indicated, it is the calendar week that contains the 12th day of the month, which is called the survey week. In the establishment survey, the reference week is the pay period including the 12th, which may or may not correspond directly to the calendar week.

The data in this release are affected by a number of technical factors, including definitions, survey differences, seasonal adjustments, and the inevitable variance in results between a survey of a sample and a census of the entire population. Each of these factors is explained below.

Coverage, definitions, and differences between surveys

The sample households in the household survey are selected so as to reflect the entire civilian noninstitutional population 16 years of age and older. Each person in a household is classified as employed, unemployed, or not in the labor force. Those who hold more than one job are classified according to the job at which they worked the most hours.

People are classified as *employed* if they did any work at all as paid civilians; worked in their own business or profession or on their own farm; or worked 15 hours or more in an enterprise operated by a member of their family, whether they were paid or not. People are also counted as employed if they were on unpaid leave because of illness, bad weather, disputes between labor and management, or personal reasons. Members of the Armed Forces stationed in the United States are also included in the employed total.

People are classified as *unemployed*, regardless of their eligibility for unemployment benefits or public assistance, if they meet all of the following criteria: They had no employment during the survey week; they were available for work at that time; and they made specific efforts to find employment sometime during the prior 4 weeks. Persons laid off from the former jobs and awaiting recall and those expecting to report to a job within 30 days need not be looking for work to be counted as unemployed.

The *labor force* equals the sum of the number employed and the number unemployed. The *unemployment rate* is the percentage of unemployed people in the labor force (civilians plus the resident Armed Forces). Table A-5 presents a special grouping of seven measures of unemployment based on varying definitions of unemployment and the labor force. The definitions are provided in the table. The most restrictive definition yields U-1 and the most comprehensive yields U-7. The overall unemployment rate is U-5a, while U-5b represents the same measure with a civilian labor force base.

Unlike the household survey, the establishment survey only counts wage and salary employees whose names appear on the payroll records of nonagricultural firms. As a result, there are many differences between the two surveys, among which are the following:

— The household survey, although based on a smaller sample, reflects larger segment of the population; the establishment survey excludes agriculture the self-employed, unpaid family workers, private household workers, and members of the resident Armed Forces;

— The household survey includes people on unpaid leave among the employed; the establishment survey does not;

— The household survey is limited to those 16 years of age and older; the establishment survey is not limited by age;

— The household survey has no duplication of individuals, because each individual is counted only once; in the establishment survey, employees working a more than one job or otherwise appearing on more than one payroll would be counted separately for each appearance.

Other differences between the two surveys are described in "Comparing Employment Estimates from Household and Payroll Surveys," which may be obtained from the BLS upon request.

Seasonal adjustment

Over the course of a year, the size of the Nation's labor force and the levels of employment and unemployment undergo sharp fluctuations due to such seasonal events as changes in weather, reduced or expanded production, harvests, major holidays, and the opening and closing of schools. For example, the labor force increases by a large number each June, when schools close and many young people enter the job market. The effect of such seasonal variation can be very large; over the course of a year, for example, seasonality may account for as much as 95 percent of the month-to-month changes in unemployment.

Because these seasonal events follow a more or less regular pattern each year, their influence on statistical trends can be eliminated by adjusting the statistics from month to month. These adjustments make nonseasonal developments, such as declines in economic activity or increases in the participation of women in the labor force, easier to spot. To return to the school-out example, the large number of people entering the labor force each June is likely to obscure any other changes that have taken place since May, making it difficult to determine if the level of economic activity has risen or declined. However, because the effect of students finishing school in previous years is known, the statistics for the current year can be adjusted to allow for a comparable change. Insofar as the seasonal adjustment is made correctly, the adjusted figure provides a more useful tool with which to analyze changes in economic activity.

Measures of labor force, employment, and unemployment contain components such as age and sex. Statistics for all employees, production workers, average weekly hours, and average hourly earnings include components based on the employer's industry. All these statistics can be seasonally adjusted either by adjusting the total or by adjusting each of the components and combining them. The second procedure usually yields more accurate information and is therefore followed by BLS. For example, the seasonally adjusted figure for the labor force is the sum of eight seasonally adjusted civilian employment components, plus the resident Armed Forces total (not adjusted for seasonality), and four seasonally adjusted unemployment components; the total for unemployment is the sum of the four unemployment components; and the overall unemployment rate is derived by dividing the resulting estimate of total unemployment by the estimate of the labor force.

The numerical factors used to make the seasonal adjustments are recalculated regularly. For the household survey, the factors are calculated for the January-June period and again for the July-December period. The January revision is applied to data that have been published over the previous 5 years. For the establishment survey, updated factors for seasonal adjustment are calculated only once a year, along with the introduction of new benchmarks which are discussed at the end of the next section.

Sampling variability

Statistics based on the household and establishment surveys are subject to sampling error, that is, the estimate of the number of people employed and the other estimates drawn from these surveys probably differ from the figures that would be obtained from a complete census, even if the same questionnaires and procedures were used. In the household survey, the amount of the differences can be expressed in terms of standard errors. The numerical value of a standard error depends upon the size of the sample, the results of the survey, and other factors. However, the numerical value is always such that the chances are approximately 68 out of 100 that an estimate based on the sample will differ by no more than the standard error from the results of a complete census. The chances are approximately 90 out of 100 that an estimate based on the sample would differ by no more than 1.6 times the standard error from the results of a complete census. At approximately the 90-percent level of confidence—the confidence limits used by BLS in its analyses—the error for the monthly change in total employment is on the order of plus or minus 358,000; for total unemployment it is 224,000; and, for the overall unemployment rate, it is 0.19 percentage point. These figures do not mean that the sample results are off by these magnitudes but, rather, that the chances are approximately 90 out of 100 that the "true" level or rate would not be expected to differ from the estimates by more than these amounts.

Sampling errors for monthly surveys are reduced when the data are cumulated for several months, such as quarterly or annually. Also, as a general rule, the smaller the estimate, the larger the sampling error. Therefore, relatively speaking, the estimate of the size of the labor force is subject to less error than is the estimate of the number unemployed. And, among the unemployed, the sampling error for the jobless rate of adult men, for example, is much smaller than is the error for the jobless rate of teenagers. Specifically, the error on monthly change in the jobless rate for men is .25 percentage point; for teenagers, it is 1.29 percentage points.

In the establishment survey, estimates for the 2 most current months are based on incomplete returns; for this reason, these estimates are labeled preliminary in the tables. When all the returns in the sample have been received, the estimates are revised. In other words, data for the month of September are published in preliminary form in October and November and in final form in December. To remove errors that build up over time, a comprehensive count of the employed is conducted each year. The results of this survey are used to establish new benchmarks—comprehensive counts of employment—against which month-to-month changes can be measured. The new benchmarks also incorporate changes in the classification of industries and allow for the formation of new establishments.

Additional statistics and other information

In order to provide a broad view of the Nation's employment situation, BLS regularly publishes a wide variety of data in this news release. More comprehensive statistics are contained in *Employment and Earnings*, published each month by BLS. It is available for $8.50 per issue or $22.00 per year from the U.S. Government Printing Office, Washington, DC 20204. A check or money order made out to the Superintendent of Documents must accompany all orders.

Employment and Earnings also provides approximations of the standard errors for the household survey data published in this release. For unemployment and other labor force categories, the standard errors appear in tables B through J of its "Explanatory Notes." Measures of the reliability of the data drawn from the establishment survey and the actual amounts of revision due to benchmark adjustments are provided in tables M, O, P, and Q of that publication.

HOUSEHOLD DATA

Table A-1. Employment status of the population, including Armed Forces in the United States, by sex

(Numbers in thousands)

Employment status and sex	Not seasonally adjusted			Seasonally adjusted[1]					
	Aug. 1987	July 1988	Aug. 1988	Aug. 1987	Apr. 1988	May 1988	June 1988	July 1988	Aug. 1988
TOTAL									
Noninstitutional population[2]	184,736	186,402	186,522	184,736	185,964	186,088	186,247	186,402	186,522
Labor force[3]	123,350	125,561	125,088	122,042	123,055	122,692	123,157	123,357	123,723
Participation rate[3]	66.8	67.4	67.1	66.1	66.2	65.9	66.1	66.2	66.3
Total employed[4]	116,263	118,739	118,429	114,786	116,445	115,909	116,703	116,732	116,872
Employment-population ratio[4]	62.9	63.7	63.5	62.1	62.6	62.3	62.7	62.6	62.7
Resident Armed Forces	1,736	1,673	1,692	1,736	1,732	1,714	1,685	1,673	1,692
Civilian employed	114,527	117,066	116,737	113,050	114,713	114,195	115,018	115,058	115,180
Agriculture	3,452	3,541	3,455	3,143	3,228	3,035	3,085	3,046	3,151
Nonagricultural industries	111,075	113,524	113,282	109,907	111,485	111,160	111,933	112,014	112,029
Unemployed	7,086	6,823	6,659	7,256	6,610	6,783	6,455	6,625	6,851
Unemployment rate[5]	5.7	5.4	5.3	5.9	5.4	5.5	5.2	5.4	5.5
Not in labor force	61,386	60,841	61,434	62,695	62,909	63,396	63,090	63,045	62,799
Men, 16 years and over									
Noninstitutional population[2]	88,598	89,445	89,504	88,598	89,225	89,287	89,367	89,445	89,504
Labor force[3]	69,001	70,205	69,955	67,937	68,445	68,318	68,429	68,521	68,723
Participation rate[3]	77.9	78.5	78.0	76.7	76.7	76.5	76.6	76.6	76.8
Total employed[4]	65,305	66,676	66,405	63,916	64,982	64,583	64,934	65,002	64,954
Employment-population ratio[4]	73.7	74.5	74.2	72.1	72.7	72.3	72.7	72.7	72.6
Resident Armed Forces	1,575	1,512	1,529	1,575	1,569	1,553	1,523	1,512	1,529
Civilian employed	63,730	65,164	64,876	62,341	63,323	63,030	63,411	63,490	63,425
Unemployed	3,696	3,529	3,450	4,021	3,553	3,736	3,495	3,519	3,768
Unemployment rate[5]	5.4	5.0	4.9	5.9	5.2	5.5	5.1	5.1	5.5
Women, 16 years and over									
Noninstitutional population[2]	96,140	96,957	97,018	96,140	96,739	96,801	96,880	96,957	97,018
Labor force[3]	54,350	55,358	55,233	54,105	54,610	54,374	54,728	54,836	55,000
Participation rate[3]	56.5	57.1	56.9	56.3	56.5	56.2	56.5	56.6	56.7
Total employed[4]	50,958	52,063	52,024	50,870	51,553	51,327	51,769	51,730	51,918
Employment-population ratio[4]	53.0	53.7	53.6	52.9	53.3	53.0	53.4	53.4	53.5
Resident Armed Forces	161	161	163	161	163	161	162	161	163
Civilian employed	50,797	51,902	51,861	50,709	51,390	51,166	51,607	51,569	51,755
Unemployed	3,392	3,294	3,209	3,235	3,057	3,047	2,960	3,106	3,083
Unemployment rate[5]	6.2	6.0	5.8	6.0	5.6	5.6	5.4	5.7	5.6

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

[2] Includes members of the Armed Forces stationed in the United States.

[3] Labor force as a percent of the noninstitutional population.

[4] Total employment as a percent of the noninstitutional population.

[5] Unemployment as a percent of the labor force (including the resident Armed Forces).

HOUSEHOLD DATA

Table A-2. Employment status of the civilian population by sex and age

(Numbers in thousands)

Employment status, sex, and age	Not seasonally adjusted[1]			Seasonally adjusted[1]					
	Aug. 1987	July 1988	Aug. 1988	Aug. 1987	Apr. 1988	May 1988	June 1988	July 1988	Aug. 1988
TOTAL									
Civilian noninstitutional population	183,002	184,729	184,830	183,002	184,232	184,374	184,562	184,729	184,830
Civilian labor force	121,614	123,886	123,396	120,306	121,323	120,976	121,472	121,684	122,031
Participation rate	66.5	67.1	66.8	65.7	65.9	65.6	65.8	65.9	66.0
Employed	114,527	117,066	116,737	113,050	114,713	114,195	115,018	115,059	115,180
Employment-population ratio[2]	62.6	63.4	63.2	61.8	62.3	61.9	62.3	62.3	62.3
Unemployed	7,088	6,823	6,659	7,256	6,610	6,783	6,455	6,625	6,851
Unemployment rate	5.8	5.5	5.4	6.0	5.4	5.6	5.3	5.4	5.6
Men, 20 years and over									
Civilian noninstitutional population	79,666	80,606	80,669	79,666	80,326	80,402	80,526	80,606	80,669
Civilian labor force	62,516	63,320	63,396	62,063	62,791	62,662	62,667	62,769	62,925
Participation rate	78.5	78.6	78.6	77.9	78.2	77.9	77.8	77.9	78.0
Employed	59,546	60,622	60,594	58,825	59,883	59,590	59,797	59,954	59,834
Employment-population ratio[2]	74.7	75.2	75.1	73.8	74.5	74.1	74.3	74.4	74.2
Agriculture	2,416	2,454	2,438	2,289	2,255	2,181	2,208	2,247	2,311
Nonagricultural industries	57,130	58,166	58,156	56,536	57,627	57,409	57,588	57,706	57,523
Unemployed	2,970	2,697	2,803	3,258	2,909	3,072	2,870	2,815	3,090
Unemployment rate	4.8	4.3	4.4	5.2	4.6	4.9	4.6	4.5	4.9
Women, 20 years and over									
Civilian noninstitutional population	88,885	89,586	89,670	88,685	89,307	89,382	89,502	89,586	89,670
Civilian labor force	49,883	50,426	50,637	49,999	50,612	50,441	50,642	50,775	50,934
Participation rate	56.0	56.3	56.5	56.3	56.7	56.4	56.6	56.7	56.8
Employed	48,840	47,783	48,003	47,308	48,170	47,980	48,199	48,199	48,466
Employment-population ratio[2]	52.8	53.3	53.5	53.3	53.9	53.7	53.8	53.8	54.0
Agriculture	660	650	650	609	662	587	616	542	586
Nonagricultural industries	46,181	47,133	47,354	46,699	47,478	47,373	47,553	47,657	47,881
Unemployed	2,843	2,643	2,633	2,661	2,442	2,481	2,473	2,576	2,468
Unemployment rate	5.7	5.2	5.2	5.3	4.8	4.9	4.9	5.1	4.9
Both sexes, 16 to 19 years									
Civilian noninstitutional population	14,649	14,533	14,491	14,649	14,598	14,590	14,534	14,533	14,491
Civilian labor force	9,415	10,143	9,363	8,254	7,919	7,875	8,163	8,141	8,172
Participation rate	64.3	69.8	64.6	56.3	54.2	54.0	56.2	56.0	56.4
Employed	8,141	8,861	8,140	6,917	6,860	6,845	7,051	6,907	6,879
Employment-population ratio[2]	55.6	59.6	56.2	47.2	45.6	45.5	48.5	47.5	47.5
Agriculture	356	438	388	245	280	257	280	257	254
Nonagricultural industries	7,785	8,223	7,773	6,672	6,580	6,578	6,791	6,650	6,625
Unemployed	1,274	1,482	1,222	1,337	1,259	1,230	1,112	1,234	1,293
Unemployment rate	13.5	14.6	13.1	16.2	15.9	15.6	13.6	15.2	15.8

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

[2] Civilian employment as a percent of the civilian noninstitutional population.

Table A-3. Employment status of the civilian population by race, sex, age, and Hispanic origin

(Numbers in thousands)

Employment status, race, sex, age, and Hispanic origin	Not seasonally adjusted			Seasonally adjusted[1]					
	Aug. 1987	July 1988	Aug. 1988	Aug. 1987	Apr. 1988	May 1988	June 1988	July 1988	Aug. 1988
WHITE									
Civilian noninstitutional population	157,134	158,279	158,340	157,134	157,843	158,034	158,186	158,279	158,340
Civilian labor force	104,631	106,381	106,148	103,516	104,574	104,209	104,691	104,603	105,007
Participation rate	66.6	67.2	67.0	65.9	66.2	65.9	66.2	66.1	66.3
Employed	99,482	101,432	101,213	98,181	99,751	99,297	99,932	99,725	99,901
Employment-population ratio[2]	63.3	64.1	63.9	62.5	63.2	62.8	63.2	63.0	63.1
Unemployed	5,149	4,949	4,933	5,335	4,824	4,913	4,759	4,878	5,106
Unemployment rate	4.9	4.7	4.6	5.2	4.6	4.7	4.5	4.7	4.9
Men, 20 years and over									
Civilian labor force	54,558	55,196	55,233	54,183	54,699	54,618	54,662	54,732	54,825
Participation rate	76.8	76.9	76.9	76.2	76.5	76.3	76.2	76.3	76.4
Employed	52,335	53,182	53,094	51,715	52,538	52,314	52,491	52,603	52,464
Employment-population ratio[2]	73.6	74.1	73.9	74.7	75.4	75.0	75.1	75.2	75.0
Unemployed	2,224	2,014	2,139	2,468	2,161	2,304	2,171	2,129	2,361
Unemployment rate	4.1	3.6	3.9	4.6	4.0	4.2	4.0	3.9	4.3
Women, 20 years and over									
Civilian labor force	42,061	42,568	42,884	42,332	42,986	42,827	42,921	42,887	43,177
Participation rate	55.4	55.7	56.0	55.8	56.3	56.1	56.2	56.1	56.4
Employed	40,049	40,671	40,985	40,449	41,297	41,104	41,183	41,040	41,399
Employment-population ratio[2]	52.7	53.2	53.5	53.3	54.1	53.8	53.9	53.7	54.1
Unemployed	2,012	1,897	1,899	1,883	1,689	1,723	1,738	1,847	1,778
Unemployment rate	4.8	4.5	4.4	4.4	3.9	4.0	4.0	4.3	4.1
Both sexes, 16 to 19 years									
Civilian labor force	8,012	8,617	8,028	7,001	6,889	6,784	7,108	6,983	7,005
Participation rate	67.0	72.6	67.8	58.5	58.0	57.0	59.9	58.9	59.2
Employed	7,098	7,579	7,134	6,017	5,916	5,879	6,258	6,081	6,038
Employment-population ratio[2]	59.4	63.9	60.3	50.3	49.8	49.5	52.7	51.3	51.0
Unemployed	913	1,038	894	984	973	885	850	902	967
Unemployment rate	11.4	12.0	11.1	14.1	14.1	13.1	12.0	12.9	13.8
Men	12.3	12.9	11.2	15.2	14.5	13.8	12.8	14.6	13.8
Women	10.4	11.1	11.1	12.9	13.7	12.4	11.1	11.1	13.8
BLACK									
Civilian noninstitutional population	20,396	20,715	20,736	20,396	20,622	20,650	20,683	20,715	20,736
Civilian labor force	13,393	13,700	13,481	13,150	13,078	13,089	12,989	13,293	13,262
Participation rate	65.7	66.1	65.0	64.5	63.4	63.3	62.8	64.2	64.0
Employed	11,721	12,031	11,962	11,513	11,482	11,452	11,489	11,774	11,764
Employment-population ratio[2]	57.5	58.1	57.7	56.4	55.7	55.5	55.5	56.8	56.7
Unemployed	1,671	1,669	1,519	1,637	1,597	1,617	1,500	1,519	1,498
Unemployment rate	12.5	12.2	11.3	12.4	12.2	12.4	11.5	11.4	11.3
Men, 20 years and over									
Civilian labor force	6,121	6,161	6,212	6,054	6,163	6,107	6,064	6,070	6,154
Participation rate	75.8	74.9	75.4	74.9	75.3	74.5	73.8	73.8	74.7
Employed	5,491	5,569	5,644	5,407	5,511	5,449	5,456	5,492	5,566
Employment-population ratio[2]	68.0	67.7	68.5	66.9	67.3	66.5	66.5	66.8	67.6
Unemployed	630	592	568	647	652	658	608	578	588
Unemployment rate	10.3	9.6	9.1	10.7	10.6	10.8	10.0	9.5	9.6
Women, 20 years and over									
Civilian labor force	6,118	6,284	6,166	6,122	6,093	6,059	6,074	6,307	6,182
Participation rate	60.3	61.0	59.8	60.3	59.4	59.0	59.0	61.2	59.9
Employed	5,379	5,616	5,516	5,430	5,407	5,414	5,421	5,650	5,572
Employment-population ratio[2]	53.0	54.5	53.5	53.5	52.7	52.7	52.7	54.8	54.0
Unemployed	739	668	650	692	686	645	652	657	610
Unemployment rate	12.1	10.6	10.5	11.3	11.3	10.6	10.7	10.4	9.9
Both sexes, 16 to 19 years									
Civilian labor force	1,154	1,254	1,103	974	822	903	852	917	926
Participation rate	53.2	57.4	50.5	44.9	37.7	41.4	39.0	42.0	42.4
Employed	852	846	802	678	564	589	610	632	626
Employment-population ratio[2]	39.3	38.7	36.7	31.2	25.9	27.0	28.0	28.9	28.7
Unemployed	302	409	302	296	258	314	242	285	300
Unemployment rate	26.2	32.6	27.3	30.6	31.4	34.8	28.4	31.1	32.4
Men	28.1	32.3	26.5	33.7	27.6	33.3	30.4	30.4	32.2
Women	24.0	32.9	28.3	27.1	35.5	36.6	25.9	31.8	32.7

See footnotes at end of table.

Table A-3. Employment status of the civilian population by race, sex, age, and Hispanic origin—Continued

(Numbers in thousands)

Employment status, race, sex, age, and Hispanic origin	Not seasonally adjusted			Seasonally adjusted[1]					
	Aug. 1987	July 1988	Aug. 1988	Aug. 1987	Apr. 1988	May 1988	June 1988	July 1988	Aug. 1988
HISPANIC ORIGIN									
Civilian noninstitutional population	12,925	13,344	13,381	12,925	13,230	13,268	13,308	13,344	13,381
Civilian labor force	8,686	9,133	9,091	8,549	8,828	8,859	9,027	8,964	8,935
Participation rate	67.2	68.4	67.9	66.1	66.7	66.8	67.8	67.3	66.8
Employed	8,013	8,396	8,357	7,856	8,010	8,058	8,219	8,264	8,185
Employment-population ratio[2]	62.0	62.9	62.5	60.8	60.5	60.7	61.8	61.9	61.2
Unemployed	675	737	733	693	818	801	809	720	750
Unemployment rate	7.8	8.1	8.1	8.1	9.3	9.0	9.0	8.0	8.4

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

[2] Civilian employment as a percent of the civilian noninstitutional population.

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

Table A-4. Selected employment indicators

(In thousands)

Category	Not seasonally adjusted			Seasonally adjusted					
	Aug. 1987	July 1988	Aug. 1988	Aug. 1987	Apr. 1988	May 1988	June 1988	July 1988	Aug. 1988
CHARACTERISTIC									
Civilian employed, 16 years and over	114,527	117,086	116,737	113,050	114,713	114,195	115,018	115,059	115,180
Married men, spouse present	40,542	40,657	40,748	40,308	40,459	40,267	40,485	40,535	40,505
Married women, spouse present	27,880	28,136	28,284	28,189	28,859	28,567	28,713	28,654	28,632
Women who maintain families	6,059	6,127	6,225	6,107	6,055	5,957	6,065	6,145	6,282
MAJOR INDUSTRY AND CLASS OF WORKER									
Agriculture:									
Wage and salary workers	1,781	1,853	1,758	1,591	1,678	1,526	1,562	1,539	1,580
Self-employed workers	1,472	1,482	1,490	1,393	1,385	1,348	1,359	1,348	1,416
Unpaid family workers	198	207	207	155	155	159	167	148	163
Nonagricultural industries:									
Wage and salary workers	102,422	104,859	104,334	101,241	102,538	101,927	103,000	103,133	103,097
Government	16,140	16,433	16,462	16,794	17,015	16,887	17,064	16,959	17,112
Private industries	86,281	88,226	87,872	84,447	85,523	85,040	85,935	86,174	85,984
Private households	1,273	1,251	1,202	1,175	1,092	1,156	1,150	1,123	1,108
Other industries	85,008	86,975	86,670	83,272	84,431	83,884	84,786	85,051	84,877
Self-employed workers	8,397	8,805	8,695	8,214	8,837	8,917	8,577	8,528	8,491
Unpaid family workers	256	259	252	248	281	307	301	255	243
PERSONS AT WORK PART TIME[1]									
All industries:									
Part time for economic reasons	5,694	6,141	5,559	5,283	5,194	4,844	5,317	5,362	5,181
Slack work	2,417	2,450	2,274	2,468	2,236	2,227	2,364	2,490	2,318
Could only find part-time work	2,900	3,309	2,837	2,526	2,502	2,315	2,537	2,581	2,491
Voluntary part time	11,580	12,357	11,957	14,573	15,016	14,790	14,507	15,070	15,021
Nonagricultural industries:									
Part time for economic reasons	5,373	5,869	5,291	5,016	4,924	4,623	5,076	5,185	4,959
Slack work	2,207	2,292	2,117	2,265	2,121	2,120	2,199	2,351	2,178
Could only find part-time work	2,803	3,214	2,742	2,463	2,397	2,236	2,566	2,545	2,429
Voluntary part time	11,136	11,911	11,537	14,099	14,592	14,338	14,083	14,669	14,585

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

Table A-5. Range of unemployment measures based on varying definitions of unemployment and the labor force, seasonally adjusted

(Percent)

Measure	Quarterly averages					Monthly data		
	1987			1988		1988		
	II	III	IV	I	II	June	July	Aug.
U-1 Persons unemployed 15 weeks or longer as a percent of the civilian labor force	1.7	1.6	1.5	1.4	1.3	1.2	1.3	1.4
U-2 Job losers as a percent of the civilian labor force	3.0	2.8	2.7	2.6	2.5	2.5	2.5	2.6
U-3 Unemployed persons 25 years and over as a percent of the civilian labor force	4.8	4.6	4.5	4.4	4.2	4.1	4.2	4.4
U-4 Unemployed full-time jobseekers as a percent of the full-time civilian labor force	5.9	5.6	5.5	5.4	5.1	4.9	5.0	5.3
U-5a Total unemployed as a percent of the labor force, including the resident Armed Forces	6.2	5.9	5.8	5.6	5.4	5.2	5.4	5.5
U-5b Total unemployed as a percent of the civilian labor force	6.3	6.0	5.9	5.7	5.5	5.3	5.4	5.6
U-6 Total full-time jobseekers plus 1/2 part-time jobseekers plus 1/2 total on part time for economic reasons as a percent of the civilian labor force less 1/2 of the part-time labor force	8.5	8.2	8.1	8.0	7.6	7.5	7.6	7.8
U-7 Total full-time jobseekers plus 1/2 part-time jobseekers plus 1/2 total on part time for economic reasons plus discouraged workers as a percent of the civilian labor force plus discouraged workers less 1/2 of the part-time labor force	9.3	9.0	8.8	8.8	8.3	N.A.	N.A.	N.A.

N.A. = not available.

Table A-6. Selected unemployment indicators, seasonally adjusted

Category	Number of unemployed persons (in thousands)			Unemployment rates[1]					
	Aug. 1987	July 1988	Aug. 1988	Aug. 1987	Apr. 1988	May 1988	June 1988	July 1988	Aug. 1988
CHARACTERISTIC									
Total, 16 years and over	7,256	6,625	6,861	6.0	5.4	5.6	5.3	5.4	5.6
Men, 16 years and over	4,021	3,519	3,788	6.1	5.3	5.6	5.2	5.3	5.6
Men, 20 years and over	3,256	2,815	3,090	5.2	4.6	4.9	4.6	4.5	4.9
Women, 16 years and over	3,235	3,106	3,083	6.0	5.6	5.6	5.4	5.7	5.6
Women, 20 years and over	2,661	2,576	2,466	5.3	4.8	4.9	4.9	5.1	4.8
Both sexes, 16 to 19 years	1,337	1,234	1,293	16.2	15.9	15.6	13.6	15.2	15.8
Married men, spouse present	1,553	1,266	1,436	3.7	3.0	3.3	3.1	3.0	3.4
Married women, spouse present	1,258	1,212	1,228	4.3	3.8	3.9	3.7	4.1	4.1
Women who maintain families	805	577	502	9.0	8.7	8.4	7.8	8.6	7.4
Full-time workers	5,812	5,174	5,517	5.6	5.1	5.2	4.9	5.0	5.3
Part-time workers	1,432	1,443	1,321	8.2	7.4	7.7	7.8	8.1	7.4
Labor force time lost[2]	--	--	--	6.9	6.2	6.4	6.3	6.4	6.5
INDUSTRY									
Nonagricultural private wage and salary workers	5,391	4,955	5,144	6.0	5.3	5.7	5.4	5.4	5.6
Goods-producing industries	2,008	1,833	1,967	6.9	6.5	6.6	6.0	6.3	6.6
Mining	75	42	52	8.6	6.4	10.4	6.7	5.3	6.6
Construction	709	630	689	11.3	10.6	10.5	10.2	10.2	11.0
Manufacturing	1,224	1,161	1,227	5.6	5.3	5.4	4.8	5.2	5.6
Durable goods	707	657	653	5.5	4.8	4.9	4.4	5.0	5.0
Nondurable goods	517	504	573	5.8	6.0	6.0	5.4	5.6	6.4
Service-producing industries	3,383	3,122	3,176	5.6	4.7	5.2	5.1	5.0	5.1
Transportation and public utilities	274	223	239	4.4	3.6	4.4	4.1	3.5	3.8
Wholesale and retail trade	1,815	1,415	1,508	7.0	5.9	6.3	5.9	6.2	6.5
Finance and service industries	1,494	1,484	1,429	4.7	4.1	4.6	4.6	4.5	4.4
Government workers	647	538	550	3.7	3.0	2.9	2.8	3.1	3.1
Agricultural wage and salary workers	189	136	203	10.6	10.6	13.9	9.7	10.8	11.4

[1] Unemployment as a percent of the 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.

HOUSEHOLD DATA

Table A-7. Duration of unemployment

(Numbers in thousands)

Weeks of unemployment	Not seasonally adjusted			Seasonally adjusted					
	Aug. 1987	July 1988	Aug. 1988	Aug. 1987	Apr. 1988	May 1988	June 1988	July 1988	Aug. 1988
DURATION									
Less than 5 weeks	3,101	3,164	3,095	3,203	3,125	3,075	3,066	2,965	3,197
5 to 14 weeks	2,305	2,186	2,094	2,142	1,956	2,110	1,890	2,078	1,957
15 weeks and over	1,662	1,473	1,470	1,696	1,540	1,609	1,512	1,629	1,676
15 to 26 weeks	642	685	669	634	725	784	727	838	859
27 weeks and over	1,040	788	800	1,062	816	825	785	791	817
Average (mean) duration, in weeks	14.2	12.7	13.5	14.3	13.4	13.8	12.9	13.6	13.7
Median duration, in weeks	6.4	5.8	5.9	6.4	5.8	5.9	6.0	6.3	5.9
PERCENT DISTRIBUTION									
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than 5 weeks	43.8	46.4	46.5	44.2	47.2	45.3	47.4	44.4	46.8
5 to 14 weeks	32.5	32.0	31.4	29.6	29.5	31.1	29.2	31.1	28.7
15 weeks and over	23.7	21.6	22.1	26.2	23.3	23.7	23.4	24.4	24.5
15 to 26 weeks	9.1	10.0	10.1	11.5	10.9	11.5	11.2	12.6	12.6
27 weeks and over	14.7	11.5	12.0	14.7	12.3	12.1	12.1	11.9	12.0

Table A-8. Reason for unemployment

(Numbers in thousands)

Reasons	Not seasonally adjusted			Seasonally adjusted					
	Aug. 1987	July 1988	Aug. 1988	Aug. 1987	Apr. 1988	May 1988	June 1988	July 1988	Aug. 1988
NUMBER OF UNEMPLOYED									
Job losers	3,145	2,957	2,887	3,389	2,916	3,236	3,059	3,087	3,138
On layoff	730	781	739	874	821	793	863	852	891
Other job losers	2,415	2,176	2,148	2,515	2,095	2,443	2,196	2,235	2,247
Job leavers	1,082	975	1,052	992	993	926	944	904	997
Reentrants	1,991	1,880	1,885	1,969	1,784	1,789	1,723	1,901	1,889
New entrants	890	1,011	822	855	915	807	777	776	793
PERCENT DISTRIBUTION									
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Job losers	44.4	43.3	43.4	47.0	44.1	47.9	47.0	46.3	46.2
On layoff	10.3	11.4	11.1	12.1	12.4	11.7	13.3	12.8	13.1
Other job losers	34.1	31.9	32.3	34.9	31.7	36.2	33.8	33.5	33.1
Job leavers	15.0	14.3	15.9	13.8	15.0	13.7	14.5	13.6	14.7
Reentrants	28.1	27.5	28.4	27.3	27.0	26.5	26.5	28.5	27.5
New entrants	12.6	14.8	12.3	11.9	13.8	11.9	11.9	11.6	11.7
UNEMPLOYED AS A PERCENT OF THE CIVILIAN LABOR FORCE									
Job losers	2.6	2.4	2.3	2.8	2.4	2.7	2.5	2.5	2.6
Job leavers	.9	.8	.9	.8	.8	.8	.8	.7	.8
Reentrants	1.6	1.5	1.5	1.6	1.5	1.5	1.4	1.6	1.5
New entrants	.7	.8	.7	.7	.8	.7	.6	.6	.6

Table A-9. Unemployed persons by sex and age, seasonally adjusted

Sex and age	Number of unemployed persons (in thousands)			Unemployment rates[1]					
	Aug. 1987	July 1988	Aug. 1988	Aug. 1987	Apr. 1988	May 1988	June 1988	July 1988	Aug. 1988
Total, 16 years and over	7,256	6,625	6,851	6.0	5.4	5.6	5.3	5.4	5.6
16 to 24 years	2,736	2,468	2,513	11.8	11.2	11.3	10.3	10.9	11.1
16 to 19 years	1,337	1,234	1,293	16.2	15.9	15.6	13.6	15.2	15.8
16 to 17 years	638	569	607	18.3	17.8	18.1	15.4	17.5	18.7
18 to 19 years	698	630	671	14.7	14.2	15.3	12.9	13.0	13.9
20 to 24 years	1,399	1,234	1,220	9.4	8.7	8.9	8.4	8.5	8.4
25 years and over	4,544	4,180	4,358	4.7	4.1	4.3	4.1	4.2	4.4
25 to 54 years	4,050	3,691	3,871	4.9	4.3	4.5	4.4	4.4	4.6
55 years and over	493	461	476	3.2	2.9	3.5	2.9	3.1	3.2
Men, 16 years and over	4,021	3,519	3,766	6.1	5.3	5.6	5.2	5.3	5.6
16 to 24 years	1,518	1,334	1,359	12.5	11.2	11.6	10.5	11.3	11.5
16 to 19 years	763	704	676	17.8	15.8	16.2	14.7	16.6	15.9
16 to 17 years	363	302	297	20.5	17.2	16.7	17.0	17.9	17.6
18 to 19 years	387	370	371	15.9	14.7	15.8	14.2	14.7	14.7
20 to 24 years	755	630	681	9.6	8.8	9.1	8.2	8.4	9.0
25 years and over	2,529	2,174	2,426	4.7	4.1	4.3	4.1	3.9	4.4
25 to 54 years	2,215	1,906	2,118	4.9	4.2	4.4	4.2	4.1	4.5
55 years and over	302	275	301	3.4	3.1	3.7	3.2	3.1	3.4
Women, 16 years and over	3,235	3,106	3,083	6.0	5.6	5.6	5.4	5.7	5.6
16 to 24 years	1,218	1,134	1,154	11.0	11.3	11.0	10.0	10.5	10.7
16 to 19 years	574	530	615	14.4	16.0	15.0	12.4	13.6	15.8
16 to 17 years	275	267	310	16.0	18.4	15.5	13.7	17.0	19.8
18 to 19 years	301	260	300	13.4	13.7	14.7	11.6	11.2	12.9
20 to 24 years	644	604	539	9.0	8.7	8.8	8.7	8.7	7.8
25 years and over	2,016	1,978	1,933	4.7	4.2	4.3	4.2	4.5	4.4
25 to 54 years	1,835	1,785	1,753	5.0	4.5	4.5	4.6	4.7	4.6
55 years and over	181	186	175	2.9	2.7	3.2	2.6	3.0	2.8

[1] Unemployment as a percent of the civilian labor force.

Table A-10. Employment status of black and other workers

(Numbers in thousands)

Employment status	Not seasonally adjusted			Seasonally adjusted[1]					
	Aug. 1987	July 1988	Aug. 1988	Aug. 1987	Apr. 1988	May 1988	June 1988	July 1988	Aug. 1988
Civilian noninstitutional population	25,868	26,451	26,490	25,868	26,299	26,340	26,396	26,451	26,490
Civilian labor force	16,984	17,508	17,250	16,697	16,733	16,699	16,735	17,021	16,993
Participation rate	65.7	66.2	65.1	64.5	63.7	63.4	63.4	64.4	64.1
Employed	15,045	15,633	15,524	14,804	14,939	14,818	15,017	15,319	15,299
Employment-population ratio[2]	58.2	59.1	58.6	57.2	56.8	56.3	56.9	57.9	57.8
Unemployed	1,939	1,874	1,726	1,893	1,795	1,879	1,718	1,701	1,694
Unemployment rate	11.4	10.7	10.0	11.3	10.7	11.3	10.3	10.0	10.0
Not in labor force	8,884	8,943	9,240	9,171	9,566	9,642	9,661	9,430	9,497

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

[2] Civilian employment as a percent of the civilian noninstitutional population.

HOUSEHOLD DATA

Table A-11. Occupational status of the employed and unemployed, not seasonally adjusted

(Numbers in thousands)

Occupation	Civilian employed		Unemployed		Unemployment rate	
	Aug. 1987	Aug. 1988	Aug. 1987	Aug. 1988	Aug. 1987	Aug. 1988
Total, 16 years and over[1]	114,527	116,737	7,088	6,859	5.8	5.4
Managerial and professional specialty	27,750	28,980	672	773	2.4	2.6
Executive, administrative, and managerial	13,791	14,575	312	379	2.2	2.5
Professional specialty	13,958	14,405	360	394	2.5	2.7
Technical, sales, and administrative support	35,285	35,904	1,622	1,548	4.4	4.1
Technicians and related support	3,470	3,609	112	78	3.1	2.1
Sales occupations	13,708	14,064	696	655	4.8	4.4
Administrative support, including clerical	18,107	18,231	813	816	4.3	4.3
Service occupations	15,277	15,828	1,257	1,107	7.6	6.6
Private household	956	947	63	48	6.2	4.8
Protective service	1,232	2,167	75	81	3.7	3.6
Service, except private household and protective	12,389	12,514	1,119	978	8.3	7.3
Precision production, craft, and repair	14,073	13,910	770	615	5.2	4.2
Mechanics and repairers	4,627	4,415	188	133	3.9	2.9
Construction trades	5,323	5,421	360	308	6.3	5.3
Other precision production, craft, and repair	4,122	4,074	222	176	5.1	4.1
Operators, fabricators, and laborers	18,161	18,404	1,809	1,508	8.1	7.6
Machine operators, assemblers, and inspectors	8,348	8,176	709	684	7.8	7.7
Transportation and material moving occupations	4,750	4,912	306	286	6.1	5.5
Handlers, equipment cleaners, helpers, and laborers	5,065	5,315	594	534	10.5	9.1
Construction laborers	935	1,001	120	140	11.3	12.3
Other handlers, equipment cleaners, helpers, and laborers	4,130	4,314	474	394	10.3	8.4
Farming, forestry, and fishing	3,961	3,911	242	255	5.7	6.1

[1] Persons with no previous work experience and those whose last job was in the Armed Forces are included in the unemployed total.

Table A-12. Employment status of male Vietnam-era veterans and nonveterans by age, not seasonally adjusted

(Numbers in thousands)

Veteran status and age	Civilian noninstitutional population		Civilian labor force							
			Total		Employed		Unemployed			
							Number		Percent of labor force	
	Aug. 1987	Aug. 1988	Aug. 1987	Aug. 1988	Aug. 1987	Aug. 1988	Aug. 1987	Aug. 1988	Aug. 1987	Aug. 1988
VIETNAM-ERA VETERANS										
Total, 30 years and over	7,847	7,896	7,241	7,311	6,934	7,066	307	245	4.2	3.4
30 to 44 years	6,184	5,864	5,904	5,621	5,655	5,416	249	205	4.2	3.6
30 to 34 years	695	655	839	812	777	576	62	36	7.4	6.9
35 to 39 years	2,552	2,106	2,428	2,007	2,310	1,935	118	72	4.9	3.6
40 to 44 years	2,737	3,103	2,637	3,002	2,568	2,905	69	97	2.6	3.2
45 years and over	1,663	2,032	1,337	1,690	1,279	1,650	58	40	4.3	2.4
NONVETERANS										
Total, 30 to 44 years	19,585	20,542	18,601	19,525	17,788	18,739	813	786	4.4	4.0
30 to 34 years	8,910	9,155	8,549	8,747	8,132	8,352	417	395	4.9	4.5
35 to 39 years	6,252	6,868	5,921	6,555	5,662	6,305	229	250	3.9	3.8
40 to 44 years	4,423	4,499	4,131	4,223	3,984	4,082	167	141	4.0	3.3

NOTE: Male Vietnam-era veterans are men who served in the Armed Forces between August 5, 1964 and May 7, 1975. Nonveterans are men who have never served in the Armed Forces; published data are limited to those 30 to 44 years of age, the group that most closely corresponds to the bulk of the Vietnam-era veteran population.

HOUSEHOLD DATA

Table A-13. Employment status of the civilian population for eleven large States

(Numbers in thousands)

State and employment status	Not seasonally adjusted[1]			Seasonally adjusted[2]					
	Aug. 1987	July 1988	Aug. 1988	Aug. 1987	Apr. 1988	May 1988	June 1988	July 1988	Aug. 1988
California									
Civilian noninstitutional population	20,599	21,012	21,043	20,599	20,894	20,931	20,972	21,012	21,043
Civilian labor force	13,875	14,299	14,256	13,777	14,077	14,142	14,105	14,131	14,158
Employed	13,125	13,461	13,462	13,031	13,362	13,251	13,315	13,374	13,373
Unemployed	750	838	794	746	715	891	790	757	786
Unemployment rate	5.4	5.9	5.6	5.4	5.1	6.3	5.6	5.4	5.6
Florida									
Civilian noninstitutional population	9,483	9,693	9,711	9,483	9,628	9,648	9,671	9,693	9,711
Civilian labor force	5,827	6,198	6,235	5,853	6,093	6,086	6,115	6,102	6,182
Employed	5,591	5,886	5,921	5,530	5,773	5,780	5,831	5,837	5,882
Unemployed	337	313	314	323	320	306	284	265	300
Unemployment rate	5.7	5.1	5.0	5.5	5.3	5.0	4.6	4.3	4.9
Illinois									
Civilian noninstitutional population	8,745	8,786	8,787	8,745	8,773	8,776	8,781	8,786	8,787
Civilian labor force	5,904	5,869	5,962	5,833	5,746	5,733	5,709	5,760	5,887
Employed	5,503	5,507	5,559	5,420	5,332	5,352	5,332	5,394	5,472
Unemployed	402	362	402	413	414	381	377	366	415
Unemployment rate	6.8	6.2	6.7	7.1	7.2	6.6	6.6	6.4	7.0
Massachusetts									
Civilian noninstitutional population	4,590	4,604	4,604	4,590	4,599	4,600	4,603	4,604	4,604
Civilian labor force	3,165	3,200	3,186	3,099	3,163	3,124	3,188	3,137	3,119
Employed	3,076	3,085	3,088	3,006	3,072	3,036	3,076	3,020	3,015
Unemployed	89	115	99	93	91	88	112	117	104
Unemployment rate	2.8	3.6	3.1	3.0	2.9	2.8	3.5	3.7	3.3
Michigan									
Civilian noninstitutional population	6,940	6,999	7,002	6,940	6,981	6,986	6,993	6,999	7,002
Civilian labor force	4,690	4,658	4,662	4,612	4,556	4,498	4,553	4,587	4,586
Employed	4,300	4,296	4,337	4,207	4,220	4,205	4,253	4,251	4,229
Unemployed	390	362	325	405	336	293	300	336	357
Unemployment rate	8.3	7.8	7.0	8.8	7.4	6.5	6.6	7.3	7.4
New Jersey									
Civilian noninstitutional population	6,008	6,042	6,044	6,008	6,032	6,034	6,039	6,042	6,044
Civilian labor force	4,034	4,053	4,029	3,985	3,969	3,922	3,955	3,969	3,983
Employed	3,878	3,884	3,886	3,817	3,831	3,776	3,810	3,825	3,828
Unemployed	156	168	143	168	138	146	145	144	155
Unemployment rate	3.9	4.2	3.6	4.2	3.5	3.7	3.7	3.6	3.9
New York									
Civilian noninstitutional population	13,760	13,777	13,774	13,760	13,769	13,770	13,774	13,777	13,774
Civilian labor force	8,655	8,714	8,742	8,508	8,363	8,429	8,516	8,537	8,589
Employed	8,280	8,350	8,375	8,119	8,072	8,071	8,220	8,171	8,206
Unemployed	376	365	367	389	291	358	296	366	383
Unemployment rate	4.3	4.2	4.2	4.6	3.5	4.2	3.5	4.3	4.5
North Carolina									
Civilian noninstitutional population	4,820	4,889	4,894	4,820	4,869	4,875	4,883	4,889	4,894
Civilian labor force	3,332	3,411	3,388	3,288	3,300	3,297	3,316	3,332	3,339
Employed	3,193	3,302	3,287	3,148	3,177	3,183	3,213	3,235	3,236
Unemployed	139	109	101	140	123	114	105	97	103
Unemployment rate	4.2	3.2	3.0	4.3	3.7	3.5	3.2	2.9	3.1
Ohio									
Civilian noninstitutional population	8,162	8,203	8,205	8,162	8,190	8,194	8,199	8,203	8,205
Civilian labor force	5,289	5,336	5,343	5,234	5,277	5,248	5,271	5,252	5,298
Employed	4,924	5,064	5,044	4,873	4,945	4,922	4,959	4,973	5,000
Unemployed	365	272	299	361	332	326	312	279	298
Unemployment rate	6.9	5.1	5.6	6.9	6.3	6.2	5.9	5.3	5.6

See footnotes at end of table.

HOUSEHOLD DATA

Table A-13. Employment status of the civilian population for eleven large States—Continued

(Numbers in thousands)

State and employment status	Not seasonally adjusted[1]			Seasonally adjusted[2]					
	Aug. 1987	July 1988	Aug. 1988	Aug. 1987	Apr. 1988	May 1988	June 1988	July 1988	Aug. 1988
Pennsylvania									
Civilian noninstitutional population	9,296	9,325	9,325	9,296	9,315	9,317	9,322	9,325	9,325
Civilian labor force	5,837	5,862	5,928	5,891	5,753	5,861	5,702	5,735	5,786
Employed	5,534	5,568	5,680	5,375	5,477	5,375	5,410	5,433	5,526
Unemployed	303	315	249	316	276	286	292	302	260
Unemployment rate	5.2	5.3	4.2	5.6	4.8	5.1	5.1	5.3	4.5
Texas									
Civilian noninstitutional population	12,032	12,072	12,072	12,032	12,058	12,061	12,067	12,072	12,072
Civilian labor force	8,440	8,492	8,469	8,364	8,334	8,372	8,518	8,277	8,381
Employed	7,742	7,830	7,801	7,859	7,711	7,770	7,926	7,757	7,814
Unemployed	698	662	668	695	623	602	592	520	567
Unemployment rate	8.3	8.6	8.7	8.3	7.5	7.2	6.9	6.3	6.8

[1] These are the official Bureau of Labor Statistics' estimates used in the administration of Federal fund allocation programs.

[2] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and the seasonally adjusted columns.

ESTABLISHMENT DATA

Table B-1. Employees on nonagricultural payrolls by industry

(In thousands)

ESTABLISHMENT DATA

Industry	Not seasonally adjusted				Seasonally adjusted					
	Aug. 1987	June 1988	July 1988p/	Aug. 1988p/	Aug. 1987	Apr. 1988	May 1988	June 1988	July 1988p/	Aug. 1988p/
Total	102,471	106,928	106,055	106,287	102,672	105,281	105,449	106,057	106,257	106,476
Total private	86,478	89,478	89,605	89,944	85,656	87,973	88,139	88,678	88,927	89,080
Goods-producing industries	25,284	25,903	25,879	26,108	24,451	25,435	25,466	25,592	25,655	25,647
Mining	734	742	745	742	728	737	739	740	741	735
Oil and gas extraction	412.4	421.3	424.0	419.9	412	421	425	425	424	419
Construction	5,352	5,510	5,634	5,699	5,012	5,238	5,237	5,308	5,325	5,328
General building contractors	1,483.2	1,453.2	1,475.9	1,479.2	1,326	1,400	1,394	1,412	1,408	1,398
Manufacturing	19,198	19,651	19,508	19,668	19,111	19,460	19,498	19,544	19,589	19,584
Production workers	13,098	13,424	13,266	13,434	13,038	13,280	13,302	13,341	13,380	13,377
Durable goods	11,232	11,582	11,496	11,552	11,246	11,459	11,477	11,515	11,563	11,565
Production workers	7,453	7,728	7,636	7,696	7,483	7,632	7,649	7,676	7,720	7,728
Lumber and wood products	743.3	773.4	776.4	779.9	739	758	757	757	757	755
Furniture and fixtures	521.6	534.9	526.5	535.3	524	535	537	537	541	537
Stone, clay, and glass products	593.1	599.9	598.0	597.3	580	587	583	587	588	584
Primary metal industries	752.8	786.1	777.4	785.3	758	775	774	781	788	786
Blast furnaces and basic steel products	273.7	282.8	281.9	282.2	274	281	281	281	281	282
Fabricated metal products	1,403.9	1,442.6	1,448.1	1,457.7	1,465	1,444	1,448	1,457	1,464	1,459
Machinery, except electrical	2,019.7	2,144.3	2,141.8	2,148.8	2,031	2,111	2,121	2,134	2,150	2,160
Electrical and electronic equipment	2,089.6	2,126.5	2,110.7	2,128.8	2,081	2,117	2,115	2,120	2,121	2,129
Transportation equipment	2,026.2	2,051.0	2,026.2	2,015.5	2,063	2,045	2,046	2,047	2,053	2,052
Motor vehicles and equipment	844.3	857.2	848.6	829.7	874	848	851	858	858	859
Instruments and related products	696.3	719.5	714.1	718.3	696	706	709	713	715	718
Miscellaneous manufacturing	374.5	383.1	374.7	387.3	372	383	381	382	386	385
Nondurable goods	7,966	8,069	8,084	8,116	7,865	8,001	8,013	8,029	8,026	8,019
Production workers	5,645	5,696	5,630	5,758	5,555	5,648	5,653	5,665	5,660	5,649
Food and kindred products	1,712.9	1,648.4	1,670.4	1,714.9	1,625	1,648	1,643	1,645	1,631	1,627
Tobacco manufactures	54.3	49.7	48.9	51.1	54	54	52	53	52	51
Textile mill products	731.8	731.1	716.4	724.2	728	727	728	727	729	721
Apparel and other textile products	1,099.4	1,107.9	1,057.7	1,092.2	1,098	1,100	1,100	1,097	1,092	1,091
Paper and allied products	682.8	697.2	692.1	695.6	688	687	689	691	691	693
Printing and publishing	1,589.7	1,566.1	1,564.2	1,564.8	1,514	1,534	1,559	1,565	1,567	1,572
Chemicals and allied products	1,033.3	1,071.6	1,075.0	1,079.5	1,029	1,056	1,060	1,065	1,069	1,073
Petroleum and coal products	168.6	169.4	170.7	170.9	163	165	166	167	167	168
Rubber and misc. plastics products	826.0	879.5	868.7	872.2	827	864	870	873	881	876
Leather and leather products	147.5	148.1	148.0	149.4	145	146	146	144	147	147
Service-producing industries	77,187	81,017	80,176	80,187	77,821	79,846	80,025	80,465	80,602	80,829
Transportation and public utilities	5,398	5,616	5,597	5,614	5,394	5,543	5,556	5,582	5,597	5,609
Transportation	3,158	3,352	3,323	3,338	3,171	3,298	3,308	3,332	3,345	3,351
Communication and public utilities	2,240	2,264	2,272	2,276	2,223	2,245	2,248	2,250	2,252	2,258
Wholesale trade	5,926	6,181	6,206	6,225	5,892	6,089	6,115	6,144	6,171	6,198
Durable goods	3,488	3,678	3,697	3,713	3,463	3,618	3,635	3,648	3,679	3,695
Nondurable goods	2,446	2,503	2,509	2,512	2,429	2,479	2,480	2,488	2,492	2,495
Retail trade	18,694	19,359	19,363	19,425	18,569	19,093	19,130	19,285	19,267	19,298
General merchandise stores	2,397.9	2,486.8	2,485.2	2,492.1	2,449	2,546	2,541	2,549	2,546	2,546
Food stores	2,968.2	3,069.0	3,118.2	3,124.2	2,961	3,049	3,053	3,080	3,098	3,119
Automotive dealers and service stations	2,036.7	2,099.0	2,114.2	2,118.6	2,010	2,064	2,078	2,076	2,089	2,095
Eating and drinking places	6,333.3	6,561.5	6,540.5	6,574.4	6,143	6,326	6,336	6,352	6,349	6,377
Finance, insurance, and real estate	6,661	6,743	6,779	6,778	6,581	6,658	6,656	6,679	6,686	6,696
Finance	3,315	3,324	3,333	3,333	3,289	3,302	3,299	3,304	3,302	3,307
Insurance	2,036	2,080	2,086	2,085	2,029	2,069	2,067	2,074	2,076	2,079
Real estate	1,310	1,339	1,358	1,360	1,263	1,283	1,290	1,301	1,308	1,310
Services	24,513	25,676	25,781	25,882	24,369	25,163	25,216	25,472	25,551	25,648
Business services	5,269.7	5,507.1	5,539.7	5,578.0	5,212	5,420	5,443	5,480	5,501	5,517
Health services	6,980.7	7,232.1	7,274.9	7,298.2	6,873	7,126	7,153	7,203	7,239	7,261
Government	15,993	17,442	16,450	16,343	17,016	17,308	17,350	17,379	17,330	17,396
Federal	2,966	2,986	2,996	2,996	2,963	2,963	2,957	2,951	2,955	2,972
State	3,749	3,932	3,849	3,845	3,971	4,041	4,050	4,049	4,069	4,075
Local	9,278	10,524	9,605	9,502	10,102	10,304	10,343	10,379	10,306	10,351

p = preliminary.

ESTABLISHMENT DATA

Table B-2. Average weekly hours of production or nonsupervisory workers1/ on private nonagricultural payrolls by industry

Industry	Not seasonally adjusted				Seasonally adjusted					
	Aug. 1987	June 1988	July 1988p/	Aug. 1988p/	Aug. 1987	Apr. 1988	May 1988	June 1988	July 1988p/	Aug. 1988p/
Total private	35.2	34.9	35.1	35.0	34.6	34.9	34.7	34.7	34.9	34.6
Mining	42.7	42.5	42.5	42.9	(2)	(2)	(2)	(2)	(2)	(2)
Construction	38.6	38.7	38.6	38.6	(2)	(2)	(2)	(2)	(2)	(2)
Manufacturing	40.9	41.2	40.7	40.8	41.0	41.2	41.0	41.1	41.2	41.0
Overtime hours	3.8	3.9	3.7	3.9	3.8	3.9	3.9	3.9	3.9	3.8
Durable goods	41.3	42.0	41.2	41.3	41.5	42.0	41.8	41.8	41.8	41.6
Overtime hours	3.8	4.1	3.8	3.9	3.9	4.2	4.2	4.1	4.0	4.0
Lumber and wood products	40.8	40.9	40.3	40.5	40.5	40.6	40.1	40.2	40.5	40.2
Furniture and fixtures	40.3	39.4	38.8	39.3	40.0	39.5	39.3	39.4	39.6	39.0
Stone, clay, and glass products	42.6	42.6	42.3	43.0	42.2	42.5	42.3	42.4	42.2	42.6
Primary metal industries	42.9	43.7	43.1	42.7	43.3	43.5	43.6	43.6	43.5	43.1
Blast furnaces and basic steel products	43.3	44.5	44.1	43.8	43.7	43.8	43.9	44.5	44.1	43.4
Fabricated metal products	41.3	42.1	41.1	41.3	41.5	42.0	41.9	42.0	41.8	41.8
Machinery, except electrical	41.9	42.6	42.3	42.9	42.3	42.8	42.6	42.5	43.0	42.4
Electrical and electronic equipment	40.7	41.1	40.4	40.5	40.9	41.2	41.0	41.1	41.0	40.7
Transportation equipment	41.8	43.0	41.7	41.5	41.8	43.0	43.0	43.0	42.6	42.3
Motor vehicles and equipment	40.7	44.2	41.6	41.4	41.9	44.1	44.0	44.2	42.5	42.6
Instruments and related products	41.3	41.4	41.1	41.3	41.6	41.8	41.4	41.5	41.8	41.6
Miscellaneous manufacturing	39.3	39.3	38.6	39.0	39.7	39.4	39.2	39.3	39.3	39.2
Nondurable goods	40.4	40.2	39.9	40.2	40.3	40.3	40.0	40.1	40.2	40.2
Overtime hours	3.9	3.6	3.6	3.8	3.7	3.6	3.6	3.6	3.7	3.6
Food and kindred products	40.6	40.3	40.4	40.8	40.2	40.1	40.1	40.3	40.5	40.4
Tobacco manufactures	37.6	39.8	39.2	39.2	(2)	(2)	(2)	(2)	(2)	(2)
Textile mill products	42.2	41.0	40.4	41.1	42.0	41.6	40.8	40.7	41.1	40.9
Apparel and other textile products	37.1	37.2	36.6	36.9	37.2	37.4	36.8	36.9	36.9	36.8
Paper and allied products	43.2	43.1	43.0	43.1	43.4	43.3	43.3	43.2	43.3	43.4
Printing and publishing	38.2	37.6	37.9	38.3	38.1	38.2	37.7	38.0	38.1	38.1
Chemicals and allied products	42.1	42.4	42.0	41.8	42.4	42.1	42.0	42.4	42.3	42.1
Petroleum and coal products	43.6	45.1	45.5	45.4	(2)	(2)	(2)	(2)	(2)	(2)
Rubber and misc. plastics products	41.4	41.7	41.0	41.4	41.6	42.0	41.7	41.6	41.6	41.6
Leather and leather products	39.0	37.9	37.4	37.8	38.9	37.3	37.3	36.9	37.1	37.7
Transportation and public utilities	39.7	39.5	39.7	39.6	39.5	39.5	39.4	39.3	39.4	39.2
Wholesale trade	38.5	38.1	38.3	38.0	38.2	38.5	38.0	37.9	38.2	37.8
Retail trade	30.2	29.4	30.0	29.8	29.4	29.2	29.0	29.1	29.3	29.0
Finance, insurance, and real estate	36.4	35.8	36.2	35.9	(2)	(2)	(2)	(2)	(2)	(2)
Services	32.9	32.7	33.0	32.8	32.5	32.7	32.5	32.5	32.7	32.4

1/ Data relate to production workers in mining and manufacturing; construction workers in construction; and 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.

2/ These series are not published seasonally adjusted since the seasonal component is small relative to the trend-cycle and/or irregular components and consequently cannot be separated with sufficient precision.

p = preliminary.

Table B-3. Average hourly and weekly earnings of production or nonsupervisory workers1/ on private nonagricultural payrolls by industry

Industry	Average hourly earnings				Average weekly earnings			
	Aug. 1987	June 1988	July 1988p/	Aug. 1988p/	Aug. 1987	June 1988	July 1988p/	Aug. 1988p/
Total private	98.96	99.23	99.24	99.24	$314.69	$322.13	$324.32	$325.40
Seasonally adjusted	9.01	9.27	9.31	9.31	313.55	321.67	324.92	322.13
Mining	12.40	12.55	12.67	12.63	529.48	533.38	538.48	536.78
Construction	12.68	12.85	12.90	12.93	489.45	497.30	497.94	499.10
Manufacturing	9.86	10.16	10.16	10.11	403.27	418.59	413.51	412.49
Durable goods	10.39	10.69	10.67	10.62	429.11	448.98	439.60	438.61
Lumber and wood products	8.48	8.60	8.64	8.60	345.98	351.76	348.19	348.30
Furniture and fixtures	7.74	7.91	7.97	8.01	311.92	311.65	309.26	314.79
Stone, clay, and glass products	10.28	10.48	10.60	10.54	437.93	448.54	450.50	453.22
Primary metal industries	11.93	12.15	12.21	12.12	511.80	530.96	526.25	517.52
Blast furnaces and basic steel products	13.74	13.96	14.07	14.01	594.94	621.22	620.49	602.43
Fabricated metal products	9.96	10.26	10.18	10.16	410.52	431.95	418.48	421.64
Machinery, except electrical	10.70	10.95	10.93	10.92	448.53	465.62	462.34	458.64
Electrical and electronic equipment	9.88	10.15	10.12	10.12	402.12	417.17	408.85	409.86
Transportation equipment	12.88	13.35	13.25	13.13	528.08	574.05	551.69	545.73
Motor vehicles and equipment	13.40	14.16	13.86	13.69	545.38	625.87	576.58	566.77
Instruments and related products	9.74	9.88	9.95	9.91	402.26	409.03	408.95	409.28
Miscellaneous manufacturing	7.72	7.93	7.94	7.96	304.94	311.65	306.48	310.44
Nondurable goods	9.14	9.39	9.45	9.40	369.26	377.48	377.06	377.88
Food and kindred products	8.82	9.12	9.15	9.01	358.09	367.94	368.85	367.61
Tobacco manufactures	14.55	15.78	15.66	14.82	549.99	628.04	613.87	580.94
Textile mill products	7.16	7.35	7.31	7.38	302.15	300.53	295.32	305.32
Apparel and other textile products	5.88	6.08	6.08	6.08	219.32	226.18	219.68	224.35
Paper and allied products	11.41	11.65	11.73	11.64	492.91	502.12	504.39	501.68
Printing and publishing	10.32	10.43	10.48	10.35	394.22	392.17	397.19	404.07
Chemicals and allied products	12.33	12.60	12.78	12.64	519.09	534.24	533.40	528.35
Petroleum and coal products	14.94	15.84	15.81	14.74	633.94	678.38	683.87	669.20
Rubber and misc. plastics products	8.93	9.87	9.11	9.13	349.70	378.22	373.51	378.81
Leather and leather products	6.04	6.27	6.21	6.24	235.56	257.63	252.25	255.87
Transportation and public utilities	12.06	12.27	12.38	12.36	478.78	484.67	488.31	489.46
Wholesale trade	9.68	9.85	9.93	9.89	367.68	375.29	380.32	375.82
Retail trade	6.87	6.26	6.28	6.25	183.31	184.06	188.40	186.25
Finance, insurance, and real estate	8.76	8.98	9.02	9.04	318.16	321.48	326.52	320.92
Services	8.48	8.78	8.79	8.78	276.36	287.11	290.07	287.98

1/ See footnote 1, table B-2. p = preliminary.

Table B-4. Hourly Earnings Index for production or nonsupervisory workers1/ on private nonagricultural payrolls by industry

(1977=100)

Industry	Not seasonally adjusted					Seasonally adjusted						
	Aug. 1987	June 1988	July 1988p/	Aug. 1988p/	Percent change from: Aug. 1987-Aug. 1988	Aug. 1987	Apr. 1988	May 1988	June 1988	July 1988p/	Aug. 1988p/	Percent change from: July 1988-Aug. 1988
Total private nonfarm:												
Current dollars	173.2	178.2	178.7	178.5	3.1	174.1	178.0	178.7	178.6	179.3	179.4	0.1
Constant (1977) dollars	93.2	93.0	92.9	N.A.	(2)	93.8	93.6	93.6	93.2	93.2	N.A.	(3)
Mining	181.4	184.6	185.8	185.3	2.1	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Construction	154.9	157.3	157.8	158.2	2.1	155.1	157.8	157.5	157.8	158.8	158.3	-.3
Manufacturing	174.5	178.6	178.9	178.2	2.1	175.3	177.9	178.4	178.8	178.8	179.1	.2
Transportation and public utilities	176.1	179.1	180.7	180.2	2.9	177.8	180.6	181.6	181.0	181.5	182.2	.3
Wholesale trade	177.3	181.7	183.8	182.3	2.8	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Retail trade	160.6	165.5	166.1	165.6	3.1	161.5	164.8	165.4	165.7	166.8	166.6	-.1
Finance, insurance, and real estate	188.1	194.0	196.8	195.3	3.8	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Services	180.4	188.5	188.9	188.9	4.7	182.4	188.3	189.9	189.4	190.8	191.0	.1

1/ See footnote 1, table B-2.

2/ Change is -.5 percent from July 1987 to July 1988, the latest month available.

3/ Change is less than .05 percent from June 1988 to July 1988, the latest month available.

4/ These series are not seasonally adjusted since the seasonal component is small relative to the trend-cycle and/or irregular components and consequently cannot be separated with sufficient precision.

N.A. Data not available.

p = preliminary.

NOTE: Beginning in 1989, the Hourly Earnings Index series will no longer be published in this release. For further information, see "Employment Cost Index Series to Replace Hourly Earnings Index," Monthly Labor Review, July 1988, pp.32-35.

ESTABLISHMENT DATA

ESTABLISHMENT DATA

Table B-5. Indexes of aggregate weekly hours of production or nonsupervisory workers1/ on private nonagricultural payrolls by industry

(1977=100)

Industry	Not seasonally adjusted				Seasonally adjusted					
	Aug. 1987	June 1988	July 1988p/	Aug. 1988p/	Aug. 1987	Apr. 1988	May 1988	June 1988	July 1988p/	Aug. 1988p/
Total private	124.3	127.5	128.2	128.5	121.6	125.1	124.6	125.4	126.4	125.5
Goods-producing industries	102.0	105.2	103.8	105.4	99.6	102.7	102.1	103.2	103.4	102.8
Mining	84.0	85.1	85.5	84.8	82.9	85.9	84.4	85.0	86.1	83.6
Construction	148.2	152.3	155.7	157.6	133.9	141.1	139.3	144.0	142.6	142.1
Manufacturing	93.9	97.0	94.7	96.2	93.8	96.1	95.7	96.1	96.6	96.1
Durable goods	90.3	95.2	92.5	93.3	91.3	94.0	93.9	94.3	94.8	94.3
Lumber and wood products	106.5	108.0	106.5	107.6	101.8	104.7	105.2	103.8	103.9	103.0
Furniture and fixtures	112.9	112.8	109.0	112.5	112.4	113.2	113.7	113.4	114.8	112.3
Stone, clay, and glass products	89.1	91.3	90.1	91.1	85.9	88.3	87.5	88.1	87.9	87.9
Primary metal industries	64.0	69.2	67.2	67.3	65.0	67.6	68.1	68.6	69.0	68.2
Blast furnaces and basic steel products	51.4	55.7	55.1	55.9	51.8	54.8	54.6	55.4	55.1	54.3
Fabricated metal products	87.5	93.7	90.2	92.0	88.2	91.8	92.1	92.8	93.1	92.8
Machinery, except electrical	84.8	92.4	91.2	90.8	86.5	91.5	91.6	91.6	93.6	92.7
Electrical and electronic equipment	99.5	103.1	100.4	102.2	100.4	102.8	102.3	103.0	103.3	103.2
Transportation equipment	96.2	100.5	95.2	96.3	99.4	100.0	100.2	100.0	99.8	99.5
Motor vehicles and equipment	81.8	91.3	83.8	82.4	88.5	89.8	89.9	90.3	88.2	89.4
Instruments and related products	102.0	107.5	106.1	107.8	103.0	106.5	106.1	106.6	108.5	108.5
Miscellaneous manufacturing	83.3	85.3	81.1	85.1	82.9	85.0	83.9	84.5	85.1	84.5
Nondurable goods	99.3	99.6	97.9	100.5	97.5	99.1	98.4	98.9	99.1	98.8
Food and kindred products	107.7	101.4	103.4	108.1	99.5	101.0	100.5	101.4	100.6	99.9
Tobacco manufactures	71.7	67.6	64.9	68.0	73.2	73.8	71.0	71.4	73.7	68.6
Textile mill products	83.8	81.2	78.4	80.6	83.0	82.2	80.6	80.2	81.3	79.7
Apparel and other textile products	85.7	86.4	80.8	84.5	85.4	86.2	84.7	84.8	84.3	84.1
Paper and allied products	100.9	102.5	101.3	102.2	100.8	101.4	101.5	101.7	102.1	102.8
Printing and publishing	131.9	135.1	135.4	137.1	132.2	136.5	134.9	136.4	136.9	137.2
Chemicals and allied products	95.4	99.5	98.7	99.0	95.3	97.1	97.4	98.8	99.0	99.1
Petroleum and coal products	86.1	88.8	90.9	91.8	85.7	84.9	85.3	86.8	87.8	89.8
Rubber and misc. plastics products	115.1	124.7	120.6	122.6	116.5	122.9	123.1	123.4	124.4	123.9
Leather and leather products	60.1	57.6	53.2	57.9	58.4	55.5	55.5	54.9	55.7	56.6
Service-producing industries	136.6	139.8	141.7	141.1	133.8	137.4	136.8	137.8	139.1	138.0
Transportation and public utilities	111.1	115.0	115.2	115.4	109.9	113.5	113.5	113.8	114.4	114.3
Wholesale trade	121.0	126.4	127.4	127.0	119.8	124.8	124.4	124.9	126.3	125.5
Retail trade	127.7	128.5	131.0	130.7	123.6	126.0	125.1	126.2	127.4	126.2
Finance, insurance, and real estate	144.2	141.9	144.4	141.9	141.8	141.1	140.1	140.1	142.3	139.5
Services	156.6	162.3	164.3	163.6	153.5	159.0	158.3	160.0	161.4	160.5

1/ See footnote 1, table B-2

p = preliminary.

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

Time span	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Over 1-month span:												
1986	57.0	47.3	49.5	58.8	51.9	46.8	51.9	54.1	51.4	53.0	58.9	58.9
1987	50.8	59.2	61.1	62.4	62.4	61.4	70.8	62.2	68.1	67.3	67.8	68.4
1988	61.6	61.6	62.2	63.8	58.1	68.9	p/60.8	p/56.5				
Over 3-month span:												
1986	50.0	47.6	45.7	46.2	46.2	46.2	48.1	51.9	50.5	55.9	59.7	59.2
1987	57.6	57.0	63.1	69.2	68.1	71.9	73.8	76.8	74.1	76.5	78.1	73.0
1988	71.6	66.8	67.0	66.8	71.4	p/68.4	p/70.8					
Over 6-month span:												
1986	48.1	47.3	43.8	42.7	43.2	47.0	46.5	50.0	53.9	53.2	55.9	58.4
1987	64.6	64.5	63.0	70.3	72.4	77.3	78.4	79.7	82.7	77.8	77.0	76.5
1988	73.5	70.3	70.3	p/72.4	p/71.1							
Over 12-month span:												
1986	42.2	41.6	43.8	44.9	45.7	48.6	46.8	48.6	51.6	53.8	56.5	57.8
1987	63.8	67.3	69.5	73.5	76.8	76.8	78.9	78.9	79.7	78.4	77.8	81.9
1988	p/78.4	p/78.9										

1/ Number of employees, seasonally adjusted for 1, 3, and 6 month spans, on the payrolls of 185 private nonagricultural industries. Data for the 12-month span are unadjusted.

NOTE: Figures are the percent of industries with employment rising. (Half of the unchanged components are counted as rising.) Data are centered within the spans.
p=preliminary.

Senator SARBANES. Thank you very much, Commissioner. We are pleased to have you and your colleagues back before the committee.

I want to get some historic perspective on how quickly the economy can move toward recession, and I want to refer back to the 1981–82 recession, which is the most recent one we have had and actually was the most severe we have had since the 1930's, I believe. Is that correct, the 1981–82 recession?

Mrs. NORWOOD. Yes, that is correct.

Senator SARBANES. From July 1981, when we had a 7.2 percent unemployment rate, it went up 0.2 of a point in August 1981. Is that correct?

Mrs. NORWOOD. That is correct.

Senator SARBANES. Which is what has happened this month, 0.2 of a point increase in unemployment this month?

Mrs. NORWOOD. In civilian unemployment, yes. There is some rounding there.

Senator SARBANES. OK.

Mrs. NORWOOD. But, yes, it is up.

Senator SARBANES. By the end of that year, in other words in 6 months, the unemployment rate had gone to 8.6 percent. So we had an increase of 1.5 points in the unemployment in 6 months' time; is that correct?

Mrs. NORWOOD. Roughly, yes. Between July and December 1981, the civilian unemployment rate rose 1.3 percentage points.

Senator SARBANES. Was that a more precipitous movement than has ordinarily been the case in previous recessions, or does it generally move that quickly?

Mrs. NORWOOD. It appears to move fairly quickly when there are a lot of surrounding data to support the fact that we are moving into a recession.

Senator SARBANES. Then I notice that in the next 6 months, the first 6 months of 1982, it went up 0.9, almost another point, from 8.6 to 9.5 percent, and then in the following 6 months went up more than a point, 1.3 percent to 10.8.

Mrs. NORWOOD. Yes.

Senator SARBANES. So would previous recessions have shown a comparably rapid movement upward, although I know the figure never went as high in terms of the unemployment?

Mrs. NORWOOD. Well, the 1973–75 recession certainly moved quite rapidly, and I think it is correct that once we are in a recession that it can move rapidly.

Senator SARBANES. So this movement of a point or a point and a half over a 6-month period is not unusual once you move into a downturn?

Mrs. NORWOOD. If you move into a downturn, that could happen, yes. It is a pretty big "if."

Senator SARBANES. I understand that.

This is the second month in a row in which we have had an increase in the number of people unemployed.

Are there any unusual circumstances to explain this, or does it represent a real rise in the number of unemployed?

Mrs. NORWOOD. We don't see any particularly unusual circumstances. As I said in my statement, we do see that after a very vigorous growth during the first 6 months of the year, last month and

this month clearly show a slowing in the rate of employment growth.

Senator SARBANES. You indicated in your statement that among the employed, the number working part time involuntarily returned to the bottom of the 5.2 to 5.6 million range within which it has been fluctuating.

How many are working part time total?

Mrs. NORWOOD. There are 15 million who are working part time because that is what they want to do, and then there are another 5.2 million now who are working part time because they can't find full-time jobs. So it is about 20 million.

Senator SARBANES. How do we ascertain that?

Mrs. NORWOOD. We ask them in the household survey.

Senator SARBANES. Let me ask this question. If demand for jobs is very strong, do people in the survey move from saying they want to work part time voluntarily into working full time? To what extent do they settle for working part time and respond that they want to do it voluntarily in the light of economic circumstances?

Mrs. NORWOOD. That depends largely on the particular demographic groups within the part-time component. People who are going to school, for example, would not become full-time workers unless they left school. Many of the younger women who have very young children might decide that they didn't want a full-time job even if there was enormous demand and wages went up.

On the other hand, I am certain that there are some people who, if working conditions were really great, might decide that they did want a job. That is a matter of choice.

But those people are not unhappy at working part time now, that voluntary part-time group. I think we should understand that. It is the other group, the 5.2 million, that clearly we need to be concerned about.

Senator SARBANES. So you have 5.2 million working part time who want to work full time.

Mrs. NORWOOD. Yes.

Senator SARBANES. What is the definition of part-time work as you are using it here?

Mrs. NORWOOD. It is less than 35 hours a week.

Senator SARBANES. And more than what?

Mrs. NORWOOD. Less than 35 hours a week.

Senator SARBANES. Well, if someone is working 1 or 2 hours a week, is he considered employed in part-time work?

Mrs. NORWOOD. Yes.

Senator SARBANES. So these employment figures count as employed someone who works just a couple of hours a week if that is the case?

Mrs. NORWOOD. That is right. This is an activity definition, and anyone who has worked for 1 hour or more during the survey week is listed as employed unless that person is an unpaid family worker, where the requirement is 15 hours a week or more.

Senator SARBANES. Have you seen a shift from full-time to part-time employment? Is there a trendline that indicates that? Do companies seem increasingly to be putting people on a part-time basis?

Mrs. NORWOOD. We don't measure that in the business survey. In the household survey, we saw that especially during the 1970's

there was a big increase. As a lot of women initially poured into the labor force, there was a big increase in part-time work. It is still continuing, but not at as rapid a rate.

We also are having a fairly large increase in the temporary help industry, and some of that is part time, not all of it. Some of it is also part year.

Senator SARBANES. Am I correct in my impression that much of the part-time employment does not carry with it fringe benefits, health and pension, and things of that sort?

Mrs. NORWOOD. Some part-time employment does not provide benefits, particularly health benefits. Some of the part-time employees, however, do get benefits. We have been concerned about this whole issue—so-called contingent work force—and so we did a survey last year of the temporary help industry; that is, the suppliers of temporary help. That is not quite the same thing as part time, but some of those people are part time, and they are on the payrolls of the temporary help supplying unit, like Manpower, Inc., and Kelly Girls and that sort of company.

We found that many of those employees were getting fringe benefits, and some of them clearly were not. Proportionately there are fewer receiving benefits than in the rest of the economy, but there are more than many people had believed.

Senator SARBANES. Well, on an order of magnitude, if you compare people working full time and their benefit package apart from wages with people working part time and their benefit package apart from wages, what does that tend to show?

Mrs. NORWOOD. It has to be smaller for the part time.

Senator SARBANES. It would be smaller, yes. And by what order of magnitude?

Mrs. NORWOOD. On average. I don't know.

Senator SARBANES. We have no figures on that? In other words, what percentage roughly of full-time workers would have a benefit package—health and pensions, and so forth—and not just simply a wage package?

Mrs. NORWOOD. That depends on the industries in which they operate and the size of the establishments. The larger establishments clearly have a lot of fringe benefit coverage.

We have information on the costs to the employer of those fringe benefits, but I am not sure that we have any other information, do we?

George Stelluto can tell you.

Mr. STELLUTO. We have a survey of employee benefits in medium and large firms.

Mrs. NORWOOD. Yes, but not in the smaller ones.

Mr. STELLUTO. And there you see the benefit package is almost universal.

Senator SARBANES. Almost what?

Mr. STELLUTO. Almost universal for items like paid vacations, holidays, health insurance, pensions, and those sort of things.

We haven't really gotten down into the very small firms yet in terms of finding out what the incidence of these benefits are there. We suspect that they are somewhat less than universal, but we haven't really measured that yet.

Senator SARBANES. Now, you are talking about full-time workers?

Mr. STELLUTO. Yes.

Senator SARBANES. What about part-time workers?

Mr. STELLUTO. As Commissioner Norwood said, we have looked at some of this in the temporary help service industries, and we have had a few small studies of this in the past. What we found in many cases is that where full and part time were working in the same establishment the part-time workers usually had some sort of prorated part of the benefit package. They didn't have the total that full-time workers had. They had something less than that even within the same establishments.

But these are fairly small studies that we have done. We haven't really looked at this on a large-scale basis.

Senator SARBANES. OK, thank you.

Mrs. NORWOOD. Yes, Tom.

Mr. PLEWES. There have been periodic supplemental inquiries to our current population survey to try to get some of these benefit packages, also. Last year the Pension Benefit Guarantee Corp. sponsored a study. We can provide that information. It goes into what the full-time and part-time benefits are. We don't have that with us.

Senator SARBANES. Well, that would be very helpful. I would take it that there is probably a correlation between the degree of part-time work and the benefit package—in other words, you count as working someone who is only working a couple of hours a week.

Mrs. NORWOOD. That is right.

Senator SARBANES. And I would assume that the fewer hours you work, the more likely it is that there is not a fringe benefit package attached to that work; while the more hours you work, even though less than full time, the more likely it is that you might have a fringe benefit package as well; is that correct?

Mrs. NORWOOD. That is correct. There are of course some legally required benefits——

Senator SARBANES. Social Security.

Mrs. NORWOOD [continuing]. Which would apply throughout under the law. There also are a large proportion of two-earner families where sometimes there may be a duplication of a benefit, but often where one wage earner gets health insurance that covers the other.

Senator SARBANES. I want to ask about the two-earner families, but I will do that in my next round because I want to defer to Senator Proxmire.

Mrs. NORWOOD. Right.

Senator SARBANES. Before I do that, let me ask one final question.

An unemployment rate of 5.6 percent means how many people unemployed?

Mrs. NORWOOD. Well, if we look at the civilians unemployed, it is about 6.9 million, seasonally adjusted.

Senator SARBANES. All right, just under 7 million.

Mrs. NORWOOD. Yes.

Senator SARBANES. In addition, 5.2 million working——

Mrs. NORWOOD. Part time for economic reasons.

Senator SARBANES [continuing]. Part time and want to work full time?

Mrs. NORWOOD. That is right.

Senator SARBANES. And what does that translate into if added to the unemployment rate?

Mrs. NORWOOD. Well, if we add that plus the discouraged workers, who are about 900,000, you would get the measure to Y-7, which is about 8.3 percent for the second quarter of 1988. That comes out on a quarterly basis.

Senator SARBANES. So if you add in the part-time people who want to work full time, can't find full-time work——

Mrs. NORWOOD. Yes.

Senator SARBANES [continuing]. And if you add in the discouraged workers—you mean those who have had such difficulty finding work that they have simply dropped out?

Mrs. NORWOOD. Yes.

Senator SARBANES. So if you add all of that together and factor it into the unemployment rate, you would get a rate of 8.3 percent?

Mrs. NORWOOD. That is correct for the second quarter of 1988.

Senator SARBANES. Thank you.

Mrs. NORWOOD. Of this year.

Senator SARBANES. Senator Proxmire.

Senator PROXMIRE. I missed your response to one question by the chairman. When you said the unpaid family work 15 hours they are considered employed, does that mean that they have a house husband or a housewife and they work around the house and don't get paid for it for more than 15 hours?

I can't believe you are including that.

Mrs. NORWOOD. No, it is really for farms and small businesses.

Senator PROXMIRE. What is that?

Mrs. NORWOOD. It is really a provision for family farms, where the family maintains the farm and more than one of the members of the family works.

Senator PROXMIRE. Is that a very small category, very few people?

Mrs. NORWOOD. Yes.

Senator PROXMIRE. But less than 100,000?

Mrs. NORWOOD. 300,000.

Senator PROXMIRE. 300,000.

Now, as I indicated when I made a short opening statement, I said that increases in unemployment for 3 successive months, 5.2, 5.4, and 5.5 percent, and it is now higher than the second quarter of the year. Is this significant or is this such a small rate of increase that you wouldn't call it statistically significant?

Mrs. NORWOOD. If we are looking at the overall——

Senator PROXMIRE. Overall.

Mrs. NORWOOD [continuing]. Rate, certainly over the 3 months it is a significant change.

Senator PROXMIRE. It is significant.

Mrs. NORWOOD. Statistically.

Senator PROXMIRE. Now, I notice that there are remarkable differences here. For adult men unemployment went up from 4.5 to 4.9 percent. For women it went down from 5.1 to 4.8 percent. In other words, the men were substantially below women in July in

unemployment, and now the women have a—I should say men have a higher level of unemployment than women have.

Mrs. NORWOOD. Yes.

Senator PROXMIRE. Is there a reason for that?

Mrs. NORWOOD. Well, it has been bouncing around that way for some months. If you look at those numbers, you will see that the unemployment rate for adult men was 4.9 percent in March, it was 4.9 percent in May, and it is 4.9 percent in August. The rate for adult women was 4.8 percent in March and April and then it went up to 4.9 percent, 5.1 percent, and is now back to 4.8 percent.

I think what has happened if you look at women in relation to men is that in recent years there has been a reversal of the usual situation. It used to be that we could say that the unemployment rate for women is much higher than the unemployment rate for men in good times as well as bad times because in a recession it was the men who lost most of the jobs in the goods-producing industries so that gap narrowed, but the women were always worse off than the men.

What seems to have happened in the last recession period and since is that there has been a reversal of that situation and that the unemployment rate for women is pretty much similar to the unemployment rate for men. There is no longer as big a gap.

Senator PROXMIRE. Then you have a big increase—I don't know if it is significant because I imagine the sample is small—in the unemployment rate for teenagers. It goes from 15.2 percent to 15.8 percent.

Mrs. NORWOOD. That is not really a change.

Senator PROXMIRE. That is not significant?

Mrs. NORWOOD. No. No, it is a very small group.

Senator PROXMIRE. Well, what do you mean then, when you have this—I am saying that is a big change—why isn't that significant?

Mrs. NORWOOD. Well, if we look at the sampling error, that is within the range of the sampling error.

Senator PROXMIRE. I see. I take it, then, the Hispanic increase, too, which is very substantial——

Mrs. NORWOOD. Yes. It is not.

Senator PROXMIRE. Is not significant?

Mrs. NORWOOD. No. Now, one way to avoid that is to double the size of the survey.

Senator PROXMIRE. Now, as you know, at the Republican Convention Vice Peresident Bush in his acceptance speech said that in the next 8 years he would like to see us have 30 million new jobs. That was later modified by some of his campaign workers, who said that he was talking about a goal, not a promise.

But a goal, whether it is a goal or a promise, an increase of 30 million jobs in the next 8 years seems to me to be absolutely flatly impossible. Now, let me make my case and you tell me whether it is a good case or not.

In the first place we now have, as you pointed out, about 7 million people out of work. If you put every last one of those people to work, you would have an increase in jobs of 7 million.

I understand that your organization has made an estimate of the increase in the work force and you have had a low estimate, a medium estimate, and a high estimate. Your high estimate is that

there might be 13 million new people coming into the work force in the next 8 years. So if you had every last person who is out of work, all of them, put them all to work and then add the 13 million, which is your high estimate, you would get to 20 million.

Now, there are several options as to how he could get the additional 10, which is his goal, 10 million jobs without having negative unemployment. In the first place, if you put every last person to work, you obviously would have fantastic inflation, wouldn't you? I mean, isn't that logical? Isn't that likely?

Mrs. NORWOOD. It is possible, certainly.

Senator PROXMIRE. What do you mean "possible"?

Mrs. NORWOOD. You will always have some——

Senator PROXMIRE. It is impossible not to have it, isn't it? Every person?

Mrs. NORWOOD. Probably, yes.

Senator PROXMIRE. I mean, there is no country in the world that has ever done that, and of course we have problems of a heterogeneous work force, which makes it harder than other countries, and so forth.

Let me proceed now. There is an option that we could throw open our borders to immigration and have a much bigger immigration than you expect with your 13 million increase. We have just passed the Simpson-Mazzoli bill, so it seems that it is unlikely that we would repeal that. We might, but that was passed by a big margin and I doubt if there is any sentiment in either party to let down the limitations.

Second, if we had a big increase in wages, we could entice more people to come into the work force than you calculate; isn't that right?

Mrs. NORWOOD. That is right.

Senator PROXMIRE. In other words, people, instead of retiring or who are retired, would come back into the work force if you had a huge increase in wages and more women might come into it.

But your high estimate includes, I assume, that you have some developments which entice more people into the work force; is that right?

Mrs. NORWOOD. Some, yes.

Senator PROXMIRE. Now, if you went to 20 million, you would have very, very inflationary pressures in the economy, wouldn't you, 20 million new jobs?

Mrs. NORWOOD. Yes.

Senator PROXMIRE. Because you would have to not only take all of the new entries into the work force, all 13 million, but you would have to eliminate unemployment. So it seems that the most likely scenario for a good, prosperous next 8 years would be 13 million additional jobs, which would mean incidentally that we would have a lower percentage of unemployment than we have now, right, because you have a bigger work force?

Let me ask you, did the Vice President or any of his substantial number of assistants consult the Bureau of Labor Statistics before that speech to determine what——

Mrs. NORWOOD. No, sir.

Senator PROXMIRE. They did not. Well, it is too bad they didn't. If they had, I think they might have come up with a different approach.

Senator SARBANES. Would the Senator yield for a moment so I might make an observation?

Senator PROXMIRE. I would be happy to yield.

Senator SARBANES. There is another theory by which you might explain the 30 million figure. As I understand it, the 17 million jobs, which the Vice President asserts were created in the 1980's were counted from a base point at the trough of the 1982 recession. In other words, people who lost their jobs in 1981 and 1982, when the unemployment figure rose from 7.2 to 10.8 percent, were then put back to work. So you count their going back to work as a job created, and get the figure of 17 million jobs created, which was what the Vice President asserted.

So if you threw the economy into a deep recession and millions lost their jobs, then when you came out of that recession, and people managed to get back to work, then you would count their reemployment as jobs created. Never mind about jobs lost in the recession. So if you had a recession deep enough to throw literally 10 more million out of work, and then you put them back to work, you can count them and say you have created the jobs, and that is consistent with the claim or the boast from the 17 million.

Senator PROXMIRE. What the chairman is saying is if in the first couple of years of the Bush administration we increase unemployment by about 10 or 15 million, then it is possible to have an increase of 30 million from that low point.

Senator SARBANES. That is right. Then you put them all back to work again.

Senator PROXMIRE. But you have to put them out of work first.

Senator SARBANES. That is right, count them as created jobs. That is exactly what is done in claiming the 17 million figure——

Senator PROXMIRE. That is right.

Senator SARBANES [continuing]. Because the 17 million figure is based on the low point of the recession. They are including in their job count all those people who lost jobs in 1981 and 1982, and then went back to work. They consider going back to work as a created job.

Senator PROXMIRE. Let me ask you in connection with the chairman's questions or statement, when you compare job growth in the 1980's with the past performance of the economy, you have to recognize that the economy is much larger today that it was at the start of the 1960's or 1970's and so it should be creating more jobs, but when you compare the average annual percentage growth in employment during this decade with the performance of previous decades, employment growth during the 1980's has actually trailed the 1960's and 1970's.

Is that right or not?

Mrs. NORWOOD. I believe that is correct, yes.

Senator PROXMIRE. That is correct.

Mrs. NORWOOD. It depends on the years of comparison of course.

Senator PROXMIRE. Well, can you give us any comparison as to how the performance of employment was during this decade compared to the 1960's and 1970's?

Mrs. NORWOOD. No, no. I said it depends on the years of comparison.

Senator PROXMIRE. What is that?

Mrs. NORWOOD. I said it depends on the years of comparison. If you are taking the decade, you get one set of figures.

Senator PROXMIRE. Taking a decade. Taking a decade.

Mrs. NORWOOD. Taking a decade, you are correct, yes.

Senator PROXMIRE. Would it also be true with the 1950's?

Mrs. NORWOOD. I don't know. We could check on that.

Senator PROXMIRE. Would you check on that?

Mrs. NORWOOD. Sure. So far the average annual rate of employment growth has been greater in the 1980's than in the 1950's, but slower than in the 1960's and 1970's.

Senator PROXMIRE. Of course, the 1940's was unusual because that was that fantastic war and there we had an enormous increase.

These are questions that perhaps Mr. Plewes and Mr. Dalton want to join you on.

What was the inflation rate in July and the annualized inflation rate for the past 3 months?

Mrs. NORWOOD. It was 4.1 percent over the year.

Do you have the monthly rate?

Mr. DALTON. Well, the rate through the first 7 months of the year was 4.5 percent.

Senator PROXMIRE. 4.5 percent was the annual rate?

Mr. DALTON. Rate, correct.

Mrs. NORWOOD. Through the first 7 months.

Senator PROXMIRE. How does that compare with the average inflation rate of the 1980's?

Mr. DALTON. It compares with 4.4 percent in 1987, 1.1 percent in 1986, 3.8 percent in 1985, 3.9 percent in 1984, 3.8 percent in 1983, 3.8 percent in 1982.

Senator PROXMIRE. So it is the highest of any year in the 1980's, right?

Mr. DALTON. By a slight margin, yes.

Senator PROXMIRE. Were there any components of the Consumer Price Index that have recorded rapid price increases during the past 3 months? For instance, what has happened to the price of food, medical care, other goods and services during the past 3 months?

Mrs. NORWOOD. Go ahead, Mr. Dalton.

Mr. DALTON. Food prices accelerated during the——

Senator SARBANES. Mr. Dalton, if you could pull that microphone a little closer, it would be easier for us to hear your response.

Mr. DALTON. Sorry.

Senator SARBANES. Thank you.

Mr. DALTON. Food prices accelerated over the past 3 months. Energy prices, also.

Senator PROXMIRE. Say that again?

Mr. DALTON. Food prices and energy prices both accelerated.

Senator PROXMIRE. And how rapid an increase were those, roughly? Can you give me a rough estimate?

Mr. DALTON. Food prices about doubled its pace from the previous 3 months. Energy prices actually turned around, they were negative and then started going up.

Senator PROXMIRE. What has happened to wholesale prices during the past 3 months, especially food prices, and do you expect that to affect food prices in the future at the retail level?

Mr. DALTON. There is some acceleration in food prices at the producer level, but I think perhaps the more significant thing is that we are beginning to see an acceleration in the goods sector that is reflecting earlier increases at the intermediate level. We saw that last month in the Producer Price Index, which I think is the more significant development right now.

Senator PROXMIRE. Now, I take it that the inflation rate in the 1980's is much better than in the 1970's, when we had the tremendous runup in oil prices; is that right?

Mrs. NORWOOD. That is right.

Senator PROXMIRE. It was an improvement over the 1970's?

Mr. DALTON. Yes.

Senator PROXMIRE. Now, the bicentennial edition of "Historical Statistics of the United States From Colonial Times to 1970," published by the Bureau of the Census, includes a Consumer Price Index developed by BLS going back as far as 1800. A review of these data as well as more recent inflation data indicate that there is no other peacetime period in American history that has experienced as high an inflation rate as the United States has during the 1980's except for the unusual experience in the 1970's when the OPEC increase in oil prices caused a very high wage/price spiral.

To your knowledge, has there been any other peacetime period when prices have risen as much as they have during the 1980's?

Mr. DALTON. Right off the top——

Senator PROXMIRE. Peacetime.

Mr. DALTON. I don't think I can answer that, but I don't believe so.

Senator PROXMIRE. Looking at the entire history of the United States, would you characterize the 1980's as a period of high or low inflation?

Mr. DALTON. Well, relative to what expectations were in the 1960's and 1970's, I would say—in the early 1970's—I would say that it is a relatively high rate of inflation.

Mrs. NORWOOD. I think that depends on our conditioning. The very high rates of inflation in the 1970's caused in large part, but not entirely certainly, by the oil shocks. The external oil shocks to the economy conditioned us to double-digit inflation, and so compared to that a 4-percent rate of inflation looks pretty good. We have had, however, in the 1980's some years that were very much lower.

Nevertheless, the rate at which consumer prices are going up now, is close to the level of inflation at which President Nixon instituted price controls.

So you can see the difference in expectations that has occurred. There are a lot of reasons for that, but I think that the thing that has turned around in the 1980's is the expectation of continuing inflation, which was fueled so much by those oil shocks in the 1970's. That has changed considerably, and that is quite important.

Senator PROXMIRE. Go ahead.

Senator SARBANES. But the rate of inflation now is the same rate which in the early 1970's led President Nixon to institute price and wage controls?

Mrs. NORWOOD. That is correct.

Senator SARBANES. In other words, primarily because of the double oil shock of the 1970's, we were conditioned to much higher rates of inflation——

Mrs. NORWOOD. Yes.

Senator SARBANES. And we use that as the basis for comparison with the current situation. If you take a longer historical view, does the current rate appear really quite high?

Mrs. NORWOOD. Yes. It was oil, and of course food in 1980 was a very important contributor.

Mr. DALTON. Well, in 1969 and 1970 the rate was somewhat higher than it is now, and price controls were put on in 1971.

Senator SARBANES. I would like to turn to what I perceive to be a stagnation of income growth for the average American worker.

In the annual report of the Joint Economic Committee we included a section discussing this phenomenon. We had a table showing that real compensation per hour, which includes both the hourly wage and the fringe benefits, had in effect stagnated through the late 1970's and through the 1980's.

What has happened to the real average hourly earnings of the average American worker during the 1980's?

Mrs. NORWOOD. Real average hourly earnings have been declining. They of course were very much affected by the recession, and they have gone up in recent years, but over the last year or so they have not been positive.

Senator SARBANES. I want to focus on this question because, you know, we are coming to Labor Day. It's appropriate to take a look at the status of working people. The average worker has in effect fallen somewhat behind the rise in the cost of living during the 1980's; is that correct?

Mrs. NORWOOD. During the 1980's there have been ups and downs. If you chart this, you see that it was down during the recession period, and during the recovery period real earnings has returned somewhat but not fully. So you are quite right.

Senator SARBANES. So their standard of living has been adversely affected compared to what it was at the beginning of the decade of the 1980's?

Mrs. NORWOOD. In terms of earnings, yes. Now, as you know, there are a number of different studies, and some of them include fringe benefits and some of them do not.

If you look at our employment cost index for compensation, you see that in constant dollars it was 100.4 in March 1981, 99.4 in December, and it is above that—it is 107.3 in June 1988.

That is one measure. That includes the employer cost of fringe benefits.

If you look at the average hourly compensation series that come out of the national accounts, which is calculated somewhat differently, the picture is really not as good, and if you look at average hourly earnings which come out of our business survey, again

which do not include fringe benefits at all, the situation shows, as you say, a deterioration.

Senator SARBANES. All right. Now, when claims are made that there has been an increase in family income over this period and yet we realize that there has been no increase in real average hourly earnings for the individual worker, the increase in family income would have to come either from working longer hours or having a second member of the family go to work.

Would that be the case?

Mrs. NORWOOD. Well, per capita income certainly, which includes the extra people who are working, has been going up much more than median family income.

Senator SARBANES. What has been the increase in married couples having two or more family members working in this decade?

Mrs. NORWOOD. Well, about 63 percent of the married couple families now have more than one earner. This is a big shift from 20 years ago, when it was much, much smaller. The one-earner household is now a very small proportion of married couple families.

Senator SARBANES. How much of the reported increase in real family incomes in the 1980's resulted from an increase in the number of workers per family?

Mrs. NORWOOD. I don't really know the exact amount. The Census Bureau released a whole body of data on median-family income the day before yesterday, and there have been a number of studies that have tried to look at this by family type. It would appear that if you look at this over a long period of time, over the last decade or two decades, you find that the two-earner family has probably done better relative to the other families.

The single-earner family has really had great difficulty, and we have had an explosion of divorce rates as well as of never married parents who are supporting children. We also have a lot of older Americans who are still working. All of them have had a slowdown in median-family income.

The two-earner family has had somewhat less of a slowdown than the others. The minority families have been harder hit, and perhaps the most important problem is the increasing difference between the bottom group and the top group, the increasing inequality, over about the last 20 years.

Senator SARBANES. Well, I want to turn to that, but I am going to defer to Senator Proxmire. Let me just close out this point, though.

To the extent that it is asserted that real-family income has gone up in this decade, the primary explanation is that additional earners have been added to the family, thereby boosting its income, because the return to the individual which we discussed earlier in terms of real average hourly earnings has essentially stagnated.

So to the extent you say that family incomes have gone up, it is because more members of the family are working. Is that the case?

Mrs. NORWOOD. To a large extent, yes.

Senator SARBANES. Yes.

Senator Proxmire.

Senator PROXMIRE. Mrs. Norwood, I am concerned, as I know you are, too, with the erratic and spotty effect that developments in the economy have had in various sections of the country, particularly

being I am from Wisconsin, which of course is in the Middle West, and we haven't shared the employment increase and economic activity with other sections of the country, and of course Texas and some of the States in the Southwest are even worse off.

The Bureau of Labor Statistics I understand recently issued a release on average annual pay by State and industry.

Can you briefly summarize the data in that release?

Mrs. NORWOOD. I am sure Mr. Plewes can. [Laughter.]

Let me just say first that that is the total payroll of an area or a State divided essentially by the number of people there. So it takes no account of differences in industry or differences in occupation.

Senator PROXMIRE. Or pay?

Mrs. NORWOOD. It just looks at the average pay. You may have one State which has a large proportion of growing industries and another State which has a large proportion of declining industries. Something of that sort could be the reason for some of these differences.

Senator PROXMIRE. Mr. Plewes.

Mr. PLEWES. Our overall finding was that a 4.5 percent over-the-year increase was noted in average annual pay of workers who are covered by State and Federal unemployment insurance. I think some of the highlights of the study are that certainly those areas which have shown the most growth in employment have shown the most growth in pay.

Connecticut had an 8-percent increase in average pay, Massachusetts, 7.5; Maine, 6.9; and New Jersey, 6.9. Those areas which are hardest hit—Oklahoma, Louisiana, and others—Oklahoma only had a 1.5 percent, and so forth, showed smaller increases, and Alaska, which was certainly hard hit by the decline in energy prices, showed an actual decline in average pay over the year.

So quite clearly the employment growth and the overall economic prospects have affected average pay. Similarly, the distribution of industries has had an effect there, also, and we can go through the various industries by State, but that is the basic finding of our study.

Senator PROXMIRE. Well, now just the week before the BLS issued its release on average pay by State the Commerce Department issued a release, entitled "Regional Differences in Per Capita Personal Income," that stated personal income continued to widen in 1987. It found the per capita income continued to rise in the three regions that already have above-average income—that is New England, the Middle Atlantic States, and the Far West—and to fall in regions with below-average income, such as the Great Lakes States and States in the Southwest and the Rocky Mountains.

In other words, the rich States got richer and the poor States got poorer. Do the Commerce Department findings on regional disparities in per capita income correspond to your findings on regional disparities in the growth of pay during 1987?

Mr. PLEWES. It shouldn't be surprising that the findings are the same. They primarily use our data in their estimate.

Senator PROXMIRE. Any reason why that shouldn't be a sound procedure?

Mrs. NORWOOD. No, we believe it is a very good procedure, Senator.

Senator PROXMIRE. You believe your data are very good. I think they are, too.

One other question along this line. Some analysts expected that the reviving fortunes of manufacturing would reverse the downward income trend in the Midwestern and Southern manufacturing States, but the Census Bureau data and your data indicate that that did not happen in 1987.

Could the reason for this be that many of the manufacturing jobs lost during the early 1980's involved job losses for older men with well-paying factory jobs while jobs now being created in manufacturing are entry-level jobs filled by young workers that have lower pay than the earlier jobs lost?

Mrs. NORWOOD. There clearly may be—we may be seeing an age cohort effect in earnings as the baby boom generation provides a larger supply of people. I don't think there is any doubt about that.

But I think part of the problem is that the restructuring of industry has occurred differentially among the States, and so some States have had greater employment growth than other States. Some regions have had greater employment growth than other regions.

Senator PROXMIRE. Do you have any data at all by union organizations?

I have a feeling that, one, unions are weaker and, two, there is—I think the data show that there is a smaller proportion——

Mrs. NORWOOD. Yes.

Senator PROXMIRE [continuing]. Of the work force that is employed that belongs to unions.

Is that correct?

Mrs. NORWOOD. Yes, that is absolutely correct. The proportion of the work force that is unionized is lower now than it was in recent years, partly because we have lost employment in manufacturing where the unions were strong. We have gained employment in service-producing establishments where unions have traditionally not focused a lot of their membership drives. But unions have lost ground even in manufacturing. They have lost ground more than one would have expected just because of the industry shifting.

We do have data from the employment cost index on wages and salaries divided by union and nonunion establishments. We find, as we should not be surprised, it seems to me, given where the employment gains have been, that the nonunion wage increases have been somewhat higher over the last year than the union increases.

Senator PROXMIRE. You are experts in telling us where we have been, but where we are going is a little different.

Mrs. NORWOOD. I leave that to you.

Senator PROXMIRE. It is like Harry Truman used to say, the Republicans like to sit in the observation car because they don't care where they are going and want to know where they have been.

But let me ask you just one more question on this before I yield to the chairman again, about where we are going.

Is there a reason to expect that the rich will continue to get richer and the poor will continue to get poorer, unions will continue to have a smaller proportion of membership and that—we

haven't discussed something—I haven't heard anybody discuss the fact that profits are way up and wages are not—but that that tendency is likely to continue?

Mrs. NORWOOD. Well, I certainly can't answer that question. What I can say is that the median-family income data that were released this week clearly show the need for attention being given to the disparity that appears to be widening, and that is rather interesting because it is occurring even within the black group and within the Hispanic group. It is not just an overall phenomenon.

Within the black group there seems to be greater inequality. Some of them are doing extremely well. Others of them are not.

Senator PROXMIRE. I am glad you raised that point——

Mrs. NORWOOD. And that I feel is——

Senator PROXMIRE [continuing]. Because just yesterday in the New York Times, I think, or the Wall Street Journal there were figures on the poverty, the proportion of Americans who are living in poverty, and while it has improved a little in the last couple of years and certainly substantially since the terrible recession of 1982, it is substantially higher—this is shocking to me—20 percent higher than it was in 1978 and 1979. In other words, there are more people in poverty now than there were 10 years ago.

Is there a tendency, do you think, to move continuously in that direction?

Mrs. NORWOOD. No, I think the trend that we are seeing is that even within each of the minority groups there are people who are doing quite well, who have essentially made it, who have obtained jobs and are really doing quite well. That group is increasing, but we are also seeing people down at the bottom end of those groups, who are not doing well. That is a matter of increasing both the haves and have-nots even within each of the groups.

Some of our people are doing very well, even among the minority groups. They are coming into the labor force. They are getting jobs. But many of them are just out of the labor force completely, and both groups are growing.

Senator SARBANES. Well, I would like to interject there, I mean, because there is a general view that the rich are getting richer and the poor are getting poorer. The fact of the matter, as I understand the Census Bureau report on income inequality—and I notice that the Bureau's Associate Director stated that people with the highest income are getting a higher proportion of income—is that even the middle-income people are getting a lesser proportion. As I understand the income shifts, the wealthiest 20 percent of families are getting a larger share of family income, and the other 80 percent are getting a smaller share of income.

Is that correct?

Mrs. NORWOOD. I believe the data suggest that, but the point that I would like to make is that one of the reasons for that is that the group at the bottom is also increasing, at least according to the Census Bureau data.

Senator SARBANES. Yes.

Mrs. NORWOOD. And it is important to recognize when we look at those poverty figures that we still have 60 percent of the adult poor who didn't work at all and that 40 percent of the poor are children

and that there are twice as many black children living in poverty as white children.

Senator SARBANES. But the point that needs to be made is that it is not just the poor who are affected by this question of income inequality; the shift in incomes is affecting middle-income persons as well.

Now, here is a chart from Thursday's Baltimore Sun based on the Census Bureau study entitled "Income Inequality on the Rise." Its figures show percentages of the Nation's total family income, divided into the poorest 20 percent of families, the middle 60 percent of families, and then the wealthiest 20 percent of families, and it uses as reference years 1967, 1972, 1982, and 1987. What it shows is an increase in the percentage of income going to the wealthiest 20 percent of families and then a decline in the percentage going to the middle 60 percent of families, and a decline going to the poorest 20 percent of families.

It is not an increasing share at the top and decreasing share at the bottom. It is in fact an increasing share at the top, for the top 20 percent, and a decreasing share for everybody else, the other 80 percent.

Mrs. NORWOOD. Yes, but worse than that is that there is an increasing share of people at the top and there is an increasing share of people at the bottom.

So this disparity——

Senator PROXMIRE. Mrs. Norwood, could I interrupt just for a minute on that because I am concerned with the fact the the minimum wage has not been increased for 7 or 8 years?

Has that had any significant effect, do you think, on the failure to increase the minimum wage, the fact that in real terms it is 20 percent below what it was or more than 20 percent below what it was in 1980? Does that have any significant effect, in your judgment, on this?

Mrs. NORWOOD. I don't really know. What I am concerned about is that a large proportion of the people in the very bottom groups are not working at all. So a minimum wage change wouldn't help them if they don't have a job at all.

Senator PROXMIRE. But a lot of them are working.

Mrs. NORWOOD. Yes.

Senator SARBANES. Is it correct——

Senator PROXMIRE. If you are making $3.35 an hour, you have to work an awful lot of hours to get above—you can't work and get above the poverty line even if you are all alone, let alone if you have a family to support; isn't that right?

Mrs. NORWOOD. Yes, but there is a differential around the country regarding the relationship between the supply and demand of workers. In some areas employers are not able to find people at the minimum wage. In some cases, particularly in the South of the country, that is not the case.

Senator SARBANES. Commissioner, is it correct that the share of national income going to the top 20 percent of the population, the share of that income to the top 20 percent, is larger now than it has been at any time in the postwar period?

Mrs. NORWOOD. I don't have those exact figures here. We could supply that for the record if you wish.

Senator SARBANES. Well, the Census Bureau table that I have goes back only to 1967, when the wealthiest 20 percent of families had 40 percent of the income. It is now up to just under 44 percent of all income. It is my understanding that their share in the period from 1945 to 1967 was not at the levels at which it is now, so that the share now going to the wealthiest 20 percent, the top 20 percent, appears to be at its highest level in the postwar period.

I take it if one looked within the top 20 percent the concentration would be even greater at the top 5 percent or the top 10 percent.

Mrs. NORWOOD. I would expect so.

Senator SARBANES. What is a possible explanation for this development?

Mrs. NORWOOD. I don't know. I think part of what we are seeing is that in recent years a number of people who were not doing so well have obtained jobs, come into the labor force. The employment-population ratios for the black and Hispanic population have really increased considerably, at probably almost twice the rate of whites over the last 6 years or so of the current expansion. But at the same time we have people who are really not doing well at all and aren't even working, and that group seems to be increasing.

But I don't really have any explanation. It is an issue that has been discussed for many, many years. There is a rather interesting chapter in a new Urban Institute study by Joseph Minarik which tries to take apart the income problems by different family groups, and he concludes that it is very hard to find any single explanation for some of the changes that have occurred.

But I don't have any words of wisdom to offer.

Senator SARBANES. In our annual report we had some charts showing that the share of overall income going to labor income had declined——

Mrs. NORWOOD. Yes.

Senator SARBANES [continuing]. And declined fairly markedly in recent years.

Is that your understanding?

Mrs. NORWOOD. Well, in the nonfarm business economy or the business economy that does appear to be true.

Senator SARBANES. In other words, we have a chart showing that labor's share of personal income——

Mrs. NORWOOD. Yes.

Senator SARBANES [continuing]. Has declined, property share of personal income has gone up.

Mrs. NORWOOD. Yes.

Senator SARBANES. So those who receive their income from labor are getting a smaller share while those who receive their income from property are getting a larger share. This would help to explain why the top 20 percent are getting a larger share of income, would it not?

Mrs. NORWOOD. Well, certainly that could be one factor, yes, and it is clear from our data that come out of our productivity program, which uses the hourly compensation measure, that there has been a shift in the labor share over the years.

Senator SARBANES. I would simply like to close the hearing by making a few comments about the study by Prof. Robert Costrell

which the committee has just received. It examines shifts in employment shares from 1948 through 1987, and indicates that in the 1980's there has been a dramatic change in employment patterns in the country, with employment opportunities shifting from industries with generally higher pay to industries with lower pay.

He looked at industries to see which received a larger share of employment—in other words, which industries had job growth—and which showed a smaller share of employment, or job loss in relative terms. And the average pay in the industries which were losing share of employment was just over $32,000 a year—that is counting fringe benefits as well—and the average pay in the industries whose share of employment was growing was about $22,000 a year.

So there was a gap of about $10,400 between the average pay of jobs in the industries that were contracting as opposed to those industries which were expanding.

We have had shifts in the past, but nothing on the order of this magnitude. This is unprecedented in terms of the pay gap. When you look at the industries affected by shifting employment, what you see is that contracting industries include durable manufactures, steel, railroad, transport, telephone, communications, heavy construction, oil and gas, metal working, and so forth and so on, and the expanding industries—in other words, the ones that are getting a larger share of the employment—are eating and drinking places, personnel supply services, other business services, hotels and motels, grocery stores, retail trade, the medical services field, and so forth.

The causes for this are difficult to discern. My own view is that trade trends in the 1980's were an important contributor, including the overvalued dollar and the failure to have reciprocal trade policies. We were hit hard by import competition from abroad, which cost us jobs in industries that have been traditionally able to pay a high average wage, and that is where we have had the most noticeable shrinkage—in durable manufactures, and so forth.

At the same time the expansion in job share has been in the service industries and those where the average pay has been significantly lower, and I think that is another explanation for this growing inequality that we see.

I think it is clear that there have been very severe shifts in employment patterns from industries with generally higher pay to industries with generally lower pay, and when I say "pay", I am including fringe benefits as well. Actually, when you do this analysis, the difference in fringe benefits is even sharper in percentage terms than the differences on the wages themselves.

This doesn't necessarily apply to shifts within a particular industry, but it does apply to shifts between industries, looking at the entire economy and looking at contracting and expanding industries, I think it is clear from the study that the contracting industries are those that have had a much higher average wage and expanding industries are those with lower annual wages. The difference is over $10,000, and that is the sharpest difference throughout this period.

There have been pay gaps of this sort before—in the 1970's, $811; in the 1960's, $647; in the 1950's, $6,000—but nothing of the magni-

tude that we are experiencing now. It seems to me this has significant implications for some of the other problems that we have been talking about are very significant.

Well, Commissioner, we thank you and your colleagues for appearing before us. It is nice to have you back again.

The committee is adjourned.

Mrs. NORWOOD. Thank you.

[Whereupon, at 10:50 a.m., the committee adjourned, subject to the call of the Chair.]

EMPLOYMENT-UNEMPLOYMENT

FRIDAY, OCTOBER 7, 1988

CONGRESS OF THE UNITED STATES,
JOINT ECONOMIC COMMITTEE,
Washington, DC.

The committee met, pursuant to notice, at 9:35 a.m., in room SD-628, Dirksen Senate Office Building, Hon. Paul S. Sarbanes (chairman of the committee) presiding

Present: Senators Sarbanes, Proxmire, and Roth; and Representative Obey.

Also present: Judith Davison, executive director; and William Buechner, Christopher Frenze, and David Freshwater, professional staff members.

OPENING STATEMENT OF SENATOR SARBANES, CHAIRMAN

Senator SARBANES. The committee will please come to order.

We are very pleased to welcome Commissioner Norwood and her associates back before the Joint Economic Committee this morning to testify on the employment and unemployment situation for September.

Before we turn to the Commissioner, I want to take just a moment or two to talk about a hearing and a 2-day symposium on the current status of rural America which the Joint Economic Committee undertook last week.

In fact, Commissioner, I may put some questions to you in this area later in this hearing.

The committee held a 2-day symposium with the Congressional Research Service on developments in rural America. The trends apparent in the 1980's have been a sharp departure from the trends of the previous decade, in many critical respects reversing them.

In the 1970's the gap in income and employment levels between rural and urban Americans narrowed. In many parts of the country the rural population grew and a rural renaissance appeared to be a realistic possibility. In fact, it was being talked about in a rather widespread fashion in the national press.

However, in the 1980's the gap in income and employment has widened significantly. Rural population has declined dramatically in many areas, and the expectations of a rural renaissance have given way to a sober reassessment.

Now, the first figure that we have, the one just to my left, shows that unemployment is much higher in rural areas than in urban areas. This is the difference in unemployment rates. In the 1983

through 1987 period, nonmetropolitan unemployment has been at least 2 percentage points higher than in metropolitan areas.

Further, we are led to believe—and we may explore it this morning—that there is significant underemployment in rural areas that is not included in the unemployment count, and a greater incidence of discouraged workers.

In contrast, during the late 1970's there was little difference between rural and urban unemployment rates.

The second chart shows one consequence of poor job opportunities in rural areas—a high rate of outmigration. Rural population rose during the 1970's but outmigration has steadily increased since 1982. That is reflected in the chart of the net migration to rural areas.

The next two charts show that rural residents have a lower level of educational achievement than urban residents and that it is the younger, better-educated residents of rural America who are most likely to leave.

One sociologist has observed that rural communities won't just shut off the lights, but will instead become pockets of poor, elderly people, and the far chart reflects outmigration by educational levels.

The bottom bar graph, the largest one, is the 4-year college, and this reflects educational level of adults in rural and urban areas. As we can see, those with more education are more heavily reflected in the population of urban areas.

The final chart illustrates a point made in an August Newsweek article entitled "America's Third World," and I quote:

"In the past decade, broad downturns in low-tech manufacturing, mining, agriculture, and oil have cut median rural income from 80 percent of U.S. urban income to 73 percent. Many economists expect that slide to continue. Seven of every eight new U.S. jobs are in metropolitan areas, and the rural jobs often pay only near-minimum wages."

During last week's hearing and symposium, the committee found that these trends occurred against the background of a decade of sweeping changes in Federal policies, macroeconomic policy, tax policy, infrastructure, and transportation policies. Rural life has been profoundly affected by these changes.

In fact, since our symposium a week ago, the Wall Street Journal has returned to the subject with an article Wednesday about how rural America has become both ward and hostage to the political system.

At this point, without objection, we will place Senator D'Amato's written opening statement in the record.

[The written opening statement of Senator D'Amato, together with an attachment, follows:]

WRITTEN OPENING STATEMENT OF SENATOR D'AMATO

MR. CHAIRMAN, I WOULD LIKE TO WELCOME DR. NORWOOD TO THE JOINT ECONOMIC COMMITTEE THIS MORNING. COMMISSIONER NORWOOD, I LOOK FORWARD TO HEARING YOUR OBSERVATIONS ON SEPTEMBER'S EMPLOYMENT FIGURES.

AT LAST MONTH'S HEARING DR. NORWOOD REPORTED THAT CIVILIAN EMPLOYMENT INCREASED 121,000 IN AUGUST. THE CIVILIAN UNEMPLOYMENT RATE WENT UP TWO TENTHS OF A PERCENTAGE POINT TO 5.6 PERCENT. BUSINESS PAYROLLS SHOWED AN INCREASE OF 220,000, AND MANUFACTURING EMPLOYMENT DECLINED BY 5,000.

FOR THE MONTH OF SEPTEMBER, OUR NATION'S UNEMPLOYMENT RATE DECREASED BY TWO TENTHS OF A PERCENT TO 5.3 PERCENT. BUSINESS PAYROLLS SHOWED AN INCREASE OF 255,000. TOTAL CIVILIAN EMPLOYMENT MEASURED A HEALTHY 115.4 MILLION.

IN MY HOME STATE OF NEW YORK, THE UNEMPLOYMENT RATE FOR THE MONTH OF SEPTEMBER DECREASED FROM 4.5 TO 4.3 PERCENT.

ALTHOUGH FEDERAL RESERVE POLICIES HAVE HAD AN IMPACT ON ECONOMIC DATA THESE PAST FEW MONTHS, THE EMPLOYMENT RATE IS HOVERING NEAR HISTORICALLY LOW LEVELS. IN THE SEVENTY-FIRST MONTH OF ECONOMIC EXPANSION, OUR NATION'S ECONOMIC SITUATION CONTINUES TO LOOK BRIGHT.

IT IS ESPECIALLY ENCOURAGING TO SEE THE DRAMATIC GROWTH OF SMALL BUSINESSES AND THEIR ABILITY TO CREATE JOBS. THE IDEA OF OUR LABOR FORCE BECOMING A NATION OF "HAMBURGER FLIPPERS" COULD NOT BE FURTHER FROM THE TRUTH.

I WOULD LIKE TO BRING TO THE ATTENTION OF THE COMMITTEE AN EXCELLENT ARTICLE IN THIS WEEK'S FORBES THAT EXAMINES THIS TREND. THE ARTICLE POINTS OUT THAT "AT LEAST HALF OF THE NEW JOBS IN THE SERVICE ECONOMY ARE FOR MANAGERS AND PROFESSIONALS. THOSE "HELP WANTED" NOTICES AT THE HAMBURGER JOINT SIGNAL SOMETHING ELSE -- A SCARICITY OF ABLE AND WILLING TEENAGERS. OF THE NEW JOBS, ONLY 12% ARE LOW-PAYING, LIKE FAST-FOOD WORKERS AND JANITORS. LOW-WAGE JOBS HAVE ACTUALLY BEEN DECLINING PRECIPITOUSLY - RESULTING IN HARD-CORE UNEMPLOYMENT AMONG THE UNSKILLED AND UNEDUCATED, BUT NOT THE ECONOMY AT LARGE."

A DRIVING ENTREPRENEURIAL SPIRIT HAS RESULTED IN THE CREATION OF THOUSANDS OF NEW JOBS IN THE LAST FEW YEARS. WE MUST NOW FOCUS ON RETRAINING THE UNSKILLED AND DISPLACED WORKER.

MR. CHAIRMAN, I ASK THAT A COPY OF THE ARTICLE BE SUBMITTED ALONG WITH MY STATEMENT.

THANK YOU, MR. CHAIRMAN.

Where are the economy's needed new jobs coming from? Not from government, but from the wonderful and often strange workings of an entrepreneurial economy.

How Gus Blythe smelled opportunity

By Dyan Machan

Gus Blythe, 28, may not be the next Steve Jobs, but like Jobs he found and exploited a market niche that bigger companies had neglected. Gus Blythe is the Steve Jobs of dirty shoes.

In 1981 Blythe was attending California Polytechnic and earning spending money working in a sporting goods store when he—literally—smelled a business opportunity. "I was constantly being asked by customers how they could keep their athletic shoes clean," Blythe says.

Blythe wasn't much interested in the courses he was taking to earn an agricultural degree, so he convinced his father, a wealthy California rancher, to allow him to tap his trust fund, set up to finance his education. Why not educate himself by doing, instead of by studying? Let him use the money to start a business. Opportunity! "There are over a billion athletic shoes in this country. Somebody's got to keep them clean."

With the help of a friend, Blythe found a chemist to formulate a cleaning fluid, and that was the start of SecondWind, of Paso Robles, Calif., in 1982. Since then Blythe says he has sold more than 2 million plastic bottles of the stuff for about $4 each.

Michael Carroll

Randall Wise of Animalens
Making chickens see red.

Besides satisfying Gus Blythe's itch to get out of school and into action, his thriving little business has created ten new jobs—in sales, warehousing and administration. This makes Blythe a small but not atypical example of the unleashed entrepreneurial forces that have in the past six years created at least 12.9 million jobs. Most of those jobs came from small companies. Many of these companies are bigger than Blythe's, but many are not. Companies with fewer than 20 employees are expected to create 35% of all new jobs next year.

Pessimists argue that too many manufacturing jobs have fled to cheaper labor markets overseas and that the newer jobs are represented by the "help wanted" ads at the shopping mall and local hamburger stand for minimum-wage jobs. "We are," they argue mindlessly, "becoming a nation of hamburger-flippers." False.

Fact is that at least half of the new jobs in the service economy are for managers and professionals. (Those "help wanted" notices at the hamburger joint signal something else—a scarcity of able and willing teenagers.) Of the new jobs, only 12% are low-paying, like fast-food workers and janitors. Low-wage jobs have actually been declining precipitously—resulting in hard-core unemployment among the unskilled and uneducated, but not in the economy at large.

Why, then, the propaganda about hamburger-flipping? Because it's hard to keep track of the small, mostly private, jobmakers. Massive steel plant closings are big news. Multiple openings of small businesses are not.

Service work covers a bewildering variety. Take Randall Wise, of Wellesley, Mass., who's trying to build a business making contact lenses for chickens, or Karen Kimbrough, in New York, creating makeup for accident victims.

Or Gerald Goldhaber, who has made a tidy business as an expert on consumer warning labels. Goldhaber, 44, associate professor of the State University of New York-Buffalo communication department, has written a dozen books on communications theory. He had a thriving market research consulting business when he was asked to design a product warning label. More than just typing up some cautionary words, this involves some research to find out what consumers know—and what they don't know, because it is what they don't know that can lead to lawsuits.

In 1985 his Goldhaber Research Associates was studying where to place a

Joseph Frohnhoefer, founder of Sea Tow International
With the Coast Guard chasing drug smugglers, somebody had to tow stranded boats.

warning for toxic shock syndrome on boxes of Playtex tampons. That earned his outfit $75,000 for about six months of effort, but here's the clever part: There was a built-in annuity. When Playtex was sued a few years later, who was their expert witness? Goldhaber, of course. Now that he's an expert in the field, Goldhaber can earn as much as $3,000 to $3,500 a day. Last year the company cleared $900,000 in pretax income on revenues of $2 million. Goldhaber employs 50, none at minimum wage.

Joseph Frohnhoefer was a high school shop teacher and part-time marine policeman in 1983, when the Coast Guard cut back on towing stranded pleasure boats to concentrate on running down drug smugglers. Frohnhoefer took his savings and started Sea Tow International in Southold, N.Y. For a $95 to $150 service contract, depending on boat size, customers get unlimited tows for a year. Frohnhoefer gets 12.5% a year from each of his 25 licensees.

Frohnhoefer has plenty of competition. Instead of referring a call for help to Sea Tow, the Coast Guard now issues an all-points bulletin, creating

The founder of Esteem by Karen Kimbrough (left)
"Everyone wants to look like Christie Brinkley."

Sunglass Hutt of America's Sanford Ziff
Selling $300 shades in 200 malls.

a free-for-all for fishermen with a boat and a tow rope. If no one responds in ten minutes, the Coast Guard will do the run. Will Frohnhoefer's business sink? "Sometimes I wish I could be an employee," he sighs, but adds with resolve, "I don't quit." He's not in the black yet, but the business is growing. It currently employs six people directly, and licensees employ another 150. "We want to be the AAA of the water," Frohnhoefer says.

In the late 1970s Stanley Rhodes was in the natural-food wholesaling and retailing business. He noticed that some natural-food purveyors were regularly buying peanuts rejected by the big food processors like Skippy or Jif for containing aflatoxin, a toxic mold. "It was 'organic' in name only," says Rhodes. Consumers, Rhodes decided, "had no way to identify what was organic or not."

A chemist by training, Rhodes, 46, used all his $300,000 in savings to start NutriClean, in Oakland, Calif. The company tests a grower's produce for harmful chemicals. If it's clean, the grocer can advertise the product as NutriClean certified. "It's a sort of Good Housekeeping seal of approval," says its founder. Eight supermarket chains pay $100,000 a year or more for the service. The business employs 12 people. Low-paid menials? Hardly. Rhodes says his biggest problem is hiring enough entomologists, food technicians, chemists and marketing types to keep up with his demand.

When Randall Wise, 40, started his first company, Graphic Communications, he says, "Everything was on the line. The house, the car. I bet everything except the kid's education." Then came the payoff. In 1986 he sold the software company for a reported $12 million to Lotus Development Corp. and went to work for Lotus. But Wise decided he was more comfortable as employer than as employee. Leaving behind $200,000 in stock op-

tions, he quit Lotus to start making contact lenses for chickens. The concept is not as crazy as it seems: Chickens have a gruesome habit of pecking one another to death, and 25% of the birds regularly die this way unless preventive measures are taken. Place red lenses on their eyes, and the fatality rate slips to 5% to 7%. Another strange benefit: Chickens with red lenses are less active and eat less. Wise figures Animalens, his Wellesley company, can shave a farmer's feedbill by 5%. Wise's new company employs six people.

Karen Kimbrough, 46, first started thinking about a special line of makeup for accident victims while working for Clinique. She noticed that women who had undergone reconstructive surgery or face-lifts were desperate for products that would cover bruises and make them look good. "Even with a serious disease, you still want to look like Christie Brinkley," she says.

At first Kimbrough was afraid to go out on her own: "I was born in a small town in Louisiana and had no female role models. It was hard for me to visualize myself running a company." A friend helped her write a business plan, and another's contacts led to startup funds from Worms America.

Corporate Child Care's Marguerite Sallee ***Turnkey child care centers.***

Rich Mori

The result is a 21-product cosmetics line, Esteem by Karen Kimbrough, that is on sale in six hospital pharmacies. With five employees, Kimbrough is out beating the bushes for $2 million to $3 million from venture capitalists for that big marketing push.

Donald Beaver Jr., 36, of Bellwood, Pa., got his inspiration from the unlikely combination of his wife's nylon stockings and kitty litter. He left college to run janitorial services with contracts to clean offices and local plants in central Pennsylvania. He hated cleaning grease spills, common in most factories. That dirty job entailed tossing kitty litter on the spill, letting it absorb the muck, then

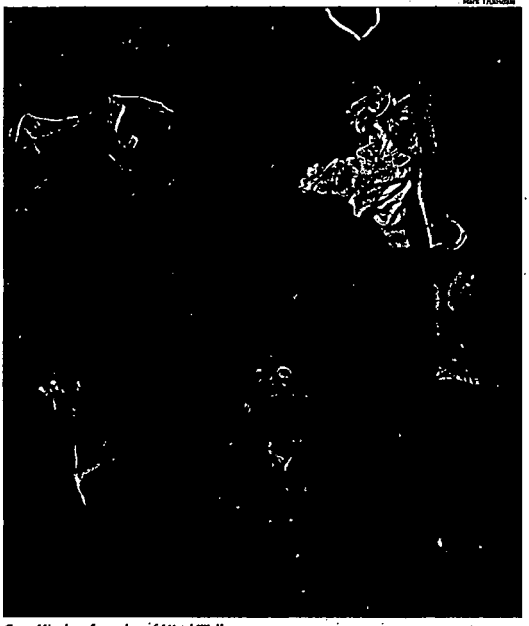
sweeping it up. To be more efficient, he started stuffing the litter into his wife's old nylon stockings and using that to sponge up the mess. After running out of stockings, he switched to athletic socks he bought at the Salvation Army. "Can you believe it? I mean, it's so simple. For a long time, even I couldn't see it," says Beaver.

He called his homemade devices Pig, for Partners in Grime. In 1986 he started selling Pigs to factories. Now he's given up cleaning and runs Tipton, Pa.'s New Pig Corp., which sold $7.9 million worth of Pigs last year and is getting close to making a profit. That's about on track, says Beaver, who knows that few new businesses turn an immediate profit. Meanwhile, his company employs 139 people.

Gregory Hind, 42, a California athlete, and his friend Guy Wells, a teacher, built a flourishing business marketing earguards for water polo caps. Hind, who competed in the Pan American games in 1968, broke his own eardrum playing water polo. Hind-Wells, a San Luis Obispo company, didn't stop with making and selling earguards. "I mean, how many water polo players do you know?" asks Hinds. The company moved to swimming goggles and bathing suits.

In 1979 sales were $2.3 million. Wells wanted to do more contract work, but Hind, the son of Harry Hind, founder of contact lens solution maker Barnes-Hind, wanted to expand the line. Hind bought out Wells with $20,000 of his own money. On his own and into hock, Hind had to hit on something fast. A few years earlier a local runner had approached him and Wells, asking for something sleeker than baggy old sweatpants to run in. Hind fashioned the first pairs of nylon running tights and sold them locally. Then track star Willie Gault wore Hind's tights in a *Sports Illustrated* photograph, and the product took off. With earnings of $2.5 million on $21.3 million last year, Hind's next challenge is maintaining market share and coming up with the next big seller to keep his 400 employees busy when the fad cools off.

Mark Tribaldos



Greg Hind, cofounder of Hind-Wells
Something sleeker than baggy old sweatpants.

These are not isolated episodes in the Great American Sitcom. They may seem offbeat, or extreme, but that's the way the new economy is: incredibly complex, making goods and services that previously did not exist and that no group of central planners, no matter how smart, could possibly engineer. In this thriving, brawling, ever changing service economy, people are also doing the more conventional things. Opening restaurants, publishing magazines, providing new services in important areas like child care, information services, convenience foods and even eye care.

For example, entrepreneurial individuals are paying a lot of attention to a dead-serious need in our society—day care for children of working couples. Marguerite Sallee, 42, runs Corporate Child Care in Nashville, offering turnkey child care centers for corporations that want to offer day care for their employees. The corporations pay $100,000 to $200,000 a year, depending on the number of children, the region and what the corporation provides, like space. Parents pay as little as $60 a week.

Or take eye care, in a society that is both increasingly faddish and increasingly myopic. Sanford Ziff, a 63-year-old optometrist in Miami, owns 51% of Sunglass Huts of America. These shops offer nonprescription sport and high-fashion sunglasses that run from $30 to $300 a pair. Ziff now has shops in 200 shopping malls.

Alfred Berg, Laurence Roth and Jeffrey White founded Marchon Eyewear Inc. in Melville, N.Y. Their firm imports eyeglass frames and distributes them to opticians. But they do it well. They ship frames the same day a doctor orders them. Marchon's sales have grown from $4 million in 1983 to $44 million last year. Berg is driving a Jaguar, White a Ferrari, and Roth is planning to move into a $2.2 million new house. Jobs created: 165 to date.

Carl Randall and David Shick are seeking to exploit a new food processing technique that extends the period that food can be kept safely under refrigeration. Their Sausalito, Calif.-based Culinary Brands sells freshly prepared foods that are sealed in airtight pouches, cooked under a vacuum and sent to restaurants. Extending refrigerated shelf life from days to weeks allows even fancy foods like seafood terrine and rack of lamb to be made in Sausalito and shipped to, say, a hotel in Boston that wouldn't have enough demand to keep a full-time chef employed.

Senator SARBANES. I will turn now to my colleagues for any statements they may have. Then we will hear from the Commissioner. Then, in addition to figures she presents today, I think we will want to explore some of these developments in rural America from this symposium that we held a week ago, which was actually very well attended by members of the committee, that we had on the future economic possibilities of the country.

Senator Roth.

OPENING STATEMENT OF SENATOR ROTH

Senator ROTH. Thank you, Mr. Chairman.

It does give me great pleasure to join in welcoming our witnesses before us today.

It is always a pleasure to see you, Mrs. Norwood.

Once again, Mrs. Norwood brings great news for American workers, as the civilian unemployment rate dropped two-tenths of a percentage point, to a level of 5.4 percent. The longest peacetime expansion in U.S. history keeps generating new jobs and opportunities for our people. More Americans are working now than ever before.

Moreover, the employment-population ratio, an important measure of the economy's ability to create enough jobs, climbed to a level of 62.4 percent. This is its highest level on record.

In addition, the closely watched payroll survey posted a gain of 255,000 in September. This too is a record high.

Moreover, the level of factory hours suggests further employment advances in the coming months.

During this expansion 16 million new jobs have been created. The great majority of these are in middle- to high-paying jobs. Over 40 percent of the net additions of employment through this year was in the managerial and professional occupational categories. Skilled blue-collar occupations have shown strong gains as well.

As a result of our economic progress, middle-American family income has grown 12 percent during this expansion, even after adjustment for inflation. This stands in stark contrast to 1980, when family income fell by $1,700, the biggest decline in postwar history.

The economic stagnation and malaise of the Carter years left a legacy of defeat and danger in the economic policy. Under President Reagan, new policies were adopted, and their implementation led to the collapse of inflation, reduction of sky-high interest rates, and renewed economic prosperity.

Now, some argue that the improvement of family income under the Reagan administration is no accomplishment because millions of married women entered the work force, boosting family income. And it is true that many married women have chosen to work in recent years, and that this has contributed to gains in family income.

However, millions of married women entered the work force in the Carter years. Family income fell sharply anyway. My point is simply that if married women choose to work for whatever reason, their families are obviously better off with higher incomes than lower.

Economic growth should be the keystone of economic policy because it leads to gains in employment and the standard of living. The foundation of the current expansion was laid by the administration's policy of lowering tax and regulatory hurdles to economic growth. Some may prefer doom and gloom. The success of the Reagan administration policy is seen in sustained economic growth and 16 million new jobs.

Thank you, Mr. Chairman.

Senator SARBANES. Congressman Obey.

OPENING STATEMENT OF REPRESENTATIVE OBEY

Representative OBEY. Mr. Chairman, I hadn't intended to say anything. But I guess I ought simply to observe two things.

It is certainly always preferable to have lower unemployment rates. I think if one is to approach these numbers with a sense of balance, however, I think one will recognize that while there is no question that a lot of people are working, there is no question that the wages which they are earning in this, the fifth year of the recovery, are still stuck far below where we would expect them to be, given our historical experience.

I would also suggest that we still have to face the fact that in the fifth year of the recovery there are millions more who are still living below the proverty line than has been the case in any previous recovery that I can think of.

I also would like to take a moment to point out simply that that is certainly the case in terms of rural America, and many of the local economies around the country.

In fact, about half of the rural counties in the country still have unemployment levels of 9 percent or even worse, and I have seen enough small towns to know that in many of those small towns you have more plywood than glass because of the boarded-up stores on main street.

I do want to congratulate the chairman for his symposium on Future Rural Development, Problems, and Opportunities. I have received good reports on that symposium. I regret that I could not attend it, because that was the 2-day period when all you know what broke loose in terms of the passage of the final appropriations bill.

But I think that that symposium very clearly laid out some of the very serious problems facing the workers in rural America, as you have a continuing erosion of the farm economy, with very little effort on the part of the Government being made to compensate for that by development efforts, with abundant losses in agriculture.

I again want to congratulate the chairman for adding significantly to the understanding of urban people in this country about the problems in rural areas.

Senator SARBANES. I just want to make two observations. First of all, we have had a very good response to the Rural Economy Syposium, and I am very hopeful that in undertaking a careful analysis of the situation, have laid the basis for signficant policy recommendations for the new Congress.

Second, I notice that we have two members of the Joint Economic Committee here who serve on the Appropriations Committees,

Congressman Obey on the House Appropriations Committee, and Senator Proxmire on the Senate Appropriations Committee.

I simply want to commend them and my colleagues on the committee for their very effective work in moving the appropriations bills. For the first time since 1977, the Congress this year passed every appropriations bill before the beginning of the new fiscal year, and the President signed them shortly after the beginning of the new fiscal year. The last time they had actually all been passed and signed by the President before the beginning of the fiscal year was in 1948. We didn't quite make that one, but we did duplicate the 1977 performance.

That is clearly the way we ought to do business, and I want to thank my two colleagues because I know they were very active within their committee and on the floor of the House and the Senate in bringing about that result.

Senator Proximire, do you have any remarks?

Senator PROXIMIRE. I have no opening statement.

Senator ROTH. Mr. Chairman, if I may, I would like to make the congratulations bipartisan.

Senator SARBANES. We are pleased to have you here, Commissioner, and we are happy to hear from you.

STATEMENT OF HON. JANET L. NORWOOD, COMMISSIONER, BUREAU OF LABOR STATISTICS, DEPARTMENT OF LABOR, ACCOMPANIED BY THOMAS J. PLEWES, ASSOCIATE COMMISSIONER, OFFICE OF EMPLOYMENT AND UNEMPLOYMENT STATISTICS; AND THOMAS R. TIBBETTS, ASSISTANT COMMISSIONER, DIVISION OF INDUSTRIAL PRICES AND PRICE INDEXES

Mrs. NORWOOD. I have with me this morning Tom Tibbetts, one of our price experts, and Tom Plewes, who is an expert on employment and unemployment. We are very pleased to be here.

Employment grew modestly in September, and the number of unemployed persons edged down. The civilian unemployment rate, which has fluctuated in the 5.3 to 5.6 percent range since March, edged down to 5.4 percent in September.

Payroll employment, as measured by our business survey, was up 255,000 over the month; only about 140,000 of the jobs gained were in the private sector. Monthly increases in total payroll employment have slowed in the third quarter, averaging only a little bit more than 200,000 per month, compared with 340,000 in the first half of the year.

Employment, as measured in the household survey, edged up in September and has grown more slowly than in the business survey for most of this year.

Nevertheless the proportion of the working-age population with jobs was at a record 62.4 percent. A large portion of the overall payroll employment increase—nearly 40 percent—was in State and local government, reflecting a stronger than usual expansion in public school jobs at the beginning of the new school year.

In contrast, the private sector, which grew strongly earlier in the year, exhibited relatively small gains. Employment in private sector business has grown at an average rate of only about 120,000

a month in August and September, compared with over 300,000 a month during the first 7 months of the year.

Probably the biggest change has occurred in the goods-producing sector of the economy. Both mining and manufacturing have actually had small job losses in August and September, and little change has occurred in construction employment.

In contrast, in the 7 previous months, these industries added an average of 65,000 jobs a month.

It should be noted, however, that the lack of factory job growth in August and September has been coupled with working hours that are unusually high. This seems to reflect the intent of many employers to keep costs down by expanding hours of work to meet production needs rather than by adding new workers to their payrolls.

September's job growth slowed in the services industry as well as in manufacturing. Employment in this industry was up only 65,000 in September, despite extremely strong performance in health services. Employment growth in the business services industry, which had been very strong during the current expansion period, was unusually small over the last 2 months.

Reflecting these employment patterns, the BLS diffusion index shows that about the same number of industries lost jobs in September as gained them. At 50 percent, the index was at its lowest level in over 2 years.

Few changes of note occurred in the household survey. After having risen by four-tenths of a percentage point in August, the jobless rate for adult men fell by the same amount in September—to 4.5 percent.

Otherwise, among the major demographic groups, only Hispanics experienced a significant change in their unemployment rate. Their rate, which often fluctuates from one month to the next, dropped to 7.4 percent in September.

The number of discouraged workers—which we publish each quarter—was 930,000 in the third quarter, about the same as in the quarter before. In fact, there has been no real change in the number of discouraged workers over the last year.

In summary, September payroll employment increased strongly in State and local governments and in the health services industry, but little gains occurred elsewhere in the economy. The civilian unemployment rate, after a small increase in August, edged down to 5.4 percent, close to the bottom of the narrow range within which it has fluctuated for the past half year.

We would all be glad to try to answer any questions you may have.

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

Unemployment rates of all civilian workers by alternative seasonal adjustment methods

Month and year	Unadjusted rate	X-11 ARIMA method							X-11 method (official method before 1980)	Range (cols. 2-9)
		Official procedure	Concurrent (as first computed)	Concurrent (revised)	Stable	Total	Residual	12-month extrapolation		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1987										
September...	5.7	5.9	5.9	5.9	6.0	5.9	5.9	5.9	5.9	.1
October.....	5.7	6.0	6.0	6.0	6.0	5.9	6.0	6.0	6.0	.1
November....	5.6	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	-
December....	5.4	5.8	5.8	5.8	5.7	5.7	5.8	5.8	5.8	.1
1988										
January.....	6.3	5.8	5.8	5.8	5.8	5.8	5.6	5.8	5.8	.2
February....	6.2	5.7	5.7	5.7	5.8	5.7	5.6	5.7	5.8	.2
March.....	5.9	5.6	5.6	5.6	5.7	5.6	5.5	5.6	5.6	.2
April.....	5.3	5.4	5.5	5.5	5.5	5.4	5.4	5.4	5.4	.1
May.....	5.4	5.6	5.6	5.6	5.6	5.6	5.8	5.6	5.6	.2
June.....	5.5	5.3	5.4	5.4	5.3	5.4	5.4	5.3	5.3	.1
July.....	5.5	5.4	5.4	5.4	5.4	5.5	5.4	5.4	5.4	.1
August.....	5.4	5.6	5.6	5.6	5.5	5.6	5.7	5.6	5.6	.2
September...	5.2	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	-

SOURCE: U.S. DEPARTMENT OF LABOR
Bureau of Labor Statistics
October 1988

(1) Unadjusted rate. Unemployment rate for all civilian workers, not seasonally adjusted.

(2) Official procedure (X-11 ARIMA method). The published seasonally adjusted rate for all civilian workers. Each of the 3 major civilian labor force components—agricultural employment, nonagricultural employment and unemployment—for 4 age-sex groups—males and females, ages 16-19 and 20 years and over—are seasonally adjusted independently using data from January 1974 forward. The data series for each of these 12 components are extended by a year at each end of the original series using ARIMA (Auto-Regressive, Integrated, Moving Average) models chosen specifically for each series. Each extended series is then seasonally adjusted with the X-11 portion of the X-11 ARIMA program. The 4 teenage unemployment and nonagricultural employment components are adjusted with the additive adjustment model, while the other components are adjusted with the multiplicative model. The unemployment rate is computed by summing the 4 seasonally adjusted unemployment components and calculating that total as a percent of the civilian labor force total derived by summing all 12 seasonally adjusted components. All the seasonally adjusted series are revised at the end of each year. Extrapolated factors for January-June are computed at the beginning of each year; extrapolated factors for July-December are computed in the middle of the year after the June data become available. Each set of 6-month factors are published in advance, in the January and July issues, respectively, of Employment and Earnings.

(3) Concurrent (as first computed, X-11 ARIMA method). The official procedure for computation of the rate for all civilian workers using the 12 components is followed except that extrapolated factors are not used at all. Each component is seasonally adjusted with the X-11 ARIMA program each month as the most recent data become available. Rates for each month of the current year are shown as first computed; they are revised only once each year, at the end of the year when data for the full year become available. For example, the rate for January 1984 would be based, during 1984, on the adjustment of data from the period January 1974 through January 1984.

(4) Concurrent (revised, X-11 ARIMA method). The procedure used is identical to (3) above, and the rate for the current month (the last month displayed) will always be the same in the two columns. However, all previous months are subject to revision each month based on the seasonal adjustment of all the components with data through the current month.

(5) Stable (X-11 ARIMA method). Each of the 12 civilian labor force components is extended using ARIMA models as in the official procedure and then run through the X-11 part of the program using the stable option. This option assumes that seasonal patterns are basically constant from year-to-year and computes final seasonal factors as unweighted averages of all the seasonal-irregular components for each month across the entire span of the period adjusted. As in the official procedure, factors are extrapolated in 6-month intervals and the series are revised at the end of each year. The procedure for computation of the rate from the seasonally adjusted components is also identical to the official procedure.

(6) Total (X-11 ARIMA method). This is one alternative aggregation procedure, in which total unemployment and civilian labor force levels are extended with ARIMA models and directly adjusted with multiplicative adjustment models in the X-11 part of the program. The rate is computed by taking seasonally adjusted total unemployment as a percent of seasonally adjusted total civilian labor force. Factors are extrapolated in 6-month intervals and the series revised at the end of each year.

(7) Residual (X-11 ARIMA method). This is another alternative aggregation method, in which total civilian employment and civilian labor force levels are extended using ARIMA models and then directly adjusted with multiplicative adjustment models. The seasonally adjusted unemployment level is derived by subtracting seasonally adjusted employment from seasonally adjusted labor force. The rate is then computed by taking the derived unemployment level as a percent of the labor force level. Factors are extrapolated in 6-month intervals and the series revised at the end of each year.

(8) 12-month extrapolation (X-11 ARIMA method). This approach is the same as the official procedure except that the factors are extrapolated in 12-month intervals. The factors for January-December of the current year are computed at the beginning of the year based on data through the preceding year. The values for January through June of the current year are the same as the official values since they reflect the same factors.

(9) X-11 method (official method before 1980). The method for computation of the official procedure is used except that the series are not extended with ARIMA models and the factors are projected in 12-month intervals. The standard X-11 program is used to perform the seasonal adjustment.

Methods of Adjustment: The X-11 ARIMA method was developed at Statistics Canada by the Seasonal Adjustment and Times Series Staff under the direction of Estela Bee Dagum. The method is described in The X-11 ARIMA Seasonal Adjustment Method, by Estela Bee Dagum, Statistics Canada Catalogue No. 12-564E, February 1980.

The standard X-11 method is described in X-11 Variant of the Census Method II Seasonal Adjustment Program, by Julius Shiskin, Allan Young and John Musgrave (Technical Paper No. 15, Bureau of the Census, 1967).

News United States Department of Labor

Bureau of Labor Statistics Washington, D.C. 20212

Technical information: (202) 523-1371
523-1944
523-1959
Media contact: 523-1913

USDL 88-498

TRANSMISSION OF MATERIAL IN THIS RELEASE IS EMBARGOED UNTIL 8:30 A.M. (EDT), FRIDAY, OCTOBER 7, 1988

THE EMPLOYMENT SITUATION: SEPTEMBER 1988

Employment rose and unemployment edged down in September, the Bureau of Labor Statistics of the U.S. Department of Labor reported today. Both the overall and civilian worker jobless rates, which had risen slightly in August, fell two-tenths of a percentage point to 5.3 and 5.4 percent, respectively.

Nonfarm payroll employment, as measured by the monthly survey of business establishments, rose by 255,000 to 106.7 million in September. More than 100,000 of this increase occurred in government employment, largely related to gains in public education. Total civilian employment, as measured by the monthly survey of households, edged up to 115.3 million.

Unemployment (Household Survey Data)

After rising slightly in August, both the level and rate of unemployment eased back down in September. The number of unemployed persons fell by 250,000 in September to 6.6 million, and the civilian worker unemployment rate declined from 5.6 to 5.4 percent, seasonally adjusted. Both of these measures have moved within relatively narrow ranges most of this year. (See table A-2.)

Adult men accounted for the over-the-month decline in unemployment as their jobless rate returned to the July level of 4.5 percent. In contrast, the rates for adult women (4.8 percent), teenagers (15.7 percent), whites (4.8 percent), and blacks (10.8 percent) showed little or no change over the month. The jobless rate for Hispanics dropped by a percentage point to 7.4 percent. (See tables A-2 and A-3.)

The median duration of unemployment declined slightly over the month to 5.5 weeks. The number of persons working part time for economic reasons--persons often referred to as the partially unemployed--was little changed at 5.1 million. (See tables A-7 and A-4.)

Civilian Employment and the Labor Force (Household Survey Data)

Total civilian employment edged up to 115.3 million, and the employment-population ratio was at a high of 62.4 percent. The civilian labor force numbered 121.9 million. Labor force growth has been relatively slow thus far in 1988. (See table A-2.)

Discouraged Workers (Household Survey Data)

In the third quarter of 1988, there were 930,000 discouraged workers--persons who want to work but have not looked for jobs because they believe they could not find any. Their number was about the same as in the second quarter of 1988. More than half of the discouraged total were women, and a third were black. (See table A-14.)

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

Category	Quarterly averages		Monthly data			Aug.-Sept. change
	1988		1988			
	II	III	July	Aug.	Sept.	
HOUSEHOLD DATA						
	Thousands of persons					
Labor force 1/.....	122,968	123,569	123,357	123,723	123,628	-95
Total employment 1/..	116,352	116,878	116,732	116,872	117,032	160
Civilian labor force...	121,258	121,880	121,684	122,031	121,924	-107
Civilian employment..	114,642	115,189	115,059	115,180	115,328	148
Unemployment.....	6,616	6,691	6,625	6,851	6,596	-255
Not in labor force.....	63,131	62,960	63,045	62,799	63,038	239
Discouraged workers..	910	930	N.A.	N.A.	N.A.	N.A.
	Percent of labor force					
Unemployment rates:						
All workers 1/.....	5.4	5.4	5.4	5.5	5.3	-0.2
All civilian workers.	5.5	5.5	5.4	5.6	5.4	-.2
Adult men.....	4.7	4.6	4.5	4.9	4.5	-.4
Adult women.....	4.9	4.9	5.1	4.8	4.8	0
Teenagers.....	15.0	15.6	15.2	15.8	15.7	-.1
White.....	4.6	4.8	4.7	4.9	4.8	-.1
Black.....	12.0	11.2	11.4	11.3	10.8	-.5
Hispanic origin....	9.1	7.9	8.0	8.4	7.4	-1.0
ESTABLISHMENT DATA						
	Thousands of jobs					
Nonfarm employment.....	105,609	p106,469	106,271	p106,440	p106,695	p255
Goods-producing.....	25,498	p25,649	25,663	p25,646	p25,637	p-9
Service-producing....	80,111	p80,820	80,608	p80,794	p81,058	p264
	Hours of work					
Average weekly hours:						
Total private.....	34.8	p34.7	34.9	p34.6	p34.7	p0.1
Manufacturing.....	41.1	p41.1	41.1	p41.0	p41.2	p.2
Overtime.....	3.9	p3.9	3.9	p3.9	p4.0	p.1

1/ Includes the resident Armed Forces. N.A.=not available.
p=preliminary.

Industry Payroll Employment (Establishment Survey Data)

Employment in nonagricultural establishments was up by 255,000 in September to a level of 106.7 million, seasonally adjusted. This job gain was slightly larger than those posted in the previous 2 months but much smaller than the average increase of 345,000 experienced during the first half of the year. Employment growth in September was concentrated in the service-producing sector, particularly in government. For the second straight month, private industries posted a small employment gain; increases averaged only 120,000, compared with over 300,000 a month in the first 7 months of the year. (See table B-1.)

In the service-producing sector, government jobs increased by 115,000, seasonally adjusted, paced by strong fall hiring in state and local education. Employment in the services industry showed a relatively modest employment increase of 65,000 in September. Health services jobs, which have risen by 430,000 over the year, accounted for most of the services increase. In contrast, business services, one of the strongest performers throughout the expansion, has shown little growth in the last 2 months. Wholesale trade continued its pattern of consistent job growth with an increase of 25,000 jobs. The transportation and public utilities industry also added 25,000 jobs, concentrated in the transportation component. Employment in the other private service sector industries--retail trade, and finance, insurance, and real estate--was little changed in September.

In the goods-producing sector, factory employment edged down for the second consecutive month, after having risen consistently over the prior year and a half. Small job gains in machinery and autos were more than offset by small but widespread declines in other manufacturing industries. In the construction industry, the number of jobs was also little changed, while employment in the oil and gas component of the mining industry has edged down over the last 2 months.

Weekly Hours (Establishment Survey Data)

The average workweek for production or nonsupervisory workers on private nonagricultural payrolls edged up by 0.1 hour to 34.7 hours in September, seasonally adjusted, following a sharp decline in the previous month. The factory workweek rose by 0.2 hour to 41.2 hours, and manufacturing overtime edged up 0.1 hour to 4.0 hours. Both factory hours and overtime continue to be quite high by historical standards. (See table B-2.)

The index of aggregate weekly hours of production or nonsupervisory workers on private nonagricultural payrolls, at 126.0 (1977=100), rose 0.4 percent, seasonally adjusted. The index for manufacturing was also up by 0.4 percent, to 96.5. (See table B-5.)

Hourly and Weekly Earnings (Establishment Survey Data)

Average hourly earnings of private production or nonsupervisory workers increased 0.5 percent in September, seasonally adjusted. Average weekly earnings rose 0.8 percent. Prior to seasonal adjustment, average hourly earnings increased 15 cents to $9.40, while average weekly earnings were up by $3.37 to $327.12. (See table B-3.)

The Hourly Earnings Index (Establishment Survey Data)

The Hourly Earnings Index (HEI) was 180.4 (1977=100) in September, seasonally adjusted, an increase of 0.5 percent from August. For the 12 months ended in September, the increase was 3.3 percent. In dollars of constant purchasing power, the HEI decreased 0.8 percent during the 12-month period ended in August. The HEI is computed so as to exclude the effects of two types of changes unrelated to underlying wage rate movements--fluctuations in manufacturing overtime and interindustry employment shifts. (Beginning in 1989, the Hourly Earnings Index will no longer be published in this release.) (See table B-4.)

The Employment Situation for October 1988 will be released on Friday, November 4, at 8:30 A.M. (EST).

Explanatory Note

This news release presents statistics from two major surveys, the Current Population Survey (household survey) and the Current Employment Statistics Survey (establishment survey). The household survey provides the information on the labor force, total employment, and unemployment that appears in the A tables, marked HOUSEHOLD DATA. It is a sample survey of about 55,800 households that is conducted by the Bureau of the Census with most of the findings analyzed and published by the Bureau of Labor Statistics (BLS).

The establishment survey provides the information on the employment, hours, and earnings of workers on nonagricultural payrolls that appears in the B tables, marked ESTABLISHMENT DATA. This information is collected from payroll records by BLS in cooperation with State agencies. The sample includes over 300,000 establishments employing over 38 million people.

For both surveys, the data for a given month are actually collected for and relate to a particular week. In the household survey, unless otherwise indicated, it is the calendar week that contains the 12th day of the month, which is called the survey week. In the establishment survey, the reference week is the pay period including the 12th, which may or may not correspond directly to the calendar week.

The data in this release are affected by a number of technical factors, including definitions, survey differences, seasonal adjustments, and the inevitable variance in results between a survey of a sample and a census of the entire population. Each of these factors is explained below.

Coverage, definitions, and differences between surveys

The sample households in the household survey are selected so as to reflect the entire civilian noninstitutional population 16 years of age and older. Each person in a household is classified as employed, unemployed, or not in the labor force. Those who hold more than one job are classified according to the job at which they worked the most hours.

People are classified as *employed* if they did any work at all as paid civilians; worked in their own business or profession or on their own farm; or worked 15 hours or more in an enterprise operated by a member of their family, whether they were paid or not. People are also counted as employed if they were on unpaid leave because of illness, bad weather, disputes between labor and management, or personal reasons. Members of the Armed Forces stationed in the United States are also included in the employed total.

People are classified as *unemployed*, regardless of their eligibility for unemployment benefits or public assistance, if they meet all of the following criteria: They had no employment during the survey week; they were available for work at that time; and they made specific efforts to find employment sometime during the prior 4 weeks. Persons laid off from their former jobs and awaiting recall and those expecting to report to a job within 30 days need not be looking for work to be counted as unemployed.

The *labor force* equals the sum of the number employed and the number unemployed. The *unemployment rate* is the percentage of unemployed people in the labor force (civilian plus the resident Armed Forces). Table A-5 presents a special grouping of seven measures of unemployment based on varying definitions of unemployment and the labor force. The definitions are provided in the table. The most restrictive definition yields U-1 and the most comprehensive yields U-7. The overall unemployment rate is U-5a, while U-5b represents the same measure with a civilian labor force base.

Unlike the household survey, the establishment survey only counts wage and salary employees whose names appear on the payroll records of nonagricultural firms. As a result, there are many differences between the two surveys, among which are the following:

— The household survey, although based on a smaller sample, reflects a larger segment of the population; the establishment survey excludes agriculture, the self-employed, unpaid family workers, private household workers, and members of the resident Armed Forces;

— The household survey includes people on unpaid leave among the employed; the establishment survey does not;

— The household survey is limited to those 16 years of age and older; the establishment survey is not limited by age;

— The household survey has no duplication of individuals, because each individual is counted only once; in the establishment survey, employees working at more than one job or otherwise appearing on more than one payroll would be counted separately for each appearance.

Other differences between the two surveys are described in "Comparing Employment Estimates from Household and Payroll Surveys," which may be obtained from the BLS upon request.

Seasonal adjustment

Over the course of a year, the size of the Nation's labor force and the levels of employment and unemployment undergo sharp fluctuations due to such seasonal events as changes in weather, reduced or expanded production, harvests, major holidays, and the opening and closing of schools. For example, the labor force increases by a large number each June, when schools close and many young people enter the job market. The effect of such seasonal variation can be very large; over the course of a year, for example, seasonality may account for as much as 95 percent of the month-to-month changes in unemployment.

Because these seasonal events follow a more or less regular pattern each year, their influence on statistical trends can be eliminated by adjusting the statistics from month to month. These adjustments make nonseasonal developments, such as declines in economic activity or increases in the participation of women in the labor force, easier to spot. To return to the school's-out example, the large number of people entering the labor force each June is likely to obscure any other changes that have taken place since May, making it difficult to determine if the level of economic activity has risen or declined. However, because the effect of students finishing school in previous years is known, the statistics for the current year can be adjusted to allow for a comparable change. Insofar as the seasonal adjustment is made correctly, the adjusted figure provides a more useful tool with which to analyze changes in economic activity.

Measures of labor force, employment, and unemployment contain components such as age and sex. Statistics for all employees, production workers, average weekly hours, and average hourly earnings include components based on the employer's industry. All these statistics can be seasonally adjusted either by adjusting the total or by adjusting each of the components and combining them. The second procedure usually yields more accurate information and is therefore followed by BLS. For example, the seasonally adjusted figure for the labor force is the sum of eight seasonally adjusted civilian employment components, plus the resident Armed Forces total (not adjusted for seasonality), and four seasonally adjusted unemployment components; the total for unemployment is the sum of the four unemployment components; and the overall unemployment rate is derived by dividing the resulting estimate of total unemployment by the estimate of the labor force.

The numerical factors used to make the seasonal adjustments are recalculated regularly. For the household survey, the factors are calculated for the January-June period and again for the July-December period. The January revision is applied to data that have been published over the previous 5 years. For the establishment survey, updated factors for seasonal adjustment are calculated only once a year, along with the introduction of new benchmarks which are discussed at the end of the next section.

Sampling variability

Statistics based on the household and establishment surveys are subject to sampling error, that is, the estimate of the number of people employed and the other estimates drawn from these surveys probably differ from the figures that would be obtained from a complete census, even if the same questionnaires and procedures were used. In the household survey, the amount of the differences can be expressed in terms of standard errors. The numerical value of a standard error depends upon the size of the sample, the results of the survey, and other factors. However, the numerical value is always such that the chances are approximately 68 out of 100 that an estimate based on the sample will differ by no more than the standard error from the results of a complete census. The chances are approximately 90 out of 100 that an estimate based on the sample will differ by no more than 1.6 times the standard error from the results of a complete census. At approximately the 90-percent level of confidence—the confidence limits used by BLS in its analyses—the error for the monthly change in total employment is on the order of plus or minus 358,000; for total unemployment it is 224,000; and, for the overall unemployment rate, it is 0.19 percentage point. These figures do not mean that the sample results are off by these magnitudes but, rather, that the chances are approximately 90 out of 100 that the "true" level or rate would not be expected to differ from the estimates by more than these amounts.

Sampling errors for monthly surveys are reduced when the data are cumulated for several months, such as quarterly or annually. Also, as a general rule, the smaller the estimate, the larger the sampling error. Therefore, relatively speaking, the estimate of the size of the labor force is subject to less error than is the estimate of the number unemployed. And, among the unemployed, the sampling error for the jobless rate of adult men, for example, is much smaller than is the error for the jobless rate of teenagers. Specifically, the error on monthly change in the jobless rate for men is .25 percentage point; for teenagers, it is 1.29 percentage points.

In the establishment survey, estimates for the 2 most current months are based on incomplete returns; for this reason, these estimates are labeled preliminary in the tables. When all the returns in the sample have been received, the estimates are revised. In other words, data for the month of September are published in preliminary form in October and November and in final form in December. To remove errors that build up over time, a comprehensive count of the employed is conducted each year. The results of this survey are used to establish new benchmarks—comprehensive counts of employment—against which month-to-month changes can be measured. The new benchmarks also incorporate changes in the classification of industries and allow for the formation of new establishments.

Additional statistics and other information

In order to provide a broad view of the Nation's employment situation, BLS regularly publishes a wide variety of data in this news release. More comprehensive statistics are contained in *Employment and Earnings*, published each month by BLS. It is available for $8.50 per issue or $25.00 per year from the U.S. Government Printing Office, Washington, DC 20204. A check or money order made out to the Superintendent of Documents must accompany all orders.

Employment and Earnings also provides approximations of the standard errors for the household survey data published in this release. For unemployment and other labor force categories, the standard errors appear in tables B through J of its "Explanatory Notes." Measures of the reliability of the data drawn from the establishment survey and the actual amounts of revision due to benchmark adjustments are provided in tables M, O, P, and Q of that publication.

HOUSEHOLD DATA

Table A-1. Employment status of the population, including Armed Forces in the United States, by sex

(Numbers in thousands)

Employment status and sex	Not seasonally adjusted			Seasonally adjusted[1]					
	Sept. 1987	Aug. 1988	Sept. 1988	Sept. 1987	May 1988	June 1988	July 1988	Aug. 1988	Sept. 1988
TOTAL									
Noninstitutional population[2]	184,904	186,522	186,666	184,904	186,088	186,247	186,402	186,522	186,666
Labor force[3]	121,627	125,088	123,546	121,706	122,692	123,157	123,357	123,723	123,828
Participation rate[4]	65.8	67.1	66.2	65.8	65.9	66.1	66.2	66.3	66.2
Total employed[5]	114,770	118,429	117,178	114,615	115,909	116,703	116,732	116,872	117,032
Employment-population ratio[6]	62.1	63.5	62.8	62.0	62.3	62.7	62.6	62.7	62.7
Resident Armed Forces	1,743	1,692	1,704	1,743	1,714	1,585	1,673	1,692	1,704
Civilian employed	113,027	116,737	115,474	112,872	114,195	115,018	115,059	115,180	115,328
Agriculture	3,277	3,455	3,250	3,184	3,035	3,085	3,046	3,151	3,169
Nonagricultural industries	109,750	113,282	112,225	109,688	111,160	111,933	112,014	112,029	112,158
Unemployed	6,857	6,659	6,368	7,091	6,783	6,455	6,625	6,851	6,596
Unemployment rate[7]	5.6	5.3	5.2	5.8	5.5	5.2	5.4	5.5	5.3
Not in labor force	63,277	61,434	63,119	63,198	63,396	63,090	63,045	62,799	63,038
Men, 16 years and over									
Noninstitutional population[2]	88,683	89,504	89,577	88,683	89,287	89,367	89,445	89,504	89,577
Labor force[3]	67,639	69,855	68,465	67,776	68,318	68,429	68,521	68,723	68,608
Participation rate[4]	76.3	78.0	76.4	76.4	76.5	76.6	76.6	76.8	76.6
Total employed[5]	64,203	66,405	65,282	63,949	64,583	64,934	65,002	64,954	65,052
Employment-population ratio[6]	72.4	74.2	72.9	72.1	72.3	72.7	72.7	72.6	72.6
Resident Armed Forces	1,581	1,529	1,540	1,581	1,553	1,523	1,512	1,529	1,540
Civilian employed	62,622	64,876	63,742	62,368	63,030	63,411	63,490	63,425	63,512
Unemployed	3,437	3,450	3,183	3,827	3,736	3,495	3,519	3,768	3,555
Unemployment rate[7]	5.1	4.9	4.6	5.6	5.5	5.1	5.1	5.5	5.2
Women, 16 years and over									
Noninstitutional population[2]	96,221	97,018	97,089	96,221	96,801	96,880	96,957	97,018	97,089
Labor force[3]	53,987	55,233	55,082	53,930	54,374	54,728	54,836	55,000	55,020
Participation rate[4]	56.1	56.9	56.7	56.0	56.2	56.5	56.6	56.7	56.7
Total employed[5]	50,567	52,024	51,896	50,666	51,327	51,769	51,730	51,918	51,979
Employment-population ratio[6]	52.6	53.6	53.5	52.7	53.0	53.4	53.4	53.5	53.5
Resident Armed Forces	162	163	164	162	161	162	161	163	164
Civilian employed	50,405	51,861	51,732	50,504	51,166	51,607	51,569	51,755	51,815
Unemployed	3,420	3,209	3,186	3,264	3,047	2,960	3,106	3,083	3,041
Unemployment rate[7]	6.3	5.8	5.8	6.1	5.6	5.4	5.7	5.6	5.5

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

[2] Includes members of the Armed Forces stationed in the United States.

[3] Labor force as a percent of the noninstitutional population.

[4] Total employment as a percent of the noninstitutional population.

[5] Unemployment as a percent of the labor force (including the resident Armed Forces).

Table A-2. Employment status of the civilian population by sex and age

(Numbers in thousands)

Employment status, sex, and age	Not seasonally adjusted			Seasonally adjusted[1]				
	Sept. 1987	Aug. 1988	Sept. 1988	Sept. 1987	May 1988	June 1988	July 1988	Aug. 1988	Sept. 1988
TOTAL									
Civilian noninstitutional population	183,161	184,830	184,962	183,161	184,374	184,562	184,729	184,830	184,962
Civilian labor force	119,884	123,396	121,842	119,963	120,978	121,472	121,684	122,031	121,924
Participation rate	65.5	66.8	65.9	65.5	65.6	65.8	65.9	66.0	65.9
Employed	113,027	116,737	115,474	112,872	114,195	115,018	115,059	115,180	115,328
Employment-population ratio[2]	61.7	63.2	62.4	61.6	61.9	62.3	62.3	62.3	62.4
Unemployed	6,857	6,659	6,368	7,091	6,783	6,455	6,625	6,851	6,596
Unemployment rate	5.7	5.4	5.2	5.9	5.6	5.3	5.4	5.6	5.4
Men, 20 years and over									
Civilian noninstitutional population	79,740	80,669	80,751	79,740	80,402	80,526	80,606	80,669	80,751
Civilian labor force	62,157	63,396	62,942	62,085	62,662	62,667	62,769	62,925	62,881
Participation rate	77.9	78.6	77.9	77.9	77.9	77.8	77.9	78.0	77.9
Employed	59,373	60,594	60,402	58,967	59,590	59,797	59,954	59,834	60,024
Employment-population ratio[2]	74.5	75.1	74.8	73.9	74.1	74.3	74.4	74.2	74.3
Agriculture	2,433	2,438	2,325	2,345	2,181	2,208	2,247	2,311	2,236
Nonagricultural industries	56,941	58,156	58,077	56,622	57,409	57,588	57,706	57,523	57,788
Unemployed	2,783	2,803	2,540	3,118	3,072	2,870	2,815	3,090	2,857
Unemployment rate	4.5	4.4	4.0	5.0	4.9	4.6	4.5	4.9	4.5
Women, 20 years and over									
Civilian noninstitutional population	88,785	89,670	89,735	88,785	89,382	89,502	89,588	89,670	89,735
Civilian labor force	50,182	50,637	51,172	49,922	50,441	50,642	50,775	50,934	50,912
Participation rate	56.5	56.5	57.0	56.2	56.4	56.6	56.7	56.8	56.7
Employed	47,349	48,003	48,556	47,251	47,960	48,169	48,199	48,466	48,452
Employment-population ratio[2]	53.3	53.5	54.1	53.2	53.7	53.8	53.8	54.0	54.0
Agriculture	615	650	642	600	587	616	542	586	633
Nonagricultural industries	46,734	47,354	47,914	46,651	47,373	47,553	47,657	47,881	47,818
Unemployed	2,833	2,633	2,616	2,671	2,481	2,473	2,576	2,468	2,461
Unemployment rate	5.6	5.2	5.1	5.4	4.9	4.9	5.1	4.8	4.8
Both sexes, 16 to 19 years									
Civilian noninstitutional population	14,637	14,491	14,477	14,637	14,590	14,534	14,533	14,491	14,477
Civilian labor force	7,545	9,363	7,728	7,956	7,875	8,163	8,141	8,172	8,131
Participation rate	51.5	64.6	53.4	54.4	54.0	56.2	56.0	56.4	56.2
Employed	6,305	8,140	6,516	6,654	6,645	7,051	6,907	6,879	6,853
Employment-population ratio[2]	43.1	56.2	45.0	45.5	45.5	48.5	47.5	47.5	47.3
Agriculture	229	368	282	239	267	260	257	254	301
Nonagricultural industries	6,076	7,773	6,234	6,415	6,378	6,791	6,650	6,625	6,552
Unemployed	1,240	1,222	1,212	1,302	1,230	1,112	1,234	1,293	1,278
Unemployment rate	16.4	13.1	15.7	16.4	15.6	13.6	15.2	15.8	15.7

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

[2] Civilian employment as a percent of the civilian noninstitutional population.

HOUSEHOLD DATA

Table A-3. Employment status of the civilian population by race, sex, age, and Hispanic origin

(Numbers in thousands)

Employment status, race, sex, age, and Hispanic origin	Not seasonally adjusted			Seasonally adjusted					
	Sept. 1987	Aug. 1988	Sept. 1988	Sept. 1987	May 1988	June 1988	July 1988	Aug. 1988	Sept. 1988
WHITE									
Civilian noninstitutional population	157,242	158,340	158,422	157,242	158,034	158,166	158,279	158,340	158,422
Civilian labor force	103,295	106,146	104,959	103,357	104,209	104,691	104,603	105,007	105,043
Participation rate	65.7	67.0	66.3	65.7	65.9	66.2	66.1	66.3	66.3
Employed	98,261	101,213	100,177	98,069	99,297	99,932	99,725	99,901	100,019
Employment-population ratio[2]	62.5	63.9	63.2	62.4	62.8	63.2	63.0	63.1	63.1
Unemployed	5,033	4,933	4,782	5,288	4,913	4,759	4,878	5,106	5,024
Unemployment rate	4.9	4.6	4.6	5.1	4.7	4.5	4.7	4.9	4.8
Men, 20 years and over									
Civilian labor force	54,236	55,233	54,872	54,213	54,818	54,662	54,732	54,825	54,850
Participation rate	78.3	78.9	78.4	78.2	78.3	78.2	78.3	78.4	78.3
Employed	52,133	53,094	52,910	51,803	52,314	52,491	52,603	52,484	52,594
Employment-population ratio[2]	75.2	75.9	75.6	74.7	75.0	75.1	75.2	75.0	75.1
Unemployed	2,103	2,139	1,962	2,410	2,304	2,171	2,129	2,361	2,255
Unemployment rate	3.9	3.9	3.6	4.4	4.2	4.0	3.9	4.3	4.1
Women, 20 years and over									
Civilian labor force	42,556	42,884	43,397	42,308	42,827	42,921	42,887	43,177	43,170
Participation rate	56.0	56.0	56.7	55.7	56.1	56.2	56.1	56.4	56.4
Employed	40,557	40,985	41,495	40,409	41,104	41,183	41,040	41,399	41,371
Employment-population ratio[2]	53.4	53.5	54.2	53.2	53.8	53.9	53.7	54.1	54.0
Unemployed	1,999	1,899	1,902	1,899	1,723	1,738	1,847	1,778	1,799
Unemployment rate	4.7	4.4	4.4	4.5	4.0	4.0	4.3	4.1	4.2
Both sexes, 16 to 19 years									
Civilian labor force	6,502	8,028	6,690	6,836	6,764	7,108	6,983	7,005	7,023
Participation rate	54.4	67.6	56.7	57.2	57.0	59.9	58.9	59.2	59.5
Employed	5,571	7,134	5,772	5,857	5,879	6,258	6,081	6,038	6,054
Employment-population ratio[2]	46.6	60.3	48.9	49.0	49.5	52.7	51.3	51.0	51.3
Unemployed	931	894	918	979	885	850	902	967	969
Unemployment rate	14.3	11.1	13.7	14.3	13.1	12.0	12.9	13.8	13.8
Men	14.5	11.2	14.2	15.1	13.8	12.8	14.6	13.8	15.0
Women	14.2	11.1	13.2	13.4	12.4	11.1	11.1	13.8	12.5
BLACK									
Civilian noninstitutional population	20,426	20,738	20,762	20,426	20,650	20,683	20,715	20,736	20,762
Civilian labor force	13,018	13,481	13,178	13,028	13,069	12,989	13,293	13,262	13,191
Participation rate	63.7	65.0	63.5	63.8	63.3	62.8	64.2	64.0	63.5
Employed	11,398	11,962	11,764	11,421	11,452	11,489	11,774	11,764	11,771
Employment-population ratio[2]	55.8	57.7	56.7	55.9	55.5	55.5	56.8	56.7	56.7
Unemployed	1,619	1,519	1,414	1,607	1,617	1,500	1,519	1,498	1,419
Unemployment rate	12.4	11.3	10.7	12.3	12.4	11.5	11.4	11.3	10.8
Men, 20 years and over									
Civilian labor force	6,039	6,212	6,126	6,032	6,107	6,064	6,070	6,154	6,123
Participation rate	74.6	75.4	74.3	74.5	74.5	73.8	73.8	74.7	74.2
Employed	5,463	5,644	5,620	5,421	5,449	5,458	5,492	5,566	5,581
Employment-population ratio[2]	67.5	68.5	68.1	67.0	66.5	66.5	66.8	67.6	67.7
Unemployed	576	568	506	611	658	606	578	588	542
Unemployment rate	9.5	9.1	8.3	10.1	10.8	10.0	9.5	9.6	8.8
Women, 20 years and over									
Civilian labor force	6,116	6,166	6,192	6,067	6,059	6,074	6,307	6,182	6,147
Participation rate	60.2	59.8	59.9	59.7	59.0	59.0	61.2	59.9	59.5
Employed	5,345	5,516	5,558	5,357	5,414	5,421	5,650	5,572	5,564
Employment-population ratio[2]	52.6	53.5	53.8	52.7	52.7	52.7	54.8	54.0	53.8
Unemployed	771	650	633	710	645	652	657	610	583
Unemployment rate	12.6	10.5	10.2	11.7	10.6	10.7	10.4	9.9	9.5
Both sexes, 16 to 19 years									
Civilian labor force	863	1,103	861	929	903	852	917	926	921
Participation rate	39.8	50.5	39.5	42.8	41.4	39.0	42.0	42.4	42.2
Employed	591	802	585	643	589	610	632	626	627
Employment-population ratio[2]	27.2	36.7	26.8	29.6	27.0	28.0	28.9	28.7	28.7
Unemployed	272	302	275	286	314	242	285	300	294
Unemployment rate	31.5	27.3	32.0	30.8	34.8	28.4	31.1	32.4	31.9
Men	32.9	26.5	32.5	31.5	33.3	30.4	30.4	32.2	31.7
Women	30.2	28.3	31.5	30.0	36.6	25.9	31.8	32.7	32.2

See footnotes at end of table.

HOUSEHOLD DATA

Table A-3. Employment status of the civilian population by race, sex, age, and Hispanic origin—Continued

(Numbers in thousands)

Employment status, race, sex, age, and Hispanic origin	Not seasonally adjusted			Seasonally adjusted[1]					
	Sept. 1987	Aug. 1988	Sept. 1988	Sept. 1987	May 1988	June 1988	July 1988	Aug. 1988	Sept. 1988
HISPANIC ORIGIN									
Civilian noninstitutional population	12,965	13,381	13,419	12,965	13,268	13,306	13,344	13,381	13,419
Civilian labor force	8,595	9,091	9,066	8,581	8,859	9,027	8,984	8,935	9,063
Participation rate	66.3	67.9	67.7	66.2	66.8	67.8	67.3	66.8	67.5
Employed	7,924	8,357	8,444	7,877	8,058	8,219	8,264	8,185	8,394
Employment-population ratio[2]	61.1	62.5	62.9	60.8	60.7	61.8	61.9	61.2	62.6
Unemployed	672	733	642	704	801	809	720	750	669
Unemployment rate	7.8	8.1	7.1	8.2	9.0	9.0	8.0	8.4	7.4

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

[2] Civilian employment as a percent of the civilian noninstitutional population.

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

Table A-4. Selected employment indicators

(In thousands)

Category	Not seasonally adjusted			Seasonally adjusted					
	Sept. 1987	Aug. 1988	Sept. 1988	Sept. 1987	May 1988	June 1988	July 1988	Aug. 1988	Sept. 1988
CHARACTERISTIC									
Civilian employed, 16 years and over	113,027	116,737	115,474	112,872	114,195	115,018	115,059	115,180	115,328
Married men, spouse present	40,893	40,748	40,815	40,404	40,267	40,485	40,535	40,505	40,531
Married women, spouse present	28,324	28,284	29,031	28,069	28,567	28,713	28,654	28,832	28,801
Women who maintain families	6,084	6,225	6,188	6,151	5,957	6,085	6,145	6,282	6,251
MAJOR INDUSTRY AND CLASS OF WORKER									
Agriculture:									
Wage and salary workers	1,670	1,758	1,626	1,624	1,526	1,582	1,539	1,580	1,593
Self-employed workers	1,477	1,490	1,500	1,415	1,348	1,359	1,348	1,416	1,438
Unpaid family workers	130	207	123	139	159	167	148	163	134
Nonagricultural industries:									
Wage and salary workers	101,229	104,334	103,400	101,282	101,927	103,000	103,133	103,097	103,415
Government	16,864	16,462	17,035	16,928	16,887	17,064	16,959	17,112	17,103
Private industries	84,365	87,872	86,365	84,354	85,040	85,935	86,174	85,984	86,312
Private households	1,088	1,202	1,077	1,100	1,156	1,150	1,123	1,108	1,085
Other industries	83,277	86,670	85,288	83,254	83,884	84,786	85,051	84,877	85,227
Self-employed workers	8,217	8,685	8,592	8,204	8,917	8,577	8,528	8,491	8,575
Unpaid family workers	303	252	232	297	307	301	255	243	228
PERSONS AT WORK PART TIME[1]									
All industries:									
Part time for economic reasons	4,937	5,559	4,704	5,261	4,844	5,317	5,382	5,181	5,053
Slack work	2,070	2,274	2,041	2,213	2,227	2,364	2,490	2,318	2,190
Could only find part-time work	2,497	2,837	2,191	2,683	2,315	2,637	2,581	2,491	2,356
Voluntary part time	14,485	11,957	15,375	14,415	14,790	14,507	15,070	15,021	15,314
Nonagricultural industries:									
Part time for economic reasons	4,650	5,291	4,458	4,986	4,623	5,076	5,185	4,959	4,814
Slack work	1,899	2,117	1,885	2,034	2,120	2,199	2,351	2,178	2,031
Could only find part-time work	2,405	2,742	2,113	2,603	2,236	2,566	2,545	2,429	2,284
Voluntary part time	14,041	11,537	14,908	13,987	14,338	14,083	14,669	14,585	14,861

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

Table A-5. Range of unemployment measures based on varying definitions of unemployment and the labor force, seasonally adjusted

(Percent)

Measure	Quarterly averages					Monthly data		
	1987		1988			1988		
	III	IV	I	II	III	July	Aug.	Sept.
U-1 Persons unemployed 15 weeks or longer as a percent of the civilian labor force	1.6	1.5	1.4	1.3	1.3	1.3	1.4	1.3
U-2 Job losers as a percent of the civilian labor force	2.8	2.7	2.6	2.5	2.5	2.5	2.6	2.5
U-3 Unemployed persons 25 years and over as a percent of the civilian labor force	4.6	4.5	4.4	4.2	4.3	4.2	4.4	4.2
U-4 Unemployed full-time jobseekers as a percent of the full-time civilian labor force	5.6	5.5	5.4	5.1	5.1	5.0	5.3	5.1
U-5a Total unemployed as a percent of the labor force, including the resident Armed Forces	5.9	5.8	5.6	5.4	5.4	5.4	5.5	5.3
U-5b Total unemployed as a percent of the civilian labor force	6.0	5.9	5.7	5.5	5.5	5.4	5.6	5.4
U-6 Total full-time jobseekers plus 1/2 part-time jobseekers plus 1/2 total on part time for economic reasons as a percent of the civilian labor force less 1/2 of the part-time labor force	8.2	8.1	8.0	7.6	7.6	7.6	7.8	7.5
U-7 Total full-time jobseekers plus 1/2 part-time jobseekers plus 1/2 total on part time for economic reasons plus discouraged workers as a percent of the civilian labor force plus discouraged workers less 1/2 of the part-time labor force	9.0	8.8	8.6	8.3	8.4	N.A.	N.A.	N.A.

N.A. = not available.

Table A-6. Selected unemployment indicators, seasonally adjusted

Category	Number of unemployed persons (in thousands)			Unemployment rates[1]					
	Sept. 1987	Aug. 1988	Sept. 1988	Sept. 1987	May 1988	June 1988	July 1988	Aug. 1988	Sept. 1988
CHARACTERISTIC									
Total, 16 years and over	7,091	6,851	6,596	5.9	5.6	5.3	5.4	5.6	5.4
Men, 16 years and over	3,827	3,758	3,555	5.8	5.8	5.2	5.3	5.6	5.3
Men, 20 years and over	3,118	3,090	2,857	5.0	4.9	4.6	4.5	4.9	4.5
Women, 16 years and over	3,264	3,083	3,041	6.1	5.6	5.4	5.7	5.6	5.5
Women, 20 years and over	2,671	2,468	2,461	5.4	4.9	4.9	5.1	4.8	4.8
Both sexes, 16 to 19 years	1,302	1,293	1,278	16.4	15.6	13.8	15.2	15.8	15.7
Married men, spouse present	1,541	1,436	1,303	3.7	3.3	3.1	3.0	3.4	3.1
Married women, spouse present	1,227	1,228	1,135	4.2	3.9	3.7	4.1	4.1	3.8
Women who maintain families	597	502	552	8.8	8.4	7.8	8.8	7.4	8.1
Full-time workers	5,636	5,517	5,256	5.5	5.2	4.9	5.0	5.3	5.1
Part-time workers	1,448	1,321	1,340	8.4	7.7	7.8	8.1	7.4	7.5
Labor force time lost[2]	--	--	--	6.8	6.4	6.3	6.4	6.5	6.4
INDUSTRY									
Nonagricultural private wage and salary workers	5,281	5,144	4,965	5.9	5.7	5.4	5.4	5.6	5.4
Goods-producing industries	2,035	1,967	1,888	7.0	6.6	6.0	6.3	6.8	6.5
Mining	63	52	68	7.4	10.4	6.7	5.3	6.8	8.6
Construction	745	689	585	11.9	10.5	10.2	10.2	11.0	9.2
Manufacturing	1,227	1,227	1,235	5.6	5.4	4.8	5.2	5.6	5.6
Durable goods	705	653	709	5.4	4.9	4.4	5.0	5.0	5.5
Nondurable goods	522	573	527	5.9	6.0	5.4	5.6	6.4	5.9
Service-producing industries	3,246	3,176	3,077	5.3	5.2	5.1	5.0	5.1	4.9
Transportation and public utilities	254	239	230	4.1	4.4	4.1	3.5	3.8	3.7
Wholesale and retail trade	1,462	1,508	1,430	6.4	6.3	5.9	6.2	6.5	6.1
Finance and service industries	1,530	1,429	1,418	4.8	4.6	4.6	4.5	4.4	4.3
Government workers	596	550	471	3.4	2.9	2.8	3.1	3.1	2.7
Agricultural wage and salary workers	152	203	204	8.6	13.9	9.7	10.8	11.4	11.3

[1] Unemployment as a percent of the 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.

HOUSEHOLD DATA

Table A-7. Duration of unemployment

(Numbers in thousands)

Weeks of unemployment	Not seasonally adjusted			Seasonally adjusted					
	Sept. 1987	Aug. 1988	Sept. 1988	Sept. 1987	May 1988	June 1988	July 1988	Aug. 1988	Sept. 1988
DURATION									
Less than 5 weeks	3,391	3,095	3,308	3,220	3,075	3,066	2,965	3,197	3,139
5 to 14 weeks	1,764	2,094	1,632	1,949	2,110	1,890	2,078	1,957	1,823
15 weeks and over	1,701	1,470	1,428	1,904	1,609	1,512	1,629	1,676	1,596
15 to 26 weeks	744	669	644	917	784	727	838	859	789
27 weeks and over	957	800	784	987	825	785	791	817	807
Average (mean) duration, in weeks	13.9	13.5	13.3	14.2	13.8	12.9	13.6	13.7	13.7
Median duration, in weeks	5.1	5.9	4.8	5.8	5.9	6.0	6.3	5.9	5.5
PERCENT DISTRIBUTION									
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than 5 weeks	49.5	46.5	51.9	45.5	45.3	47.4	44.4	46.8	47.9
5 to 14 weeks	25.7	31.4	25.6	27.6	31.1	29.2	31.1	28.7	27.8
15 weeks and over	24.8	22.1	22.4	26.9	23.7	23.4	24.4	24.5	24.3
15 to 26 weeks	10.9	10.1	10.1	13.0	11.5	11.2	12.6	12.6	12.0
27 weeks and over	14.0	12.0	12.3	14.0	12.1	12.1	11.9	12.0	12.3

Table A-8. Reason for unemployment

(Numbers in thousands)

Reasons	Not seasonally adjusted			Seasonally adjusted					
	Sept. 1987	Aug. 1988	Sept. 1988	Sept. 1987	May 1988	June 1988	July 1988	Aug. 1988	Sept. 1988
NUMBER OF UNEMPLOYED									
Job losers	2,942	2,887	2,732	3,313	3,236	3,059	3,087	3,138	3,087
On layoff	643	739	636	820	793	863	852	891	816
Other job losers	2,299	2,148	2,096	2,493	2,443	2,196	2,235	2,247	2,271
Job leavers	1,066	1,062	1,099	981	926	944	904	997	994
Reentrants	1,975	1,888	1,821	1,908	1,789	1,723	1,901	1,869	1,761
New entrants	854	822	717	882	807	777	776	793	745
PERCENT DISTRIBUTION									
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Job losers	42.9	43.4	42.9	46.8	47.9	47.0	48.3	46.2	46.9
On layoff	9.4	11.1	10.0	11.6	11.7	13.3	12.8	13.1	12.4
Other job losers	33.5	32.3	32.9	35.2	36.2	33.8	33.5	33.1	34.5
Job leavers	15.8	15.9	17.3	13.8	13.7	14.5	13.6	14.7	15.1
Reentrants	28.8	28.4	28.6	26.9	26.5	26.5	26.5	27.5	26.7
New entrants	12.5	12.3	11.3	12.5	11.9	11.9	11.6	11.7	11.3
UNEMPLOYED AS A PERCENT OF THE CIVILIAN LABOR FORCE									
Job losers	2.4	2.3	2.2	2.8	2.7	2.5	2.5	2.6	2.5
Job leavers	.9	.9	.9	.8	.8	.8	.7	.8	.8
Reentrants	1.6	1.5	1.5	1.8	1.5	1.4	1.6	1.5	1.4
New entrants	.7	.7	.6	.7	.7	.6	.6	.8	.6

Table A-9. Unemployed persons by sex and age, seasonally adjusted

Sex and age	Number of unemployed persons (in thousands)			Unemployment rates[1]					
	Sept. 1987	Aug. 1988	Sept. 1988	Sept. 1987	May 1988	June 1988	July 1988	Aug. 1988	Sept. 1988
Total, 16 years and over	7,091	6,851	6,596	5.9	5.6	5.3	5.4	5.6	5.4
16 to 24 years	2,692	2,513	2,460	11.8	11.3	10.3	10.9	11.1	10.9
16 to 19 years	1,302	1,293	1,278	16.4	15.6	13.6	15.2	15.8	15.7
16 to 17 years	618	607	582	18.3	16.1	15.4	17.5	18.7	20.5
18 to 19 years	701	671	612	15.2	15.3	12.9	13.0	13.9	12.7
20 to 24 years	1,390	1,220	1,182	9.4	8.9	8.4	8.5	8.4	8.2
25 years and over	4,445	4,358	4,181	4.6	4.3	4.1	4.2	4.4	4.2
25 to 54 years	3,931	3,871	3,728	4.8	4.5	4.4	4.4	4.6	4.4
55 years and over	499	476	437	3.3	3.5	2.9	3.1	3.2	2.9
Men, 16 years and over	3,827	3,768	3,555	5.8	5.6	5.2	5.3	5.6	5.3
16 to 24 years	1,435	1,359	1,338	12.1	11.6	10.5	11.3	11.5	11.4
16 to 19 years	709	676	698	17.3	16.2	14.7	16.6	15.9	16.7
16 to 17 years	341	297	388	19.7	16.7	17.0	17.9	17.6	21.7
18 to 19 years	382	371	325	15.9	15.8	14.2	14.7	14.7	13.4
20 to 24 years	726	681	640	9.3	9.1	8.2	8.4	9.0	8.5
25 years and over	2,427	2,426	2,253	4.5	4.3	4.1	3.9	4.4	4.1
25 to 54 years	2,139	2,118	1,997	4.7	4.4	4.2	4.1	4.5	4.3
55 years and over	283	301	248	3.2	3.7	3.2	3.1	3.4	2.8
Women, 16 years and over	3,264	3,083	3,041	6.1	5.6	5.4	5.7	5.6	5.5
16 to 24 years	1,257	1,154	1,122	11.5	11.0	10.0	10.5	10.7	10.4
16 to 19 years	593	615	580	15.4	15.0	12.4	13.6	15.8	14.7
16 to 17 years	277	310	294	16.9	15.5	13.7	17.0	19.8	19.0
18 to 19 years	319	300	287	14.4	14.7	11.6	11.2	12.9	12.0
20 to 24 years	664	539	542	9.4	8.8	8.7	8.7	7.8	7.9
25 years and over	2,018	1,933	1,928	4.7	4.3	4.2	4.5	4.4	4.4
25 to 54 years	1,792	1,753	1,731	4.9	4.5	4.6	4.7	4.6	4.6
55 years and over	216	175	189	3.5	3.2	2.6	3.0	2.6	3.0

[1] Unemployment as a percent of the civilian labor force.

Table A-10. Employment status of black and other workers

(Numbers in thousands)

Employment status	Not seasonally adjusted			Seasonally adjusted[1]					
	Sept. 1987	Aug. 1988	Sept. 1988	Sept. 1987	May 1988	June 1988	July 1988	Aug. 1988	Sept. 1988
Civilian noninstitutional population	25,919	26,490	26,540	25,919	26,340	26,396	26,451	26,490	26,540
Civilian labor force	16,589	17,250	16,884	16,594	16,698	16,735	17,021	16,993	16,892
Participation rate	64.0	65.1	63.6	64.0	63.4	63.4	64.4	64.1	63.6
Employed	14,766	15,524	15,297	14,778	14,818	15,017	15,319	15,299	15,301
Employment-population ratio[2]	57.0	58.6	57.6	57.0	56.3	56.9	57.9	57.8	57.7
Unemployed	1,824	1,726	1,586	1,816	1,879	1,718	1,701	1,694	1,592
Unemployment rate	11.0	10.0	9.4	10.9	11.3	10.3	10.0	10.0	9.4
Not in labor force	9,330	9,240	9,656	9,325	9,642	9,661	9,430	9,497	9,648

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

[2] Civilian employment as a percent of the civilian noninstitutional population.

HOUSEHOLD DATA

Table A-11. Occupational status of the employed and unemployed, not seasonally adjusted

(Numbers in thousands)

Occupation	Civilian employed		Unemployed		Unemployment rate	
	Sept. 1987	Sept. 1988	Sept. 1987	Sept. 1988	Sept. 1987	Sept. 1988
Total, 16 years and over[1]	113,027	115,474	6,857	6,368	5.7	5.2
Managerial and professional specialty	28,107	29,537	689	624	2.4	2.1
Executive, administrative, and managerial	13,692	14,302	374	322	2.7	2.2
Professional specialty	14,415	15,235	315	302	2.1	1.9
Technical, sales, and administrative support	35,060	35,509	1,622	1,573	4.4	4.2
Technicians and related support	3,432	3,676	112	92	3.1	2.5
Sales occupations	13,470	13,575	670	658	4.7	4.6
Administrative support, including clerical	18,177	18,259	840	822	4.4	4.3
Service occupations	14,754	15,223	1,197	1,056	7.5	6.5
Private household	816	851	44	53	5.1	5.9
Protective service	1,856	1,971	102	66	5.2	3.3
Service, except private household and protective	12,082	12,400	1,051	936	8.0	7.0
Precision production, craft, and repair	13,714	13,514	742	603	5.1	4.3
Mechanics and repairers	4,541	4,281	162	140	3.4	3.2
Construction trades	5,047	5,145	393	288	7.2	5.3
Other precision production, craft, and repair	4,126	4,088	187	175	4.3	4.1
Operators, fabricators, and laborers	17,796	18,106	1,502	1,513	7.8	7.7
Machine operators, assemblers, and inspectors	8,163	8,156	657	715	7.4	8.1
Transportation and material moving occupations	4,785	5,056	277	224	5.5	4.2
Handlers, equipment cleaners, helpers, and laborers	4,847	4,893	568	573	10.5	10.5
Construction laborers	829	899	151	145	15.4	13.9
Other handlers, equipment cleaners, helpers, and laborers	4,018	3,994	418	429	9.4	9.7
Farming, forestry, and fishing	3,577	3,586	219	258	5.8	6.7

[1] Persons with no previous work experience and those whose last job was in the Armed Forces are included in the unemployed total.

Table A-12. Employment status of male Vietnam-era veterans and nonveterans by age, not seasonally adjusted

(Numbers in thousands)

Veteran status and age	Civilian noninstitutional population		Civilian labor force							
			Total		Employed		Unemployed			
							Number		Percent of labor force	
	Sept. 1987	Sept. 1988	Sept. 1987	Sept. 1988	Sept. 1987	Sept. 1988	Sept. 1987	Sept. 1988	Sept. 1987	Sept. 1988
VIETNAM-ERA VETERANS										
Total, 30 years and over	7,850	7,890	7,227	7,261	6,923	7,008	304	253	4.2	3.5
30 to 44 years	6,156	5,826	5,842	5,540	5,581	5,344	261	196	4.5	3.5
30 to 34 years	875	633	826	592	759	554	67	38	8.1	6.4
35 to 39 years	2,515	2,070	2,385	1,965	2,283	1,894	102	71	4.3	3.6
40 to 44 years	2,766	3,123	2,631	2,983	2,539	2,896	92	87	3.5	2.9
45 years and over	1,694	2,064	1,385	1,721	1,342	1,664	43	57	3.1	3.3
NONVETERANS										
Total, 30 to 44 years	19,666	20,631	18,693	19,645	17,977	18,958	716	687	3.8	3.5
30 to 34 years	8,935	9,175	8,515	8,779	8,178	8,439	337	340	4.0	3.9
35 to 39 years	6,304	6,928	6,020	6,593	5,796	6,405	224	188	3.7	2.9
40 to 44 years	4,427	4,528	4,156	4,273	4,003	4,114	155	159	3.7	3.7

NOTE: Male Vietnam-era veterans are men who served in the Armed Forces between August 5, 1964 and May 7, 1975. Nonveterans are men who have never served in the Armed Forces; published data are limited to those 30 to 44 years of age, the group that most closely corresponds to the bulk of the Vietnam-era veteran population.

HOUSEHOLD DATA

Table A-13. Employment status of the civilian population for eleven large States

(Numbers in thousands)

State and employment status	Not seasonally adjusted[1]			Seasonally adjusted[2]					
	Sept. 1987	Aug. 1988	Sept. 1988	Sept. 1987	May 1988	June 1988	July 1988	Aug. 1988	Sept. 1988
California									
Civilian noninstitutional population	20,639	21,043	21,078	20,639	20,931	20,972	21,012	21,043	21,078
Civilian labor force	13,790	14,256	14,116	13,815	14,142	14,105	14,131	14,159	14,142
Employed	13,026	13,462	13,409	13,027	13,251	13,315	13,374	13,373	13,411
Unemployed	764	794	707	788	891	790	757	786	731
Unemployment rate	5.5	5.6	5.0	5.7	6.3	5.6	5.4	5.6	5.2
Florida									
Civilian noninstitutional population	9,485	9,711	9,731	9,485	9,646	9,671	9,693	9,711	9,731
Civilian labor force	5,905	6,235	6,119	5,901	6,086	6,115	6,102	6,162	6,121
Employed	5,594	5,921	5,810	5,600	5,780	5,831	5,837	5,862	5,820
Unemployed	311	314	310	301	306	284	265	300	301
Unemployment rate	5.3	5.0	5.1	5.1	5.0	4.6	4.3	4.9	4.9
Illinois									
Civilian noninstitutional population	8,750	8,787	8,790	8,750	8,776	8,781	8,786	8,787	8,790
Civilian labor force	5,848	5,962	5,818	5,833	5,733	5,709	5,760	5,887	5,797
Employed	5,488	5,559	5,506	5,441	5,352	5,332	5,394	5,472	5,450
Unemployed	358	402	313	392	381	377	366	415	347
Unemployment rate	6.1	6.7	5.4	6.7	6.6	6.6	6.4	7.0	6.0
Massachusetts									
Civilian noninstitutional population	4,592	4,604	4,605	4,592	4,600	4,603	4,604	4,604	4,605
Civilian labor force	3,065	3,186	3,130	3,074	3,124	3,188	3,137	3,119	3,144
Employed	2,981	3,088	3,036	2,992	3,036	3,076	3,020	3,015	3,051
Unemployed	85	99	94	82	88	112	117	104	93
Unemployment rate	2.8	3.1	3.0	2.7	2.8	3.5	3.7	3.3	3.0
Michigan									
Civilian noninstitutional population	6,946	7,002	7,007	6,946	6,986	6,993	6,999	7,002	7,007
Civilian labor force	4,580	4,662	4,588	4,569	4,498	4,553	4,587	4,566	4,572
Employed	4,246	4,337	4,283	4,206	4,205	4,253	4,251	4,229	4,238
Unemployed	334	325	305	361	293	300	336	337	334
Unemployment rate	7.3	7.0	6.6	7.9	6.5	6.6	7.3	7.4	7.3
New Jersey									
Civilian noninstitutional population	6,011	6,044	6,047	6,011	6,034	6,039	6,042	6,044	6,047
Civilian labor force	3,895	4,029	3,943	3,933	3,922	3,955	3,969	3,983	3,979
Employed	3,742	3,886	3,809	3,762	3,776	3,810	3,825	3,828	3,829
Unemployed	153	143	134	171	146	145	144	155	150
Unemployment rate	3.9	3.6	3.4	4.3	3.7	3.7	3.6	3.9	3.8
New York									
Civilian noninstitutional population	13,763	13,774	13,773	13,763	13,770	13,774	13,777	13,774	13,773
Civilian labor force	8,382	8,742	8,494	8,421	8,429	8,516	8,537	8,589	8,517
Employed	8,014	8,375	8,141	8,037	8,071	8,220	8,171	8,206	8,149
Unemployed	368	367	353	384	356	296	366	383	368
Unemployment rate	4.4	4.2	4.2	4.6	4.2	3.5	4.3	4.5	4.3
North Carolina									
Civilian noninstitutional population	4,827	4,894	4,900	4,827	4,875	4,883	4,889	4,894	4,900
Civilian labor force	3,285	3,388	3,329	3,292	3,297	3,318	3,332	3,339	3,332
Employed	3,169	3,287	3,226	3,157	3,183	3,213	3,235	3,236	3,209
Unemployed	116	101	103	135	114	105	97	103	123
Unemployment rate	3.5	3.0	3.1	4.1	3.5	3.2	2.9	3.1	3.7
Ohio									
Civilian noninstitutional population	8,167	8,205	8,208	8,167	8,194	8,199	8,203	8,205	8,208
Civilian labor force	5,190	5,343	5,251	5,181	5,248	5,271	5,252	5,298	5,251
Employed	4,903	5,044	4,952	4,891	4,922	4,959	4,973	5,000	4,947
Unemployed	288	299	300	290	326	312	279	298	304
Unemployment rate	5.5	5.6	5.7	5.6	6.2	5.9	5.3	5.6	5.8

See footnotes at end of table.

HOUSEHOLD DATA

Table A-13. Employment status of the civilian population for eleven large States—Continued

(Numbers in thousands)

State and employment status	Not seasonally adjusted[1]			Seasonally adjusted[2]					
	Sept. 1987	Aug. 1988	Sept. 1988	Sept. 1987	May 1988	June 1988	July 1988	Aug. 1988	Sept. 1988
Pennsylvania									
Civilian noninstitutional population	9,299	9,325	9,327	9,299	9,317	9,322	9,325	9,325	9,327
Civilian labor force	5,715	5,928	5,845	5,683	5,661	5,702	5,735	5,786	5,815
Employed	5,418	5,680	5,549	5,365	5,375	5,410	5,433	5,526	5,500
Unemployed	297	249	296	318	286	292	302	260	315
Unemployment rate	5.2	4.2	5.1	5.6	5.1	5.1	5.3	4.5	5.4
Texas									
Civilian noninstitutional population	12,036	12,072	12,075	12,036	12,081	12,087	12,072	12,072	12,075
Civilian labor force	8,273	8,469	8,386	8,254	8,372	8,518	8,277	8,381	8,354
Employed	7,569	7,901	7,793	7,559	7,770	7,926	7,757	7,814	7,768
Unemployed	704	568	594	695	602	592	520	567	586
Unemployment rate	8.5	6.7	7.1	8.4	7.2	6.9	6.3	6.8	7.0

[1] These are the official Bureau of Labor Statistics' estimates used in the administration of Federal fund allocation programs.

[2] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and the seasonally adjusted columns.

Table A-14. Persons not in the labor force by reason, sex, and race, quarterly averages

(In thousands)

Reason, sex, and race	Not seasonally adjusted		Seasonally adjusted				
	1987	1988	1987		1989		
	III	III	III	IV	I	II	III
TOTAL							
Total not in labor force	61,815	61,796	62,963	62,899	62,825	63,131	62,960
Do not want a job now	56,366	56,816	57,490	57,408	57,414	C 57,589	58,423
Current activity: Going to school	3,521	3,774	6,388	6,414	6,325	6,352	7,133
Ill, disabled	4,423	4,447	4,426	4,467	4,254	4,484	4,434
Keeping house	25,568	25,380	25,646	25,513	25,289	C 25,330	25,457
Retired	16,550	17,044	16,317	16,506	16,882	16,784	16,776
Other activity	6,285	6,171	4,713	4,507	4,684	4,659	4,622
Want a job now	5,449	4,982	5,802	5,462	5,510	5,313	5,313
Reason not looking: School attendance	882	806	1,556	1,389	1,310	1,276	1,426
Ill health, disability	834	791	847	834	850	844	804
Home responsibilities	1,388	1,237	1,274	1,234	1,182	1,215	1,140
Think cannot get a job	1,025	952	992	910	1,027	910	930
Job-market factors[1]	651	600	635	581	700	589	590
Personal factors[2]	374	351	357	329	327	321	340
Other reasons[3]	1,320	1,194	1,132	1,094	1,141	1,068	1,013
Men							
Total not in labor force	19,946	20,000	20,811	20,845	20,856	20,696	20,892
Do not want a job now	18,196	18,311	18,945	18,878	18,997	18,854	19,160
Want a job now	1,750	1,689	2,064	1,918	1,971	1,872	1,946
Reason not looking: School attendance	407	379	773	737	633	674	693
Ill health, disability	404	376	416	414	406	370	386
Think cannot get a job	433	448	431	358	462	403	443
Other reasons[3]	506	487	444	409	471	425	424
Women							
Total not in labor force	41,868	41,796	42,152	42,055	41,970	42,235	42,070
Do not want a job now	38,170	38,505	38,545	38,530	38,417	C 38,735	39,243
Want a job now	3,699	3,293	3,738	3,545	3,539	3,440	3,367
Reason not looking: School attendance	475	429	784	653	677	602	733
Ill health, disability	430	415	431	421	444	474	418
Home responsibilities	1,388	1,237	1,274	1,234	1,182	1,215	1,140
Think cannot get a job	582	504	561	552	566	507	467
Other reasons	815	708	688	685	670	643	590
White							
Total not in labor force	52,841	52,518	53,771	53,679	53,455	53,557	53,483
Do not want a job now	48,741	48,975	49,536	49,564	49,536	49,640	49,751
Want a job now	4,099	3,545	4,252	4,045	4,020	3,883	3,673
Reason not looking: School attendance	807	517	1,082	986	945	905	904
Ill health, disability	638	552	648	646	644	637	559
Home responsibilities	1,061	902	948	909	837	858	810
Think cannot get a job	664	583	643	620	697	593	576
Other reasons[3]	1,129	991	951	884	897	891	823
Black							
Total not in labor force	7,105	7,284	7,326	7,294	7,406	7,606	7,488
Do not want a job now	5,992	6,134	6,088	6,083	6,094	6,372	6,215
Want a job now	1,113	1,150	1,237	1,210	1,320	1,242	1,289
Reason not looking: School attendance	198	197	333	341	351	312	337
Ill health, disability	160	222	168	165	195	186	238
Home responsibilities	281	265	275	304	310	318	264
Think cannot get a job	318	317	315	237	266	262	313
Other reasons[3]	156	149	145	163	198	164	137

[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."

[3] Includes small number of men not looking for work because of "home responsibilities."

C = corrected.

ESTABLISHMENT DATA

Table B-1. Employees on nonagricultural payrolls by industry

(In thousands)

Industry	Not seasonally adjusted				Seasonally adjusted					
	Sept. 1987	July 1988	Aug. 1988p/	Sept. 1988p/	Sept. 1987	May 1988	June 1988	July 1988	Aug. 1988p/	Sept. 1988p/
Total	103,288	106,069	106,253	107,097	102,906	105,489	106,057	106,271	106,440	106,695
Total private	86,556	89,619	89,803	89,911	85,851	88,139	88,678	88,941	89,035	89,177
Goods-producing industries	25,557	25,887	26,103	26,114	24,902	25,466	25,592	25,663	25,646	25,637
Mining	748	744	744	736	734	739	740	748	737	730
Oil and gas extraction	416.6	423.2	422.5	416.8	417	425	425	424	422	417
Construction	5,298	5,459	5,498	5,445	5,012	5,237	5,308	5,338	5,333	5,351
General building contractors	1,382.8	1,475.4	1,485.2	1,468.6	1,328	1,396	1,412	1,408	1,404	1,404
Manufacturing	19,527	19,504	19,661	19,733	19,156	19,490	19,544	19,593	19,574	19,556
Production workers	13,240	13,268	13,421	13,508	13,075	13,502	13,341	13,582	13,566	13,540
Durable goods	11,335	11,499	11,561	11,619	11,269	11,477	11,515	11,566	11,554	11,548
Production workers	7,563	7,636	7,688	7,770	7,499	7,649	7,676	7,720	7,712	7,703
Lumber and wood products	744.5	775.8	778.0	772.1	744	757	757	756	753	751
Furniture and fixtures	527.5	526.6	534.8	538.6	526	537	537	541	536	536
Stone, clay, and glass products	592.8	598.9	599.6	598.7	580	585	587	589	587	586
Primary metal industries	762.9	778.4	781.9	789.7	761	774	781	789	785	787
Blast furnaces and basic steel products	276.3	282.9	288.7	280.1	276	281	281	282	280	279
Fabricated metal products	1,422.1	1,447.7	1,455.1	1,448.8	1,412	1,448	1,457	1,464	1,457	1,458
Machinery, except electrical	2,036.6	2,141.9	2,145.8	2,160.6	2,039	2,121	2,134	2,151	2,157	2,163
Electrical and electronic equipment	2,091.1	2,111.6	2,129.2	2,138.6	2,085	2,115	2,120	2,122	2,129	2,124
Transportation equipment	2,861.9	2,825.7	2,808.3	2,850.7	2,852	2,848	2,847	2,852	2,845	2,848
Motor vehicles and equipment	868.1	839.9	827.8	868.1	868	851	850	857	856	860
Instruments and related products	694.1	714.6	720.4	720.2	694	709	713	715	720	720
Miscellaneous manufacturing	379.8	377.5	387.7	389.5	374	381	382	387	385	383
Nondurable goods	7,992	8,005	8,120	8,114	7,887	8,013	8,029	8,027	8,020	8,008
Production workers	5,677	5,632	5,741	5,738	5,576	5,653	5,665	5,662	5,654	5,637
Food and kindred products	1,708.9	1,669.9	1,721.8	1,712.1	1,627	1,643	1,645	1,631	1,634	1,631
Tobacco manufactures	57.2	49.0	51.9	54.8	53	52	53	52	51	51
Textile mill products	735.5	714.6	722.8	724.2	730	728	727	726	719	719
Apparel and other textile products	1,111.8	1,062.0	1,092.1	1,095.3	1,104	1,108	1,097	1,096	1,091	1,087
Paper and allied products	684.6	692.6	694.4	692.4	682	689	691	692	692	690
Printing and publishing	1,513.1	1,564.1	1,567.1	1,570.4	1,518	1,559	1,565	1,567	1,572	1,573
Chemicals and allied products	1,034.3	1,072.9	1,077.4	1,072.8	1,032	1,060	1,063	1,067	1,071	1,078
Petroleum and coal products	167.6	170.5	170.6	169.8	166	166	167	167	167	167
Rubber and misc. plastics products	832.5	870.1	874.1	876.1	858	870	873	882	878	873
Leather and leather products	146.8	140.1	147.9	147.2	145	146	146	147	145	145
Service-producing industries	77,931	80,182	80,158	80,983	78,804	80,023	80,465	80,688	80,794	81,058
Transportation and public utilities	5,474	5,598	5,607	5,672	5,427	5,556	5,582	5,598	5,602	5,625
Transportation	3,247	3,325	3,332	3,412	3,201	3,308	3,332	3,345	3,345	3,363
Communication and public utilities	2,227	2,273	2,275	2,260	2,226	2,248	2,250	2,253	2,257	2,262
Wholesale trade	5,934	6,209	6,228	6,240	5,914	6,115	6,148	6,174	6,193	6,218
Durable goods	3,480	3,699	3,714	3,716	3,478	3,635	3,668	3,681	3,696	3,712
Nondurable goods	2,454	2,510	2,514	2,524	2,436	2,480	2,488	2,493	2,497	2,506
Retail trade	18,701	19,357	19,409	19,483	18,605	19,130	19,203	19,261	19,274	19,288
General merchandise stores	2,415.7	2,486.1	2,482.8	2,494.2	2,457	2,541	2,549	2,548	2,536	2,537
Food stores	2,964.1	3,109.2	3,117.5	3,124.4	2,958	3,053	3,080	3,097	3,108	3,116
Automotive dealers and service stations	2,029.2	2,113.2	2,118.3	2,109.8	2,015	2,070	2,076	2,088	2,093	2,095
Eating and drinking places	6,318.0	6,548.5	6,574.4	6,556.2	6,152	6,536	6,552	6,569	6,577	6,584
Finance, insurance, and real estate	6,688	6,777	6,770	6,787	6,588	6,656	6,679	6,684	6,688	6,695
Finance	3,287	3,333	3,326	3,296	3,292	3,290	3,304	3,308	3,298	3,299
Insurance	2,828	2,887	2,886	2,877	2,832	2,867	2,874	2,877	2,888	2,881
Real estate	1,285	1,357	1,360	1,334	1,264	1,290	1,301	1,307	1,318	1,313
Services	24,490	25,791	25,786	25,773	24,415	25,216	25,472	25,561	25,632	25,696
Business services	5,278.4	5,538.6	5,538.4	5,565.0	5,233	5,443	5,480	5,500	5,498	5,515
Health services	6,896.5	7,274.5	7,295.0	7,328.2	6,894	7,153	7,203	7,238	7,266	7,328
Government	16,731	16,450	16,350	17,186	17,055	17,350	17,379	17,330	17,405	17,518
Federal	2,941	2,992	2,980	2,950	2,962	2,957	2,951	2,951	2,956	2,971
State	3,894	3,840	3,848	4,036	3,973	4,050	4,049	4,039	4,076	4,118
Local	9,896	9,618	9,522	10,200	10,120	10,343	10,379	10,320	10,373	10,429

p = preliminary.

ESTABLISHMENT DATA

Table B-2. Average weekly hours of production or nonsupervisory workers1/ on private nonagricultural payrolls by industry -

Industry	Not seasonally adjusted				Seasonally adjusted					
	Sept. 1987	July 1988	Aug. 1988p/	Sept. 1988p/	Sept. 1987	May 1988	June 1988	July 1988	Aug. 1988p/	Sept. 1988p/
Total private	34.7	35.1	35.8	34.8	34.6	34.7	34.7	34.9	34.6	34.7
Mining	42.3	42.5	42.0	42.5	(2)	(2)	(2)	(2)	(2)	(2)
Construction	36.5	38.5	38.6	38.4	(2)	(2)	(2)	(2)	(2)	(2)
Manufacturing	40.8	40.7	40.9	41.4	40.6	41.8	41.1	41.1	41.0	41.2
Overtime hours	3.9	3.7	3.9	4.3	3.7	3.9	3.9	3.9	3.9	4.0
Durable goods	41.1	41.2	41.4	42.0	41.0	41.8	41.8	41.8	41.7	42.0
Overtime hours	3.9	3.8	4.0	4.4	3.7	4.2	4.1	4.0	4.1	4.1
Lumber and wood products	39.9	40.3	40.4	40.3	39.6	40.1	40.2	40.5	40.1	40.0
Furniture and fixtures	40.0	38.9	39.3	40.0	39.5	39.5	39.4	39.7	39.8	39.5
Stone, clay, and glass products	42.5	42.4	42.6	42.8	42.0	42.3	42.4	42.1	42.2	42.3
Primary metal industries	43.2	43.0	43.2	43.8	43.2	43.6	43.6	43.4	43.6	43.8
Blast furnaces and basic steel products	44.7	44.0	43.7	44.5	44.6	43.9	44.3	44.0	44.1	44.4
Fabricated metal products	41.8	41.8	41.5	42.2	40.9	41.9	42.0	41.7	41.8	42.2
Machinery, except electrical	41.7	42.3	42.0	42.7	41.7	42.6	42.5	43.0	42.4	42.7
Electrical and electronic equipment	40.4	40.4	40.6	40.9	40.4	41.0	41.1	41.0	40.8	40.9
Transportation equipment	41.1	41.7	41.9	43.4	41.4	43.0	43.0	42.6	42.8	43.8
Motor vehicles and equipment	41.1	41.6	42.3	44.7	41.5	44.8	44.2	42.5	43.6	45.2
Instruments and related products	41.0	41.1	41.1	41.3	41.0	41.4	41.3	41.0	41.4	41.3
Miscellaneous manufacturing	39.1	38.5	38.9	39.1	38.9	39.2	39.3	39.2	39.1	39.0
Nondurable goods	40.5	39.9	40.2	40.5	40.1	40.8	40.1	40.2	40.1	40.2
Overtime hours	4.0	3.6	3.8	4.1	3.6	3.6	3.6	3.7	3.6	3.7
Food and kindred products	40.8	40.4	40.9	41.2	40.2	40.1	40.3	40.5	40.5	40.6
Tobacco manufactures	40.1	39.2	39.1	40.4	(2)	(2)	(2)	(2)	(2)	(2)
Textile mill products	41.7	40.4	41.1	41.3	41.4	40.8	40.7	41.1	40.9	41.0
Apparel and other textile products	36.3	36.6	37.8	37.1	36.4	36.8	36.9	36.9	36.9	37.2
Paper and allied products	44.1	42.9	42.9	43.6	43.7	43.3	43.2	43.2	43.2	43.2
Printing and publishing	38.5	37.8	38.2	38.5	38.1	37.7	38.0	38.0	38.0	38.1
Chemicals and allied products	42.7	42.0	41.9	42.5	42.5	42.0	42.4	42.3	42.2	42.3
Petroleum and coal products	44.0	45.3	44.4	44.6	(2)	(2)	(2)	(2)	(2)	(2)
Rubber and misc. plastics products	41.3	41.0	41.3	41.5	41.3	41.7	41.4	41.6	41.5	41.5
Leather and leather products	37.8	37.3	37.6	37.3	37.8	37.3	36.9	37.0	37.5	37.3
Transportation and public utilities	39.2	39.8	39.7	39.4	39.1	39.4	39.3	39.5	39.3	39.3
Wholesale trade	38.0	38.3	38.0	38.1	38.0	38.0	37.9	38.2	37.8	38.1
Retail trade	29.5	30.0	29.8	29.8	29.5	29.8	29.1	29.3	29.8	28.9
Finance, insurance, and real estate	36.0	36.2	35.6	35.7	(2)	(2)	(2)	(2)	(2)	(2)
Services	32.4	33.0	32.8	32.5	32.5	32.3	32.5	32.7	32.4	32.6

1/ Data relate to production workers in mining and manufacturing; construction workers in construction; and 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 employees on private nonagricultural payrolls.

2/ These series are not published seasonally adjusted since the seasonal component is small relative to the trend-cycle and/or irregular components and consequently cannot be separated with sufficient precision.

p = preliminary.

ESTABLISHMENT DATA

Table B-3. Average hourly and weekly earnings of production or nonsupervisory workers1/ on private nonagricultural payrolls by industry

Industry	Average hourly earnings				Average weekly earnings			
	Sept. 1987	July 1988	Aug. 1988p/	Sept. 1988p/	Sept. 1987	July 1988	Aug. 1988p/	Sept. 1988p/
Total private	$9.85	$9.25	$9.25	$9.40	$314.84	$324.68	$325.75	$327.12
Seasonally adjusted	9.02	9.32	9.32	9.37	312.89	325.27	322.47	325.14
Mining	12.58	12.66	12.63	12.79	528.75	535.52	530.46	543.58
Construction	12.79	12.91	12.95	13.12	466.84	497.04	499.87	503.81
Manufacturing	9.99	10.16	10.12	10.27	407.59	413.51	413.91	425.18
Durable goods	10.49	10.67	10.65	10.80	431.14	439.68	440.91	453.68
Lumber and wood products	8.46	8.65	8.61	8.70	337.55	346.68	347.86	358.61
Furniture and fixtures	7.76	7.97	8.08	8.07	289.68	310.03	314.40	322.80
Stone, clay, and glass products	10.57	10.54	10.45	10.52	440.73	446.98	445.17	450.26
Primary metal industries	12.19	12.22	12.13	12.28	526.61	525.46	524.02	537.86
Blast furnaces and basic steel products	14.12	14.09	14.02	14.20	631.16	619.96	612.67	631.90
Fabricated metal products	10.08	10.18	10.28	10.36	418.00	417.38	423.50	437.19
Machinery, except electrical	10.74	10.96	10.93	11.05	447.86	462.76	459.86	471.84
Electrical and electronic equipment	9.94	10.15	10.15	10.20	401.58	409.25	412.09	417.18
Transportation equipment	13.84	13.23	13.27	13.58	535.94	551.69	556.81	585.98
Motor vehicles and equipment	13.64	13.86	13.92	14.28	548.68	576.38	588.82	634.74
Instruments and related products	9.76	9.93	9.92	9.94	400.16	408.12	407.71	410.52
Miscellaneous manufacturing	7.78	7.94	7.94	8.04	304.20	305.69	308.87	314.36
Nondurable goods	9.38	9.45	9.48	9.52	374.79	377.86	377.88	385.56
Food and kindred products	8.95	9.13	9.06	9.14	345.16	348.85	349.74	376.37
Tobacco manufacturers	13.36	15.66	14.60	13.71	534.93	613.67	570.86	553.88
Textile mill products	7.23	7.51	7.37	7.45	301.49	295.32	302.91	307.49
Apparel and other textile products	5.99	6.82	6.07	6.20	217.44	220.33	224.59	230.82
Paper and allied products	11.66	11.71	11.62	11.72	514.21	502.36	498.58	510.99
Printing and publishing	10.48	10.49	10.56	10.68	403.48	396.52	403.39	411.57
Chemicals and allied products	12.56	12.78	12.64	12.82	534.31	533.40	529.62	544.85
Petroleum and coal products	14.76	14.99	14.89	15.15	648.56	679.09	661.12	675.69
Rubber and misc. plastics products	9.01	9.11	9.14	9.22	372.11	373.51	377.48	382.63
Leather and leather products	6.13	6.20	6.25	6.31	231.71	231.26	235.08	235.36
Transportation and public utilities	12.11	12.35	12.37	12.42	474.71	490.73	491.09	489.35
Wholesale trade	9.64	9.93	9.89	10.00	366.32	388.32	375.82	381.00
Retail trade	6.20	6.28	6.25	6.37	182.98	188.40	186.25	184.73
Finance, insurance, and real estate	8.73	9.83	9.05	9.12	314.28	326.89	322.18	325.58
Services	8.54	8.79	8.79	8.97	276.70	290.07	288.31	291.53

1/ See footnote 1, table B-2.

p = preliminary.

Table B-4. Hourly Earnings Index for production or nonsupervisory workers1/ on private nonagricultural payrolls by industry

(1977=100)

Industry	Not seasonally adjusted					Seasonally adjusted						
	Sept. 1987	July 1988	Aug. 1988p/	Sept. 1988p/	Percent change from: Sept. 1987-Sept. 1988	Sept. 1987	May 1988	June 1988	July 1988	Aug. 1988p/	Sept. 1988p/	Percent change from: Aug. 1988-Sept. 1988
Total private nonfarm:												
Current dollars	174.9	178.7	178.7	180.7	3.3	174.6	178.7	178.6	179.3	179.6	180.4	0.5
Constant (1977) dollars	93.6	92.9	92.4	N.A.	(2)	93.7	93.6	93.2	93.2	92.9	N.A.	(3)
Mining	182.8	183.8	183.7	186.5	2.0	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Construction	156.2	157.8	158.5	160.5	2.7	154.8	157.5	157.8	158.8	158.7	159.2	.3
Manufacturing	176.8	178.9	178.5	179.9	2.2	176.3	178.4	178.8	178.8	179.4	180.2	.4
Transportation and public utilities	177.4	180.2	181.4	182.8	3.0	176.8	181.6	181.9	181.5	182.3	182.2	(5)
Wholesale trade	178.1	183.8	182.2	184.3	3.5	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Retail trade	163.3	166.1	165.6	168.3	3.0	162.3	165.4	165.7	166.8	166.6	167.3	.4
Finance, insurance, and real estate	187.7	196.8	195.6	196.3	4.6	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Services	182.9	188.9	188.9	192.5	5.2	182.5	189.9	189.4	190.8	191.0	192.1	.6

1/ See footnote 1, table B-2.

2/ Change is -.8 percent from August 1987 to August 1988, the latest month available.

3/ Change is -.3 percent from July 1988 to August 1988, the latest month available.

4/ These series are not seasonally adjusted since the seasonal component is small relative to the trend-cycle and/or irregular components and consequently cannot be separated with sufficient precision.

5/ Change is less than .05 percent.

N.A. Data not available.

p = preliminary.

NOTE: Beginning in 1989, publication of the Hourly Earnings Index series will no longer be published in this release. For further information, see "Employment Cost Index Series to Replace Hourly Earnings Index," Monthly Labor Review, July 1988, pp. 32-35.

ESTABLISHMENT DATA

ESTABLISHMENT DATA

Table B-5. Indexes of aggregate weekly hours of production or nonsupervisory workers1/ on private nonagricultural payrolls by industry

(1977=100)

Industry	Not seasonally adjusted				Seasonally adjusted					
	Sept. 1987	July 1988	Aug. 1988p/	Sept. 1988p/	Sept. 1987	May 1988	June 1988	July 1988	Aug. 1988p/	Sept. 1988p/
Total private	122.5	128.2	126.3	127.5	121.1	124.4	125.4	126.4	125.5	126.0
Goods-producing industries	101.8	103.8	103.4	106.4	98.8	102.1	103.2	103.3	102.9	103.2
Mining	84.2	85.1	84.4	84.3	82.7	84.4	85.8	85.6	83.2	82.8
Construction	138.8	155.8	158.0	155.4	127.8	139.3	144.8	142.4	142.3	143.0
Manufacturing	94.7	94.6	96.2	98.0	93.2	95.7	96.1	96.5	96.1	96.5
Durable goods	91.3	92.4	93.3	95.8	98.3	93.9	94.3	94.8	94.3	94.9
Lumber and wood products	106.2	106.4	107.1	105.5	100.2	103.2	103.8	103.9	102.6	101.5
Furniture and fixtures	113.2	109.1	112.5	115.8	111.3	113.7	113.4	115.1	112.0	113.7
Stone, clay, and glass products	89.1	90.2	90.8	91.8	85.7	87.5	88.1	88.8	87.7	87.7
Primary metal industries	65.8	67.2	67.9	69.8	65.5	68.1	68.6	69.8	68.9	69.4
Blast furnaces and basic steel products	53.8	55.2	54.3	55.8	54.0	54.6	55.4	55.3	54.6	54.5
Fabricated metal products	88.5	89.9	91.4	94.3	87.5	92.1	92.8	92.7	92.5	93.4
Machinery, except electrical	85.7	91.3	91.0	93.7	85.7	91.6	91.6	93.7	92.7	93.7
Electrical and electronic equipment	99.9	100.2	102.1	103.6	99.3	102.3	103.0	103.1	103.1	103.1
Transportation equipment	97.4	99.1	94.5	101.2	97.9	100.2	100.0	99.7	100.0	101.6
Motor vehicles and equipment	85.9	83.8	83.7	93.7	85.7	89.9	90.3	88.2	90.8	93.8
Instruments and related products	102.1	105.9	107.3	108.1	102.1	106.1	106.6	108.2	108.2	108.2
Miscellaneous manufacturing	83.6	81.2	84.9	86.2	81.5	83.9	84.5	85.1	84.3	84.1
Nondurable goods	99.7	97.9	100.5	101.2	97.5	98.4	98.9	99.1	98.8	98.8
Food and kindred products	107.9	103.5	108.9	109.8	99.7	100.5	101.4	100.6	100.8	100.7
Tobacco manufactures	80.4	64.9	69.5	76.2	70.9	71.0	71.4	73.7	70.5	67.7
Textile mill products	83.3	78.2	80.4	81.1	82.1	80.6	80.2	81.2	79.5	79.9
Apparel and other textile products	84.5	81.2	84.6	85.1	84.8	84.7	84.8	84.7	84.3	84.6
Paper and allied products	103.5	101.5	101.6	102.9	102.5	101.5	101.7	101.9	101.9	101.5
Printing and publishing	133.6	135.2	136.9	138.1	132.7	134.9	136.4	136.6	137.0	137.2
Chemicals and allied products	96.9	98.5	98.9	99.7	96.2	97.4	98.8	98.7	99.1	98.7
Petroleum and coal products	86.5	89.9	88.8	89.4	84.7	85.3	86.8	86.6	87.1	87.5
Rubber and misc. plastics products	116.4	120.8	122.4	123.7	116.2	123.1	123.4	124.8	124.0	125.4
Leather and leather products	57.6	55.1	57.0	56.6	56.7	55.5	54.9	55.5	55.8	56.0
Service-producing industries	136.4	141.8	141.0	139.1	133.9	136.8	137.8	139.1	138.0	138.6
Transportation and public utilities	111.4	115.6	115.5	115.9	110.8	113.5	113.8	114.7	114.3	114.5
Wholesale trade	120.3	127.4	126.9	127.4	119.6	124.4	124.9	126.3	125.4	126.9
Retail trade	126.7	131.1	130.6	126.8	124.1	125.1	126.2	127.3	126.1	125.8
Finance, insurance, and real estate	148.7	144.1	141.8	140.1	148.6	148.1	140.1	142.1	139.6	140.3
Services	153.8	164.5	163.6	161.6	153.7	158.3	160.8	161.5	160.5	161.7

1/ See footnote 1, table B-2.

p = preliminary.

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

Time span	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Over 1-month span:												
1986	57.8	47.3	49.5	58.8	51.9	46.8	51.9	54.1	51.4	53.8	58.9	58.9
1987	50.8	59.2	61.1	62.4	62.4	61.6	70.8	62.2	68.1	67.5	67.8	68.4
1988	61.6	61.6	62.2	63.8	58.1	68.9	61.4	p/52.4	p/50.5			
Over 3-month span:												
1986	50.0	47.6	45.7	44.2	46.2	46.2	48.1	51.9	58.5	55.9	59.7	59.2
1987	57.6	57.8	65.1	69.2	68.1	71.9	73.8	76.8	74.1	76.5	78.1	73.0
1988	71.6	66.8	67.8	66.8	71.4	69.7	p/66.1	p/58.4				
Over 6-month span:												
1986	48.1	47.3	43.8	42.7	43.2	47.0	46.5	50.0	55.9	53.2	59.9	58.4
1987	64.6	64.3	63.0	70.3	72.6	77.3	78.4	79.7	82.7	77.8	77.0	76.5
1988	73.5	70.3	70.3	73.8	p/71.1	p/66.5						
Over 12-month span:												
1986	42.2	41.6	43.8	44.9	43.7	48.6	46.8	48.6	51.4	53.8	56.5	57.8
1987	63.8	67.3	69.5	73.5	76.8	76.8	78.9	78.9	79.7	78.4	77.8	81.9
1988	77.6	p/78.4	p/73.8									

1/ Number of employees, seasonally adjusted for 1, 3, and 6 month spans, on the payrolls of 185 private nonagricultural industries. Data for the 12-month span are unadjusted.

NOTE: Figures are the percent of industries with employment rising. (Half of the unchanged components are counted as rising.) Data are centered within the spans.
p=preliminary.

Senator SARBANES. Thank you very much, Commissioner.

I wanted to address an issue raised by a study entitled "Education Level of U.S. Labor Force Continues To Rise," which the Bureau put out in August. It noted that the educational attainment of the labor force has increased significantly over the past decade.

The question that I have is along the following lines: As I understand it, earlier in the postwar period, while those with a college education obviously could expect an annual income higher than those without a college education, that gap has widened in recent years. It is now about 50 percent. Is that correct, do you know?

Mrs. NORWOOD. I believe so, but I would have to check it for the specific figures.

Senator SARBANES. So that the data the BLS collects each month in the household surveys show a growing difference between those who have completed a college education and others?

Mrs. NORWOOD. Yes. The household survey does look at occupations. And it does show an employment increase, particularly for those in the jobs that require higher education.

Senator SARBANES. Has this widening gap resulted from an increase in the real earnings of the college educated, or from a decline in the real earnings of those without a diploma, or both?

Mrs. NORWOOD. I can't answer that question here. We would be glad to take a look at it.

It is true that the growth in jobs and in the future, our projection for the future, is that it is the jobs that require education that will be growing; and, therefore, those people who have not had the advantages of education may tend to be left behind both in earnings and in job market experience.

Senator SARBANES. Is the real earnings of those without college education declining, and thereby contributing to this widening gap? Or is it an increase in the real earnings of the educated?

Mrs. NORWOOD. There is some of both; it depends on the time period.

Senator SARBANES. So, what we have is a widening gap between those with a college education and those without, in part because the real earnings of those with education have improved but also in part because the real earnings of those without an education has declined. Is that correct?

Mrs. NORWOOD. Yes. The competitive positions of those people have changed.

Senator SARBANES. Which, of course, only ends up underscoring the importance of education.

Mrs. NORWOOD. Yes. All of the data suggest that both now and in the future; and that the disparities are such that the people at the bottom who don't have the educational advantages and the training advantages not only have a harder time now, but even more worrying, are likely to have a much harder time in the future.

Senator SARBANES. We looked at data showing that the gap had narrowed in the 1970's from what it had been in the 1950's and 1960's, and now it has widened significantly in the 1980's.

Mrs. NORWOOD. That may be. I haven't looked at those data. I would be glad to look at those data and report back to you. Certainly, we had a very large increase in educational attainment in the

1970's. We still have some of that, but not nearly as much now, I believe, as then.

Senator SARBANES. Let me just turn to the rural question which I raised before, and actually the point we are making on the educational attainment ties into it. During the 1980's, as that first chart shows, rural unemployment rates have averaged about 2 percentage points higher than in urban areas. In the 1970's there was little difference between urban and rural unemployment rates.

What has caused this relative increase in rural unemployment?

Mrs. NORWOOD. We have clearly had differences in economic development throughout the country. And over time, I think that some of those differences have intensified, as we have had a restructuring of our economy generally.

The farm belt, that is, those States in the middle of the country, include farming and some mining. Some of the States, like Oklahoma, have both agricultural production and oil production, for example, and they have been hit doubly hard.

That area had difficulties because of the downturn in the extraction industries and the drought just made things worse.

There was a release that I haven't yet seen, but I have read reports of the data released just last week by the Commerce Department on personal income differences around the country. The data showed quite clearly essentially what you're saying: that the two coasts and the area around the Great Lakes have come back quite well, but that the central part of the country, which includes primarily rural States, is still having much more difficulty.

There is much more of a problem there than in the other areas where we are beginning to recover our productive capacity and where we are continuing to recover our productive capacity.

I would just comment on the chart there that the metropolitan-nonmetropolitan break certainly shows a change in unemployment rates, but as we have discussed before, the definition of unemployment doesn't really reflect entirely the kinds of labor market experiences that people in rural areas have. Those engaged in farming may have limited growing seasons and may not be looking at times when they know there isn't any work available. Or they may be working part time.

So, there is much more underemployment, I believe, in farm and rural areas than in our urban areas. This means that there may indeed be something of an understatement of labor market problems by looking only at unemployment rates.

It is difficult to measure the problem because, as you all know, our definition of unemployment requires job search activity. Also our household survey only provides data for individual States on a monthly basis for the 11 largest States, and most of the States that we are talking about here are not included in those monthly data.

Senator SARBANES. My time is up. But as I understand the thrust of that response, the differential showing rural unemployment significantly above that of metro areas understates the problem in rural areas.

Mrs. NORWOOD. I believe so. It certainly could understate it, because I just don't think the definitions are effective when applied to areas where there are such sharp differences in growing seasons and in weather-related activities.

Senator SARBANES. Does that suggest a deficiency in our statistical analysis or is it a problem that it is just not possible to get at?

Mrs. NORWOOD. Anything is possible with resources. There is always a cost-benefit question, and there is also a question of the burden on respondents. Let's face it, State and local data are very expensive to collect, and therefore what we have done generally in this country—I think in every area, not just employment, but health, almost any area that you look at—is tried to make do with limited local area data.

And what we have been trying to do in the local area unemployment field, for example, is to piece together elements of the administrative data together with benchmarking to the surveys. And it's sometimes hard to develop those data.

And we know that in addition to sampling errors, there are also nonsampling errors that are probably even greater.

In order to understand the situation in America it seems to me that what we need to do is design a survey that specifically identifies their problems. That doesn't mean I am advocating changing the definition of the national unemployment rate, but I think that in order to zero in on the problems of a particular region, you may need to do some things somewhat differently. One of the things that I have been, shall I say, dreaming about is the possibility of developing a quick-response capability within BLS using new technology to do household surveys as well as establishment surveys which we found we can do quite well.

Tom Plewes' group has made remarkable achievements in fielding surveys very rapidly and getting answers very rapidly. I think if we could invest in the capability of doing some of that kind using those techniques in household survey work, through random digit dialing and other telephone collection, computerized telephone collection, we might be able to get a better handle on some of these things.

So, we are thinking about these things, but I am not quite sure how far they will go.

Senator SARBANES. We will explore that further. I think one of the contributions this committee has made in recent years is to protect the statistical infrastructure in the Government and its integrity.

It is my own view that the fact that our techniques are not adequate to the challenge has an inhibiting effect. Good statistics don't guarantee that we will make good policy, but without good statistics we are handicapped, I think, in making and formulating good policy.

Mrs. NORWOOD. May I just comment, Mr. Chairman, that I think that it is correct to say that the entire statistical community is very appreciative of the work of this committee. I believe that this committee has been important in trying to focus attention on policy needs for data and the applicability of data for various kinds of policymaking.

Once you have a data system, there is a tendency to let it stay where it is or to improve it solely in terms of accuracy. But the real issue that must be addressed is the link to the needs of the policymakers both in the administration and the Congress and on both sides of the political spectrum.

Senator SARBANES. Thank you.

Senator Roth.

Senator ROTH. Thank you, Mr. Chairman.

Mrs. Norwood, what are the fastest growing occupational categories over the last 12 months?

Mrs. NORWOOD. They have clearly been the managerial and professional occupations, which have grown considerably over the last year and have been for most of this expansionary period that we have been in now for 70 months.

Technical occupations also have been growing, and there has been some growth in sales occupations.

But it is the professional and managerial jobs that have really been growing fastest.

Senator ROTH. Could you say what percentage that would be?

Mrs. NORWOOD. We could calculate that over the last year. I can tell you that during the period of the expansion——

Senator ROTH. What is the breakdown?

Mrs. NORWOOD. I have it—I am sorry. We will have to provide that. But it is quite high, and in our release we have data for the last year. That is table A-11.

Senator ROTH. It's my recollection that the figures that were cited in the past are about 60 percent.

Mrs. NORWOOD. Yes, managerial and professional jobs account for 58 percent of the past year's employment growth. I calculated it last night.

Senator ROTH. What are the median earnings in the managerial and professional occupations?

Mrs. NORWOOD. The average is certainly higher than for many other occupations. The data suggest that managers, for example, even in retail trade, probably earn a little more than average.

Senator ROTH. I suppose that also underscores the chairman's point of the importance of education. These are certainly jobs where educational training is certainly essential.

Senator SARBANES. If you would yield for a moment.

How does a job get defined as being professional?

Mrs. NORWOOD. There is a governmentwide system called the standard occupational classification system.

Mr. PLEWES. Basically, there are certain characteristics of jobs that are asked for on the questionnaire. It's a self-reporting item.

Senator SARBANES. It's a "self" what?

Mr. PLEWES. A self-reporting item. In other words, interviewers ask the respondent to describe the kind of work and the major duties of the job. If the person responds "economist," that would be coded as economist. Every job has its particular coding.

Mrs. NORWOOD. I would like to point out that this is an area where we are planning to do some extensive research in preparation for the next redesign of the household survey. We want to be certain that people really understand the questions when they describe themselves.

Senator SARBANES. I saw a report that says when you asked the people whether they were supervisory or managerial, you got a much larger percentage saying they were than when you asked the employer how many supervisory and managerial people he had. He gave a much lower figure.

So, to ask people, "Are you a supervisor or a manager," they say, "Yes." You ask the employer, "Are these people supervisory or managerial," they say, "No."

Mrs. NORWOOD. That's correct. That is the reason we have an occupational employment statistics program, which is a Federal-State cooperative program, to get occupational employment data from employers' records.

We believe it is necessary to keep that program going, although that program tracks the economy over a 3-year cycle, so it's sometimes a little difficult to see where you were in any one year.

Senator ROTH. Let me go back. What are the median weekly earnings in the so-called managerial and professional occupations?

Mr. PLEWES. The most recent numbers I have are for the second quarter of 1988. On a median weekly basis for the managerial and professional specialty combined, it was $543 a week. For executive, administrative, and managerial, it was $533; for the professionals it was $550.

Senator ROTH. Let me ask you this, Mrs. Norwood: How significant is the employment-population ratio compared to other labor market statistics? Is the current level of employment-population ratio the highest ever?

I would also like to know by historical standards how the current levels of the E-P ratio for women and blacks compare with the past.

Mrs. NORWOOD. The answer is yes, the employment-population ratio is the highest ever. During the current expansionary period of the last 70 months the E-P's for minority populations, that is, blacks and Hispanics, have gone up considerably. They have gone up faster than for the white population. For women, I believe the same thing is true.

Now, having said that, I think it is important to recognize that the labor force has been growing more slowly.

Senator ROTH. I'm sorry, I missed that.

Mrs. NORWOOD. The labor force—in fact, the whole population—has been growing more slowly. So, it has been a little bit easier to develop a situation where you can have slower employment growth and still have a high employment-population ratio.

I think it is important, and we at the BLS believe that the E-P ratios are extremely important, but they are one part of a whole set of data that needs to be looked at together.

But you are quite right, those data are clearly at a record high.

Senator ROTH. How does the U.S. unemployment rate, would you say, which is now 5.4 percent, compare with European nations such as France and the United Kingdom?

Mrs. NORWOOD. The U.S. rates are generally lower except for the Scandinavian countries, which of course have always had a lower rate—Sweden, for example—and also Japan. When put on a comparable basis, after we adjust for some of the differences in definition, the unemployment rate for the United States is considerably lower than those for most other countries.

For example, the United Kingdom has a rate of 8 percent; Germany, 7; and Italy, somewhere around 8. France is double-digit. And Canada is considerably higher.

Senator ROTH. Let me ask you this: How many jobs have been created by the United States since 1974, and how does this compare with Western Europe?

Mrs. NORWOOD. Since 1974? I don't have that exact figure here. But I am certain that it is much more than the number of jobs in Western Europe. We have created more jobs than they have. In part, of course, we are in a different stage of labor force development. We have had our baby-boom generation. We are pretty much through that post-World War II baby-boom generation. They are beginning to move much more into this big increase, which will create some jobs because there is a relationship to job creation and labor force growth.

In addition, in the 1960's and 1970's we had a very large push of women coming into the labor force, which the European countries, again except for Scandinavia, have not yet seen in the same way, at least not in the same size.

So, I think we will be seeing more difficulty there. But it is true that in the last several decades we have had a much greater success in job creation than any of the Western European countries except for the Scandinavian countries.

Senator ROTH. Some have suggested that these so-called managerial and professional jobs are really low-wage and menial. How does this square with the trend of real increases in the median earnings in this occupation?

Mrs. NORWOOD. By the way, I think Mr. Plewes has calculated the difference since 1974.

Mr. PLEWES. Since 1974, the number of jobs in the United States has risen by about 28.5 million. This represents a higher proportion, we believe, than any European country.

Mrs. NORWOOD. There has been a great deal of employment growth. There has been employment growth in many of the services industries, some of which have a lot of professional, managerial, and technical jobs, and in retail trade, with big increases in sales and administrative jobs.

We have seen that if you look at the occupational data only, you can see a good deal of improvement. If you look at the expansion of employment in occupations which have a higher than average income you get one result; if you look at industry data alone, you get an opposite kind of result.

I think it is very difficult to put the two together. I suspect that part of the problem is that BLS has not yet been able to provide users with a map through the maze of using various kinds of data.

And in fact, some of the questions that are being asked may not be the right questions. We are trying to look at this to see what we can do to help in the future. And we have underway at BLS a complete review of our wage and working practices programs because we believe that they are increasingly important and that they need increasing attention and support.

Senator ROTH. My time is up. But just let me ask you this final question:

Suppose these jobs were low wage. Wouldn't the median go down, not up?

Mrs. NORWOOD. Possibly. I think one needs to be able to relate the employment growth to the income for the particular occupa-

tion. You see, what you really want to be able to do, I believe, is to trace individuals' experience from one job situation to another. That is the real issue.

We don't have longitudinal data that is useful for this purpose. That is really what everybody is talking about. If people are talking about new jobs, they are not talking about employment change. But we don't know what happens later to the people who go into a specific occupation. So, I understand the frustrations that people have, but I am afraid that at this point BLS cannot help this dialog.

Senator ROTH. Thank you, Mr. Chairman.

Senator SARBANES. Let me just make this observation before I go to Congressman Obey.

I think this is a very complicated point that we have just been addressing, and let me just cite the following example.

I think a managerial person in the manufacturing and highways industries probably supervises many more people than the manager of a Wendy's. So, let's say you have one manager and 100 workers on a production line. The manager of a Wendy's, you have one manager and 10 workers. So, if you shift jobs from out of the manufacturing sector, highways jobs, into the service sector, into Wendy's, even assuming they keep the same number of jobs, you have 10 Wendy's now going, so you have 100 people working just like you have 100 people on the manufacturing line. You have 10 managers instead of 1 manager.

So, the number of managers has increased. Now, the job is the same. The manager's job in Wendy's is probably a lower paying job than the manager's job in the manufacturing industry, probably, and the workers' jobs are certainly lower paying.

So, it can be a very complicated problem. You may have a situation in which you have more managers in that context, but what has happened is you are still shifting from high-wage occupations. The jobs are moving from high-wage occupations to lower-wage occupations.

Mrs. NORWOOD. The jobs may be moving from higher wage industries to lower wage industries, but the data do not suggest that we are shifting from higher wage occupations to lower wage occupations.

I think you are quite right, it's a very complicated issue. I can tell you we have looked at the data a great deal. Also, there are a lot of very good studies out there.

Senator ROTH. Mr. Chairman, if I just might make this observation—and I agree as to the complexity of the analysis—but the fact is that the median earnings in the managerial professional occupations are going up, and not down. This information may be as difficult to analyze, but I think that is a fact.

Senator SARBANES. Congressman Obey.

Representative OBEY. Thank you, Mr. Chairman.

Mr. Chairman, I think what we really have is a situation in which if you are a family with two workers, both of whom are college educated, that things are looking pretty good for you.

But I think what we also see in all of the numbers in the economy is that people who make things with their hands are the people who are in the biggest potential squeeze.

I think that means whether you look at rural areas or urban areas, that you have the biggest squeeze on the goods-producing sectors. And because the rural areas of this country are primarily areas which produce things rather than services, because of that you have an especially rough impact on these sections of the country, which you referred to earlier, Mrs. Norwood. Those workers in the goods-producing sectors are the workers who have been hit the hardest because our budget policies and our trade policies have put those workers at the greatest risk in terms of direct competition with low-paid workers all around the world.

To me, that is the change that exists. Since I happen to represent a primarily rural area with no city in my district larger than 35,000, I see the impact of that driven home every day.

And when you add to that the fact that our tax policies—not so much anymore, thank God—but our tax policies up until a couple of years ago gave large incentives to people to develop their shopping centers in urban areas, that knocked the blazes out of small businessmen in rural areas. So, you see a transfer of services and you see a transfer of retail grocery stores, things like that, out of rural America into more urbanized areas.

If you couple that with what has happened in the manufacturing section of the country, because of what has happened in agriculture and other goods-producing industries, I think you then see largely why we have such a disparity between growth on the East Coast and other areas.

As I look at the Commerce Department data, what it shows is that if you compare growth in the 1980's with growth in the 1970's, virtually every State in the heartland area has had lower growth in the 1980's than they had in the 1970's, in terms of income growth at any rate.

To me, it means that until we straighten out trade policies and our budget policies, we are likely to continue to see that kind of disparity in the income growth around the country.

I think it's ironic that at a time when those workers in the goods-producing sectors are being squeezed by that international competition and by the consequences of our macroeconomic policy, at the same time we have pulled the plug on some things that are very important to serve as a correction to that:

We have pulled the plug on job training to a considerable degree. With all due respect to JTPA, the funding for job training programs is substantially lower than it was a number of years ago.

We have also pulled the plug on education because in real-dollar terms, on the Federal level, the Government is providing 20 percent less for education than we were in 1979—at least the education that Senator Roth is talking about.

I also think that we make a mistake when we talk about it only in terms of education because people who are doing well in this economy are people who have very good formal educations. But you can have somebody just as smart, who has developed very good and badly needed skills, not in the formal education sense but certainly in the real world economic sense. And those are the people who have become highly trained by being on the job in these sectors of the economy. Those are the people who are getting squeezed. And we are not doing enough to deal with their problems.

I would like to follow up very briefly on a couple of questions asked of you by the chairman.

Referring to college earnings, how do you think the growing gap in earnings between those with formal education, college education, and others is affecting the overall distribution of income in the United States?

Mrs. NORWOOD. I think that the growth now, and more important, our projections for the future of employment, is in occupations that will require much more of the formal kind of training that you talk about. That tilt in occupations is likely to exacerbate the differences between those at the bottom of the income scale and those who are moving forward and upward in the income scale.

My concern is that we are likely to move ahead without focusing attention on the needs of those at the bottom. There are some data suggesting that while a lot of people are doing quite well in the labor market, those who are not are not only having difficulties now, but may continue to do so in the future. Our projections program, focusing on the labor force and the work force over the year 2000, suggests that there is a group that needs more education in order to be able to cope in the labor market.

It is this accentuation of difference that concerns me a great deal.

Representative OBEY. Let me ask you this. You have testified in the past before this committee that the historically unprecedented divergence between productivity growth and growth in real wages during the 1980's has reflected a shift in income from labor to owners of property.

How widely is property and property income distributed among households in this country?

Mrs. NORWOOD. I don't have any answer to that very specifically. We could try to look at that, but I don't have that information.

Representative OBEY. It is my understanding that about 50 percent of all property income goes to the wealthest 10 percent of families in this country, very roughly. Do you know what percentage of families own most of their income from labor as opposed to income from property?

Mrs. NORWOOD. No.

Representative OBEY. I would be interested in knowing, if you could report back to us on that.

Although my time is up, let me ask you two other questions.

Senator SARBANES. Could you yield, because I wanted to follow up.

Isn't it the case that we are seeing a situation now, traditionally when the unemployment rate went down, the poverty rate went down. There tended to be a coincidence between them. Is that correct?

Mrs. NORWOOD. There is some relationship, yes.

Senator SARBANES. We are now seeing a situation where the unemployment rate went down, but the poverty rate did not go down. Is that correct?

Mrs. NORWOOD. Certainly in the last year, and I suspect before that, yes. And if I might say, that again underscores the point that

I was making about the people who are having difficulty, and not able by themselves to advance their position.

Representative OBEY. This is the fifth year of the recovery, as I understand it. We had 11.4 percent of the people below the poverty line in 1978 versus 13.5 percent now. And there are about 32 million below the poverty level, which is $11,600 for a family of four, about 8 million more than in 1978, which leads me to my next question.

Some of us are trying to do something on the fringes about that by dealing with the minimum wage, for instance. Some of our friends have been suggesting that we also ought to include a subminimum, or training, wage.

I wouldn't be so bothered by that if I thought it was actually meant to be a training wage rather than an escape from paying a real wage level.

But let me ask you this:

If we were to explore the idea of allowing a so-called training wage for young workers but if we did not want to see that result in kids taking jobs away from the old man, what would we have to invest and how long do you think it would take for us to develop local job market data that would be sufficiently accurate to tell us where we could safely provide authority for a subminimum wage so that it would only be in the areas where you reached a level of full employment so that employers could not use a subminimum wage to pay the kids at lower wages than ordinarily they would pay their parents?

Mrs. NORWOOD. It would take a lot of thought, first, to design a program. As you and I have discussed many times, the development of information for local areas that is reliable enough for use in triggering programs is hard and it's expensive, quite expensive, just the data collection itself that would be necessary.

In this case, I think we would need first to figure out what we would need. For example, to measure full employment, you would have to identify some specific conditions that would signify if those conditions existed. And it's rather a hard thing to do because, as you know, some labor markets are nationwide and some of them are quite local.

Usually, minimum-wage jobs are local jobs. People usually aren't going to move for those jobs alone. Many minimum-wage workers are teenagers living in families, some of which are in fairly good circumstances, but many of which require that additional minimum-wage help for the family itself.

Senator SARBANES. How many are there, do you know?

Mrs. NORWOOD. No. We don't have data on minimum wage—oh, how many teenagers?

Mr. PLEWES. On average in 1987, there were 4.7 million persons working at $3.35 an hour or below.

Mrs. NORWOOD. Who were paid an hourly wage?

Mr. PLEWES. 1.7 million of those were 16 to 19 years of age.

Senator PROXMIRE. 1.7 million?

Mr. PLEWES. 1.7 million were 16 to 19. In the group 16 to 24 years, it was 2.7 million. So, 1.7 million were 16 to 19, and a million were 20 to 24.

Mrs. NORWOOD. So, a little more than half of minimum wage workers were age 16 to 24.

Senator SARBANES. A little more than half were 16 to 24. That's not teenagers.

Mr. PLEWES. That's right.

Senator SARBANES. I want to be sure we are not trying to dismiss this problem away by saying, "Well, it's just teenagers who live in some family and they are just earning pin money or movie money or something." That is not my perception of what the minimum-wage problem is. And these figures don't back that up.

These figures say one-third of them, a little over one-third, are 16 to 19 years old.

Mrs. NORWOOD. Yes, that's right.

Senator SARBANES. Of that third, you then have to analyze what the nature of the 16-to-19-year-olds is. Some of those are probably on their own. Some come from very poor families. In many elements of our society, the 16-to-19-year-olds are out on their own or they are in a family that they might as well be out on their own.

So, I don't want this brushed off with this notion that, "Well, you know, these minimum-wage jobs are all just held by teenagers in sort of dual-income families, and really it doesn't matter very much."

Mrs. NORWOOD. Senator, the point I was trying to make—obviously not very well—is that if we were to develop a new data system for this purpose, we need to consider in a policy sense what it is we mean by full employment. And I would argue that if a teenager is in a family with very low income then that teenager should be considered at least until the older people in the family are able to work or to do better, a necessary part of that family's subsistence.

The only point I was making was that we would need to think through very carefully with you the kind of requirements, whatever it is that you would set in a policy sense, so that when we got to designing a data collection program, we would know what the specifics were that we were trying to look at.

Just the question of full employment, for example, means very different things to different people, as we know. So, we would have to lock that down into more specific situations that could be measured.

Then, of course, we would have to look at household survey capability. If we were able to use newer technology to move rapidly to get information, then I think perhaps we could do something. I am not sure. We would be glad to think about it and talk with you further about it.

Senator SARBANES. Senator Proxmire.

Senator PROXMIRE. Thank you, Mr. Chairman.

Madam Commissioner, in your statement you said that the unemployment rate edged down to, as I recall, 5.4 percent in September from 5.6 percent in August.

Mrs. NORWOOD. Yes, I did.

Senator PROXMIRE. What does the term "edged" mean? Statistically significant or barely significant or not significant?

Mrs. NORWOOD. It is statistically significant.

Senator PROXMIRE. The reason I asked that is because the last time I recall that a Bureau of Labor Statistics made that statement that a small drop in unemployment was not significant, the President ordered that Commissioner—at that time, President Nixon—not to have any more press conferences. And that was the reason why you are up here today and have been up here, you and your predecessors have been up here since 1971.

So, I know these words are full of political dynamite and that we have to be very careful about them.

But when you use the term "edged," I take it to mean barely significant? Is that right?

Mrs. NORWOOD. It is statistically significant. The movement was from 5.614 to 5.410 percent. And that is technically statistically significant because it is more than 0.19.

I was looking at something else. To me, what we have been seeing—and I don't know whether the word "edged" did it or not—but my feeling was that we should not look at this rate as though it went from 5.4 percent in July to 5.6 percent in August, then down to 5.4 percent in September. We were very careful in describing the increase in August and we are careful in describing the decline.

Senator PROXMIRE. You're telling me over a little longer period, over the period of 2 months, it didn't change much?

Mrs. NORWOOD. Over the period of several months. If you go back to last April we had 5.4 percent. We had 5.4, 5.6, 5.3, 5.4, 5.6, and 5.4 percent. What I was trying to get across—perhaps not very well—is that we have been in this very narrow band, going up a little, going down a little—but basically, we have been in this narrow band of 5.3 to 5.6 percent for a considerable period of time.

Senator PROXMIRE. The trouble is we get so conditioned to what has happened the previous 2 or 3 or 4 or 5 or 6 years that we don't really put this in the proper perspective.

The New York Times had a list of every presidential election since the end of World War II, the 10 presidential elections, 1948 through 1984, and I compared that with the present level of employment and found that in 7 of those years the unemployment level was lower than it is today. We get the impression that, boy, we're at the point that if it gets any lower, we're going to have terrific inflation. Maybe the economy has changed that much, but I am inclined to doubt it.

From an employment standpoint, I would give the performance of the economy right now kind of a C-minus. At least certainly not an A or a B. Not any kind of an honor grade.

And then you have a very interesting statement where you say nearly 40 percent of the increase was in State and local government.

Well, that is a tremendous proportion to be in State and local government because State and local government, as we know, is important, but it is a relatively minor sector of the economy compared to the private sector. The private sector, therefore, grew even less.

Would the private sector be statistically significant, that small gain? You call that a small gain. I think that is right.

I see Mr. Plewes shaking his head. Does that mean it's not?

Mrs. NORWOOD. The total in that survey has to be almost 143,000. So, I would be surprised.

Mr. PLEWES. Yes, it is significant; 96,000 would be significant for the private sector.

Senator PROXMIRE. You had to study that to find that out?

Mrs. NORWOOD. But I think one other point is important, Senator. That is the movement in local employment in the public schools. That is probably a one-time surge that coincides with the opening of the school season. There was a larger than usual increase in employment there, but it doesn't really tell us very much about what will be happening.

Senator PROXMIRE. Then I notice a very interesting difference among the biggest States. In Pennsylvania, for instance, unemployment went up from 4.5 to 5.4 percent. Most of the others are fairly similar. I don't want to be political, but the Massachusetts miracle sails on. I notice that their unemployment was 3.7 percent in July, dropped to 3.3 percent in August, and now it's down to 3.0 percent.

Mrs. NORWOOD. Massachusetts has returned to having the lowest unemployment rate in the country.

Senator PROXMIRE. It is the lowest unemployment rate of any State; is that right?

Mrs. NORWOOD. The lowest of any of the big States for which we now have data for this particular month.

Senator PROXMIRE. You have offered, I think, in recent years a very interesting variation on measuring the statistics here. You say the index of diffusion, which is the percent of industry in which employment increased, has dropped very sharply over the past 4 months. In June it was 68.9 percent. It dropped sharply to 61.4 percent in July, and it dropped again very sharply in August and dropped again, not as sharply, but it dropped now to where it's barely 50 percent, 50.5 percent.

Doesn't that indicate, that steady decline to the lowest level since March 1986, deterioration in job opportunities?

Mrs. NORWOOD. Well, there certainly seems to be a downward trend in that index. We have been experimenting with a diffusion index that is a little bit broader and puts a little bit more emphasis on the service industries than our official diffusion index does.

That one is very similar. It is a couple of points higher, but it is still pretty close. It's 52 instead of 50. It's very, very similar.

Senator PROXMIRE. At any rate, there has been a drop since June?

Mrs. NORWOOD. Clearly. Yes.

Senator PROXMIRE. One other question I wanted to ask about is the inflation situation, and perhaps your colleagues might help you some on that.

During the last 3 months, the CPI has risen at an annual rate of 4.8 percent. That is almost the same as the inflation rate in 1971 that caused President Nixon to invoke wage and price controls.

The Producer Price Index for finished goods rose 0.6 percent, and it's up 6.2 percent in annual rate during the past 3 months, again largely because of increase in wholesale gasoline prices. Retail food prices in August rose 0.5 percent, wholesale prices rose 0.4 percent.

Do all these statistics indicate a continued sharp increase over the past several months, suggest that we are going to have some

inflationary problems, suggest that the economy is getting into a position where prices will rise?

Mrs. NORWOOD. There are clear differences beginning to occur. We have been watching intermediate goods for some time. And oil prices, of course, keep going up and down.

But I would like to have Mr. Tibbetts, respond to that in more detail.

Mr. TIBBETTS. Thank you.

Of course, the indexes we have published reflect a runup in energy prices because the pricing dates we used in the last index preceded the downturn in oil prices. Therefore, we are about to see a turnaround at least in the energy contribution. The drought effect seems to have run its course. It was very significant in narrow areas, but for food overall it wasn't so great, especially when you consider that the price of bread only has about an 8 percent——

Senator PROXMIRE. Let me interrupt. How big a factor are energy prices in the total? Do they account for about 10 percent?

Mr. TIBBETTS. Twelve percent is the number. And therefore it is very significant. We are facing now that notorious preelection month when we have automobile liquidation allowances which have caused substantial decreases in the index in the past.

However, I am pleased to be able to report that our seasonal factors seem to have absorbed that sufficiently so that we will not be seeing that kind of distortion coming up in this next series of indicators.

So, I think I would be very modest and say that it does not look like to me that the heating up that we have seen in the last few months is likely to continue in the next couple of months because of the energy downturn, a slowdown in the effect of the drought, and a major seasonal factor that will probably cause the published index to rise some, largely because a decline is anticipated.

Senator PROXMIRE. Has there been any pressure to increase prices because in some areas, Massachusetts and others, the work force may be inadequate, the demand for workers is enough to raise wages sufficiently to, in turn, increase prices?

Mr. TIBBETTS. I can't comment on regional areas because this is strictly a national survey. But on a national basis, our reading of capacity utilization, for instance, suggests some upward pressure on prices, definitely.

Senator PROXMIRE. What is the capacity utilization rate now?

Mr. TIBBETTS. It's higher than it has been in a long time.

Senator PROXMIRE. It's over 85 percent, isn't it?

Mrs. NORWOOD. In August it was 83.8 percent. But I think we need to remember——

Senator PROXMIRE. 83 percent, you say?

Mrs. NORWOOD. Close to 84 percent.

But I think we need to remember that the capacity that we have is very different from the capacity we had before. We have taken a lot of inefficient plants out of existence.

Senator PROXMIRE. When you do that, prices go up because costs go up; right?

Mrs. NORWOOD. I think the big concern that many economists have today is the possible heating up of the materials for further

processing, the cost of those materials to manufacturers. We have had some evidence that manufacturers have worked very hard to keep their prices down so that they could sell more and be more competitive. We watch with great care what happens to intermediate products. There was some heating up of that.

Mr. TIBBETTS. Two months ago, and then that mitigated in the most recent months.

Mrs. NORWOOD. So, that is the index, I think, that we want to be watching to see because that, if it went up very much, that index would push up at some point in the future some of the overall price levels for products that people buy.

Senator PROXMIRE. Thank you, Mr. Chairman.

Senator SARBANES. Commissioner, thank you very much.

I have two followup questions. You were asked about a comparison of our unemployment rates with those in Western Europe. A reasonable question.

But I am beginning to think more and more the question we ought to be putting is a comparison between our economies and the economies of the Pacific Rim nations because it is clear that to the extent that you talk about economic dynamism in the world economy, it is really the United States and the Pacific Rim that is where the competitive game is.

What are the unemployment rates in the Pacific Rim countries as compared to the United States?

Mrs. NORWOOD. I only have with me Japanese unemployment rates, which are quite low, 2.4 percent.

Senator SARBANES. 2.4 percent for Japan?

Mrs. NORWOOD. That was for June. We can supply some others for the record.

Senator SARBANES. South Korea, Taiwan, and Singapore?

Mrs. NORWOOD. We don't have them for all those countries. I know we have been working on them for Korea and a few other countries, Australia. And I will be glad to supply those for the record.

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

Unemployment Rates in Pacific Rim Countries or Areas, 1986-88

Table 1 shows recent unemployment rates in seven Pacific Rim countries or areas. All of the data are obtained from labor force surveys which produce unemployment figures closely comparable with U.S. definitions. There are some conceptual differences, but they are believed to have a minor impact on the comparability of the unemployment rates among these countries.

The Bureau of Labor Statistics (BLS) international unemployment comparisons program covers two of the Pacific Rim countries, Australia and Japan. The BLS data adjusted to U.S. concepts are shown on Table 1 for these two countries. The International Labour Office (ILO) has done detailed studies of the definitions used in Hong Kong, Korea, the Philippines, and Singapore as part of a program to publish comparable annual estimates of unemployment. The ILO has concluded that these countries closely follow the ILO standard definition, except that Hong Kong includes discouraged workers in the unemployed. To the extent that there are any discouraged workers in Hong Kong, excluding them could make the already low unemployment rate even lower. BLS has reviewed the definitions used in the Taiwan labor force survey and finds them very close to U.S. definitions.

There are some differences among the seven countries or areas in their treatment of the Armed Forces and unpaid family workers, and these differences are explained briefly in the note to the table. Both the ILO and BLS studies indicate that these differences have little or no impact on the comparability of the unemployment rates.

Table 1. Unemployment Rates in Pacific Rim Countries or Areas, 1986-1988

Country	1986	1987	Latest 1988[1]
Australia	8.1	8.1	7.0 (Aug.)
Hong Kong	2.8	1.7	1.7 (April)
Japan	2.8	2.9	2.6 (Aug.)
Korea (Republic of)	3.8	3.1	2.7 (July)
Philippines	[2]11.1	[2]9.5	9.2 (Jan.)
Singapore	[3]6.5	[3]4.7	NA
Taiwan	2.7	2.0	1.8 (June)

NA = Not available.

[1]Data are seasonally adjusted except for the Philippines and Taiwan.

[2]October.

[3]June.

Note: Data for all countries or areas are from labor force surveys which are closely comparable with U.S. definitions, except that Hong Kong includes discouraged workers in the unemployed. Unemployment rates are calculated on a civilian labor force basis except for the Philippines and Singapore which include the Armed Forces living in private households. Unpaid family workers working less than 15 hours are excluded from the labor force in Japan, Korea, and Hong Kong, but included in the other countries. These differences have little or no impact on the comparability of the data shown in this table.

Prepared by: U.S. Department of Labor, Bureau of Labor Statistics, Office of Productivity and Technology, Division of Foreign Labor Statistics, October 1988.

Senator SARBANES. Off the top of your head, are they fairly low?

Mrs. NORWOOD. Part of the problem is how they measure them. For example, I was in Tokyo 2 years ago, and looked with great care, since I was making some speeches there, at the differences in our unemployment rates.

If you were to take account of what we consider to be discouraged workers, that is, people who are out of jobs in Japan perhaps because they have become older or perhaps because they have not been in some of the larger enterprises, and you were to add that group in, there would be not so much of a difference in the unemployment rates.

The Japanese system, like ours, doesn't count those. But the group is, I think, somewhat larger there than it is here.

Senator SARBANES. My final question. In his opening statement, Senator Roth referred to women who choose to work for whatever reason. I am concerned about the possibility that women with young children, particularly, might choose not to work or seek to work part time but don't have the luxury of that choice.

My question is: Is it possible to ascertain the portion of women with children who are working for economic reasons and not out of choice, or women who work longer hours and who choose to work, absent economic pressures? Do you have any measurement of that?

Mrs. NORWOOD. No. We don't. And it's really very difficult to get at that in a factual way. We do know that multiple job holding by women has increased considerably and that is, in part at least, because they need the money. And so they work not just at one job, but at another.

And when a couple of years ago we did a survey and asked those people who were working how many hours they were working and whether they wanted more hours, fewer hours, we found a sizable proportion of that group who said they wanted more hours. And many of those people were women.

We have thought about trying to see if we could find out about women wanting to work, particularly in view of all the interest in child-care questions. But is rather hard to get at that question.

Senator SARBANES. But their indication that they wanted to work more hours may have been responding to an economic question.

Mrs. NORWOOD. Yes. That's what I said. Yes. I think that may well mean that they were not able to earn enough during that period of work and, therefore, wanted more hours.

Senator SARBANES. I will just close by quoting. Time has an interesting article in the issue of October 10, 1988, "Are You Better Off?" For much of the middle class the answer is no. And they discuss the income distribution problems.

But on dual incomes they say the following—I am not quoting them—for many families it takes two jobs to get by. Last year about 65 percent of all mothers, including 51 percent of those with infants under the age of 1, were either holding jobs or looking for them.

Many women, of course, work because they enjoy the independence and broader horizons that a job outside of the home entails, but an even larger number of mothers would rather stay home to raise their children.

They feel driven to take jobs by sheer economic necessity. These mothers and their families have lost a key choice as to how they want to raise their families and live their lives.

Mrs. NORWOOD. I think that's true.

I might say that some of the data that we have looked at, looking at the proportions of children with working mothers, suggest that the child-care issue is one—certainly for the low-income group, but it is for the middle and even upper income group—child care is one of the major issues that women are concerned with. A very large proportion are in that.

Senator SARBANES. The one light on that clock means that the vote is just starting to cut off the filibuster on the child-care parental leave legislation. So, it comes at an opportune time to adjourn this hearing.

Thank you very much.

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

EMPLOYMENT-UNEMPLOYMENT

FRIDAY, NOVEMBER 4, 1988

CONGRESS OF THE UNITED STATES,
JOINT ECONOMIC COMMITTEE,
Washington, DC.

The committee met, pursuant to notice, at 11:20 a.m., in room SD-628, Dirksen Senate Office Building, Hon. Paul S. Sarbanes (chairman of the committee) presiding.

Present: Senator Sarbanes.

Also present: William Buechner, Jim Klumpner, and Christopher Frenze, professional staff members.

OPENING STATEMENT OF SENATOR SARBANES, CHAIRMAN

Senator SARBANES. The committee will come to order.

The Joint Economic Committee is especially pleased today to welcome Janet Norwood, the Commissioner of the Bureau of Labor Statistics, and her colleagues to discuss the employment and unemployment situation for October.

This is the 100th hearing of the Joint Economic Committee on the monthly employment and unemployment statistics at which Janet Norwood has testified as Commissioner of the Bureau of Labor Statistics since assuming her current position in May 1979. She had testified earlier as acting Commissioner, but as Commissioner, confirmed and fully holding the position, this is the 100th time. The first appearance was before the committee as Commissioner on June 1, 1979.

In fact, at that time, Senator Lloyd Bentsen, who is busily occupied elsewhere this morning, was chairman of the committee, but if I remember correctly, he was absent on that occasion and I had the honor of chairing that hearing.

At that time I said, Commissioner, that we were pleased that you had dropped the adjective "acting" from in front of "Commissioner," and that I thought it was a splendid appointment. For nearly a decade now that has consistently proven to be the case.

The Bureau of Labor Statistics plays a central role in the Federal statistical infrastructure. The Bureau of Labor Statistics is responsible for compiling employment, unemployment, wage, productivity, and price data. Accuracy, comprehensiveness, and timeliness are essential and presuppose the highest professional standards of competence and of integrity. Commissioner Norwood has invariably met those standards with distinction. The fact that the Commissioner is now in her third term, having served under two different Presidents of different parties, reflects the universal respect which she has earned.

At that hearing, Commissioner Norwood, now almost 10 years ago, you observed that in your judgment the Bureau of Labor Statistics had an unusually capable staff and was one of the best managed agencies in the Federal Government. I concurred then in that judgment and I continue to concur in that judgment today.

I want to note that the Bureau's extraordinary effectiveness, especially in a period of spending restraint and even of budget reductions, is in large measure a reflection of your leadership. So on this occasion, on behalf of the Joint Economic Committee, I want to congratulate Commissioner Norwood on her 100th appearance as Commissioner to testify on the monthly employment and unemployment statistics.

These hearings provide an unusual opportunity for members not only to keep abreast of current developments in the economy, but to explore in greater detail some of the broader questions about the economy which these statistics raise.

I look forward to many more such hearings.

We will now hear from Commissioner Norwood on the employment and unemployment data for October.

STATEMENT OF HON. JANET L. NORWOOD, COMMISSIONER, BUREAU OF LABOR STATISTICS, DEPARTMENT OF LABOR, ACCOMPANIED BY KENNETH V. DALTON, ASSOCIATE COMMISSIONER, OFFICE OF PRICES AND LIVING CONDITIONS; AND JOHN E. BREGGER, ASSISTANT COMMISSIONER, OFFICE OF CURRENT EMPLOYMENT ANALYSIS

Mrs. NORWOOD. Thank you very much, Mr. Chairman. Thank you also for the kind words about me and about the Bureau. I do want you to know that we at the BLS believe that this hearing is extremely important to us and we believe it is very much in the public interest. For us, I can tell you that it keeps us very alert and challenged and hard working, but we welcome the opportunity to be here and to share our professional judgment on these data with the committee.

I also would like to thank you personally for the great confidence and the really terrific support that you have given not just to the Bureau of Labor Statistics, but to the entire statistical system. It is a matter of great pride to all of us who work in the system to find Members of the Congress who understand the importance of data and who really recognize the role of information in a democratic society.

Employment rose in October, while the number of unemployed persons was little changed from September. The civilian unemployment rate was 5.3 percent, and the overall rate was 5.2 percent. Each rate has remained within a narrow three-tenths of a percentage point range since last March and is now seven-tenths of a point below a year ago.

Employment, as measured by the business survey, rose by 325,000 in October. The entire gain occurred in private industry. This job gain was close to the average monthly increases in the first 7 months of the year, but substantially more than the increases of the last 2 months. Most of the over-the-month job gains

occurred in manufacturing and services; smaller employment gains also took place in wholesale and retail trade.

The factory job increase in October followed declines in each of the previous 2 months. Employment in manufacturing had risen steadily from early 1987 until August of this year. With the October gain, the number of factory jobs is up 425,000 over the past year; only 55,000 of this gain occurred during the last 3 months. Over the month, the largest increases took place in food processing, lumber and wood products, fabricated metals, machinery, and automobiles. The seasonally adjusted increase of 25,000 jobs in food processing followed several months of drought-related slowdown. Thus the 1-month pickup in manufacturing jobs may be somewhat overstated.

Health services and amusement and recreation accounted for a substantial part of the October increase in the services industry. The gain in amusement and recreation services, however, followed a drop of nearly the same amount in September. Retail trade employment increased by 50,000 as food stores and eating and drinking places both posted large gains. However, department store employment edged down for the fourth month in a row.

Civilian employment, as measured by the household survey, rose by approximately 200,000 in October. The household survey has shown considerably less growth than the establishment survey for some time now. Nevertheless, employment gains have outpaced the growth in the working-age civilian population, and, as a result the employment-population ratio is now at a high of 62.4 percent.

Most unemployment measures showed little change in October. Over the past 2 years the civilian worker rate has dropped by about 1½ points. Most of this improvement took place in the first 18 months of this period.

Jobless rates for adult men, women, and teenagers, as well as for whites, blacks, and Hispanics, all have fallen substantially over the past 2 years. However, the rates for the minority population remain much higher than for the population as a whole.

In summary, unemployment in October was at the lower end of the narrow range that has prevailed for 8 months now. Factory jobs rose after 2 months of decline, and factory hours remained quite high. Employment also rose in services and trade.

Mr. Chairman, Ken Dalton and Jack Bregger and I will be glad to try to answer any questions you have.

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

Unemployment rates of all civilian workers by alternative seasonal adjustment methods

Month and year	Unadjusted rate	X-11 ARIMA method							X-11 method (official method before 1980)	Range (cols. 2-9)
		Official procedure	Concurrent (as first computed)	Concurrent (revised)	Stable	Total	Residual	12-month extrapolation		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1987										
October.....	5.7	6.0	6.0	6.0	6.0	5.9	6.0	6.0	6.0	.1
November....	5.6	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	-
December....	5.4	5.8	5.8	5.8	5.7	5.7	5.8	5.8	5.8	.1
1988										
January.....	6.3	5.8	5.8	5.8	5.8	5.8	5.6	5.8	5.8	.2
February....	6.2	5.7	5.7	5.7	5.8	5.7	5.6	5.7	5.8	.2
March.....	5.9	5.6	5.6	5.6	5.7	5.6	5.5	5.6	5.6	.2
April.....	5.3	5.4	5.5	5.5	5.5	5.4	5.4	5.4	5.4	.1
May.....	5.4	5.6	5.6	5.6	5.6	5.6	5.8	5.6	5.6	.2
June.....	5.5	5.3	5.4	5.4	5.3	5.4	5.4	5.3	5.3	.1
July.....	5.5	5.4	5.4	5.4	5.4	5.5	5.4	5.4	5.4	.1
August.....	5.4	5.6	5.6	5.6	5.5	5.6	5.7	5.6	5.6	.2
September...	5.2	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	-
October.....	5.0	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	-

SOURCE: U.S. DEPARTMENT OF LABOR
Bureau of Labor Statistics
November 1988

(1) Unadjusted rate. Unemployment rate for all civilian workers, not seasonally adjusted.

(2) Official procedure (X-11 ARIMA method). The published seasonally adjusted rate for all civilian workers. Each of the 3 major civilian labor force components—agricultural employment, nonagricultural employment and unemployment—for 4 age-sex groups—males and females, ages 16-19 and 20 years and over—are seasonally adjusted independently using data from January 1974 forward. The data series for each of these 12 components are extended by a year at each end of the original series using ARIMA (Auto-Regressive, Integrated, Moving Average) models chosen specifically for each series. Each extended series is then seasonally adjusted with the X-11 portion of the X-11 ARIMA program. The 4 teenage unemployment and nonagricultural employment components are adjusted with the additive adjustment model, while the other components are adjusted with the multiplicative model. The unemployment rate is computed by summing the 4 seasonally adjusted unemployment components and calculating that total as a percent of the civilian labor force total derived by summing all 12 seasonally adjusted components. All the seasonally adjusted series are revised at the end of each year. Extrapolated factors for January-June are computed at the beginning of each year; extrapolated factors for July-December are computed in the middle of the year after the June data become available. Each set of 6-month factors are published in advance, in the January and July issues, respectively, of Employment and Earnings.

(3) Concurrent (as first computed, X-11 ARIMA method). The official procedure for computation of the rate for all civilian workers using the 12 components is followed except that extrapolated factors are not used at all. Each component is seasonally adjusted with the X-11 ARIMA program each month as the most recent data become available. Rates for each month of the current year are shown as first computed; they are revised only once each year, at the end of the year when data for the full year become available. For example, the rate for January 1984 would be based, during 1984, on the adjustment of data from the period January 1974 through January 1984.

(4) Concurrent (revised, X-11 ARIMA method). The procedure used is identical to (3) above, and the rate for the current month (the last month displayed) will always be the same in the two columns. However, all previous months are subject to revision each month based on the seasonal adjustment of all the components with data through the current month.

(5) Stable (X-11 ARIMA method). Each of the 12 civilian labor force components is extended using ARIMA models as in the official procedure and then run through the X-11 part of the program using the stable option. This option assumes that seasonal patterns are basically constant from year-to-year and computes final seasonal factors as unweighted averages of all the seasonal-irregular components for each month across the entire span of the period adjusted. As in the official procedure, factors are extrapolated in 6-month intervals and the series are revised at the end of each year. The procedure for computation of the rate from the seasonally adjusted components is also identical to the official procedure.

(6) Total (X-11 ARIMA method). This is one alternative aggregation procedure, in which total unemployment and civilian labor force levels are extended with ARIMA models and directly adjusted with multiplicative adjustment models in the X-11 part of the program. The rate is computed by taking seasonally adjusted total unemployment as a percent of seasonally adjusted total civilian labor force. Factors are extrapolated in 6-month intervals and the series revised at the end of each year.

(7) Residual (X-11 ARIMA method). This is another alternative aggregation method, in which total civilian employment and civilian labor force levels are extended using ARIMA models and then directly adjusted with multiplicative adjustment models. The seasonally adjusted unemployment level is derived by subtracting seasonally adjusted employment from seasonally adjusted labor force. The rate is then computed by taking the derived unemployment level as a percent of the labor force level. Factors are extrapolated in 6-month intervals and the series revised at the end of each year.

(8) 12-month extrapolation (X-11 ARIMA method). This approach is the same as the official procedure except that the factors are extrapolated in 12-month intervals. The factors for January-December of the current year are computed at the beginning of the year based on data through the preceding year. The values for January through June of the current year are the same as the official values since they reflect the same factors.

(9) X-11 method (official method before 1980). The method for computation of the official procedure is used except that the series are not extended with ARIMA models and the factors are projected in 12-month intervals. The standard X-11 program is used to perform the seasonal adjustment.

Methods of Adjustment: The X-11 ARIMA method was developed at Statistics Canada by the Seasonal Adjustment and Times Series Staff under the direction of Estela Bee Dagum. The method is described in The X-11 ARIMA Seasonal Adjustment Method, by Estela Bee Dagum, Statistics Canada Catalogue No. 12-564E, February 1980.

The standard X-11 method is described in X-11 Variant of the Census Method II Seasonal Adjustment Program, by Julius Shiskin, Allan Young and John Musgrave (Technical Paper No. 15, Bureau of the Census, 1967).

News United States Department of Labor

Bureau of Labor Statistics Washington, D.C. 20212

Technical information: (202) 523-1371
523-1944
523-1959
Media contact: 523-1913

USDL 88-553

TRANSMISSION OF MATERIAL IN THIS RELEASE IS EMBARGOED UNTIL 8:30 A.M. (EST), FRIDAY, NOVEMBER 4, 1988

THE EMPLOYMENT SITUATION: OCTOBER 1988

Employment rose in October and unemployment was little changed, the Bureau of Labor Statistics of the U.S. Department of Labor reported today. The overall unemployment rate was 5.2 percent, and the civilian worker rate was 5.3 percent. Both have fluctuated within a narrow range since the spring.

Nonagricultural payroll jobs, as measured by the survey of business establishments, grew by 325,000 in October to 107.1 million. All of this increase was in private industries. Total civilian employment, as measured by the household survey, edged up to 115.5 million. The household survey continues to show much slower employment growth than the business survey--2.4 million over the past year, versus 3.7 million.

Unemployment (Household Survey Data)

The civilian worker unemployment rate was essentially unchanged in October at 5.3 percent; the number of unemployed persons was 6.5 million. Since the spring, the jobless rate has moved within a narrow range of 5.3 to 5.6 percent, and the number of unemployed persons has ranged between 6.5 and 6.8 million. (See table A-2.)

The October jobless rates for adult men (4.6 percent), adult women (4.7 percent), and teenagers (14.9 percent) were little different from September, as were the rates for whites (4.6 percent), blacks (11.0 percent), and Hispanics (7.7 percent). (See tables A-2 and A-3.)

The number of persons who cited job loss as their reason for unemployment declined by 180,000 to 2.9 million in October. Declines in the number of unemployed job losers and new entrants to the labor force accounted for most of the nearly 700,000 fall in unemployment over the past year; the number of job leavers and labor force reentrants was little changed. (See table A-8.)

Civilian Employment and the Labor Force (Household Survey Data)

Civilian employment rose slightly to 115.5 million in October, and the employment-population ratio sustained its high of 62.4 percent reached in the previous month. Employment among adult women grew by 320,000, and their employment-population ratio rose 0.3 percentage point to a new high of 54.3 percent.

At 122.0 million, the civilian labor force has been little changed since August, while the labor force participation rate remained at 65.9 percent. The labor force rose by 1.7 million over the past year. (See table A-2.)

Industry Payroll Employment (Establishment Survey Data)

Total nonagricultural employment rose by 325,000 in October, seasonally adjusted, to a level of 107.1 million. This gain was in line with average job growth so far this year. All of the October gains were in private industries, which had shown slower growth in the prior 2 months. (See table B-1.)

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

Category	Quarterly averages		Monthly data			Sept.-Oct. change
	1988		1988			
	II	III	Aug.	Sept.	Oct.	
HOUSEHOLD DATA						
	Thousands of persons					
Labor force 1/.....	122,968	123,569	123,723	123,628	123,699	71
Total employment 1/..	116,352	116,878	116,872	117,032	117,208	176
Civilian labor force...	121,258	121,880	122,031	121,924	122,012	88
Civilian employment..	114,642	115,189	115,180	115,328	115,521	193
Unemployment.....	6,616	6,691	6,851	6,596	6,491	-105
Not in labor force.....	63,131	62,960	62,799	63,038	63,102	64
Discouraged workers..	910	930	N.A.	N.A.	N.A.	N.A.
	Percent of labor force					
Unemployment rates:						
All workers 1/.....	5.4	5.4	5.5	5.3	5.2	-0.1
All civilian workers.	5.5	5.5	5.6	5.4	5.3	-.1
Adult men.....	4.7	4.6	4.9	4.5	4.6	.1
Adult women.....	4.9	4.9	4.8	4.8	4.7	-.1
Teenagers.....	15.0	15.6	15.8	15.7	14.9	-.8
White.....	4.6	4.8	4.9	4.8	4.6	-.2
Black.....	12.0	11.2	11.3	10.8	11.0	.2
Hispanic origin....	9.1	7.9	8.4	7.4	7.7	.3
ESTABLISHMENT DATA						
	Thousands of jobs					
Nonfarm employment.....	105,609	p106,475	106,425	p106,729	p107,052	p323
Goods-producing.....	25,498	p25,648	25,639	p25,642	p25,734	p92
Service-producing....	80,111	p80,827	80,786	p81,087	p81,318	p231
	Hours of work					
Average weekly hours:						
Total private.....	34.8	p34.7	34.6	p34.7	p34.8	p0.1
Manufacturing.....	41.1	p41.1	41.0	p41.2	p41.1	p-.1
Overtime.....	3.9	p3.9	3.9	p3.9	p4.0	p.1

1/ Includes the resident Armed Forces. N.A.=not available.
p=preliminary.

Manufacturing employment rose by 100,000, seasonally adjusted, more than offsetting declines totaling 45,000 in the previous 2 months. Job gains were widespread throughout the durable and nondurable industries. The largest increase was in food processing, which experienced fewer fall cutbacks than usual following light summer hiring due to the drought. Other industries showing sizable increases included lumber and wood products, primary metals, fabricated metals, machinery, motor vehicles, and rubber and plastics. Despite October's strong growth, only 9 of the 20 manufacturing industries were above July levels.

Elsewhere in the goods-producing sector, construction employment was about unchanged, following fairly substantial growth during most of the year. Mining employment was also about unchanged in October.

In the services industry, an October gain of 145,000 was led by health services. Business services continued to show slow growth. Retail trade employment rose by 50,000 over the month; there were substantial increases in food stores and eating and drinking places, while holiday hiring in general merchandise stores was less than expected. Wholesale trade added 20,000 jobs, mostly in durable goods distribution. Virtually no employment change occurred in government, following a large increase in public school employment in September. Employment in both finance, insurance, and real estate and transportation and public utilities was also little changed in October.

Weekly Hours (Establishment Survey Data)

The average workweek for production or nonsupervisory workers on private nonagricultural payrolls edged up by 0.1 hour to a level of 34.8 hours in October, seasonally adjusted. The factory workweek fell slightly to 41.1 hours, while manufacturing overtime edged up 0.1 hour to 4.0 hours. Both the average workweek and overtime in manufacturing continued to be very high by historical standards. (See table B-2.)

The index of aggregate weekly hours of production or nonsupervisory workers on private nonagricultural payrolls, at 126.9 (1977=100), rose by 0.7 percent, seasonally adjusted. The index for manufacturing increased by 0.5 percent to 96.8. (See table B-5.)

Hourly and Weekly Earnings (Establishment Survey Data)

Average hourly earnings of private production or nonsupervisory workers rose 0.7 percent in October, seasonally adjusted. Average weekly earnings increased 1.0 percent, reflecting the increases in both hourly earnings and the length of the workweek. Prior to seasonal adjustment, average hourly earnings rose 5 cents to $9.45, and average weekly earnings increased by $2.69 to $329.81. (See table B-3.)

The Hourly Earnings Index (Establishment Survey Data)

The Hourly Earnings Index (HEI) was 181.6 (1977=100) in October, seasonally adjusted, an increase of 0.8 percent from September. For the 12 months ended in October, the increase was 3.8 percent. In dollars of constant purchasing power, the HEI decreased 0.9 percent during the 12-month period ending in September. The HEI is computed so as to exclude the effects of two types of changes unrelated to underlying wage rate movements--fluctuations in manufacturing overtime and interindustry employment shifts. (Beginning in 1989, the HEI will no longer be published in this release.) (See table B-4.)

The Employment Situation for November 1988 will be released on Friday, December 2, at 8:30 A.M. (EST).

Explanatory Note

This news release presents statistics from two major surveys, the Current Population Survey (household survey) and the Current Employment Statistics Survey (establishment survey). The household survey provides the information on the labor force, total employment, and unemployment that appears in the A tables, marked HOUSEHOLD DATA. It is a sample survey of about 55,800 households that is conducted by the Bureau of the Census with most of the findings analyzed and published by the Bureau of Labor Statistics (BLS).

The establishment survey provides the information on the employment, hours, and earnings of workers on nonagricultural payrolls that appears in the B tables, marked ESTABLISHMENT DATA. This information is collected from payroll records by BLS in cooperation with State agencies. The sample includes over 300,000 establishments employing over 38 million people.

For both surveys, the data for a given month are actually collected for and relate to a particular week. In the household survey, unless otherwise indicated, it is the calendar week that contains the 12th day of the month, which is called the survey week. In the establishment survey, the reference week is the pay period including the 12th, which may or may not correspond directly to the calendar week.

The data in this release are affected by a number of technical factors, including definitions, survey differences, seasonal adjustments, and the inevitable variance in results between a survey of a sample and a census of the entire population. Each of these factors is explained below.

Coverage, definitions, and differences between surveys

The sample households in the household survey are selected so as to reflect the entire civilian noninstitutional population 16 years of age and older. Each person in a household is classified as employed, unemployed, or not in the labor force. Those who hold more than one job are classified according to the job at which they worked the most hours.

People are classified as *employed* if they did any work at all as paid civilians; worked in their own business or profession or on their own farm; or worked 15 hours or more in an enterprise operated by a member of their family, whether they were paid or not. People are also counted as employed if they were on unpaid leave because of illness, bad weather, disputes between labor and management, or personal reasons. Members of the Armed Forces stationed in the United States are also included in the employed total.

People are classified as *unemployed*, regardless of their eligibility for unemployment benefits or public assistance, if they meet all of the following criteria: They had no employment during the survey week; they were available for work at that time; and they made specific efforts to find employment sometime during the prior 4 weeks. Persons laid off from their former jobs and awaiting recall and those expecting to report to a job within 30 days need not be looking for work to be counted as unemployed.

The *labor force* equals the sum of the number employed and the number unemployed. The *unemployment rate* is the percentage of unemployed people in the labor force (civilian plus the resident Armed Forces). Table A-5 presents a special grouping of seven measures of unemployment based on varying definitions of unemployment and the labor force. The definitions are provided in the table. The most restrictive definition yields U-1 and the most comprehensive yields U-7. The overall unemployment rate is U-5a, while U-5b represents the same measure with a civilian labor force base.

Unlike the household survey, the establishment survey only counts wage and salary employees whose names appear on the payroll records of nonagricultural firms. As a result, there are many differences between the two surveys, among which are the following:

— The household survey, although based on a smaller sample, reflects a larger segment of the population; the establishment survey excludes agriculture, the self-employed, unpaid family workers, private household workers, and members of the resident Armed Forces;

— The household survey includes people on unpaid leave among the employed; the establishment survey does not;

— The household survey is limited to those 16 years of age and older; the establishment survey is not limited by age;

— The household survey has no duplication of individuals, because each individual is counted only once; in the establishment survey, employees working at more than one job or otherwise appearing on more than one payroll would be counted separately for each appearance.

Other differences between the two surveys are described in "Comparing Employment Estimates from Household and Payroll Surveys," which may be obtained from the BLS upon request.

Seasonal adjustment

Over the course of a year, the size of the Nation's labor force and the levels of employment and unemployment undergo sharp fluctuations due to such seasonal events as changes in weather, reduced or expanded production, harvests, major holidays, and the opening and closing of schools. For example, the labor force increases by a large number each June, when schools close and many young people enter the job market. The effect of such seasonal variation can be very large; over the course of a year, for example, seasonality may account for as much as 95 percent of the month-to-month changes in unemployment.

Because these seasonal events follow a more or less regular pattern each year, their influence on statistical trends can be eliminated by adjusting the statistics from month to month. These adjustments make nonseasonal developments, such as declines in economic activity or increases in the participation of women in the labor force, easier to spot. To return to the school's-out example, the large number of people entering the labor force each June is likely to obscure any other changes that have taken place since May, making it difficult to determine if the level of economic activity has risen or declined. However, because the effect of students finishing school in previous years is known, the statistics for the current year can be adjusted to allow for a comparable change. Insofar as the seasonal adjustment is made correctly, the adjusted figure provides a more useful tool with which to analyze changes in economic activity.

Measures of labor force, employment, and unemployment contain components such as age and sex. Statistics for all employees, production workers, average weekly hours, and average hourly earnings include components based on the employer's industry. All these statistics can be seasonally adjusted either by adjusting the total or by adjusting each of the components and combining them. The second procedure usually yields more accurate information and is therefore followed by BLS. For example, the seasonally adjusted figure for the labor force is the sum of eight seasonally adjusted civilian employment components, plus the resident Armed Forces total (not adjusted for seasonality), and four seasonally adjusted unemployment components; the total for unemployment is the sum of the four unemployment components; and the overall unemployment rate is derived by dividing the resulting estimate of total unemployment by the estimate of the labor force.

The numerical factors used to make the seasonal adjustments are recalculated regularly. For the household survey, the factors are calculated for the January-June period and again for the July-December period. The January revision is applied to data that have been published over the previous 5 years. For the establishment survey, updated factors for seasonal adjustment are calculated only once a year, along with the introduction of new benchmarks which are discussed at the end of the next section.

Sampling variability

Statistics based on the household and establishment surveys are subject to sampling error, that is, the estimate of the number of people employed and the other estimates drawn from these surveys probably differ from the figures that would be obtained from a complete census, even if the same questionnaires and procedures were used. In the household survey, the amount of the differences can be expressed in terms of standard errors. The numerical value of a standard error depends upon the size of the sample, the results of the survey, and other factors. However, the numerical value is always such that the chances are approximately 68 out of 100 that an estimate based on the sample will differ by no more than the standard error from the results of a complete census. The chances are approximately 90 out of 100 that an estimate based on the sample will differ by no more than 1.6 times the standard error from the results of a complete census. At approximately the 90-percent level of confidence—the confidence limits used by BLS in its analyses—the error for the monthly change in total employment is on the order of plus or minus 358,000; for total unemployment it is 224,000; and, for the overall unemployment rate, it is 0.19 percentage point. These figures do not mean that the sample results are off by these magnitudes but, rather, that the chances are approximately 90 out of 100 that the "true" level or rate would not be expected to differ from the estimates by more than these amounts.

Sampling errors for monthly surveys are reduced when the data are cumulated for several months, such as quarterly or annually. Also, as a general rule, the smaller the estimate, the larger the sampling error. Therefore, relatively speaking, the estimate of the size of the labor force is subject to less error than is the estimate of the number unemployed. And, among the unemployed, the sampling error for the jobless rate of adult men, for example, is much smaller than is the error for the jobless rate of teenagers. Specifically, the error on monthly change in the jobless rate for men is .25 percentage point; for teenagers, it is 1.29 percentage points.

In the establishment survey, estimates for the 2 most current months are based on incomplete returns; for this reason, these estimates are labeled preliminary in the tables. When all the returns in the sample have been received, the estimates are revised. In other words, data for the month of September are published in preliminary form in October and November and in final form in December. To remove errors that build up over time, a comprehensive count of the employed is conducted each year. The results of this survey are used to establish new benchmarks—comprehensive counts of employment—against which month-to-month changes can be measured. The new benchmarks also incorporate changes in the classification of industries and allow for the formation of new establishments.

Additional statistics and other information

In order to provide a broad view of the Nation's employment situation, BLS regularly publishes a wide variety of data in this news release. More comprehensive statistics are contained in *Employment and Earnings*, published each month by BLS. It is available for $8.50 per issue or $25.00 per year from the U.S. Government Printing Office, Washington, DC 20204. A check or money order made out to the Superintendent of Documents must accompany all orders.

Employment and Earnings also provides approximations of the standard errors for the household survey data published in this release. For unemployment and other labor force categories, the standard errors appear in tables B through J of its "Explanatory Notes." Measures of the reliability of the data drawn from the establishment survey and the actual amounts of revision due to benchmark adjustments are provided in tables M, O, P, and Q of that publication.

HOUSEHOLD DATA

Table A-1. Employment status of the population, including Armed Forces in the United States, by sex

(Numbers in thousands)

Employment status and sex	Not seasonally adjusted			Seasonally adjusted[1]					
	Oct. 1987	Sept. 1988	Oct. 1988	Oct. 1987	June 1988	July 1988	Aug. 1988	Sept. 1988	Oct. 1988
TOTAL									
Noninstitutional population[2]	186,052	186,666	186,801	186,052	186,247	186,402	186,522	186,666	186,801
Labor force[3]	122,486	123,546	124,119	122,128	123,157	123,367	123,723	123,629	123,899
Participation rate[4]	65.2	66.2	66.4	65.0	66.1	66.2	66.3	66.2	66.2
Total employed[5]	115,639	117,178	117,837	114,951	116,703	116,752	116,872	117,032	117,208
Employment-population ratio[4]	62.5	62.8	63.1	62.1	62.7	62.6	62.7	62.7	62.7
Resident Armed Forces	1,741	1,704	1,687	1,741	1,695	1,673	1,692	1,704	1,687
Civilian employed	113,898	115,474	116,250	113,210	115,018	115,059	115,180	115,328	115,521
Agriculture	3,297	3,250	3,316	3,249	3,085	3,048	3,151	3,189	3,266
Nonagricultural industries	110,601	112,225	112,934	109,961	111,933	112,014	112,029	112,158	112,255
Unemployed	6,845	6,368	6,182	7,177	6,455	6,625	6,851	6,596	6,491
Unemployment rate[6]	5.6	5.2	5.0	5.9	5.2	5.4	5.5	5.3	5.2
Not in labor force	62,567	63,119	62,682	62,924	63,090	63,045	62,799	63,036	63,102
Men, 16 years and over									
Noninstitutional population[2]	88,756	89,577	89,637	88,756	89,367	89,445	89,504	89,577	89,637
Labor force[3]	67,820	68,465	68,451	67,947	68,429	68,521	68,723	68,808	68,544
Participation rate[4]	76.4	76.4	76.4	76.6	76.6	76.6	76.8	76.8	76.5
Total employed[5]	64,272	65,262	65,184	64,048	64,934	65,002	64,954	65,052	64,943
Employment-population ratio[4]	72.4	72.9	72.7	72.2	72.7	72.7	72.6	72.6	72.5
Resident Armed Forces	1,580	1,540	1,526	1,580	1,523	1,512	1,529	1,540	1,526
Civilian employed	62,692	63,742	63,658	62,468	63,411	63,490	63,425	63,512	63,417
Unemployed	3,549	3,183	3,267	3,899	3,495	3,519	3,768	3,755	3,600
Unemployment rate[6]	5.2	4.6	4.8	5.7	5.1	5.1	5.5	5.2	5.3
Women, 16 years and over									
Noninstitutional population[2]	96,295	97,089	97,164	96,295	96,880	96,957	97,018	97,089	97,164
Labor force[3]	54,664	55,082	55,668	54,181	54,728	54,836	55,000	55,020	55,155
Participation rate[4]	56.8	56.7	57.3	56.3	56.5	56.6	56.7	56.7	56.8
Total employed[5]	51,367	51,916	52,753	50,903	51,769	51,750	51,918	51,979	52,265
Employment-population ratio[4]	53.3	53.5	54.3	52.9	53.4	53.4	53.5	53.5	53.8
Resident Armed Forces	161	164	161	161	162	161	163	164	161
Civilian employed	51,206	51,732	52,592	50,742	51,607	51,589	51,755	51,815	52,104
Unemployed	3,297	3,166	2,915	3,278	2,960	3,105	3,083	3,041	2,890
Unemployment rate[6]	6.0	5.8	5.2	6.1	5.4	5.7	5.6	5.5	5.2

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

[2] Includes members of the Armed Forces stationed in the United States.

[3] Labor force as a percent of the noninstitutional population.

[4] Total employment as a percent of the noninstitutional population.

[5] Unemployment as a percent of the labor force (including the resident Armed Forces).

HOUSEHOLD DATA

Table A-2. Employment status of the civilian population by sex and age

(Numbers in thousands)

Employment status, sex, and age	Not seasonally adjusted			Seasonally adjusted[1]					
	Oct. 1987	Sept. 1988	Oct. 1988	Oct. 1987	June 1988	July 1988	Aug. 1988	Sept. 1988	Oct. 1988
TOTAL									
Civilian noninstitutional population	183,311	184,962	185,114	183,311	184,562	184,729	184,830	184,962	185,114
Civilian labor force	120,744	121,842	122,432	120,367	121,472	121,684	122,031	121,924	122,012
Participation rate	65.9	65.9	66.1	65.7	65.8	65.9	66.0	65.9	65.9
Employed	113,898	115,474	116,250	113,210	115,018	115,059	115,180	115,328	115,521
Employment-population ratio[2]	62.1	62.4	62.8	61.8	62.3	62.3	62.3	62.4	62.4
Unemployed	6,845	6,368	6,182	7,177	6,455	6,625	6,851	6,596	6,491
Unemployment rate	5.7	5.2	5.0	6.0	5.3	5.4	5.6	5.4	5.3
Men, 20 years and over									
Civilian noninstitutional population	79,807	80,751	80,851	79,807	80,526	80,608	80,669	80,751	80,851
Civilian labor force	62,317	62,942	63,023	62,211	62,667	62,769	62,925	62,881	62,892
Participation rate	78.1	77.9	78.0	78.0	77.8	77.9	78.0	77.9	77.8
Employed	59,442	60,402	60,405	59,037	59,797	59,954	59,834	60,024	59,989
Employment-population ratio[2]	74.5	74.8	74.7	74.0	74.3	74.4	74.2	74.3	74.2
Agriculture	2,403	2,325	2,400	2,343	2,206	2,247	2,311	2,236	2,330
Nonagricultural industries	57,040	58,077	58,005	56,694	57,588	57,706	57,523	57,788	57,659
Unemployed	2,875	2,540	2,618	3,174	2,870	2,815	3,090	2,857	2,902
Unemployment rate	4.6	4.0	4.2	5.1	4.6	4.5	4.9	4.5	4.6
Women, 20 years and over									
Civilian noninstitutional population	88,843	89,735	89,807	88,843	89,502	89,588	89,670	89,735	89,807
Civilian labor force	50,721	51,172	51,809	50,095	50,642	50,775	50,934	50,912	51,172
Participation rate	57.1	57.0	57.7	56.4	56.6	56.7	56.8	56.7	57.0
Employed	48,076	48,556	49,379	47,480	48,169	48,199	48,466	48,452	48,771
Employment-population ratio[2]	54.1	54.1	55.0	53.4	53.8	53.8	54.0	54.0	54.3
Agriculture	670	642	678	636	616	542	586	633	647
Nonagricultural industries	47,407	47,914	48,701	46,844	47,553	47,657	47,881	47,818	48,124
Unemployed	2,644	2,616	2,430	2,615	2,473	2,576	2,468	2,461	2,401
Unemployment rate	5.2	5.1	4.7	5.2	4.9	5.1	4.8	4.8	4.7
Both sexes, 16 to 19 years									
Civilian noninstitutional population	14,661	14,477	14,456	14,661	14,534	14,533	14,491	14,477	14,456
Civilian labor force	7,706	7,728	7,599	8,081	8,163	8,141	8,172	8,131	7,948
Participation rate	52.6	53.4	52.6	55.1	56.2	56.0	56.4	56.2	55.0
Employed	6,379	6,516	6,465	6,693	7,051	6,907	6,879	6,853	6,761
Employment-population ratio[2]	43.5	45.0	44.7	45.7	48.5	47.5	47.5	47.3	46.8
Agriculture	225	282	238	270	260	257	254	301	289
Nonagricultural industries	6,155	6,234	6,228	6,423	6,791	6,650	6,625	6,552	6,472
Unemployed	1,327	1,212	1,134	1,388	1,112	1,234	1,293	1,278	1,187
Unemployment rate	17.2	15.7	14.9	17.2	13.6	15.2	15.8	15.7	14.9

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

[2] Civilian employment as a percent of the civilian noninstitutional population.

Table A-3. Employment status of the civilian population by race, sex, age, and Hispanic origin

(Numbers in thousands)

Employment status, race, sex, age, and Hispanic origin	Not seasonally adjusted			Seasonally adjusted[1]					
	Oct. 1987	Sept. 1988	Oct. 1988	Oct. 1987	June 1988	July 1988	Aug. 1988	Sept. 1988	Oct. 1988
WHITE									
Civilian noninstitutional population	157,342	158,422	158,524	157,342	158,186	158,279	158,340	158,422	158,524
Civilian labor force	103,634	104,869	105,295	103,869	104,691	104,803	105,007	105,043	105,002
Participation rate	65.9	66.2	66.4	66.0	66.2	66.1	66.3	66.3	66.2
Employed	98,882	100,177	100,723	98,317	99,932	99,725	99,901	100,019	100,144
Employment-population ratio[2]	62.8	63.2	63.5	62.5	63.2	63.0	63.1	63.1	63.2
Unemployed	5,053	4,782	4,572	5,352	4,759	4,878	5,106	5,024	4,858
Unemployment rate	4.9	4.6	4.3	5.2	4.5	4.7	4.9	4.8	4.6
Men, 20 years and over									
Civilian labor force	54,399	54,872	54,924	54,375	54,862	54,732	54,825	54,850	54,876
Participation rate	78.4	78.4	78.4	78.4	78.2	78.3	78.4	78.3	78.3
Employed	52,167	52,910	52,930	51,864	52,491	52,603	52,464	52,594	52,614
Employment-population ratio[2]	75.2	75.6	75.5	74.8	75.1	75.2	75.0	75.1	75.1
Unemployed	2,232	1,962	1,994	2,511	2,171	2,129	2,361	2,255	2,263
Unemployment rate	4.1	3.6	3.6	4.6	4.0	3.9	4.3	4.1	4.1
Women, 20 years and over									
Civilian labor force	42,943	43,397	43,814	42,379	42,921	42,887	43,177	43,170	43,258
Participation rate	56.5	56.7	57.2	55.7	56.2	56.1	56.4	56.4	56.4
Employed	41,089	41,495	42,093	40,538	41,183	41,040	41,399	41,371	41,553
Employment-population ratio[2]	54.0	54.2	54.9	53.3	53.9	53.7	54.1	54.0	54.2
Unemployed	1,854	1,902	1,721	1,841	1,738	1,847	1,778	1,799	1,706
Unemployment rate	4.3	4.4	3.9	4.3	4.0	4.3	4.1	4.2	3.9
Both sexes, 16 to 19 years									
Civilian labor force	6,592	6,690	6,557	6,915	7,106	6,983	7,005	7,023	6,866
Participation rate	56.2	56.7	55.7	57.9	59.9	58.9	59.2	59.5	58.3
Employed	5,626	5,772	5,700	5,915	6,256	6,081	6,038	6,054	5,977
Employment-population ratio[2]	47.1	48.9	48.4	49.5	52.7	51.3	51.0	51.3	50.8
Unemployed	967	918	857	1,000	850	902	967	969	889
Unemployment rate	14.7	13.7	13.1	14.5	12.0	12.9	13.8	13.8	12.9
Men	14.8	14.2	14.4	15.1	12.8	14.6	13.8	15.0	14.8
Women	14.6	13.2	11.8	13.8	11.1	11.1	13.8	12.5	11.0
BLACK									
Civilian noninstitutional population	20,453	20,762	20,786	20,453	20,683	20,715	20,736	20,762	20,786
Civilian labor force	13,160	13,178	13,307	13,152	12,989	13,293	13,262	13,191	13,290
Participation rate	64.3	63.5	64.0	64.3	62.8	64.2	64.0	63.5	63.9
Employed	11,582	11,764	11,873	11,556	11,489	11,774	11,764	11,771	11,829
Employment-population ratio[2]	56.6	56.7	57.1	56.5	55.5	56.8	56.7	56.7	56.9
Unemployed	1,578	1,414	1,434	1,596	1,500	1,519	1,498	1,419	1,461
Unemployment rate	12.0	10.7	10.8	12.1	11.5	11.4	11.3	10.8	11.0
Men, 20 years and over									
Civilian labor force	6,019	6,126	6,147	6,023	6,064	6,070	6,154	6,123	6,158
Participation rate	74.3	74.3	74.4	74.3	73.8	73.8	74.7	74.2	74.6
Employed	5,451	5,620	5,593	5,431	5,458	5,492	5,566	5,581	5,576
Employment-population ratio[2]	67.3	68.1	67.7	67.0	66.5	66.8	67.6	67.7	67.5
Unemployed	569	506	554	592	606	578	588	542	582
Unemployment rate	9.5	8.3	9.0	9.8	10.0	9.5	9.6	8.8	9.4
Women, 20 years and over									
Civilian labor force	6,241	6,193	6,309	6,177	6,074	6,307	6,182	6,147	6,236
Participation rate	61.3	59.9	61.0	60.7	59.0	61.2	59.9	59.5	60.3
Employed	5,533	5,556	5,681	5,495	5,421	5,650	5,572	5,564	5,630
Employment-population ratio[2]	54.4	53.8	54.9	54.0	52.7	54.8	54.0	53.8	54.4
Unemployed	707	633	628	682	652	657	610	583	607
Unemployment rate	11.3	10.2	10.0	11.0	10.7	10.4	9.9	9.5	9.7
Both sexes, 16 to 19 years									
Civilian labor force	900	861	851	952	852	917	926	921	894
Participation rate	41.4	39.5	39.0	43.8	39.0	42.0	42.4	42.2	41.0
Employed	597	585	600	630	610	632	626	627	622
Employment-population ratio[2]	27.5	26.8	27.5	29.0	28.0	28.9	28.7	28.7	28.5
Unemployed	302	275	252	322	242	285	300	294	272
Unemployment rate	33.6	32.0	29.5	33.8	28.4	31.1	32.4	31.9	30.4
Men	32.5	32.5	33.1	32.5	30.4	30.4	32.2	31.7	33.5
Women	34.7	31.5	25.2	35.2	25.9	31.8	32.7	32.2	26.5

See footnotes at end of table.

Table A-9. Employment status of the civilian population by race, sex, age, and Hispanic origin—Continued

(Numbers in thousands)

Employment status, race, sex, age, and Hispanic origin	Not seasonally adjusted			Seasonally adjusted[1]					
	Oct. 1997	Sept. 1998	Oct. 1998	Oct. 1997	June 1998	July 1998	Aug. 1998	Sept. 1998	Oct. 1998
HISPANIC ORIGIN									
Civilian noninstitutional population	13,003	13,419	13,458	13,003	13,398	13,344	13,381	13,419	13,469
Civilian labor force	8,896	9,086	9,108	8,864	9,087	8,984	8,988	9,063	8,999
Participation rate	68.4	67.7	67.7	68.6	67.8	67.3	68.8	67.5	67.3
Employed	7,891	8,444	8,428	7,985	8,219	8,284	8,195	8,394	8,391
Employment-population ratio[2]	61.5	62.9	62.6	61.6	61.8	61.9	61.2	62.6	62.1
Unemployed	704	642	681	719	868	729	793	669	607
Unemployment rate	8.1	7.1	7.5	8.3	9.0	8.0	8.4	7.4	7.7

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

[2] Civilian employment as a percent of the civilian noninstitutional population.

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

Table A-4. Selected employment indicators

(In thousands)

Category	Not seasonally adjusted			Seasonally adjusted					
	Oct. 1997	Sept. 1998	Oct. 1998	Oct. 1997	June 1998	July 1998	Aug. 1998	Sept. 1998	Oct. 1998
CHARACTERISTIC									
Civilian employed, 16 years and over	113,898	115,474	116,250	113,210	115,018	115,058	115,180	115,328	115,521
Married men, spouse present	49,905	50,815	49,886	50,556	50,485	50,536	50,505	50,531	50,483
Married women, spouse present	28,685	29,031	29,399	28,099	28,713	28,854	28,832	28,901	28,951
Women who maintain families	6,174	6,186	6,366	6,178	6,086	6,145	6,282	6,251	6,367
MAJOR INDUSTRY AND CLASS OF WORKER									
Agriculture:									
Wage and salary workers	1,673	1,628	1,670	1,705	1,562	1,528	1,590	1,583	1,709
Self-employed workers	1,487	1,500	1,471	1,430	1,388	1,346	1,416	1,438	1,414
Unpaid family workers	136	123	175	140	167	148	163	134	188
Nonagricultural industries:									
Wage and salary workers	101,883	103,400	104,127	101,522	103,086	103,133	103,087	103,415	103,781
Government	17,288	17,035	17,472	17,033	17,084	16,958	17,112	17,103	17,231
Private industries	84,595	86,365	86,655	84,489	85,935	86,174	85,984	86,312	86,550
Private households	1,257	1,077	1,185	1,222	1,150	1,123	1,108	1,085	1,142
Other industries	83,338	85,288	85,470	83,267	84,786	85,051	84,877	85,227	85,408
Self-employed workers	8,478	8,592	8,583	8,274	8,577	8,528	8,491	8,575	8,386
Unpaid family workers	240	232	224	242	301	256	243	229	227
PERSONS AT WORK PART TIME[1]									
All industries:									
Part time for economic reasons	5,129	4,704	4,668	5,353	5,317	5,362	5,181	5,053	4,693
Slack work	2,348	2,041	2,125	2,377	2,364	2,490	2,316	2,190	2,166
Could only find part-time work	2,496	2,191	2,246	2,655	2,637	2,581	2,491	2,356	2,382
Voluntary part time	15,509	15,375	18,184	14,466	14,507	15,070	15,021	15,314	15,078
Nonagricultural industries:									
Part time for economic reasons	4,856	4,456	4,452	5,067	5,076	5,165	4,959	4,814	4,682
Slack work	2,162	1,885	1,990	2,198	2,199	2,351	2,178	2,031	2,043
Could only find part-time work	2,412	2,113	2,174	2,557	2,586	2,545	2,429	2,264	2,298
Voluntary part time	15,058	14,906	15,691	14,011	14,083	14,689	14,585	14,861	14,596

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

HOUSEHOLD DATA

HOUSEHOLD DATA

Table A-6. Range of unemployment measures based on varying definitions of unemployment and the labor force, seasonally adjusted

(Percent)

Measure	Quarterly averages					Monthly data		
	1987		1988			1988		
	III	IV	I	II	III	Aug.	Sept.	Oct.
U-1 Persons unemployed 15 weeks or longer as a percent of the civilian labor force	1.6	1.5	1.4	1.3	1.3	1.4	1.3	1.3
U-2 Job losers as a percent of the civilian labor force	2.8	2.7	2.6	2.5	2.5	2.6	2.5	2.4
U-3 Unemployed persons 25 years and over as a percent of the civilian labor force	4.8	4.5	4.4	4.2	4.3	4.4	4.2	4.1
U-4 Unemployed full-time jobseekers as a percent of the full-time civilian labor force	5.6	5.5	5.4	5.1	5.1	5.3	5.1	4.9
U-5a Total unemployed as a percent of the labor force, including the resident Armed Forces	5.9	5.8	5.6	5.4	5.4	5.5	5.3	5.2
U-5b Total unemployed as a percent of the civilian labor force	6.0	5.9	5.7	5.5	5.5	5.6	5.4	5.3
U-6 Total full-time jobseekers plus 1/2 part-time jobseekers plus 1/2 total on part time for economic reasons as a percent of the civilian labor force less 1/2 of the part-time labor force	8.2	8.1	8.0	7.6	7.6	7.8	7.5	7.3
U-7 Total full-time jobseekers plus 1/2 part-time jobseekers plus 1/2 total on part time for economic reasons plus discouraged workers as a percent of the civilian labor force plus discouraged workers less 1/2 of the part-time labor force	9.0	8.8	8.8	8.3	8.4	N.A.	N.A.	N.A.

N.A. = not available.

Table A-8. Selected unemployment indicators, seasonally adjusted

Category	Number of unemployed persons (in thousands)			Unemployment rates[1]					
	Oct. 1987	Sept. 1988	Oct. 1988	Oct. 1987	June 1988	July 1988	Aug. 1988	Sept. 1988	Oct. 1988
CHARACTERISTIC									
Total, 16 years and over	7,177	6,596	6,491	6.0	5.3	5.4	5.6	5.4	5.3
Men, 16 years and over	3,898	3,555	3,600	5.9	5.2	5.3	5.6	5.3	5.4
Men, 20 years and over	3,174	2,857	2,902	5.1	4.6	4.5	4.9	4.5	4.6
Women, 16 years and over	3,278	3,041	2,890	6.1	5.4	5.7	5.6	5.5	5.3
Women, 20 years and over	2,615	2,461	2,401	5.2	4.9	5.1	4.8	4.8	4.7
Both sexes, 16 to 19 years	1,386	1,278	1,187	17.2	13.6	15.2	15.6	15.7	14.9
Married men, spouse present	1,542	1,303	1,305	3.7	3.1	3.0	3.4	3.1	3.1
Married women, spouse present	1,220	1,135	1,101	4.2	3.7	4.1	4.1	3.8	3.7
Women who maintain families	801	552	543	8.9	7.8	8.6	7.4	8.1	7.9
Full-time workers	5,725	5,268	5,164	5.8	4.9	5.0	5.3	5.1	4.9
Part-time workers	1,439	1,340	1,311	8.3	7.8	8.1	7.4	7.5	7.4
Labor force time lost[2]	—	—	—	6.8	6.3	6.4	6.5	6.4	6.1
INDUSTRY									
Nonagricultural private wage and salary workers	5,267	4,985	4,952	5.9	5.4	5.4	5.6	5.4	5.4
Goods-producing industries	2,005	1,888	1,847	7.0	6.0	6.3	6.8	6.5	6.4
Mining	74	68	70	8.3	6.7	5.3	6.8	6.8	9.0
Construction	686	585	622	11.2	10.2	10.2	11.0	9.2	9.9
Manufacturing	1,243	1,235	1,155	5.7	4.8	5.2	5.8	5.6	5.3
Durable goods	663	709	635	5.2	4.4	5.0	5.0	5.5	5.0
Nondurable goods	580	527	520	6.5	5.4	5.6	6.4	5.9	5.7
Service-producing industries	3,262	3,077	3,105	5.4	5.1	5.0	5.1	4.9	5.0
Transportation and public utilities	269	230	208	4.4	4.1	3.5	3.8	3.7	3.3
Wholesale and retail trade	1,492	1,430	1,389	6.5	5.9	6.2	6.5	6.1	5.9
Finance and service industries	1,501	1,418	1,528	4.7	4.6	4.5	4.4	4.3	4.6
Government workers	589	471	434	3.3	2.6	3.1	3.1	2.7	2.5
Agricultural wage and salary workers	203	204	191	10.6	9.7	10.6	11.4	11.3	10.0

[1] Unemployment as a percent of the 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.

Table A-7. Duration of unemployment

(Numbers in thousands)

Weeks of unemployment	Not seasonally adjusted			Seasonally adjusted					
	Oct. 1987	Sept. 1988	Oct. 1988	Oct. 1987	June 1988	July 1988	Aug. 1988	Sept. 1988	Oct. 1988
DURATION									
Less than 5 weeks	3,211	3,308	3,056	3,223	3,086	2,965	3,197	3,139	3,062
5 to 14 weeks	2,032	1,832	1,747	2,093	1,880	2,078	1,957	1,823	1,814
15 weeks and over	1,802	1,426	1,379	1,801	1,512	1,629	1,676	1,596	1,551
15 to 26 weeks	712	644	680	844	727	838	859	789	778
27 weeks and over	891	784	719	957	785	791	817	807	773
Average (mean) duration, in weeks	13.7	13.3	13.1	14.1	12.9	13.6	13.7	13.7	13.5
Median duration, in weeks	5.7	4.8	5.1	6.2	6.0	6.3	5.9	5.5	5.6
PERCENT DISTRIBUTION									
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than 5 weeks	46.9	51.9	49.4	45.3	47.4	44.4	46.8	47.9	47.6
5 to 14 weeks	29.7	25.8	28.3	29.4	29.2	31.1	28.7	27.8	28.2
15 weeks and over	23.4	22.4	22.3	25.3	23.4	24.4	24.5	24.3	24.1
15 to 26 weeks	10.4	10.1	10.7	11.9	11.2	12.6	12.6	12.0	12.1
27 weeks and over	13.0	12.3	11.6	13.4	12.1	11.9	12.0	12.3	12.0

Table A-8. Reason for unemployment

(Numbers in thousands)

Reasons	Not seasonally adjusted			Seasonally adjusted					
	Oct. 1987	Sept. 1988	Oct. 1988	Oct. 1987	June 1988	July 1988	Aug. 1988	Sept. 1988	Oct. 1988
NUMBER OF UNEMPLOYED									
Job losers	3,082	2,732	2,641	3,388	3,059	3,087	3,136	3,087	2,909
On layoff	768	636	691	944	869	852	891	816	853
Other job losers	2,314	2,096	1,950	2,444	2,190	2,235	2,247	2,271	2,056
Job leavers	1,030	1,069	1,059	980	944	904	907	994	986
Reentrants	1,873	1,821	1,805	1,845	1,723	1,901	1,889	1,761	1,764
New entrants	861	717	676	914	777	776	793	745	728
PERCENT DISTRIBUTION									
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Job losers	45.0	42.9	42.7	47.7	47.0	46.3	46.2	46.9	45.5
On layoff	11.2	10.0	11.2	13.3	13.3	12.8	13.1	12.4	13.4
Other job losers	33.8	32.9	31.5	34.4	33.6	33.5	33.1	34.5	32.2
Job leavers	15.0	17.3	17.1	13.5	14.5	13.6	14.7	15.1	15.4
Reentrants	27.4	28.6	29.2	26.0	26.5	28.5	27.5	26.7	27.6
New entrants	12.6	11.3	10.9	12.9	11.9	11.6	11.7	11.3	11.4
UNEMPLOYED AS A PERCENT OF THE CIVILIAN LABOR FORCE									
Job losers	2.5	2.2	2.2	2.8	2.5	2.5	2.6	2.5	2.4
Job leavers	.9	.9	.9	.8	.8	.7	.8	.8	.8
Reentrants	1.6	1.5	1.5	1.5	1.4	1.6	1.5	1.4	1.4
New entrants	.7	.6	.6	.8	.6	.6	.6	.6	.6

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

Sex and age	Number of unemployed persons (in thousands)			Unemployment rates[1]					
	Oct. 1987	Sept. 1988	Oct. 1988	Oct. 1987	June 1988	July 1988	Aug. 1988	Sept. 1988	Oct. 1988
Total, 16 years and over	7,177	6,598	6,491	6.0	5.3	5.4	5.6	5.4	5.3
16 to 24 years	2,689	2,480	2,433	11.8	10.3	10.9	11.1	10.9	10.9
16 to 19 years	1,388	1,278	1,187	17.2	13.8	15.2	15.8	15.7	14.9
16 to 17 years	710	662	561	20.4	15.4	17.5	18.7	20.5	17.3
18 to 19 years	679	612	626	14.7	12.9	13.0	13.9	12.7	13.3
20 to 24 years	1,301	1,182	1,246	8.8	8.4	8.5	8.4	8.2	8.7
25 years and over	4,482	4,181	4,080	4.6	4.1	4.2	4.4	4.2	4.1
25 to 54 years	3,993	3,728	3,629	4.8	4.4	4.4	4.6	4.4	4.3
55 years and over	474	437	409	3.1	2.9	3.1	3.2	2.9	2.7
Men, 16 years and over	3,899	3,555	3,600	5.9	5.2	5.3	5.6	5.3	5.4
16 to 24 years	1,432	1,336	1,419	12.1	10.5	11.3	11.5	11.4	12.1
16 to 19 years	725	698	666	17.4	14.7	16.6	15.9	16.7	16.9
16 to 17 years	372	386	331	20.9	17.0	17.9	17.6	21.7	19.1
18 to 19 years	354	325	367	14.6	14.2	14.7	14.7	13.4	15.3
20 to 24 years	707	640	721	9.2	8.2	8.4	9.0	8.5	9.5
25 years and over	2,462	2,253	2,189	4.5	4.1	3.9	4.4	4.1	4.0
25 to 54 years	2,182	1,997	1,923	4.8	4.2	4.1	4.5	4.3	4.1
55 years and over	277	248	258	3.1	3.2	3.1	3.4	2.8	3.0
Women, 16 years and over	3,278	3,041	2,890	6.1	5.4	5.7	5.8	5.5	5.3
16 to 24 years	1,257	1,122	1,014	11.5	10.0	10.5	10.7	10.4	9.5
16 to 19 years	663	580	489	16.9	12.4	13.8	15.8	14.7	12.8
16 to 17 years	338	294	230	19.9	13.7	17.0	19.8	19.0	15.3
18 to 19 years	325	287	261	14.6	11.6	11.2	12.9	12.0	11.3
20 to 24 years	594	542	525	8.5	8.7	8.7	7.8	7.9	7.7
25 years and over	2,020	1,926	1,872	4.7	4.2	4.5	4.4	4.4	4.2
25 to 54 years	1,811	1,731	1,706	4.9	4.6	4.7	4.6	4.6	4.5
55 years and over	197	189	150	3.1	2.6	3.0	2.8	3.0	2.4

[1] Unemployment as a percent of the civilian labor force.

Table A-10. Employment status of black and other workers

(Numbers in thousands)

Employment status	Not seasonally adjusted			Seasonally adjusted[1]					
	Oct. 1987	Sept. 1988	Oct. 1988	Oct. 1987	June 1988	July 1988	Aug. 1988	Sept. 1988	Oct. 1988
Civilian noninstitutional population	25,969	26,540	26,590	25,969	26,396	26,451	26,490	26,540	26,590
Civilian labor force	16,809	16,884	17,137	16,755	16,735	17,021	16,993	16,892	17,073
Participation rate	64.7	63.6	64.5	64.5	63.4	64.4	64.1	63.6	64.2
Employed	15,017	15,297	15,527	14,946	15,017	15,319	15,299	15,301	15,431
Employment-population ratio[2]	57.8	57.6	58.4	57.6	56.9	57.9	57.8	57.7	58.0
Unemployed	1,793	1,586	1,610	1,809	1,718	1,701	1,694	1,592	1,642
Unemployment rate	10.7	9.4	9.4	10.8	10.3	10.0	10.0	9.4	9.6
Not in labor force	9,159	9,656	9,453	9,214	9,661	9,430	9,497	9,648	9,517

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

[2] Civilian employment as a percent of the civilian noninstitutional population.

HOUSEHOLD DATA

Table A-11. Occupational status of the employed and unemployed, not seasonally adjusted

(Numbers in thousands)

Occupation	Civilian employed		Unemployed		Unemployment rate	
	Oct. 1987	Oct. 1988	Oct. 1987	Oct. 1988	Oct. 1987	Oct. 1988
Total, 16 years and over[1]	113,898	116,250	6,845	6,182	5.7	5.0
Managerial and professional specialty	28,309	29,816	630	583	2.2	1.9
Executive, administrative, and managerial	13,729	14,230	378	291	2.7	2.0
Professional specialty	14,580	15,387	252	292	1.7	1.9
Technical, sales, and administrative support	35,667	35,819	1,575	1,455	4.2	3.9
Technicians and related support	3,907	3,804	184	94	2.8	2.5
Sales occupations	13,680	13,879	652	672	4.5	4.6
Administrative support, including clerical	18,480	18,336	820	689	4.2	3.6
Service occupations	14,906	15,409	1,176	1,130	7.3	6.8
Private household	953	915	42	53	4.2	5.5
Protective service	1,851	1,990	86	97	4.5	4.7
Service, except private household and protective	12,104	12,503	1,048	980	8.0	7.3
Precision production, craft, and repair	13,722	13,883	704	712	4.9	5.0
Mechanics and repairers	4,464	4,333	163	176	3.5	3.9
Construction trades	5,132	5,113	361	345	6.6	6.3
Other precision production, craft, and repair	4,126	4,217	180	190	4.2	4.3
Operators, fabricators, and laborers	17,736	18,266	1,802	1,368	8.3	7.0
Machine operators, assemblers, and inspectors	8,099	8,271	711	616	8.1	6.9
Transportation and material moving occupations	4,896	4,960	318	210	6.1	4.1
Handlers, equipment cleaners, helpers, and laborers	4,743	4,975	573	542	10.8	9.8
Construction laborers	791	902	165	141	17.3	13.5
Other handlers, equipment cleaners, helpers, and laborers	3,951	4,072	409	401	9.4	9.0
Farming, forestry, and fishing	3,554	3,537	260	238	6.8	6.3

[1] Persons with no previous work experience and those whose last job was in the Armed Forces are included in the unemployed total.

Table A-12. Employment status of male Vietnam-era veterans and nonveterans by age, not seasonally adjusted

(Numbers in thousands)

Veteran status and age	Civilian noninstitutional population		Civilian labor force							
			Total		Employed		Unemployed			
							Number		Percent of labor force	
	Oct. 1987	Oct. 1988	Oct. 1987	Oct. 1988	Oct. 1987	Oct. 1988	Oct. 1987	Oct. 1988	Oct. 1987	Oct. 1988
VIETNAM-ERA VETERANS										
Total, 30 years and over	7,853	7,899	7,277	7,318	6,983	7,069	294	249	4.0	3.4
30 to 44 years	6,128	5,799	5,843	5,524	5,594	5,334	249	190	4.3	3.4
30 to 34 years	856	622	817	582	749	537	68	45	8.3	7.7
35 to 39 years	2,478	2,034	2,344	1,937	2,259	1,871	85	66	3.6	3.4
40 to 44 years	2,794	3,143	2,682	3,005	2,586	2,926	96	79	3.6	2.6
45 years and over	1,725	2,100	1,434	1,794	1,389	1,735	45	59	3.1	3.3
NONVETERANS										
Total, 30 to 44 years	19,741	20,707	18,785	19,703	17,974	18,974	811	729	4.3	3.7
30 to 34 years	8,920	9,165	8,541	8,768	8,147	8,410	394	358	4.6	4.1
35 to 39 years	6,379	6,997	6,074	6,857	5,838	6,618	236	239	3.9	3.6
40 to 44 years	4,442	4,545	4,170	4,278	3,989	4,146	181	132	4.3	3.1

NOTE: Male Vietnam-era veterans are men who served in the Armed Forces between August 5, 1964 and May 7, 1975. Nonveterans are men who have never served in the Armed Forces; published data are limited to those 30 to 44 years of age, the group that most closely corresponds to the bulk of the Vietnam-era veteran population.

HOUSEHOLD DATA

Table A-13. Employment status of the civilian population for eleven large States

(Numbers in thousands)

State and employment status	Not seasonally adjusted[1]			Seasonally adjusted[1]					
	Oct. 1987	Sept. 1988	Oct. 1988	Oct. 1987	June 1988	July 1988	Aug. 1988	Sept. 1988	Oct. 1988
California									
Civilian noninstitutional population	20,678	21,078	21,115	20,678	20,972	21,012	21,043	21,078	21,115
Civilian labor force	13,825	14,118	14,200	13,784	14,105	14,131	14,159	14,142	14,160
Employed	13,055	13,409	13,524	12,984	13,315	13,374	13,373	13,411	13,457
Unemployed	770	707	676	800	790	757	786	731	703
Unemployment rate	5.6	5.0	4.8	5.8	5.6	5.4	5.6	5.2	5.0
Florida									
Civilian noninstitutional population	9,507	9,731	9,752	9,507	9,671	9,693	9,711	9,731	9,752
Civilian labor force	5,966	6,119	6,174	5,851	6,115	6,102	6,162	6,121	6,168
Employed	5,670	5,810	5,871	5,666	5,831	5,837	5,862	5,820	5,863
Unemployed	296	310	303	295	284	265	300	301	305
Unemployment rate	5.0	5.1	4.9	4.9	4.6	4.3	4.9	4.9	4.9
Illinois									
Civilian noninstitutional population	8,754	8,790	8,793	8,754	8,781	8,786	8,787	8,790	8,793
Civilian labor force	5,866	5,816	5,849	5,857	5,709	5,760	5,887	5,797	5,807
Employed	5,525	5,506	5,495	5,463	5,332	5,394	5,472	5,450	5,425
Unemployed	371	313	353	394	377	366	415	347	382
Unemployment rate	6.3	5.4	6.0	6.7	6.6	6.4	7.0	6.0	6.6
Massachusetts									
Civilian noninstitutional population	4,593	4,605	4,606	4,593	4,603	4,604	4,604	4,605	4,606
Civilian labor force	3,109	3,130	3,149	3,111	3,188	3,137	3,119	3,144	3,157
Employed	3,025	3,036	3,060	3,014	3,076	3,020	3,015	3,051	3,054
Unemployed	84	94	89	97	112	117	104	93	103
Unemployment rate	2.7	3.0	2.8	3.1	3.5	3.7	3.3	3.0	3.3
Michigan									
Civilian noninstitutional population	6,951	7,007	7,012	6,951	6,993	6,999	7,002	7,007	7,012
Civilian labor force	4,523	4,588	4,596	4,520	4,553	4,587	4,586	4,572	4,583
Employed	4,212	4,283	4,291	4,187	4,253	4,251	4,229	4,238	4,255
Unemployed	310	305	305	333	300	336	337	334	328
Unemployment rate	6.9	6.6	6.6	7.4	6.6	7.3	7.4	7.3	7.2
New Jersey									
Civilian noninstitutional population	6,015	6,047	6,050	6,015	6,039	6,042	6,044	6,047	6,050
Civilian labor force	3,983	3,943	3,910	3,985	3,955	3,969	3,983	3,979	3,937
Employed	3,818	3,809	3,772	3,825	3,810	3,825	3,828	3,829	3,785
Unemployed	144	134	138	160	145	144	155	150	152
Unemployment rate	3.6	3.4	3.5	4.0	3.7	3.6	3.9	3.8	3.9
New York									
Civilian noninstitutional population	13,765	13,773	13,776	13,765	13,774	13,777	13,774	13,773	13,776
Civilian labor force	8,521	8,494	8,544	8,478	8,516	8,537	8,589	8,517	8,494
Employed	8,108	8,141	8,185	8,068	8,220	8,171	8,206	8,149	8,141
Unemployed	415	353	359	410	296	366	383	368	353
Unemployment rate	4.9	4.2	4.2	4.8	3.5	4.3	4.5	4.3	4.2
North Carolina									
Civilian noninstitutional population	4,834	4,900	4,906	4,834	4,883	4,889	4,894	4,900	4,906
Civilian labor force	3,336	3,329	3,377	3,324	3,318	3,332	3,339	3,332	3,367
Employed	3,207	3,226	3,249	3,188	3,213	3,235	3,236	3,209	3,232
Unemployed	129	103	128	136	105	97	103	123	135
Unemployment rate	3.9	3.1	3.8	4.1	3.2	2.9	3.1	3.7	4.0
Ohio									
Civilian noninstitutional population	8,171	8,208	8,212	8,171	8,199	8,203	8,205	8,208	8,212
Civilian labor force	5,243	5,251	5,327	5,215	5,271	5,252	5,298	5,251	5,311
Employed	4,940	4,952	5,052	4,900	4,959	4,973	5,000	4,947	5,016
Unemployed	302	300	276	315	312	279	298	304	295
Unemployment rate	5.8	5.7	5.2	6.0	5.9	5.3	5.6	5.8	5.6

See footnotes at end of table.

HOUSEHOLD DATA

Table A-13. Employment status of the civilian population for eleven large States—Continued

(Numbers in thousands)

State and employment status	Not seasonally adjusted[1]			Seasonally adjusted[2]					
	Oct. 1987	Sept. 1988	Oct. 1988	Oct. 1987	June 1988	July 1988	Aug. 1988	Sept. 1988	Oct. 1988
Pennsylvania									
Civilian noninstitutional population	9,303	9,327	9,330	9,303	9,322	9,325	9,325	9,327	9,330
Civilian labor force	5,797	5,845	5,770	5,734	5,702	5,735	5,786	5,815	5,707
Employed	5,489	5,549	5,478	5,403	5,410	5,433	5,526	5,500	5,394
Unemployed	308	296	292	331	292	302	260	315	313
Unemployment rate	5.3	5.1	5.1	5.8	5.1	5.3	4.5	5.4	5.5
Texas									
Civilian noninstitutional population	12,041	12,075	12,079	12,041	12,067	12,072	12,072	12,075	12,079
Civilian labor force	8,245	8,368	8,375	8,249	8,518	8,277	8,381	8,354	8,359
Employed	7,638	7,793	7,804	7,592	7,926	7,757	7,814	7,768	7,739
Unemployed	606	594	571	657	592	520	567	586	620
Unemployment rate	7.4	7.1	6.8	8.0	6.9	6.3	6.8	7.0	7.4

[1] These are the official Bureau of Labor Statistics' estimates used in the administration of Federal fund allocation programs.

[2] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and the seasonally adjusted columns.

Table B-1. Employees on nonagricultural payrolls by industry

(In thousands)

ESTABLISHMENT DATA

Industry	Not seasonally adjusted				Seasonally adjusted					
	Oct. 1987	Aug. 1988	Sept. 1988p/	Oct. 1988p/	Oct. 1987	June 1988	July 1988	Aug. 1988	Sept. 1988p/	Oct. 1988p/
Total	104,210	106,241	107,129	107,929	103,371	106,057	106,271	106,425	106,729	107,052
Total private	86,855	89,933	89,914	90,156	86,241	88,678	88,961	89,066	89,181	89,515
Goods-producing industries	25,484	26,895	26,119	26,132	25,825	25,592	25,663	25,639	25,642	25,734
Mining	746	746	739	738	740	740	740	739	733	731
Oil and gas extraction	423.8	423.6	418.7	417.2	421	425	424	423	419	414
Construction	5,323	5,703	5,656	5,635	5,860	5,388	5,330	5,340	5,361	5,356
General building contractors	1,400.8	1,482.7	1,459.5	1,455.6	1,340	1,412	1,400	1,401	1,403	1,393
Manufacturing	19,335	19,646	19,724	19,759	19,225	19,544	19,593	19,560	19,548	19,647
Production workers	13,226	13,407	13,499	13,529	13,118	13,341	13,382	13,352	13,335	13,419
Durable goods	11,368	11,536	11,605	11,663	11,315	11,515	11,566	11,547	11,534	11,597
Production workers	7,578	7,673	7,754	7,788	7,532	7,676	7,720	7,705	7,690	7,741
Lumber and wood products	755.5	777.9	772.5	773.1	744	757	756	753	751	762
Furniture and fixtures	532.9	535.1	539.5	544.1	529	537	541	537	537	540
Stone, clay, and glass products	591.8	599.8	597.5	598.0	585	587	589	586	584	589
Primary metal industries	762.6	781.8	789.7	790.8	766	781	789	785	787	796
Blast furnaces and basic steel products	276.0	281.8	280.5	279.9	278	281	282	281	280	282
Fabricated metal products	1,430.0	1,456.6	1,478.0	1,476.8	1,421	1,457	1,464	1,458	1,460	1,468
Machinery, except electrical	2,045.2	2,144.8	2,156.8	2,168.6	2,049	2,134	2,151	2,156	2,159	2,173
Electrical and electronic equipment	2,101.3	2,125.7	2,130.4	2,133.9	2,094	2,120	2,122	2,126	2,124	2,125
Transportation equipment	2,053.7	2,087.3	2,042.9	2,047.7	2,052	2,047	2,052	2,044	2,033	2,044
Motor vehicles and equipment	863.0	825.9	859.3	864.2	859	850	857	855	851	861
Instruments and related products	699.1	718.7	716.3	717.0	709	713	715	716	716	718
Miscellaneous manufacturing	385.9	387.1	389.1	392.9	377	382	387	384	383	384
Nondurable goods	7,975	8,112	8,119	8,116	7,910	8,029	8,027	8,013	8,014	8,050
Production workers	5,648	5,734	5,745	5,741	5,586	5,665	5,662	5,647	5,643	5,678
Food and kindred products	1,671.2	1,718.0	1,714.7	1,698.0	1,630	1,645	1,631	1,630	1,633	1,657
Tobacco manufactures	56.5	52.0	54.5	54.6	52	53	52	52	51	51
Textile mill products	734.7	722.5	726.8	725.2	731	727	726	719	722	722
Apparel and other textile products	1,118.4	1,089.6	1,095.4	1,097.1	1,106	1,097	1,096	1,089	1,087	1,085
Paper and allied products	682.7	693.6	691.0	691.7	682	691	692	691	688	690
Printing and publishing	1,521.5	1,567.4	1,570.6	1,577.9	1,522	1,565	1,567	1,572	1,575	1,579
Chemicals and allied products	1,035.4	1,076.3	1,071.8	1,070.0	1,036	1,065	1,067	1,070	1,069	1,070
Petroleum and coal products	167.1	170.6	169.8	169.5	167	167	167	167	168	169
Rubber and misc. plastics products	840.8	874.3	877.5	884.6	839	873	882	878	875	882
Leather and leather products	147.1	148.8	147.5	147.1	145	146	147	145	146	145
Service-producing industries	78,806	80,146	81,010	81,797	78,346	80,465	80,608	80,786	81,087	81,318
Transportation and public utilities	5,499	5,610	5,668	5,688	5,448	5,582	5,598	5,605	5,621	5,634
Transportation	3,267	3,338	3,415	3,438	3,214	3,332	3,345	3,351	3,368	3,384
Communication and public utilities	2,232	2,272	2,253	2,250	2,234	2,250	2,253	2,254	2,253	2,252
Wholesale trade	5,964	6,227	6,241	6,278	5,935	6,148	6,174	6,192	6,219	6,240
Durable goods	3,505	3,714	3,717	3,737	3,498	3,660	3,681	3,696	3,713	3,730
Nondurable goods	2,459	2,513	2,524	2,533	2,437	2,488	2,493	2,496	2,506	2,510
Retail trade	18,777	19,414	19,381	19,411	18,705	19,205	19,261	19,279	19,285	19,334
General merchandise stores	2,516.9	2,485.2	2,487.1	2,554.4	2,489	2,549	2,545	2,539	2,530	2,524
Food stores	2,978.5	3,115.8	3,115.5	3,146.6	2,971	3,080	3,097	3,106	3,109	3,140
Automotive dealers and service stations	2,029.8	2,119.7	2,107.0	2,108.8	2,026	2,076	2,088	2,095	2,092	2,105
Eating and drinking places	6,196.1	6,574.4	6,556.2	6,421.9	6,191	6,352	6,369	6,377	6,384	6,415
Finance, insurance, and real estate	6,589	6,771	6,706	6,683	6,684	6,679	6,684	6,689	6,690	6,700
Finance	3,283	3,324	3,296	3,287	3,295	3,304	3,308	3,298	3,299	3,300
Insurance	2,059	2,087	2,078	2,082	2,043	2,074	2,077	2,081	2,082	2,086
Real estate	1,267	1,360	1,330	1,314	1,266	1,301	1,307	1,310	1,309	1,314
Services	24,622	25,816	25,881	25,972	24,524	25,472	25,561	25,662	25,724	25,869
Business services	5,334.4	5,572.2	5,585.1	5,607.6	5,282	5,480	5,500	5,512	5,553	5,552
Health services	6,927.9	7,300.4	7,322.8	7,370.1	6,928	7,203	7,238	7,271	7,325	7,370
Government	17,356	16,308	17,215	17,773	17,130	17,379	17,330	17,359	17,568	17,539
Federal	2,944	2,980	2,970	2,972	2,966	2,951	2,951	2,956	2,991	2,993
State	4,081	3,842	4,012	4,189	3,985	4,049	4,059	4,070	4,094	4,091
Local	10,331	9,486	10,233	10,612	10,179	10,379	10,320	10,333	10,463	10,455

p = preliminary.

ESTABLISHMENT DATA

ESTABLISHMENT DATA

Table B-2. Average weekly hours of production or nonsupervisory workers1/ on private nonagricultural payrolls by industry

Industry	Not seasonally adjusted				Seasonally adjusted					
	Oct. 1987	Aug. 1988	Sept. 1988p/	Oct. 1988p/	Oct. 1987	June 1988	July 1988	Aug. 1988	Sept. 1988p/	Oct. 1988p/
Total private	34.9	35.0	34.8	34.9	34.9	34.7	34.9	34.6	34.7	34.8
Mining	42.9	42.8	42.1	42.6	(2)	(2)	(2)	(2)	(2)	(2)
Construction	38.8	38.6	38.4	38.9	(2)	(2)	(2)	(2)	(2)	(2)
Manufacturing	41.3	40.8	41.3	41.2	41.2	41.1	41.1	41.8	41.2	41.1
Overtime hours	4.0	3.9	4.2	4.1	3.9	3.9	3.9	3.9	3.9	4.0
Durable goods	41.8	41.3	42.0	42.0	41.8	41.8	41.8	41.6	41.9	41.9
Overtime hours	4.1	4.0	4.3	4.3	4.0	4.1	4.0	4.1	4.0	4.2
Lumber and wood products	40.6	40.3	40.2	40.6	40.4	40.2	40.5	40.8	39.9	40.4
Furniture and fixtures	40.8	39.3	40.0	40.2	40.1	39.4	39.7	39.0	39.5	39.5
Stone, clay, and glass products	43.0	42.5	42.9	42.9	42.5	42.4	42.1	42.1	42.4	42.4
Primary metal industries	43.4	43.1	44.0	43.9	43.6	43.6	43.4	43.5	44.0	44.1
Blast furnaces and basic steel products	43.5	43.6	44.7	44.6	43.9	44.3	44.0	44.0	44.6	44.8
Fabricated metal products	42.0	41.5	42.0	41.9	41.9	42.0	41.7	41.8	42.0	41.8
Machinery, except electrical	42.5	42.0	42.7	42.6	42.6	42.5	43.0	42.4	42.7	42.7
Electrical and electronic equipment	41.0	40.6	41.1	40.9	41.0	41.1	41.0	40.8	41.1	40.9
Transportation equipment	42.2	41.8	43.1	43.2	42.4	43.0	42.6	42.7	43.4	43.4
Motor vehicles and equipment	42.6	42.3	44.3	44.1	42.8	44.2	42.5	43.6	44.7	44.3
Instruments and related products	41.7	41.2	41.5	41.5	41.9	41.3	41.8	41.5	41.5	41.7
Miscellaneous manufacturing	40.0	39.0	39.3	39.5	39.5	39.3	39.2	39.2	39.2	39.0
Nondurable goods	40.5	40.2	40.5	40.2	40.4	40.1	40.2	40.1	40.2	40.1
Overtime hours	3.9	3.8	4.1	3.8	3.8	3.6	3.7	3.6	3.7	3.7
Food and kindred products	40.6	40.8	40.8	40.5	40.4	40.3	40.5	40.4	40.2	40.3
Tobacco manufactures	41.4	40.1	40.9	40.9	(2)	(2)	(2)	(2)	(2)	(2)
Textile mill products	42.0	41.3	41.4	41.1	41.8	40.7	41.1	41.1	41.1	40.9
Apparel and other textile products	37.5	36.9	37.1	37.1	37.5	36.9	36.9	36.8	37.2	36.9
Paper and allied products	43.7	42.9	43.7	43.4	43.6	43.2	43.2	43.2	43.3	43.3
Printing and publishing	38.2	38.2	38.5	38.8	38.1	38.0	38.0	38.0	38.1	37.9
Chemicals and allied products	42.3	41.8	42.4	41.9	42.5	42.4	42.3	42.1	42.2	42.1
Petroleum and coal products	44.0	44.6	44.5	44.3	(2)	(2)	(2)	(2)	(2)	(2)
Rubber and misc. plastics products	41.9	41.3	41.6	41.5	41.8	41.6	41.6	41.5	41.6	41.4
Leather and leather products	38.8	37.7	37.5	37.3	38.8	36.9	37.0	37.6	37.5	37.3
Transportation and public utilities	39.4	39.7	39.4	39.6	39.3	39.3	39.5	39.3	39.3	39.5
Wholesale trade	38.3	38.0	38.1	38.2	38.2	37.9	38.2	37.8	38.1	38.1
Retail trade	29.1	29.8	29.0	29.0	29.2	29.1	29.3	29.0	28.9	29.1
Finance, insurance, and real estate	36.2	35.7	35.8	36.0	(2)	(2)	(2)	(2)	(2)	(2)
Services	32.5	32.8	32.5	32.6	32.6	32.5	32.7	32.4	32.6	32.7

1/ Data relate to production workers in mining and manufacturing; construction workers in construction; and 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 employees on private nonagricultural payrolls.

2/ These series are not published seasonally adjusted since the seasonal component is small relative to the trend-cycle and/or irregular components and consequently cannot be separated with sufficient precision.
p = preliminary.

ESTABLISHMENT DATA

ESTABLISHMENT DATA

Table B-3. Average hourly and weekly earnings of production or nonsupervisory workers1/ on private nonagricultural payrolls by industry

Industry	Average hourly earnings				Average weekly earnings			
	Oct. 1987	Aug. 1988	Sept. 1988p/	Oct. 1988p/	Oct. 1987	Aug. 1988	Sept. 1988p/	Oct. 1988p/
Total private	$9.88	$9.24	$9.48	$9.45	$316.89	$323.40	$327.12	$329.81
Seasonally adjusted	9.87	9.32	9.37	9.44	316.54	322.47	325.14	328.51
Mining	12.42	12.62	12.76	12.66	532.82	530.04	537.20	539.32
Construction	12.82	12.95	13.12	13.12	497.42	499.87	503.81	510.37
Manufacturing	9.95	10.12	10.25	10.25	418.94	412.98	423.33	422.30
Durable goods	10.48	10.64	10.78	10.79	438.06	439.43	452.76	453.18
Lumber and wood products	8.42	8.58	8.67	8.73	341.85	345.77	348.53	354.44
Furniture and fixtures	7.71	8.00	8.07	8.05	314.57	314.40	322.80	323.61
Stone, clay, and glass products	10.27	10.46	10.54	10.57	441.61	444.55	452.17	453.45
Primary metal industries	12.80	12.11	12.26	12.18	520.88	521.94	539.44	534.70
Blast furnaces and basic steel products	13.88	13.96	14.09	13.99	601.78	608.66	629.82	621.16
Fabricated metal products	10.06	10.28	10.38	10.35	422.52	423.30	432.68	432.83
Machinery, except electrical	10.79	10.93	11.04	11.05	458.58	459.06	471.41	470.73
Electrical and electronic equipment	9.92	10.15	10.20	10.19	406.72	412.09	419.22	416.77
Transportation equipment	13.07	13.26	13.49	13.51	551.55	554.27	581.42	583.63
Motor vehicles and equipment	13.69	13.98	14.18	14.20	583.19	587.97	628.17	626.22
Instruments and related products	9.78	9.91	9.96	10.02	407.83	408.29	413.34	415.83
Miscellaneous manufacturing	7.79	7.93	8.00	8.09	311.60	309.27	314.40	319.56
Nondurable goods	9.20	9.48	9.50	9.48	372.60	377.88	384.75	381.10
Food and kindred products	8.88	9.04	9.12	9.05	360.53	368.83	372.10	366.53
Tobacco manufactures	13.18	14.84	14.07	14.09	545.63	595.08	575.46	576.28
Textile mill products	7.24	7.37	7.42	7.42	304.08	304.58	307.19	304.96
Apparel and other textile products	5.97	6.07	6.19	6.20	223.88	223.98	229.65	230.02
Paper and allied products	11.46	11.63	11.71	11.65	500.80	498.93	511.73	505.61
Printing and publishing	10.41	10.55	10.70	10.68	397.66	403.01	411.95	405.84
Chemicals and allied products	12.50	12.63	12.75	12.80	528.75	527.93	540.60	536.32
Petroleum and coal products	14.66	14.91	15.09	15.09	645.04	664.99	671.51	668.49
Rubber and misc. plastics products	8.93	9.14	9.18	9.17	374.17	377.48	381.89	380.56
Leather and leather products	6.12	6.23	6.30	6.35	237.46	234.87	236.25	236.86
Transportation and public utilities	12.12	12.35	12.36	12.42	477.53	490.30	486.98	491.83
Wholesale trade	9.65	9.88	10.00	10.10	369.60	375.44	381.00	385.82
Retail trade	6.16	6.26	6.37	6.39	179.26	186.55	184.73	185.51
Finance, insurance, and real estate	8.76	9.04	9.13	9.27	317.11	322.75	326.85	333.72
Services	8.61	8.79	8.98	9.09	279.83	288.31	291.85	296.33

1/ See footnote 1, table B-2.

p = preliminary.

Table B-4. Hourly Earnings Index for production or nonsupervisory workers1/ on private nonagricultural payrolls by industry

(1977=100)

Industry	Not seasonally adjusted					Seasonally adjusted						
	Oct. 1987	Aug. 1988	Sept. 1988p/	Oct. 1988p/	Percent change from: Oct. 1987-Oct. 1988	Oct. 1987	June 1988	July 1988	Aug. 1988	Sept. 1988p/	Oct. 1988p/	Percent change from: Sept. 1988-Oct. 1988
Total private nonfarm:												
Current dollars	174.8	178.6	180.5	181.5	3.8	174.9	178.6	179.3	179.5	180.2	181.6	0.8
Constant (1977) dollars	93.5	92.6	92.8	N.A.	(2)	93.5	93.2	93.2	92.9	92.9	N.A.	(3)
Mining	182.1	185.6	186.7	185.5	1.9	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Construction	156.7	158.5	160.4	160.6	2.5	155.2	157.8	158.8	158.6	159.2	159.0	-.1
Manufacturing	175.4	178.4	179.7	179.8	2.5	176.1	178.8	178.8	179.3	180.0	180.5	.3
Transportation and public utilities	177.5	181.0	181.8	182.9	3.0	177.5	181.0	181.5	181.9	181.3	182.9	.9
Wholesale trade	178.3	182.1	184.3	186.2	4.4	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Retail trade	161.9	165.7	168.0	168.5	4.0	162.1	165.7	166.8	166.7	167.0	168.6	1.0
Fince,insurance, and real estate	188.4	195.2	197.0	199.9	6.1	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Services	183.7	188.8	192.3	194.4	5.9	183.9	189.4	190.8	190.9	191.9	196.6	1.4

1/ See footnote 1, table B-2.

2/ Change is -.9 percent from September 1987 to September 1988, the latest month available.

3/ Change is .1 percent from August 1988 to September 1988, the latest month available.

4/ These series are not seasonally adjusted since the seasonal component is small relative to the trend-cycle and/or irregular components and consequently cannot be separated with sufficient precision.

N.A. Data not available.

p = preliminary.

NOTE: Beginning in 1989, the Hourly Earnings Index series will no longer be published in this release. For further information, see "Employment Cost Index Series to Replace Hourly Earnings Index," Monthly Labor Review, July 1988, pp.32-35.

ESTABLISHMENT DATA

ESTABLISHMENT DATA

Table B-5. Indexes of aggregate weekly hours of production or nonsupervisory workers1/ on private nonagricultural payrolls by industry

(1977=100)

Industry	Not seasonally adjusted				Seasonally adjusted					
	Oct. 1987	Aug. 1988	Sept. 1988p/	Oct. 1988p/	Oct. 1987	June 1988	July 1988	Aug. 1988	Sept. 1988p/	Oct. 1988p/
Total private	123.6	128.3	127.5	128.2	122.5	125.4	126.4	125.5	126.0	126.9
Goods-producing industries	103.5	105.3	106.3	106.5	101.8	103.2	103.3	102.8	103.1	103.8
Mining	86.4	84.7	84.1	84.8	85.8	85.0	85.6	83.5	82.6	83.5
Construction	147.9	150.8	155.5	157.0	136.7	144.8	142.4	142.5	143.4	144.6
Manufacturing	95.8	96.0	97.8	97.8	94.8	96.1	96.5	96.0	96.3	96.8
Durable goods	93.1	93.1	95.5	96.0	92.5	94.3	94.8	94.2	94.7	95.3
Lumber and wood products	104.5	106.9	105.5	106.7	102.2	103.8	103.9	102.5	101.6	104.3
Furniture and fixtures	117.0	112.5	116.0	117.6	114.1	113.4	115.1	112.8	114.8	114.5
Stone, clay, and glass products	89.9	88.6	91.0	91.1	87.1	88.1	88.8	87.5	87.7	88.3
Primary metal industries	65.9	67.8	70.1	69.9	66.5	68.6	69.0	68.7	69.8	70.5
Blast furnaces and basic steel products	52.4	54.5	55.6	54.7	53.9	55.4	55.3	54.8	55.0	55.8
Fabricated metal products	91.0	91.6	94.9	94.4	90.1	92.8	92.7	92.6	93.2	93.5
Machinery, except electrical	87.7	90.7	93.2	93.8	88.1	91.6	93.7	92.6	93.2	94.2
Electrical and electronic equipment	102.1	101.7	103.9	103.8	101.4	103.0	103.1	102.8	103.5	103.1
Transportation equipment	99.5	96.5	100.0	100.5	99.7	100.0	99.7	99.9	100.2	100.7
Motor vehicles and equipment	84.6	83.7	91.9	92.0	88.9	90.3	88.2	90.9	91.8	92.0
Instruments and related products	104.2	106.8	107.8	108.1	105.2	106.6	108.2	107.7	108.0	109.0
Miscellaneous manufacturing	87.4	84.8	86.3	87.6	83.4	84.5	85.1	84.2	84.2	85.8
Nondurable goods	99.7	100.4	101.2	100.5	98.3	98.9	99.1	98.7	98.7	99.0
Food and kindred products	104.4	108.5	108.6	106.2	100.5	101.4	100.6	100.2	99.9	100.2
Tobacco manufactures	82.9	72.1	77.4	77.2	71.7	71.4	73.7	72.8	68.6	67.2
Textile mill products	83.8	80.7	81.6	81.8	82.9	80.2	81.2	79.9	80.3	80.2
Apparel and other textile products	87.8	84.3	85.1	85.2	86.3	84.8	84.7	83.9	84.6	83.8
Paper and allied products	102.0	101.4	102.8	102.4	101.7	101.7	101.9	101.9	101.4	101.7
Printing and publishing	133.3	136.9	138.5	137.4	133.0	136.4	136.6	137.0	137.5	137.5
Chemicals and allied products	95.6	98.7	99.6	98.2	96.2	98.8	98.7	98.7	98.6	98.7
Petroleum and coal products	86.0	88.7	88.1	87.5	85.1	86.8	86.6	86.6	85.7	86.5
Rubber and misc. plastics products	119.4	122.5	126.1	125.2	118.7	123.4	124.8	124.2	125.9	124.2
Leather and leather products	59.1	57.2	56.9	56.2	58.2	54.9	55.5	56.0	56.3	55.5
Service-producing industries	134.7	141.0	139.3	140.1	134.3	137.8	139.1	138.1	138.7	139.6
Transportation and public utilities	112.3	115.5	115.9	116.7	110.9	113.8	114.7	114.5	114.5	115.3
Wholesale trade	121.6	126.9	127.4	128.2	120.7	124.9	126.3	125.4	126.9	127.2
Retail trade	123.7	130.6	126.7	126.8	123.5	126.2	127.3	126.2	125.6	126.7
Finance, insurance, and real estate	140.4	142.1	140.4	140.9	141.1	140.1	142.1	140.8	140.6	141.2
Services	155.1	163.6	162.1	163.7	154.8	160.0	161.5	160.7	161.9	163.2

1/ See footnote 1, table B-2.

p = preliminary.

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

Time span	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Over 1-month span:												
1986	57.8	47.3	49.5	58.8	51.9	46.8	51.9	54.1	51.4	55.8	58.9	58.9
1987	58.8	59.2	61.1	62.4	62.4	61.6	70.8	62.2	68.1	67.3	67.8	68.4
1988	61.6	61.6	62.2	63.8	58.1	68.9	61.4	51.9	p/47.5	p/61.9		
Over 3-month span:												
1986	50.8	47.6	45.7	46.2	46.2	46.2	48.1	51.9	50.5	55.9	59.7	59.2
1987	57.6	57.8	65.1	69.2	68.1	71.9	73.8	76.8	74.1	76.5	78.1	73.8
1988	71.6	66.8	67.8	66.8	71.4	69.7	68.4	p/57.6	p/57.6			
Over 6-month span:												
1986	48.1	47.3	43.8	42.7	43.2	47.8	46.5	50.8	55.9	53.2	55.9	58.4
1987	64.6	64.5	65.8	70.5	72.4	77.3	78.4	79.7	82.7	77.8	77.0	76.5
1988	73.5	70.3	70.3	73.8	78.5	p/66.8	p/63.5					
Over 12-month span:												
1986	42.2	41.6	43.8	44.9	45.7	48.6	46.8	48.6	51.6	53.8	56.5	57.8
1987	63.8	67.3	69.5	75.5	76.8	76.8	78.9	78.9	79.7	78.4	77.8	81.9
1988	77.6	77.6	p/73.8	p/73.2								

1/ Number of employees, seasonally adjusted for 1, 3, and 6 month spans, on the payrolls of 185 private nonagricultural industries. Data for the 12-month span are unadjusted.

NOTE: Figures are the percent of industries with employment rising. (Half of the unchanged components are counted as rising.) Data are centered within the spans.
p=preliminary.

Senator SARBANES. Thank you very much, Commissioner. We very much appreciate your testimony this morning.

I want to make reference to a report issued by the Bureau about a week ago entitled "Employment and Earnings Characteristics of Families, Third Quarter of 1988." As I understand it, the number of families in which both husband and wife are working rose 700,000, or about 3 percent, during the past year. Is that correct?

Mrs. NORWOOD. That is right.

Senator SARBANES. Was this an unusually large increase for a 1-year period?

Mrs. NORWOOD. It was sharp, yes. Considerably larger. Of course, we have had that kind of trend now for many years. I think we are seeing somewhat more of it now.

Senator SARBANES. With respect to wives and mothers who work, does the BLS have any data as to how much of that is voluntary and how much of it is involuntary, or the reason why they are working?

Mrs. NORWOOD. No, we don't. We have found it very difficult to get good data on why people are working. We did do a survey a while ago asking about hours of work and whether people wanted more or less hours, but it is very, very difficult to get at more than that. People's views on this subject change. Obviously most people work because they need the money; some people work for a variety of reasons.

Perhaps Mr. Bregger knows something more than I about that.

Mr. BREGGER. Not really. In terms of whether a person works because they want to or are forced to by economic circumstances, we really don't have that sort of information. As the Commissioner indicated, I think it would be extraordinarily difficult to try and pinpoint that. It would involve a lot of subjectivity.

Senator SARBANES. One of the tables in that release, as I understand it, indicates that married couple families with only the husband working had a 3.6-percent increase in median weekly earnings during that past year. Is that correct? I think that is table 6.

Mrs. NORWOOD. I believe so, yes.

Senator SARBANES. Whereas families with both the husband and wife working had a 4.3-percent increase.

The consumer price index increased 4.2 percent over the year.

Mrs. NORWOOD. That's right.

Senator SARBANES. So according to these figures, a family in which only the husband was working would not have stayed even with the consumer price index. In other words, their real position would have slipped. The family in which both the husband and wife were working would just about have stayed even, just a tiny bit better than staying even. Is that correct?

Mrs. NORWOOD. Yes.

Senator SARBANES. Doesn't that suggest that perhaps a very strong reason why we have had such a sharp rise in the number of families in which both the husband and wife are working is that it really requires the income of two or more earners in order to keep abreast of expenses?

Mrs. NORWOOD. Certainly there is information to suggest that many people are working for that reason. Part of the question, of course, is what kind of standard of living they are developing. Most

women certainly work because they need the money. I don't think there is any doubt about that. Sometimes it is to put children through school. We found in our consumer expenditure survey that that was probably one of the elements on which they spent money. Sometimes it is to buy a new car. There are some specific expenditures that frequently require the second earner in the family. Then there is the question of a general standard that people want to maintain.

Senator SARBANES. As I understand it, among married couples with children under the age of 6 the percent with both parents at work is at the highest it has ever been in our history. Is that correct?

Mrs. NORWOOD. It is increasing, yes. It has been increasing steadily for some time. Even for children under 1 year of age.

Senator SARBANES. It is now 52 percent, I gather.

Mrs. NORWOOD. That's about right.

Senator SARBANES. Do you know what it was a decade ago or two decades ago?

Mrs. NORWOOD. We can supply that for the record. I don't think we have that specific figure here.

Mr. Bregger says it is at least 15 percentage points higher than it was a decade ago. But we will supply the exact figures for the record.

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

Proportion of married couple families with children under 6 with both parents employed, March 1978-88

Year	Percent
1978	34.5
1979	36.7
1980	38.0
1981	40.0
1982	39.1
1983	39.3
1984	42.9
1985	Not available
1986	45.3
1987	49.1
1988	49.6

Source: Unpublished tabulations from the March supplement to the Current Population Survey, U.S. Department of Labor, Bureau of Labor Statistics
December 6, 1988

Senator SARBANES. When you say 15 percentage points, do you mean it has gone from 36 percent to 52 percent?

Mr. BREGGER. Roughly.

Senator SARBANES. So it has really been about a 50-percent increase in the number of families with both parents working in which there are children under the age of 6.

Mr. BREGGER. I was responding to a slightly different question. I was indicating what the participation rate is of women with young children, and their participation rate has gone from somewhere in the 30's to the mid-50's now, but I don't have the exact numbers.

Senator SARBANES. That would be about the same.

Mrs. NORWOOD. That is right.

Senator SARBANES. The 15-point increase represents a 50-percent jump in the number of women with young children who are now working. These median-income figures seem to lend some weight to the view that it has been prompted by the necessity to keep the standard of living from declining. Otherwise they would slip.

Mrs. NORWOOD. I think there is some truth to that. We also have had an increase in single-parent families who are struggling to make do with just one income.

Senator SARBANES. The other area I wanted to address was the relationship or correlation, if any, between the unemployment figures and some of the economic indicators we hear so much about. For instance, there has been a significant slowdown in GNP growth in the third quarter compared to the second quarter. We have had a decline in the leading indicators during 3 of the past 5 months, a decline in new orders for durable goods, and we have had a very slow pace in housing starts.

What is the passthrough between these declining economic indicators and the unemployment rate, if in fact there is one?

Mrs. NORWOOD. There is one. The business survey data have a significant effect particularly on the national income accounts and on the industrial production index. They are used almost directly in those estimates. The household survey estimates are used for the self-employed as well. The leading indicators has, of course, a number of other elements and in fact is being reviewed now. As I understand it, some of those elements will be changed.

I think what we have seen was a clear slowdown in economic growth as represented by these indicators in the summer quarter, and we did see a slowdown in growth in employment in our business survey over that period. This month we seem in the business survey to be back to where we were in the first 7 months of the year.

If we look at the household survey, we see consistent growth, but the growth in employment is much more moderate.

In my own view, it is probable that the business survey is perhaps overestimating employment slightly; the truth is somewhere in between these two surveys. We will know that better once the year is over and we are able to benchmark the business survey data with the unemployment insurance tax records.

Senator SARBANES. Commissioner, we thank you very much and we thank your colleagues very much. We look forward to hearing from you again next month.

The committee stands adjourned.

[Whereupon, at 11:45 a.m., the committee adjourned, subject to the call of the Chair.]

EMPLOYMENT-UNEMPLOYMENT

FRIDAY, DECEMBER 2, 1988

CONGRESS OF THE UNITED STATES,
JOINT ECONOMIC COMMITTEE,
Washington, DC.

The committee met, pursuant to notice, at 9:30 a.m., in room SD-628, Dirksen Senate Office Building, Hon. William Proxmire (member of the committee) presiding.

Present: Senator Proxmire and Representative Obey.

Also present: William Buechner, professional staff member.

OPENING STATEMENT OF SENATOR PROXMIRE, PRESIDING

Senator PROXMIRE. The committee will come to order. This morning, the Joint Economic Committee is very pleased to welcome the Commissioner of Labor Statistics, Janet Norwood, who is here to testify on the employment and unemployment situation for November.

This series of hearings on the monthly employment and unemployment figures began more than 17 years ago, on April 2, 1971. The first hearing was called in response to a Nixon administration policy that canceled the Commissioner's usual monthly press briefing on the employment data, a tradition that went back to the 1940's. The Commissioner's briefing provided a forum for "the public, truthful and unvarnished explanation" of the monthly data, as I said in my opening statement at the first hearing, a responsibility that was filled in 1971 by these committee hearings before the Joint Economic Committee.

We did this because, as I recall, the administration canceled the press conference because they felt that that was a bad interpretation from their standpoint by the Commissioner. He had indicated, as I recall, that the slight decrease in unemployment was not significant. And for that he was disciplined and told there would be no more press conferences. So, since then, we have had the hearings before this committee. We have had that every month for the last 17 years.

During those 17 years, the BLS Commissioners have testified before the Joint Economic Committee on a regular monthly basis, appearing as Commissioner Norwood remembers, even in snowstorms that have shut down the rest of the Government.

The first Commissioner to testify was Geoffrey Moore, who was succeeded in 1974 by Commissioner Julius Shishkin. For the past 10 years, the Commissioner's chair has been occupied with distinction by the current Commissioner, Janet Norwood, who has ap-

peared more than 100 times before this committee to testify on the monthly employment and unemployment figures.

The news Commissioner Norwood brings this morning is that the unemployment rate rose to 5.4 percent in November, despite an increase in total employment. It was much larger than anyone had predicted. Payroll employment rose by 463,000 last month, including an increase of 71,000 new jobs in manufacturing, and even with this number of new jobs, the economy was still not able to absorb all new workers entering the labor force in November and unemployment rose by 104,000. After 6 years of expansion, a total of 6.6 million people remain jobless.

I suppose one of the great questions which we would like to have some answers on is why the labor force had this extraordinary growth, whether there was a glitch in seasonal data. Whatever it was, it seems to call for an explanation. The committee will now hear from Commissioner Norwood for her "public, truthful and unvarnished explanation" of the employment and unemployment figures for November.

Before we do that, I want to call on my good friend and Wisconsin colleague and former chairman of the committee, Congressman Obey.

OPENING STATEMENT OF REPRESENTATIVE OBEY

Representative OBEY. I thank the Chair. I simply wanted to come here this morning because I knew that it was an historic occasion and, so to speak, the end of an era.

I have through the years developed a tremendous fondness and respect for the gentleman in the Chair. Given the fact that this is the last unemployment hearing which you will chair, I simply wanted to come here this morning to see if things were going to wind up any better after 18 years than they were when you held the first hearing.

I should note, though, that I came to Washington—the first day I was in Washington was April 2 of 1969, and it took only 2 years for the economy to get in such trouble that the Chair thought it was necessary to begin holding these unemployment hearings.

I simply want to pay tribute to the job which Bill Proxmire has done through the years on this committee. I think his work on this committee has exemplified his concern about taxpayers' dollars, as evidenced by the many hearings that he ran in trying to focus attention on waste in the Pentagon, among other issues which he tackled in this committee through the years.

Also, I think he has demonstrated, as has the witness in the chair, an insistence on calling things exactly as he has seen them through the years, and he has certainly demonstrated his deep and abiding concern for rational fiscal policy which does not forever land us deep in hock, for which I think taxpayers owe him much.

I have no doubt that Bill Proxmire will go down in history, if I can engage in a little analysis of my own State, as one of the four giants in Wisconsin history in terms of the people they have sent to the congressional delegation, the others being the two La Follettes and Gaylord Nelson.

Rather than having any question for the witness, which I will hold for later, I do have one question for the Chair. Senator, have you ever been able to get Mrs. Norwood to answer a question that she didn't want to answer? [Laughter.]

Senator PROXMIRE. I have given up trying.

We have a marvelous Commissioner and I want to thank you, Congressman Obey, so much for those very excellent and so honest and true statements about me.

Before we begin, Mrs. Norwood, I have a written opening statement from the chairman of the committee, Senator Sarbanes, for insertion in the hearing record. Without objection, it is so ordered.

[The written opening statement follows:]

WRITTEN OPENING STATEMENT OF SENATOR SARBANES, CHAIRMAN

I regret that I am unable to be in Washington this morning and want to express my appreciation to my distinguished colleague, the senior Senator from Wisconsin, for his willingness to chair today's hearing on the November employment situation.

It was the foresight of Bill Proxmire that led to the first of these hearings in 1971. When the Bureau of Labor Statistics was directed by the Nixon administration to cancel its regular monthly unemployment press conference Bill Proxmire, as Chairman of the Joint Economic Committee, promptly convened a hearing in this Committee to review the data. Subsequently the monthly hearing on the employment situation was incorporated into the Committee's schedule. Over eighteen years the Committee has held more than 100, and Bill Proxmire has chaired more than two-thirds of them.

Again and again, the hearings have proved invaluable. The testimony presented by the Bureau of Labor Statistics at the Committee's monthly unemployment hearings have given us not only

a regular snapshot of changing employment and unemployment conditions but an opportunity to examine significant long-range questions of employment, wage and price trends.

Bill Proxmire's contribution to the Joint Economic Committee has not been limited to the monthly employment/unemployment hearings, however. Despite the heavy demands of his time of the Chairmanship of the Senate Committee on Banking, Housing and Urban Affairs, and the Chairmanship of the Senate Appropriations Subcommittee on HUD-Independent Agencies, Bill has continued to commit his extraordinary talents and energies to the work of the JEC. As Chairman of the JEC's Subcommittee on National Security Economics he has focused unsparingly on the inefficiencies of the Nation's military procurement system; and he has held hearings on the Soviet, Chinese and Eastern Bloc economies which time and again have been an indispensable source of information to the Congress, scholars and the broader public. Bill has always managed to participate in the Committee's hearings whenever his crowded schedule permitted, and his broad knowledge of the economic issues facing the Nation, unflinching honesty, acuity and good humor will be long remembered.

It has been my privilege to serve with Bill Proxmire on the Joint Economic Committee for more than a decade. I am deeply grateful for all I have learned serving at his side; and for his advice, counsel and friendship.

Senator PROXMIRE. Go right ahead, Mrs. Norwood.

STATEMENT OF HON. JANET L. NORWOOD, COMMISSIONER, BUREAU OF LABOR STATISTICS, DEPARTMENT OF LABOR, ACCOMPANIED BY THOMAS J. PLEWES, ASSOCIATE COMMISSIONER, OFFICE OF EMPLOYMENT AND UNEMPLOYMENT STATISTICS; AND KENNETH V. DALTON, ASSOCIATE COMMISSIONER, OFFICE OF PRICES AND LIVING CONDITIONS

Mrs. NORWOOD. Thank you very much, Senator. Tom Plewes and Ken Dalton and I are very happy to be here.

With your permission, I too would like to make a comment this morning. I am quite aware that this is your final appearance as chair of this committee and that it has been 17 years since you first inaugurated this monthly hearing. And I have participated with you in most of them over the last decade.

You have done much to raise the country's awareness of the importance of statistical information and to increase public understanding of the labor market. On the rare occasions over the last decade when the committee has not held a hearing, I have continued the tradition you started by holding a press conference.

I well remember that on one of those occasions, you were there as well. You attended as a reporter on behalf of a publication that was identified as the Proxmire News. There, as always at these hearings, your penetrating questions and thoughtful analysis of the statistics contributed to the depth of understanding of the meaning behind the numbers.

Your questions at these committee hearings have always been searching and incisive and, frankly, not always very easy for those of us on this side of the table to answer. I really want you to know how much we have appreciated your interest in our work and the support you have given us. The U.S. statistical system owes a great deal to you.

When you leave the Senate, the public service will lose one of its most effective stars. But we look forward, all of us, to further discussions with you in the future as you undertake the new challenges that lie ahead.

And now let me follow with my statement. The labor market continued to show strength in November as the economy completed a sixth year of expansion. Employment rose markedly—by about 450,000—in both the household and the business surveys. The overall unemployment rate, at 5.3 percent, and the civilian worker rate, at 5.4 percent, have changed very little since spring, but both rates are half a percentage point below their year-earlier levels.

Widespread job gains were reported, after seasonal adjustment, in the payroll survey, especially in services, manufacturing, and contruction. The employment gain in the services industry was particularly large—195,000—reflecting strong growth in health and business services, as well as in most of the components of this diverse industry group.

Factory employment picked up for the second month in a row, following a late summer decline. As was the case in services, the gain was broad based, with increases in virtually every major industry group.

Over the past year, the number of factory jobs has risen by 425,000. This growth has been concentrated in a limited number of industries, with machinery alone accounting for more than a quarter of the gain. Construction employment was up by 55,000 over the month, after 4 months of sluggish activity.

Civilian employment, as measured by the household survey, also jumped sharply in November, following 4 months of only very moderate increases. Unemployment rates for most worker groups were little changed over the month and, indeed, have fluctuated within comparatively narrow ranges for much of this year.

The economic expansion reached its sixth birthday in November and shows some very interesting patterns. In the 2 years immediately after the steep 1981–82 recession, the labor market rebounded very strongly. The expansion then moderated in the middle 2 years before resuming a strong upward swing in 1987 and 1988.

During the initial rebound period, employment rose by roughly 7 million in both surveys, and the civilian unemployment rate dropped from 10.8 to 7.2 percent. In the middle period, employment growth slowed markedly—to about 4.5 million in both surveys—and the jobless rate edged down by only 0.3 of a percentage point—from 7.2 to 6.9 percent.

Stronger job growth resumed in 1987 and 1988, but, during this period, the payroll survey showed more of an increase than did the household survey. The jobless rate dropped another 1.5 percentage points.

Dramatic swings in manufacturing employment were a major factor in the different rates of job growth in the three periods of the expansion. The number of factory jobs jumped by 1.4 million in the initial recovery period, fell by about 600,000 in the middle years, and rebounded by 850,000 in the last 2 years. Not unexpectedly, changes in the unemployment rate for adult men have tracked closely with the factory job swings.

The adult male jobless rate fell by nearly 4 precentage points during the rebound from the recession, was unchanged in the middle years, and dropped from 6.2 to 4.8 percent in the last 2 years.

As a result of the strong employment growth from October to November, the civilian employment-population ratio rose to a new high. A total of 116 million persons in this country are not at work. The labor force has grown by 2 million over the last year, and participation rates are at very high levels.

There is increasing concern expressed by some about the potential for shortages in the supply of labor. In examining this issue, however, we need to distinguish between two kinds of shortages. Job vacancies that require workers with special skills may remain unfilled because there simply are not enough people with the necessary qualifications. Development of the required labor force may take considerable time, depending on the amount of education and training involved.

On the other hand, vacancies may exist despite the availability of workers capable of performing the required tasks. In this case, adjustments are accommodated through a variety of labor market mechanisms. Unfortunately, we do not have sufficient data to analyze fully these phenomena.

We know a great deal from the current population survey about the characteristics of the people who work or who look for work. In November, 6.6 million people without jobs were looking for work. They clearly constitute a supply of labor. Their ability to find jobs may be affected by geographic location, skill level, their wage expectations, and by possible discrimination.

In addition, some of those who remain outside the labor force may want to work under certain circumstances. It would be useful to learn more about the conditions under which this group would enter the labor force. On the demand side, we know very little about the number and the types of job vacancies.

We would be glad to try to answer any questions that you may have.

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

Unemployment rates of all civilian workers by alternative seasonal adjustment methods

Month and year	Unadjusted rate	X-11 ARIMA method							X-11 method (official method before 1980)	Range (cols. 2-9)
		Official procedure	Concurrent (as first computed)	Concurrent (revised)	Stable	Total	Residual	12-month extrapolation		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1987										
November....	5.6	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	-
December....	5.4	5.8	5.8	5.8	5.7	5.7	5.8	5.8	5.8	.1
1988										
January.....	6.3	5.8	5.8	5.8	5.8	5.8	5.6	5.8	5.8	.2
February....	6.2	5.7	5.7	5.7	5.8	5.7	5.6	5.7	5.8	.2
March.....	5.9	5.6	5.6	5.6	5.7	5.6	5.5	5.6	5.6	.2
April.....	5.3	5.4	5.5	5.5	5.5	5.4	5.4	5.4	5.4	.1
May.....	5.4	5.6	5.6	5.6	5.6	5.6	5.8	5.6	5.6	.2
June.....	5.5	5.3	5.4	5.4	5.3	5.4	5.4	5.3	5.3	.1
July.....	5.5	5.4	5.4	5.4	5.4	5.5	5.4	5.4	5.4	.1
August.....	5.4	5.6	5.6	5.6	5.5	5.6	5.7	5.6	5.6	.2
September...	5.2	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	-
October.....	5.0	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	-
November....	5.2	5.4	5.4	5.4	5.4	5.4	5.3	5.4	5.4	.1

SOURCE: U.S. DEPARTMENT OF LABOR
Bureau of Labor Statistics
December 1988

(1) Unadjusted rate. Unemployment rate for all civilian workers, not seasonally adjusted.

(2) Official procedure (X-11 ARIMA method). The published seasonally adjusted rate for all civilian workers. Each of the 3 major civilian labor force components—agricultural employment, nonagricultural employment and unemployment—for 4 age-sex groups—males and females, ages 16-19 and 20 years and over—are seasonally adjusted independently using data from January 1974 forward. The data series for each of these 12 components are extended by a year at each end of the original series using ARIMA (Auto-Regressive, Integrated, Moving Average) models chosen specifically for each series. Each extended series is then seasonally adjusted with the X-11 portion of the X-11 ARIMA program. The 4 teenage unemployment and nonagricultural employment components are adjusted with the additive adjustment model, while the other components are adjusted with the multiplicative model. The unemployment rate is computed by summing the 4 seasonally adjusted unemployment components and calculating that total as a percent of the civilian labor force total derived by summing all 12 seasonally adjusted components. All the seasonally adjusted series are revised at the end of each year. Extrapolated factors for January-June are computed at the beginning of each year; extrapolated factors for July-December are computed in the middle of the year after the June data become available. Each set of 6-month factors are published in advance, in the January and July issues, respectively, of Employment and Earnings.

(3) Concurrent (as first computed, X-11 ARIMA method). The official procedure for computation of the rate for all civilian workers using the 12 components is followed except that extrapolated factors are not used at all. Each component is seasonally adjusted with the X-11 ARIMA program each month as the most recent data become available. Rates for each month of the current year are shown as first computed; they are revised only once each year, at the end of the year when data for the full year become available. For example, the rate for January 1984 would be based, during 1984, on the adjustment of data from the period January 1974 through January 1984.

(4) Concurrent (revised, X-11 ARIMA method). The procedure used is identical to (3) above, and the rate for the current month (the last month displayed) will always be the same in the two columns. However, all previous months are subject to revision each month based on the seasonal adjustment of all the components with data through the current month.

(5) Stable (X-11 ARIMA method). Each of the 12 civilian labor force components is extended using ARIMA models as in the official procedure and then run through the X-11 part of the program using the stable option. This option assumes that seasonal patterns are basically constant from year-to-year and computes final seasonal factors as unweighted averages of all the seasonal-irregular components for each month across the entire span of the period adjusted. As in the official procedure, factors are extrapolated in 6-month intervals and the series are revised at the end of each year. The procedure for computation of the rate from the seasonally adjusted components is also identical to the official procedure.

(6) Total (X-11 ARIMA method). This is one alternative aggregation procedure, in which total unemployment and civilian labor force levels are extended with ARIMA models and directly adjusted with multiplicative adjustment models in the X-11 part of the program. The rate is computed by taking seasonally adjusted total unemployment as a percent of seasonally adjusted total civilian labor force. Factors are extrapolated in 6-month intervals and the series revised at the end of each year.

(7) Residual (X-11 ARIMA method). This is another alternative aggregation method, in which total civilian employment and civilian labor force levels are extended using ARIMA models and then directly adjusted with multiplicative adjustment models. The seasonally adjusted unemployment level is derived by subtracting seasonally adjusted employment from seasonally adjusted labor force. The rate is then computed by taking the derived unemployment level as a percent of the labor force level. Factors are extrapolated in 6-month intervals and the series revised at the end of each year.

(8) 12-month extrapolation (X-11 ARIMA method). This approach is the same as the official procedure except that the factors are extrapolated in 12-month intervals. The factors for January-December of the current year are computed at the beginning of the year based on data through the preceding year. The values for January through June of the current year are the same as the official values since they reflect the same factors.

(9) X-11 method (official method before 1980). The method for computation of the official procedure is used except that the series are not extended with ARIMA models and the factors are projected in 12-month intervals. The standard X-11 program is used to perform the seasonal adjustment.

Methods of Adjustment: The X-11 ARIMA method was developed at Statistics Canada by the Seasonal Adjustment and Times Series Staff under the direction of Estela Bee Dagum. The method is described in The X-11 ARIMA Seasonal Adjustment Method, by Estela Bee Dagum, Statistics Canada Catalogue No. 12-564E, February 1980.

The standard X-11 method is described in X-11 Variant of the Census Method II Seasonal Adjustment Program, by Julius Shiskin, Allan Young and John Musgrave (Technical Paper No. 15, Bureau of the Census, 1967).

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

Technical information: (202) 523-1371
523-1944
523-1959
Media contact: 523-1913

USDL 88-603

TRANSMISSION OF MATERIAL IN THIS RELEASE IS EMBARGOED UNTIL 8:30 A.M. (EST), FRIDAY, DECEMBER 2, 1988

THE EMPLOYMENT SITUATION: NOVEMBER 1988

Employment rose sharply in November, and the unemployment rate was little changed, the Bureau of Labor Statistics of the U.S. Department of Labor reported today. The overall unemployment rate was 5.3 percent, and the civilian worker rate was 5.4 percent. Both have shown little movement since the spring.

Nonagricultural payroll jobs, as measured by the survey of business establishments, increased by 465,000 to 107.4 million. Total civilian employment, as measured by the household survey, rose by a similar amount to 116.0 million.

Unemployment (Household Survey Data)

The civilian worker unemployment rate and the number of unemployed persons were essentially unchanged in November at 5.4 percent and 6.6 million persons, respectively. These series have moved within relatively narrow ranges for most of this year--5.3 to 5.6 percent for the jobless rate and 6.5 to 6.8 million persons for the level of unemployment. (See table A-2.)

Jobless rates for adult men (4.8 percent), adult women (4.8 percent), teenagers (13.9 percent), whites (4.6 percent), blacks (11.2 percent), and Hispanics (8.1 percent) showed little or no movement in November. Whereas all of these groups have shown some improvement over the past year, the largest drop occurred among teenagers--3 percentage points. Most of this was among white teens, as the rate for black teenagers continues to remain above 30 percent. (See tables A-2 and A-3.)

The number of newly unemployed persons, those unemployed less than 5 weeks, has been between 3.0 and 3.2 million every month since mid-1987. In contrast, the number of long-term unemployed, those jobless for more than half a year, has declined over this period, from 1.1 million to about 700,000. (See table A-7.)

Civilian Employment and the Labor Force (Household Survey Data)

Civilian employment expanded by 455,000 to 116.0 million in November, and the employment-population ratio gained 0.2 percentage point to reach a record high of 62.6 percent. Most of November's employment gain occurred among adult women, whose employment increased by 380,000. Over the year, total civilian employment has increased by 2.5 million. The number of persons voluntarily working part-time schedules, at 15.5 million in November, was 1.1 million more than a year earlier. (See tables A-2 and A-4.)

After remaining essentially unchanged from August to October, the civilian labor force jumped by 560,000 to 122.6 million in November. As a result, the labor force participation rate rose 0.3 percentage point to a record 66.5 percent. Over the year, the labor force has expanded by 2.0 million, 1.4 million of whom were adult women. (See table A-2.)

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

Category	Quarterly averages		Monthly data			Oct.-Nov. change
	1988		1988			
	II	III	Sept.	Oct.	Nov.	
HOUSEHOLD DATA						
	Thousands of persons					
Labor force 1/.....	122,968	123,569	123,628	123,699	124,277	578
Total employment 1/..	116,352	116,878	117,032	117,208	117,681	473
Civilian labor force...	121,258	121,880	121,924	122,012	122,572	560
Civilian employment..	114,642	115,189	115,328	115,521	115,976	455
Unemployment.....	6,616	6,691	6,596	6,491	6,595	104
Not in labor force.....	63,131	62,960	63,038	63,102	62,672	-430
Discouraged workers..	910	930	N.A.	N.A.	N.A.	N.A.
	Percent of labor force					
Unemployment rates:						
All workers 1/.....	5.4	5.4	5.3	5.2	5.3	0.1
All civilian workers.	5.5	5.5	5.4	5.3	5.4	.1
Adult men.....	4.7	4.6	4.5	4.6	4.8	.2
Adult women.....	4.9	4.9	4.8	4.7	4.8	.1
Teenagers.....	15.0	15.6	15.7	14.9	13.9	-1.0
White.....	4.6	4.8	4.8	4.6	4.6	0
Black.....	12.0	11.2	10.8	11.0	11.2	.2
Hispanic origin....	9.1	7.9	7.4	7.7	8.1	.4
ESTABLISHMENT DATA						
	Thousands of jobs					
Nonfarm employment.....	105,609	106,478	106,737	p106,975	p107,438	p463
Goods-producing.....	25,498	25,650	25,648	p25,741	p25,860	p119
Service-producing....	80,111	80,828	81,089	p81,234	p81,578	p344
	Hours of work					
Average weekly hours:						
Total private.....	34.8	34.7	34.7	p34.9	p34.7	p-0.2
Manufacturing.....	41.1	41.1	41.2	p41.2	p41.2	p0
Overtime.....	3.9	3.9	3.9	p4.0	p4.0	p0

1/ Includes the resident Armed Forces. N.A.=not available.
p=preliminary.

Industry Payroll Employment (Establishment Survey Data)

Total nonagricultural employment rose by 465,000 in November, seasonally adjusted, to a level of 107.4 million. Increases were widespread, occurring in both goods-producing and service-producing industries. (See table B-1.)

The service-producing sector added 345,000 jobs in November, after seasonal adjustment. Following more moderate growth in recent months, employment gains in the services industry itself totaled 195,000, with increases spread across most of its major industries. Elsewhere in the sector, transportation and public utilities jobs increased by 40,000, mostly in the transportation component. Job growth of 30,000 in wholesale trade occurred mainly in the distribution of durable goods. Employment in finance, insurance, and real estate rose by about 20,000 for the second month in a row. Employment in retail trade and in government was little changed after seasonal adjustment.

In the goods-producing sector, manufacturing employment rose sharply for the second month in a row. The 70,000 increase reflected widespread gains among durable and nondurable goods industries, with particular strength in machinery, electrical equipment, and lumber and wood products. Construction employment rose by 55,000, after seasonal adjustment, as seasonal cutbacks were smaller than usual. In contrast, the number of mining jobs continued to edge downward in November, having declined by nearly 20,000 in the past 4 months, all of it in the oil and gas extraction component.

Weekly Hours (Establishment Survey Data)

The average workweek for production or nonsupervisory workers on private nonagricultural payrolls dropped by 0.2 hour in November, seasonally adjusted, to 34.7 hours, the same level as in September. In manufacturing, both the workweek and overtime were unchanged at historically high levels of 41.2 and 4.0 hours, respectively. (See table B-2.)

The index of aggregate weekly hours of production or nonsupervisory workers on private nonagricultural payrolls, at 127.0 (1977=100), was essentially unchanged in November, as the drop in the workweek about offset the gain in employment. The index for manufacturing rose by 0.5 percent to 97.4. (See table B-5.)

Hourly and Weekly Earnings (Establishment Survey Data)

Average hourly earnings of private production or nonsupervisory workers were little changed in November on a seasonally adjusted basis. Average weekly earnings declined 0.7 percent, reflecting the decrease in the workweek. Prior to seasonal adjustment, average hourly earnings remained at $9.45, and average weekly earnings fell by $1.89 to $327.92. (See table B-3.)

The Hourly Earnings Index (Establishment Survey Data)

The Hourly Earnings Index (HEI) was 181.5 (1977=100) in November, seasonally adjusted, unchanged from October. For the 12 months ended in November, the increase was 3.3 percent. In dollars of constant purchasing power, the HEI decreased 0.4 percent during the 12-month period ending in October. The HEI is computed so as to exclude the effects of two types of changes unrelated to underlying wage rate movements--fluctuations in manufacturing overtime and interindustry employment shifts. (Beginning in 1989, the Hourly Earnings Index will no longer be published in this release.) (See table B-4.)

The Employment Situation for December 1988 will be released on Friday, January 6, 1989, at 8:30 A.M. (EST). Release dates for the balance of 1989 are as follows:

Feb. 3	May 5	Aug. 4	Nov. 3
March 10	June 2	Sept. 1	Dec. 8
April 7	July 7	Oct. 6	

Revisions in Household Survey Data

In accordance with usual practice, the Employment Situation release of December data will incorporate annual revisions in seasonally adjusted unemployment and other labor force series. Seasonally adjusted data for the most recent 5 years are subject to revision.

Changes in Data Presentation

Beginning with data for January 1989, this release will introduce a new table showing seasonally adjusted average hourly earnings series for major industry divisions, manufacturing earnings excluding overtime, and total private real earnings. This will coincide with the Bureau's discontinuance of the Hourly Earnings Index, now shown in table B-4.

In addition, a broader-based diffusion index of employment change, comprised of 349 private nonagricultural industries, will replace the 185-industry index shown in table B-6. This table will also include a diffusion index for manufacturing, comprised of 143 industries.

Explanatory Note

This news release presents statistics from two major surveys, the Current Population Survey (household survey) and the Current Employment Statistics Survey (establishment survey). The household survey provides the information on the labor force, total employment, and unemployment that appears in the A tables, marked HOUSEHOLD DATA. It is a sample survey of about 55,800 households that is conducted by the Bureau of the Census with most of the findings analyzed and published by the Bureau of Labor Statistics (BLS).

The establishment survey provides the information on the employment, hours, and earnings of workers on nonagricultural payrolls that appears in the B tables, marked ESTABLISHMENT DATA. This information is collected from payroll records by BLS in cooperation with State agencies. The sample includes over 300,000 establishments employing over 38 million people.

For both surveys, the data for a given month are actually collected for and relate to a particular week. In the household survey, unless otherwise indicated, it is the calendar week that contains the 12th day of the month, which is called the survey week. In the establishment survey, the reference week is the pay period including the 12th, which may or may not correspond directly to the calendar week.

The data in this release are affected by a number of technical factors, including definitions, survey differences, seasonal adjustments, and the inevitable variance in results between a survey of a sample and a census of the entire population. Each of these factors is explained below.

Coverage, definitions, and differences between surveys

The sample households in the household survey are selected so as to reflect the entire civilian noninstitutional population 16 years of age and older. Each person in a household is classified as employed, unemployed, or not in the labor force. Those who hold more than one job are classified according to the job at which they worked the most hours.

People are classified as *employed* if they did any work at all as paid civilians; worked in their own business or profession or on their own farm; or worked 15 hours or more in an enterprise operated by a member of their family, whether they were paid or not. People are also counted as employed if they were on unpaid leave because of illness, bad weather, disputes between labor and management, or personal reasons. Members of the Armed Forces stationed in the United States are also included in the employed total.

People are classified as *unemployed*, regardless of their eligibility for unemployment benefits or public assistance, if they meet all of the following criteria: They had no employment during the survey week; they were available for work at that time; and they made specific efforts to find employment sometime during the prior 4 weeks. Persons laid off from their former jobs and awaiting recall and those expecting to report to a job within 30 days need not be looking for work to be counted as unemployed.

The *labor force* equals the sum of the number employed and the number unemployed. The *unemployment rate* is the percentage of unemployed people in the labor force (civilian plus the resident Armed Forces). Table A-5 presents a special grouping of seven measures of unemployment based on varying definitions of unemployment and the labor force. The definitions are provided in the table. The most restrictive definition yields U-1 and the most comprehensive yields U-7. The overall unemployment rate is U-5a, while U-5b represents the same measure with a civilian labor force base.

Unlike the household survey, the establishment survey only counts wage and salary employees whose names appear on the payroll records of nonagricultural firms. As a result, there are many differences between the two surveys, among which are the following:

— The household survey, although based on a smaller sample, reflects a larger segment of the population; the establishment survey excludes agriculture, the self-employed, unpaid family workers, private household workers, and members of the resident Armed Forces;

— The household survey includes people on unpaid leave among the employed; the establishment survey does not;

— The household survey is limited to those 16 years of age and older; the establishment survey is not limited by age;

— The household survey has no duplication of individuals, because each individual is counted only once; in the establishment survey, employees working at more than one job or otherwise appearing on more than one payroll would be counted separately for each appearance.

Other differences between the two surveys are described in "Comparing Employment Estimates from Household and Payroll Surveys," which may be obtained from the BLS upon request.

Seasonal adjustment

Over the course of a year, the size of the Nation's labor force and the levels of employment and unemployment undergo sharp fluctuations due to such seasonal events as changes in weather, reduced or expanded production, harvests, major holidays, and the opening and closing of schools. For example, the labor force increases by a large number each June, when schools close and many young people enter the job market. The effect of such seasonal variation can be very large; over the course of a year, for example, seasonality may account for as much as 95 percent of the month-to-month changes in unemployment.

Because these seasonal events follow a more or less regular pattern each year, their influence on statistical trends can be eliminated by adjusting the statistics from month to month. These adjustments make nonseasonal developments, such as declines in economic activity or increases in the participation of women in the labor force, easier to spot. To return to the school's-out example, the large number of people entering the labor force each June is likely to obscure any other changes that have taken place since May, making it difficult to determine if the level of economic activity has risen or declined. However, because the effect of students finishing school in previous years is known, the statistics for the current year can be adjusted to allow for a comparable change. Insofar as the seasonal adjustment is made correctly, the adjusted figure provides a more useful tool with which to analyze changes in economic activity.

Measures of labor force, employment, and unemployment contain components such as age and sex. Statistics for all employees, production workers, average weekly hours, and average hourly earnings include components based on the employer's industry. All these statistics can be seasonally adjusted either by adjusting the total or by adjusting each of the components and combining them. The second procedure usually yields more accurate information and is therefore followed by BLS. For example, the seasonally adjusted figure for the labor force is the sum of eight seasonally adjusted civilian employment components, plus the resident Armed Forces total (not adjusted for seasonality), and four seasonally adjusted unemployment components; the total for unemployment is the sum of the four unemployment components; and the overall unemployment rate is derived by dividing the resulting estimate of total unemployment by the estimate of the labor force.

The numerical factors used to make the seasonal adjustments are recalculated regularly. For the household survey, the factors are calculated for the January-June period and again for the July-December period. The January revision is applied to data that have been published over the previous 5 years. For the establishment survey, updated factors for seasonal adjustment are calculated only once a year, along with the introduction of new benchmarks which are discussed at the end of the next section.

Sampling variability

Statistics based on the household and establishment surveys are subject to sampling error, that is, the estimate of the number of people employed and the other estimates drawn from these surveys probably differ from the figures that would be obtained from a complete census, even if the same questionnaires and procedures were used. In the household survey, the amount of the differences can be expressed in terms of standard errors. The numerical value of a standard error depends upon the size of the sample, the results of the survey, and other factors. However, the numerical value is always such that the chances are approximately 68 out of 100 that an estimate based on the sample will differ by no more than the standard error from the results of a complete census. The chances are approximately 90 out of 100 that an estimate based on the sample will differ by no more than 1.6 times the standard error from the results of a complete census. At approximately the 90-percent level of confidence—the confidence limits used by BLS in its analyses—the error for the monthly change in total employment is on the order of plus or minus 358,000; for total unemployment it is 224,000; and, for the overall unemployment rate, it is 0.19 percentage point. These figures do not mean that the sample results are off by these magnitudes but, rather, that the chances are approximately 90 out of 100 that the "true" level or rate would not be expected to differ from the estimates by more than these amounts.

Sampling errors for monthly surveys are reduced when the data are cumulated for several months, such as quarterly or annually. Also, as a general rule, the smaller the estimate, the larger the sampling error. Therefore, relatively speaking, the estimate of the size of the labor force is subject to less error than is the estimate of the number unemployed. And, among the unemployed, the sampling error for the jobless rate of adult men, for example, is much smaller than is the error for the jobless rate of teenagers. Specifically, the error on monthly change in the jobless rate for men is .25 percentage point; for teenagers, it is 1.29 percentage points.

In the establishment survey, estimates for the 2 most current months are based on incomplete returns; for this reason, these estimates are labeled preliminary in the tables. When all the returns in the sample have been received, the estimates are revised. In other words, data for the month of September are published in preliminary form in October and November and in final form in December. To remove errors that build up over time, a comprehensive count of the employed is conducted each year. The results of this survey are used to establish new benchmarks—comprehensive counts of employment—against which month-to-month changes can be measured. The new benchmarks also incorporate changes in the classification of industries and allow for the formation of new establishments.

Additional statistics and other information

In order to provide a broad view of the Nation's employment situation, BLS regularly publishes a wide variety of data in this news release. More comprehensive statistics are contained in *Employment and Earnings*, published each month by BLS. It is available for $8.50 per issue or $25.00 per year from the U.S. Government Printing Office, Washington, DC 20204. A check or money order made out to the Superintendent of Documents must accompany all orders.

Employment and Earnings also provides approximations of the standard errors for the household survey data published in this release. For unemployment and other labor force categories, the standard errors appear in tables B through J of its "Explanatory Notes." Measures of the reliability of the data drawn from the establishment survey and the actual amounts of revision due to benchmark adjustments are provided in tables M, O, P, and Q of that publication.

HOUSEHOLD DATA

Table A-1. Employment status of the population, including Armed Forces in the United States, by sex

(Numbers in thousands)

Employment status and sex	Not seasonally adjusted			Seasonally adjusted					
	Nov. 1987	Oct. 1988	Nov. 1988	Nov. 1987	July 1988	Aug. 1988	Sept. 1988	Oct. 1988	Nov. 1988
TOTAL									
Noninstitutional population	185,225	186,801	186,949	185,225	186,402	186,522	186,666	186,801	186,949
Labor force	122,366	124,119	124,344	122,349	123,357	123,723	123,628	123,699	124,277
Participation rate	66.1	66.4	66.5	66.1	66.2	66.3	66.2	66.2	66.5
Total employed	115,564	117,937	118,019	115,259	116,732	116,872	117,032	117,206	117,681
Employment-population ratio[1]	62.4	63.1	63.1	62.2	62.6	62.7	62.7	62.7	62.9
Resident Armed Forces	1,755	1,687	1,705	1,755	1,673	1,692	1,704	1,687	1,705
Civilian employed	113,809	116,250	116,314	113,504	115,059	115,180	115,328	115,521	115,976
Agriculture	3,020	3,316	3,111	3,172	3,046	3,151	3,189	3,266	3,276
Nonagricultural industries	110,789	112,934	113,203	110,332	112,014	112,029	112,158	112,255	112,700
Unemployed	6,802	6,182	6,325	7,090	6,625	6,851	6,596	6,491	6,595
Unemployment rate	5.6	5.0	5.1	5.8	5.4	5.5	5.3	5.2	5.3
Not in labor force	62,859	62,682	62,605	62,876	63,045	62,799	63,038	63,102	62,672
Men, 16 years and over									
Noninstitutional population[2]	88,849	89,637	89,716	88,849	89,445	89,504	89,577	89,637	89,716
Labor force	67,753	68,451	68,448	68,019	68,521	68,723	68,606	68,544	68,721
Participation rate[3]	76.3	76.4	76.3	76.6	76.6	76.8	76.6	76.5	76.6
Total employed	64,084	65,184	64,964	64,174	65,002	64,954	65,052	64,943	65,079
Employment-population ratio[4]	72.1	72.7	72.4	72.2	72.7	72.6	72.6	72.5	72.5
Resident Armed Forces	1,593	1,526	1,542	1,593	1,512	1,529	1,540	1,526	1,542
Civilian employed	62,491	63,658	63,442	62,581	63,490	63,425	63,512	63,417	63,537
Unemployed	3,669	3,267	3,484	3,845	3,519	3,768	3,555	3,600	3,642
Unemployment rate[5]	5.4	4.8	5.1	5.7	5.1	5.5	5.2	5.3	5.3
Women, 16 years and over									
Noninstitutional population	96,376	97,164	97,234	96,376	96,957	97,018	97,089	97,164	97,234
Labor force	54,613	55,668	55,895	54,330	54,836	55,000	55,020	55,155	55,556
Participation rate	56.7	57.3	57.5	56.4	56.6	56.7	56.7	56.8	57.1
Total employed	51,480	52,753	53,035	51,085	51,730	51,918	51,979	52,265	52,602
Employment-population ratio[1]	53.4	54.3	54.5	53.0	53.4	53.5	53.5	53.8	54.1
Resident Armed Forces	162	161	163	162	161	163	164	161	163
Civilian employed	51,318	52,592	52,872	50,923	51,569	51,755	51,815	52,104	52,439
Unemployed	3,133	2,915	2,860	3,245	3,106	3,083	3,041	2,890	2,954
Unemployment rate	5.7	5.2	5.1	6.0	5.7	5.6	5.5	5.2	5.3

[1] Labor force as a percent of the noninstitutional population.
[2] Total employment as a percent of the noninstitutional population.
[3] Unemployment as a percent of the labor force (including the resident Armed Forces).
[4] The population and Armed Forces figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.
[5] Includes members of the Armed Forces stationed in the United States.

HOUSEHOLD DATA

Table A-2. Employment status of the civilian population by sex and age

(Numbers in thousands)

Employment status, sex, and age	Not seasonally adjusted			Seasonally adjusted					
	Nov. 1987	Oct. 1988	Nov. 1988	Nov. 1987	July 1988	Aug. 1988	Sept. 1988	Oct. 1988	Nov. 1988
TOTAL									
Civilian noninstitutional population	183,470	185,114	185,244	183,470	184,729	184,830	184,962	185,114	185,244
Civilian labor force	120,611	122,432	122,639	120,594	121,684	122,031	121,924	122,012	122,572
Participation rate	65.7	66.1	66.2	65.7	65.9	66.0	65.9	65.9	66.2
Employed	113,809	116,250	116,314	113,504	115,059	115,190	115,328	115,521	115,976
Employment-population ratio	62.0	62.8	62.8	61.9	62.3	62.3	62.4	62.4	62.6
Unemployed	6,802	6,182	6,325	7,090	6,625	6,851	6,596	6,491	6,595
Unemployment rate	5.6	5.0	5.2	5.9	5.4	5.6	5.4	5.3	5.4
Men, 20 years and over									
Civilian noninstitutional population	79,885	80,651	80,924	79,885	80,606	80,699	80,751	80,851	80,924
Civilian labor force	62,286	63,023	62,996	62,299	62,769	62,925	62,881	62,892	63,019
Participation rate	78.0	78.0	77.8	78.0	77.9	78.0	77.9	77.8	77.9
Employed	59,289	60,405	60,101	59,164	59,954	59,834	60,024	59,989	59,981
Employment-population ratio	74.2	74.7	74.3	74.1	74.4	74.2	74.3	74.2	74.1
Agriculture	2,234	2,400	2,288	2,297	2,247	2,311	2,236	2,330	2,321
Nonagricultural industries	57,056	58,005	57,833	56,867	57,706	57,523	57,788	57,659	57,660
Unemployed	2,999	2,618	2,895	3,135	2,815	3,090	2,857	2,902	3,038
Unemployment rate	4.8	4.2	4.6	5.0	4.5	4.9	4.5	4.6	4.8
Women, 20 years and over									
Civilian noninstitutional population	88,923	89,807	89,887	88,923	89,586	89,670	89,735	89,807	89,887
Civilian labor force	50,590	51,809	52,100	50,254	50,775	50,934	50,912	51,172	51,611
Participation rate	57.0	57.7	58.0	56.5	56.7	56.8	56.7	57.0	57.4
Employed	48,166	49,379	49,721	47,634	48,199	48,466	48,452	48,771	49,153
Employment-population ratio	54.2	55.0	55.3	53.6	53.8	54.0	54.0	54.3	54.7
Agriculture	624	678	642	636	542	586	633	647	657
Nonagricultural industries	47,542	48,701	49,078	46,998	47,657	47,881	47,818	48,124	48,496
Unemployed	2,525	2,430	2,379	2,620	2,576	2,468	2,461	2,401	2,458
Unemployment rate	5.0	4.7	4.6	5.2	5.1	4.8	4.8	4.7	4.8
Both sexes, 16 to 19 years									
Civilian noninstitutional population	14,663	14,456	14,433	14,663	14,533	14,491	14,477	14,456	14,433
Civilian labor force	7,633	7,599	7,542	8,041	8,141	8,172	8,131	7,948	7,942
Participation rate	52.1	52.6	52.3	54.8	56.0	56.4	56.2	55.0	55.0
Employed	6,354	6,485	6,492	6,706	6,907	6,879	6,853	6,761	6,842
Employment-population ratio	43.3	44.7	45.0	45.7	47.5	47.5	47.3	46.8	47.4
Agriculture	182	238	200	239	257	254	301	299	298
Nonagricultural industries	6,192	6,228	6,292	6,467	6,650	6,625	6,552	6,472	6,544
Unemployed	1,279	1,134	1,050	1,335	1,234	1,293	1,278	1,187	1,100
Unemployment rate	16.8	14.9	13.9	16.6	15.2	15.8	15.7	14.9	13.9

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

Civilian employment as a percent of the civilian noninstitutional population.

HOUSEHOLD DATA

Table A-3. Employment status of the civilian population by race, sex, age, and Hispanic origin

(Numbers in thousands)

Employment status, race, sex, age, and Hispanic origin	Not seasonally adjusted			Seasonally adjusted					
	Nov. 1987	Oct. 1988	Nov. 1988	Nov. 1987	July 1988	Aug. 1988	Sept. 1988	Oct. 1988	Nov. 1988
WHITE									
Civilian noninstitutional population	157,449	158,524	158,603	157,449	158,279	158,340	158,422	158,524	158,603
Civilian labor force	103,729	105,295	105,509	103,731	104,603	105,007	105,043	105,002	105,475
Participation rate	65.9	66.4	66.5	65.9	66.1	66.3	66.3	66.2	66.5
Employed	98,698	100,723	100,818	98,492	99,725	99,901	100,019	100,144	100,578
Employment-population ratio	62.7	63.5	63.6	62.6	63.0	63.1	63.1	63.2	63.4
Unemployed	5,031	4,572	4,691	5,239	4,878	5,106	5,024	4,858	4,896
Unemployment rate	4.9	4.3	4.4	5.1	4.7	4.9	4.8	4.6	4.6
Men, 20 years and over									
Civilian labor force	54,349	54,924	54,921	54,361	54,732	54,825	54,850	54,878	54,945
Participation rate	78.3	78.4	78.3	78.3	78.3	78.4	78.3	78.3	78.3
Employed	52,050	52,930	52,700	51,969	52,603	52,464	52,594	52,614	52,595
Employment-population ratio	75.0	75.5	75.1	74.9	75.2	75.0	75.1	75.1	75.0
Unemployed	2,298	1,994	2,221	2,412	2,129	2,361	2,255	2,263	2,350
Unemployment rate	4.2	3.6	4.0	4.4	3.9	4.3	4.1	4.1	4.3
Women, 20 years and over									
Civilian labor force	42,850	43,814	44,071	42,464	42,887	43,177	43,170	43,258	43,662
Participation rate	56.3	57.2	57.4	55.8	56.1	56.4	56.4	56.4	56.9
Employed	41,058	42,093	42,378	40,606	41,040	41,399	41,371	41,553	41,917
Employment-population ratio	54.0	54.9	55.2	53.4	53.7	54.1	54.0	54.2	54.6
Unemployed	1,792	1,721	1,693	1,858	1,847	1,778	1,799	1,706	1,745
Unemployment rate	4.2	3.9	3.8	4.4	4.3	4.1	4.2	3.9	4.0
Both sexes, 16 to 19 years									
Civilian labor force	6,531	6,557	6,518	6,886	6,983	7,005	7,023	6,866	6,868
Participation rate	54.7	55.7	55.5	57.7	58.9	59.2	59.5	58.3	58.5
Employed	5,590	5,700	5,741	5,917	6,081	6,038	6,054	5,977	6,066
Employment-population ratio	46.8	48.4	48.9	49.6	51.3	51.0	51.3	50.8	51.6
Unemployed	941	857	777	969	902	967	969	889	802
Unemployment rate	14.4	13.1	11.9	14.1	12.9	13.8	13.8	12.9	11.7
Men	15.1	14.4	12.3	14.8	14.6	13.8	15.0	14.8	12.2
Women	13.7	11.6	11.5	13.3	11.1	13.8	12.5	11.0	11.2
BLACK									
Civilian noninstitutional population	20,482	20,786	20,811	20,482	20,715	20,736	20,762	20,786	20,811
Civilian labor force	13,178	13,307	13,350	13,193	13,293	13,262	13,191	13,290	13,348
Participation rate	64.3	64.0	64.1	64.4	64.2	64.0	63.5	63.9	64.1
Employed	11,632	11,873	11,923	11,589	11,774	11,784	11,771	11,829	11,850
Employment-population ratio	56.8	57.1	57.3	56.6	56.8	56.7	56.7	56.9	56.9
Unemployed	1,545	1,434	1,427	1,604	1,519	1,498	1,419	1,461	1,497
Unemployment rate	11.7	10.8	10.7	12.2	11.4	11.3	10.8	11.0	11.2
Men, 20 years and over									
Civilian labor force	6,053	6,147	6,130	6,045	6,070	6,154	6,123	6,158	6,133
Participation rate	74.6	74.4	74.2	74.5	73.8	74.7	74.2	74.6	74.2
Employed	5,454	5,593	5,557	5,430	5,492	5,566	5,581	5,576	5,535
Employment-population ratio	67.2	67.7	67.2	66.9	66.8	67.6	67.7	67.5	66.9
Unemployed	599	554	574	615	578	588	542	582	599
Unemployment rate	9.9	9.0	9.4	10.2	9.5	9.6	8.8	9.4	9.8
Women, 20 years and over									
Civilian labor force	6,252	6,309	6,370	6,207	6,307	6,182	6,147	6,238	6,300
Participation rate	61.3	61.0	61.5	60.9	61.2	59.9	59.5	60.3	60.8
Employed	5,594	5,681	5,769	5,537	5,650	5,572	5,564	5,630	5,689
Employment-population ratio	54.9	54.9	55.7	54.3	54.8	54.0	53.8	54.4	54.9
Unemployed	659	628	601	670	657	610	583	607	611
Unemployment rate	10.5	10.0	9.4	10.8	10.4	9.9	9.5	9.7	9.7
Both sexes, 16 to 19 years									
Civilian labor force	872	851	849	941	917	926	921	894	914
Participation rate	40.1	39.0	38.9	43.3	42.0	42.4	42.2	41.0	41.9
Employed	585	600	597	622	632	626	627	622	626
Employment-population ratio	26.9	27.5	27.4	28.6	28.9	28.7	28.7	28.5	28.7
Unemployed	287	252	252	319	285	300	294	272	288
Unemployment rate	32.9	29.5	29.7	33.9	31.1	32.4	31.9	30.4	31.5
Men	32.1	33.1	31.5	32.2	30.4	32.2	31.7	33.5	32.4
Women	33.7	25.2	27.5	35.8	31.8	32.7	32.2	26.5	30.4

See footnotes at end of table.

HOUSEHOLD DATA

Table A-3. Employment status of the civilian population by race, sex, age, and Hispanic origin—Continued

(Numbers in thousands)

Employment status, race, sex, age, and Hispanic origin	Not seasonally adjusted			Seasonally adjusted					
	Nov. 1987	Oct. 1988	Nov. 1988	Nov. 1987	July 1988	Aug. 1988	Sept. 1988	Oct. 1988	Nov. 1988
HISPANIC ORIGIN									
Civilian noninstitutional population	13,043	13,458	13,496	13,043	13,344	13,381	13,419	13,458	13,495
Civilian labor force	8,788	9,109	9,201	8,783	8,964	8,935	9,063	9,058	9,172
Participation rate	67.4	67.7	68.2	67.2	67.3	66.8	67.5	67.3	68.0
Employed	8,002	8,428	8,462	7,978	8,264	8,185	8,394	8,361	8,428
Employment-population ratio	61.4	62.6	62.7	61.2	61.9	61.2	62.6	62.1	62.5
Unemployed	786	681	740	795	720	750	669	697	744
Unemployment rate	8.9	7.5	8.0	9.0	8.0	8.4	7.4	7.7	8.1

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

Civilian employment as a percent of the civilian noninstitutional population.

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

Table A-4. Selected employment indicators

(In thousands)

Category	Not seasonally adjusted			Seasonally adjusted					
	Nov. 1987	Oct. 1988	Nov. 1988	Nov. 1987	July 1988	Aug. 1988	Sept. 1988	Oct. 1988	Nov. 1988
CHARACTERISTIC									
Civilian employed, 16 years and over	113,809	116,250	116,314	113,504	115,059	115,180	115,328	115,521	115,976
Married men, spouse present	40,879	40,888	40,800	40,645	40,535	40,505	40,531	40,483	40,318
Married women, spouse present	28,888	29,399	29,439	28,175	28,654	28,632	28,801	28,851	28,975
Women who maintain families	6,216	6,386	6,423	6,237	6,145	6,262	6,251	6,367	6,410
MAJOR INDUSTRY AND CLASS OF WORKER									
Agriculture:									
Wage and salary workers	1,492	1,670	1,559	1,595	1,539	1,580	1,593	1,709	1,678
Self-employed workers	1,384	1,471	1,437	1,407	1,346	1,416	1,438	1,414	1,463
Unpaid family workers	144	175	115	155	148	163	134	183	123
Nonagricultural industries:									
Wage and salary workers	102,245	104,127	104,123	101,943	103,133	103,097	103,415	103,781	103,751
Government	17,307	17,472	17,657	17,118	16,959	17,112	17,103	17,231	17,430
Private industries	84,938	86,655	86,465	84,825	86,174	85,984	86,312	86,550	86,320
Private households	1,244	1,185	1,213	1,286	1,123	1,106	1,085	1,142	1,252
Other industries	83,694	85,470	85,252	83,539	85,051	84,877	85,227	85,408	85,069
Self-employed workers	8,316	8,583	8,793	8,222	8,526	8,491	8,575	8,366	8,629
Unpaid family workers	228	224	268	235	255	243	226	227	296
PERSONS AT WORK PART TIME									
All industries:									
Part time for economic reasons	5,430	4,668	4,955	5,534	5,382	5,181	5,053	4,893	5,025
Slack work	2,504	2,125	2,322	2,406	2,490	2,318	2,190	2,166	2,241
Could only find part-time work	2,569	2,246	2,237	2,696	2,581	2,491	2,356	2,382	2,347
Voluntary part time	15,639	16,164	16,721	14,523	15,070	15,021	15,314	15,078	15,540
Nonagricultural industries:									
Part time for economic reasons	5,152	4,452	4,699	5,241	5,185	4,959	4,814	4,662	4,761
Slack work	2,293	1,990	2,138	2,209	2,351	2,178	2,031	2,043	2,072
Could only find part-time work	2,510	2,174	2,180	2,597	2,545	2,429	2,284	2,298	2,264
Voluntary part time	15,232	15,691	16,298	14,064	14,869	14,585	14,861	14,596	15,063

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

Table A-5. Range of unemployment measures based on varying definitions of unemployment and the labor force, seasonally adjusted

(Percent)

Measure	Quarterly averages					Monthly data		
	1987		1988			1988		
	III	IV	I	II	III	Sept.	Oct.	Nov.
U-1 Persons unemployed 15 weeks or longer as a percent of the civilian labor force	1.6	1.5	1.4	1.3	1.3	1.3	1.3	1.2
U-2 Job losers as a percent of the civilian labor force	2.8	2.7	2.6	2.5	2.5	2.5	2.4	2.5
U-3 Unemployed persons 25 years and over as a percent of the civilian labor force	4.6	4.5	4.4	4.2	4.3	4.2	4.1	4.2
U-4 Unemployed full-time jobseekers as a percent of the full-time civilian labor force	5.6	5.5	5.4	5.1	5.1	5.1	4.9	5.1
U-5a Total unemployed as a percent of the labor force, including the resident Armed Forces	5.9	5.8	5.6	5.4	5.4	5.3	5.2	5.3
U-5b Total unemployed as a percent of the civilian labor force	6.0	5.9	5.7	5.5	5.5	5.4	5.3	5.4
U-6 Total full-time jobseekers plus 1/2 part-time jobseekers plus 1/2 total on part time for economic reasons as a percent of the civilian labor force less 1/2 of the part-time labor force	8.2	8.1	8.0	7.6	7.6	7.5	7.3	7.5
U-7 Total full-time jobseekers plus 1/2 part-time jobseekers plus 1/2 total on part time for economic reasons plus discouraged workers as a percent of the civilian labor force plus discouraged workers less 1/2 of the part-time labor force	9.0	8.8	8.8	8.3	8.4	N.A.	N.A.	N.A.

N.A. = not available.

Table A-6. Selected unemployment indicators, seasonally adjusted

Category	Number of unemployed persons (in thousands)			Unemployment rates					
	Nov. 1987	Oct. 1988	Nov. 1988	Nov. 1987	July 1988	Aug. 1988	Sept. 1988	Oct. 1988	Nov. 1988
CHARACTERISTIC									
Total, 16 years and over	7,090	6,491	6,595	5.9	5.4	5.6	5.4	5.3	5.4
Men, 16 years and over	3,845	3,600	3,642	5.8	5.3	5.6	5.3	5.4	5.4
Men, 20 years and over	3,135	2,902	3,038	5.0	4.5	4.9	4.5	4.6	4.8
Women, 16 years and over	3,245	2,890	2,954	6.0	5.7	5.6	5.5	5.3	5.3
Women, 20 years and over	2,620	2,401	2,458	5.2	5.1	4.8	4.8	4.7	4.8
Both sexes, 16 to 19 years	1,335	1,187	1,100	16.6	15.2	15.8	15.7	14.9	13.9
Married men, spouse present	1,487	1,305	1,399	3.5	3.0	3.4	3.1	3.1	3.4
Married women, spouse present	1,247	1,101	1,144	4.2	4.1	4.1	3.8	3.7	3.8
Women who maintain families	579	543	526	8.5	8.6	7.4	8.1	7.9	7.6
Full-time workers	5,684	5,164	5,315	5.5	5.0	5.3	5.1	4.9	5.1
Part-time workers	1,415	1,311	1,292	8.2	8.1	7.4	7.5	7.4	7.1
Labor force time lost	—	—	—	6.8	6.4	6.5	6.4	6.1	6.2
INDUSTRY									
Nonagricultural private wage and salary workers	5,243	4,952	5,048	5.8	5.4	5.6	5.4	5.4	5.5
Goods-producing industries	1,876	1,847	1,830	6.5	6.3	6.8	6.5	6.4	6.4
Mining	62	70	67	7.0	5.3	6.8	8.6	9.0	8.9
Construction	664	622	680	10.6	10.2	11.0	9.2	9.9	10.9
Manufacturing	1,150	1,155	1,083	5.3	5.2	5.6	5.6	5.3	5.0
Durable goods	616	635	610	4.8	5.0	5.0	5.5	5.0	4.7
Nondurable goods	534	520	473	5.9	5.8	6.4	5.9	5.7	5.3
Service-producing industries	3,367	3,105	3,218	5.5	5.0	5.1	4.9	5.0	5.1
Transportation and public utilities	277	206	266	4.5	3.5	3.8	3.7	3.3	4.2
Wholesale and retail trade	1,545	1,369	1,413	6.8	6.2	6.5	6.1	5.9	6.1
Finance and service industries	1,545	1,528	1,539	4.8	4.5	4.4	4.3	4.6	4.6
Government workers	611	434	423	3.4	3.1	3.1	2.7	2.5	2.4
Agricultural wage and salary workers	200	191	169	11.1	10.8	11.4	11.3	10.0	9.2

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

HOUSEHOLD DATA

Table A-7. Duration of unemployment

(Numbers in thousands)

Weeks of unemployment	Not seasonally adjusted			Seasonally adjusted					
	Nov. 1987	Oct. 1988	Nov. 1988	Nov. 1987	July 1988	Aug. 1988	Sept. 1988	Oct. 1988	Nov. 1988
DURATION									
Less than 5 weeks	3,131	3,056	3,080	3,218	2,965	3,197	3,139	3,082	3,153
5 to 14 weeks	2,039	1,747	1,909	2,029	2,078	1,957	1,823	1,814	1,924
15 weeks and over	1,633	1,379	1,335	1,834	1,629	1,676	1,596	1,551	1,467
15 to 26 weeks	770	660	682	899	838	859	799	778	776
27 weeks and over	863	719	653	935	791	817	807	773	711
Average (mean) duration, in weeks	14.0	13.1	12.5	14.0	13.6	13.7	13.7	13.5	12.5
Median duration, in weeks	5.9	5.1	5.3	6.1	6.3	5.9	5.5	5.6	5.5
PERCENT DISTRIBUTION									
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than 5 weeks	46.0	49.4	48.7	45.4	44.4	46.8	47.9	47.6	48.0
5 to 14 weeks	30.0	28.3	30.2	28.7	31.1	28.7	27.8	28.2	29.3
15 weeks and over	24.0	22.3	21.1	25.9	24.4	24.5	24.3	24.1	22.6
15 to 26 weeks	11.3	10.7	10.8	12.7	12.6	12.6	12.0	12.1	11.8
27 weeks and over	12.7	11.6	10.3	13.2	11.9	12.0	12.3	12.0	10.8

Table A-8. Reason for unemployment

(Numbers in thousands)

Reasons	Not seasonally adjusted			Seasonally adjusted					
	Nov. 1987	Oct. 1988	Nov. 1988	Nov. 1987	July 1988	Aug. 1988	Sept. 1988	Oct. 1988	Nov. 1988
NUMBER OF UNEMPLOYED									
Job losers	3,171	2,641	2,909	3,307	3,087	3,138	3,087	2,909	3,037
On layoff	825	691	757	878	852	891	816	853	810
Other job losers	2,346	1,950	2,152	2,429	2,235	2,247	2,271	2,056	2,227
Job leavers	950	1,059	966	926	904	997	994	966	948
Reentrants	1,929	1,805	1,740	1,974	1,901	1,869	1,761	1,764	1,765
New entrants	752	676	709	855	776	793	745	728	805
PERCENT DISTRIBUTION									
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Job losers	46.6	42.7	46.0	46.8	46.3	46.2	46.9	45.5	46.3
On layoff	12.1	11.2	12.0	12.4	12.8	13.1	12.4	13.4	12.4
Other job losers	34.5	31.5	34.0	34.4	33.5	33.1	34.5	32.2	34.0
Job leavers	14.0	17.1	15.3	13.1	13.6	14.7	15.1	15.4	14.5
Reentrants	28.4	29.2	27.5	28.0	28.5	27.5	26.7	27.6	26.9
New entrants	11.1	10.9	11.2	12.1	11.6	11.7	11.3	11.4	12.3
UNEMPLOYED AS A PERCENT OF THE CIVILIAN LABOR FORCE									
Job losers	2.6	2.2	2.4	2.7	2.5	2.6	2.5	2.4	2.5
Job leavers	.8	.9	.8	.8	.7	.8	.8	.8	.8
Reentrants	1.6	1.5	1.4	1.6	1.6	1.5	1.4	1.4	1.4
New entrants	.6	.6	.6	.7	.6	.6	.6	.6	.7

ble A-9. Unemployed persons by sex and age, seasonally adjusted

Sex and age	Number of unemployed persons (in thousands)			Unemployment rates					
	Nov. 1987	Oct. 1988	Nov. 1988	Nov. 1987	July 1988	Aug. 1988	Sept. 1988	Oct. 1988	Nov. 1988
otal, 16 years and over	7,090	6,491	6,595	5.9	5.4	5.6	5.4	5.3	5.4
16 to 24 years	2,641	2,433	2,365	11.6	10.9	11.1	10.9	10.9	10.6
16 to 19 years	1,335	1,187	1,100	16.6	15.2	15.6	15.7	14.9	13.9
16 to 17 years	649	561	510	19.2	17.5	18.7	20.5	17.3	15.4
18 to 19 years	691	626	588	14.6	13.0	13.9	12.7	13.3	12.7
20 to 24 years	1,306	1,248	1,265	8.9	8.5	8.4	8.2	8.7	8.9
25 years and over	4,442	4,060	4,231	4.5	4.2	4.4	4.2	4.1	4.2
25 to 54 years	3,909	3,629	3,769	4.7	4.4	4.6	4.4	4.3	4.4
55 years and over	513	409	426	3.4	3.1	3.2	2.9	2.7	2.8
Men, 16 years and over	3,845	3,600	3,642	5.8	5.3	5.6	5.3	5.4	5.4
16 to 24 years	1,414	1,419	1,281	12.0	11.3	11.5	11.4	12.1	11.0
16 to 19 years	710	696	604	17.2	16.6	15.9	16.7	16.9	14.5
16 to 17 years	356	331	304	20.4	17.9	17.6	21.7	19.1	17.2
18 to 19 years	355	367	300	14.8	14.7	14.7	13.4	15.3	12.5
20 to 24 years	704	721	677	9.2	8.4	9.0	8.5	9.5	9.0
25 years and over	2,419	2,189	2,362	4.4	3.9	4.4	4.1	4.0	4.3
25 to 54 years	2,109	1,923	2,079	4.6	4.1	4.5	4.3	4.1	4.4
55 years and over	313	258	275	3.5	3.1	3.4	2.8	3.0	3.2
Women, 16 years and over	3,245	2,890	2,954	6.0	5.7	5.6	5.5	5.3	5.3
16 to 24 years	1,227	1,014	1,085	11.2	10.5	10.7	10.4	9.5	10.3
16 to 19 years	625	489	496	16.0	13.6	15.8	14.7	12.8	13.1
16 to 17 years	293	230	206	17.9	17.0	19.8	19.0	15.3	13.2
18 to 19 years	336	261	288	14.7	11.2	12.9	12.0	11.3	13.0
20 to 24 years	602	525	589	8.6	8.7	7.8	7.9	7.7	8.7
25 years and over	2,023	1,872	1,869	4.7	4.5	4.4	4.4	4.2	4.2
25 to 54 years	1,800	1,706	1,690	4.9	4.7	4.6	4.6	4.5	4.4
55 years and over	200	150	152	3.2	3.0	2.8	3.0	2.4	2.3

Unemployment as a percent of the civilian labor force.

ble A-10. Employment status of black and other workers

umbers in thousands)

Employment status	Not seasonally adjusted			Seasonally adjusted					
	Nov. 1987	Oct. 1988	Nov. 1988	Nov. 1987	July 1988	Aug. 1988	Sept. 1988	Oct. 1988	Nov. 1988
ivilian noninstitutional population	26,021	26,590	26,641	26,021	26,451	26,490	26,540	26,590	26,641
Civilian labor force	16,882	17,137	17,129	16,869	17,021	16,993	16,892	17,073	17,092
Participation rate	64.9	64.5	64.3	64.8	64.4	64.1	63.6	64.2	64.2
Employed	15,112	15,527	15,496	15,017	15,319	15,299	15,301	15,431	15,377
Employment-population ratio	58.1	58.4	58.2	57.7	57.9	57.8	57.7	58.0	57.7
Unemployed	1,771	1,610	1,634	1,852	1,701	1,694	1,592	1,642	1,715
Unemployment rate	10.5	9.4	9.5	11.0	10.0	10.0	9.4	9.6	10.0
Not in labor force	9,139	9,453	9,512	9,152	9,430	9,497	9,648	9,517	9,549

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

Civilian employment as a percent of the civilian noninstitutional population.

HOUSEHOLD DATA

Table A-11. Occupational status of the employed and unemployed, not seasonally adjusted

(Numbers in thousands)

Occupation	Civilian employed		Unemployed		Unemployment	
	Nov. 1987	Nov. 1988	Nov. 1987	Nov. 1988	Nov. 1987	Nov. 19
Total, 16 years and over	113,809	116,314	6,802	6,325	5.6	5
Managerial and professional specialty	28,266	29,800	584	483	2.0	1
Executive, administrative, and managerial	13,444	14,430	355	288	2.6	1
Professional specialty	14,822	15,370	229	217	1.5	1
Technical, sales, and administrative support	35,481	35,883	1,518	1,421	4.1	3
Technicians and related support	3,348	3,536	84	90	2.6	2
Sales occupations	13,577	14,044	633	604	4.5	4
Administrative support, including clerical	18,536	18,281	801	727	4.1	3
Service occupations	15,199	15,489	1,236	1,123	7.5	6
Private household	965	941	46	58	4.5	5
Protective service	1,939	1,929	97	92	4.8	4
Service, except private household and protective	12,296	12,619	1,093	973	8.2	7
Precision production, craft, and repair	13,712	13,779	750	750	5.2	5
Mechanics and repairers	4,456	4,425	163	196	3.5	4
Construction trades	5,108	5,172	398	353	7.2	6
Other precision production, craft, and repair	4,148	4,182	189	199	4.4	4
Operators, fabricators, and laborers	17,936	18,057	1,627	1,524	8.3	7
Machine operators, assemblers, and inspectors	8,172	8,279	686	587	7.7	6
Transportation and material moving occupations	4,867	4,903	293	339	5.7	6
Handlers, equipment cleaners, helpers, and laborers	4,897	4,874	647	598	11.7	10
Construction laborers	809	739	190	206	19.0	22
Other handlers, equipment cleaners, helpers, and laborers	4,088	4,135	458	390	10.1	8
Farming, forestry, and fishing	3,235	3,326	296	269	8.4	7

Persons with no previous work experience and those whose last job was in the Armed Forces are included in the unemployed total.

Table A-12. Employment status of male Vietnam-era veterans and nonveterans by age, not seasonally adjusted

(Numbers in thousands)

Veteran status and age	Civilian noninstitutional population		Civilian labor force							
			Total		Employed		Unemployed			
							Number		Percent of labor force	
	Nov. 1987	Nov. 1988	Nov. 1987	Nov. 1988	Nov. 1987	Nov. 1988	Nov. 1987	Nov. 1988	Nov. 1987	Nov. 1988
VIETNAM-ERA VETERANS										
Total, 30 years and over	7,861	7,907	7,257	7,325	6,918	7,051	339	274	4.7	3.7
30 to 44 years	6,112	5,769	5,796	5,498	5,507	5,295	289	203	5.0	3.7
30 to 34 years	832	613	790	570	716	534	74	36	9.4	6.3
35 to 39 years	2,439	2,001	2,319	1,923	2,227	1,851	92	72	4.0	3.7
40 to 44 years	2,841	3,155	2,687	3,005	2,564	2,910	123	95	4.6	3.2
45 years and over	1,749	2,138	1,461	1,827	1,411	1,756	50	71	3.4	3.9
NONVETERANS										
Total, 30 to 44 years	19,619	20,789	18,776	19,706	18,031	18,917	745	789	4.0	4.0
30 to 34 years	8,949	9,175	8,513	8,738	8,134	8,338	379	400	4.5	4.6
35 to 39 years	6,420	7,049	6,071	6,678	5,861	6,428	210	250	3.5	3.7
40 to 44 years	4,450	4,565	4,192	4,290	4,036	4,151	156	139	3.7	3.2

NOTE: Male Vietnam-era veterans are men who served in the Armed Forces between August 5, 1964 and May 7, 1975. Nonveterans are men who have never served in the Armed Forces; published data are limited to those 30 to 44 years of age, the group that most closely corresponds to the bulk of the Vietnam-era veteran population.

HOUSEHOLD DATA

HOUSEHOLD DATA

Table A-13. Employment status of the civilian population for eleven large States

(Numbers in thousands)

State and employment status	Not seasonally adjusted			Seasonally adjusted					
	Nov. 1987	Oct. 1988	Nov. 1988	Nov. 1987	July 1988	Aug. 1988	Sept. 1988	Oct. 1988	Nov. 1988
California									
Civilian noninstitutional population	20,714	21,115	21,151	20,714	21,012	21,043	21,078	21,115	21,151
Civilian labor force	13,908	14,200	14,337	13,912	14,131	14,159	14,142	14,160	14,338
Employed	13,190	13,524	13,606	13,172	13,374	13,373	13,411	13,457	13,584
Unemployed	716	676	731	740	757	786	731	703	754
Unemployment rate	5.1	4.8	5.1	5.3	5.4	5.6	5.2	5.0	5.3
Florida									
Civilian noninstitutional population	9,527	9,752	9,771	9,527	9,693	9,711	9,731	9,752	9,771
Civilian labor force	5,932	6,174	6,103	5,958	6,102	6,162	6,121	6,168	6,125
Employed	5,630	5,871	5,786	5,647	5,837	5,862	5,820	5,863	5,802
Unemployed	303	303	317	311	265	300	301	305	323
Unemployment rate	5.1	4.9	5.2	5.2	4.3	4.9	4.9	4.9	5.3
Illinois									
Civilian noninstitutional population	8,757	8,793	8,798	8,757	8,788	8,787	8,790	8,793	8,798
Civilian labor force	5,747	5,849	5,908	5,764	5,760	5,887	5,797	5,807	5,932
Employed	5,384	5,495	5,523	5,364	5,394	5,472	5,450	5,425	5,508
Unemployed	364	353	385	400	366	415	347	382	424
Unemployment rate	6.3	6.0	6.5	6.9	6.4	7.0	6.0	6.6	7.1
Massachusetts									
Civilian noninstitutional population	4,594	4,606	4,607	4,594	4,604	4,604	4,605	4,606	4,607
Civilian labor force	3,097	3,149	3,146	3,093	3,137	3,119	3,144	3,157	3,152
Employed	3,024	3,060	3,035	3,009	3,020	3,015	3,051	3,054	3,027
Unemployed	72	89	111	84	117	104	93	103	125
Unemployment rate	2.3	2.8	3.5	2.7	3.7	3.3	3.0	3.3	4.0
Michigan									
Civilian noninstitutional population	6,956	7,012	7,016	6,956	6,999	7,002	7,007	7,012	7,016
Civilian labor force	4,538	4,596	4,652	4,519	4,587	4,566	4,572	4,583	4,624
Employed	4,203	4,291	4,337	4,159	4,251	4,229	4,238	4,255	4,284
Unemployed	335	305	315	360	336	337	334	328	340
Unemployment rate	7.4	6.6	6.8	8.0	7.3	7.4	7.3	7.2	7.4
New Jersey									
Civilian noninstitutional population	6,018	6,050	6,052	6,018	6,042	6,044	6,047	6,050	6,052
Civilian labor force	3,972	3,910	3,956	3,994	3,969	3,983	3,979	3,937	3,972
Employed	3,843	3,772	3,816	3,847	3,825	3,828	3,829	3,785	3,816
Unemployed	129	138	139	147	144	155	150	152	156
Unemployment rate	3.2	3.5	3.5	3.7	3.6	3.9	3.8	3.9	3.9
New York									
Civilian noninstitutional population	13,766	13,776	13,776	13,766	13,777	13,774	13,773	13,776	13,776
Civilian labor force	8,576	8,544	8,564	8,553	8,537	8,589	8,517	8,494	8,543
Employed	8,153	8,185	8,192	8,112	8,171	8,206	8,149	8,141	8,154
Unemployed	423	359	371	441	366	383	368	353	389
Unemployment rate	4.9	4.2	4.3	5.2	4.3	4.5	4.3	4.2	4.6
North Carolina									
Civilian noninstitutional population	4,840	4,906	4,912	4,840	4,889	4,894	4,900	4,906	4,912
Civilian labor force	3,317	3,377	3,378	3,314	3,332	3,339	3,332	3,367	3,372
Employed	3,184	3,249	3,255	3,181	3,235	3,236	3,209	3,232	3,250
Unemployed	133	128	123	133	97	103	123	135	122
Unemployment rate	4.0	3.8	3.6	4.0	2.9	3.1	3.7	4.0	3.6
Ohio									
Civilian noninstitutional population	8,174	8,212	8,215	8,174	8,203	8,205	8,208	8,212	8,215
Civilian labor force	5,285	5,327	5,360	5,263	5,252	5,298	5,251	5,311	5,345
Employed	4,980	5,052	5,075	4,945	4,973	5,000	4,947	5,016	5,041
Unemployed	305	276	284	318	279	298	304	295	304
Unemployment rate	5.8	5.2	5.3	6.0	5.3	5.6	5.8	5.6	5.7

See footnotes at end of table.

HOUSEHOLD DATA

Table A-13. Employment status of the civilian population for eleven large States—Continued

(Numbers in thousands)

State and employment status	Not seasonally adjusted[1]			Seasonally adjusted[2]					
	Nov. 1987	Oct. 1988	Nov. 1988	Nov. 1987	July 1988	Aug. 1988	Sept. 1988	Oct. 1988	Nov. 1988
Pennsylvania									
Civilian noninstitutional population	9,305	9,330	9,331	9,305	9,325	9,325	9,327	9,330	9,331
Civilian labor force	5,724	5,770	5,739	5,709	5,736	5,786	5,815	5,707	5,736
Employed	5,425	5,478	5,491	5,394	5,433	5,526	5,500	5,394	5,486
Unemployed	300	292	248	315	302	260	315	313	251
Unemployment rate	5.2	5.1	4.3	5.5	5.3	4.5	5.4	5.5	4.6
Texas									
Civilian noninstitutional population	12,044	12,079	12,081	12,044	12,072	12,072	12,075	12,079	12,081
Civilian labor force	8,390	8,375	8,420	8,351	8,377	8,361	8,354	8,359	8,361
Employed	7,731	7,804	7,868	7,659	7,757	7,814	7,768	7,739	7,772
Unemployed	659	571	552	692	520	567	586	620	579
Unemployment rate	7.9	6.8	6.6	8.3	6.3	6.8	7.0	7.4	6.9

[1] These are the official Bureau of Labor Statistics' estimates used in the administration of Federal fund allocation programs.

[2] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and the seasonally adjusted columns.

ESTABLISHMENT DATA

Table B-1. Employees on nonagricultural payrolls by industry

(In thousands)

Industry	Not seasonally adjusted				Seasonally adjusted					
	Nov. 1987	Sept. 1988	Oct. 1988p/	Nov. 1988p/	Nov. 1987	July 1988	Aug. 1988	Sept. 1988	Oct. 1988p/	Nov. 1988p/
Total	104,548	107,138	107,854	108,332	103,678	106,271	106,425	106,737	106,975	107,458
Total private	87,034	89,939	90,104	90,408	86,520	88,941	89,066	89,205	89,459	89,877
Goods-producing industries	25,351	26,126	26,141	26,108	25,123	25,663	25,639	25,648	25,741	25,860
Mining	745	748	736	731	736	748	739	734	729	722
Oil and gas extraction	424.3	418.6	415.8	412.4	418	424	423	419	413	406
Construction	5,227	5,668	5,643	5,565	5,090	5,330	5,340	5,365	5,366	5,419
General building contractors	1,385.1	1,460.5	1,455.9	1,442.5	1,348	1,400	1,401	1,404	1,393	1,401
Manufacturing	19,379	19,726	19,762	19,804	19,297	19,583	19,560	19,569	19,648	19,719
Production workers	13,256	13,498	13,523	13,563	13,175	13,382	13,352	13,332	13,412	13,478
Durable goods	11,400	11,606	11,642	11,688	11,355	11,566	11,547	11,537	11,595	11,642
Production workers	7,609	7,753	7,782	7,828	7,564	7,720	7,705	7,689	7,734	7,780
Lumber and wood products	751.8	773.6	771.9	769.0	750	756	753	753	760	768
Furniture and fixtures	536.7	539.8	544.9	546.0	531	541	537	538	541	540
Stone, clay, and glass products	589.3	597.9	597.3	594.6	585	589	586	585	588	590
Primary metal industries	766.4	789.5	790.6	796.6	768	789	785	787	794	798
Blast furnaces and basic steel products	277.3	280.6	279.7	282.7	279	282	281	280	282	284
Fabricated metal products	1,437.1	1,470.0	1,477.5	1,479.5	1,429	1,464	1,458	1,460	1,469	1,471
Machinery, except electrical	2,058.3	2,156.6	2,167.9	2,182.3	2,062	2,151	2,156	2,159	2,172	2,187
Electrical and electronic equipment	2,108.7	2,130.3	2,134.6	2,141.2	2,180	2,122	2,126	2,124	2,126	2,133
Transportation equipment	2,060.7	2,042.4	2,068.9	2,067.8	2,047	2,052	2,044	2,032	2,045	2,053
Motor vehicles and equipment	863.1	857.8	862.4	869.0	854	857	855	849	859	860
Instruments and related products	704.3	716.4	717.8	720.6	704	715	718	716	719	720
Miscellaneous manufacturing	387.5	389.1	390.2	390.2	379	387	384	383	381	382
Nondurable goods	7,979	8,120	8,120	8,116	7,942	8,027	8,013	8,012	8,053	8,077
Production workers	5,647	5,745	5,741	5,735	5,611	5,662	5,647	5,643	5,678	5,698
Food and kindred products	1,650.6	1,714.1	1,697.0	1,675.5	1,636	1,631	1,630	1,632	1,656	1,661
Tobacco manufactures	55.2	54.9	55.2	54.2	54	52	52	51	51	53
Textile mill products	736.1	727.3	726.1	726.5	733	726	719	722	722	723
Apparel and other textile products	1,117.8	1,095.7	1,098.3	1,099.1	1,110	1,096	1,089	1,087	1,086	1,091
Paper and allied products	684.0	690.9	691.3	693.8	683	692	691	688	690	692
Printing and publishing	1,515.3	1,569.8	1,579.3	1,588.7	1,528	1,567	1,572	1,575	1,581	1,581
Chemicals and allied products	1,039.7	1,072.5	1,071.6	1,074.3	1,041	1,067	1,070	1,069	1,072	1,076
Petroleum and coal products	166.1	169.8	169.8	169.7	167	167	167	168	169	170
Rubber and misc. plastics products	846.5	877.1	884.5	887.6	845	882	878	874	882	886
Leather and leather products	147.8	147.4	146.6	146.1	145	147	145	146	144	146
Service-producing industries	79,197	81,012	81,713	82,232	78,555	80,608	80,786	81,089	81,234	81,578
Transportation and public utilities	5,498	5,665	5,675	5,697	5,466	5,598	5,605	5,618	5,623	5,662
Transportation	3,265	3,413	3,426	3,442	3,231	3,365	3,351	3,366	3,372	3,405
Communication and public utilities	2,233	2,252	2,249	2,255	2,235	2,253	2,254	2,252	2,251	2,257
Wholesale trade	5,975	6,241	6,272	6,287	5,958	6,174	6,192	6,219	6,262	6,270
Durable goods	3,518	3,718	3,742	3,759	3,514	3,681	3,696	3,716	3,735	3,755
Nondurable goods	2,457	2,523	2,530	2,528	2,444	2,493	2,496	2,505	2,507	2,515
Retail trade	19,050	19,387	19,406	19,638	18,761	19,261	19,279	19,291	19,329	19,368
General merchandise stores	2,665.7	2,489.5	2,549.1	2,690.4	2,495	2,565	2,539	2,533	2,519	2,517
Food stores	3,016.1	3,116.1	3,147.3	3,182.4	2,979	3,097	3,106	3,110	3,141	3,145
Automotive dealers and service stations	2,021.4	2,109.3	2,106.6	2,107.9	2,026	2,088	2,095	2,095	2,102	2,114
Eating and drinking places	6,162.8	6,556.2	6,421.9	6,381.7	6,216	6,369	6,377	6,384	6,415	6,440
Finance, insurance, and real estate	6,582	6,786	6,693	6,704	6,608	6,684	6,689	6,692	6,710	6,729
Finance	3,289	3,297	3,294	3,304	3,299	3,300	3,298	3,300	3,307	3,314
Insurance	2,039	2,079	2,086	2,091	2,042	2,077	2,081	2,083	2,090	2,093
Real estate	1,254	1,330	1,313	1,309	1,267	1,307	1,310	1,309	1,313	1,322
Services	24,578	25,814	25,917	25,982	24,406	25,561	25,662	25,737	25,814	26,008
Business services	5,322.5	5,588.0	5,601.4	5,615.7	5,287	5,580	5,512	5,558	5,546	5,577
Health services	6,954.4	7,322.9	7,366.9	7,415.5	6,962	7,258	7,271	7,322	7,365	7,421
Government	17,513	17,199	17,750	17,924	17,158	17,330	17,359	17,532	17,516	17,561
Federal	2,956	2,968	2,969	2,973	2,974	2,951	2,936	2,989	2,960	2,991
State	4,105	4,004	4,169	4,216	3,988	4,059	4,070	4,086	4,071	4,097
Local	10,452	10,227	10,612	10,735	10,196	10,320	10,353	10,457	10,455	10,473

p/ = preliminary.

ESTABLISHMENT DATA

ESTABLISHMENT DATA

Table B-2. Average weekly hours of production or nonsupervisory workers1/ on private nonagricultural payrolls by industry

Industry	Not seasonally adjusted				Seasonally adjusted					
	Nov. 1987	Sept. 1988	Oct. 1988p/	Nov. 1988p/	Nov. 1987	July 1988	Aug. 1988	Sept. 1988	Oct. 1988p/	Nov. 1988p/
Total private	34.8	34.8	34.9	34.7	34.8	34.9	34.6	34.7	34.9	34.7
Mining	42.6	42.2	42.7	42.2	(2)	(2)	(2)	(2)	(2)	(2)
Construction	37.1	38.4	39.0	37.6	(2)	(2)	(2)	(2)	(2)	(2)
Manufacturing	41.4	41.3	41.5	41.5	41.2	41.1	41.0	41.2	41.2	41.2
Overtime hours	4.1	4.2	4.1	4.1	3.9	3.9	3.9	3.9	4.0	4.0
Durable goods	42.0	42.0	42.0	42.2	41.8	41.8	41.6	41.9	41.9	41.9
Overtime hours	4.2	4.3	4.3	4.4	4.0	4.0	4.1	4.0	4.2	4.2
Lumber and wood products	40.4	40.2	40.9	40.2	40.7	40.5	40.0	39.9	40.7	40.5
Furniture and fixtures	40.6	40.1	40.1	39.8	40.2	39.7	39.8	39.6	39.6	39.6
Stone, clay, and glass products	42.4	42.8	42.9	42.7	42.4	42.1	42.1	42.3	42.4	42.7
Primary metal industries	43.7	44.0	43.6	43.9	43.5	43.4	43.3	44.0	43.8	43.7
Blast furnaces and basic steel products	43.8	44.7	43.8	44.3	43.8	44.0	44.0	44.6	44.2	44.5
Fabricated metal products	42.4	42.0	41.9	42.3	42.1	41.7	41.8	42.0	41.8	42.0
Machinery, except electrical	43.0	42.7	42.5	42.8	42.7	43.0	42.4	42.7	42.6	42.5
Electrical and electronic equipment	41.4	41.8	40.9	41.4	41.8	41.8	40.8	41.0	40.9	41.0
Transportation equipment	42.5	43.0	43.1	43.3	42.3	42.6	42.7	43.3	43.3	43.0
Motor vehicles and equipment	42.9	44.1	44.8	44.2	42.9	42.5	43.6	44.5	44.2	44.2
Instruments and related products	41.8	41.6	41.9	42.3	41.4	41.8	41.5	41.6	42.1	42.1
Miscellaneous manufacturing	39.7	39.3	39.6	39.9	39.2	39.2	39.2	39.2	39.1	39.4
Nondurable goods	40.6	40.5	40.3	40.5	40.3	40.2	40.1	40.2	40.2	40.2
Overtime hours	3.9	4.1	3.9	3.9	3.7	3.7	3.6	3.7	3.8	3.7
Food and kindred products	40.7	40.9	40.7	41.1	40.4	40.5	40.4	40.5	40.5	40.8
Tobacco manufactures	40.9	41.2	41.2	40.3	(2)	(2)	(2)	(2)	(2)	(2)
Textile mill products	42.0	41.4	41.2	41.3	41.6	41.1	41.1	41.1	41.0	40.9
Apparel and other textile products	37.4	37.0	37.1	37.2	37.1	36.9	36.8	37.1	36.9	36.9
Paper and allied products	43.8	43.7	43.5	43.9	43.5	43.2	43.2	43.5	43.2	43.2
Printing and publishing	38.5	38.5	38.0	38.1	38.0	38.0	38.0	38.1	37.9	37.8
Chemicals and allied products	42.7	42.3	42.3	42.6	42.5	42.3	42.1	42.1	42.5	42.6
Petroleum and coal products	44.1	44.7	44.8	44.5	(2)	(2)	(2)	(2)	(2)	(2)
Rubber and misc. plastics products	42.0	41.6	41.7	42.0	41.8	41.6	41.5	41.6	41.6	41.7
Leather and leather products	38.4	37.5	37.9	37.8	38.3	37.8	37.6	37.5	37.9	37.7
Transportation and public utilities	39.5	39.5	39.7	39.4	39.2	39.5	39.3	39.4	39.6	39.3
Wholesale trade	38.2	38.1	38.2	38.0	38.2	38.2	37.8	38.1	38.1	38.0
Retail trade	29.0	29.0	29.1	28.8	29.2	29.3	29.0	28.9	29.2	29.0
Finance, insurance, and real estate	36.3	35.8	36.0	35.6	(2)	(2)	(2)	(2)	(2)	(2)
Services	32.5	32.5	32.7	32.4	32.6	32.7	32.4	32.6	32.8	32.5

1/ Data relate to production workers in mining and manufacturing; construction workers in construction; and 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 employees on private nonagricultural payrolls.

2/ These series are not published seasonally adjusted since the seasonal component is small relative to the trend-cycle and/or irregular components and consequently cannot be separated with sufficient precision.

p = preliminary.

ESTABLISHMENT DATA

ESTABLISHMENT DATA

Table B-3. Average hourly and weekly earnings of production or nonsupervisory workers1/ on private nonagricultural payrolls by industry

Industry	Average hourly earnings				Average weekly earnings			
	Nov. 1987	Sept. 1988	Oct. 1988p/	Nov. 1988p/	Nov. 1987	Sept. 1988	Oct. 1988p/	Nov. 1988p/
Total private	$9.13	$9.40	$9.45	$9.45	$317.72	$327.12	$329.81	$327.92
Seasonally adjusted	9.10	9.37	9.43	9.42	316.68	325.14	329.11	326.87
Mining	12.54	12.75	12.73	12.78	534.20	538.05	543.57	535.94
Construction	12.83	13.13	13.14	13.07	475.99	504.19	512.46	491.43
Manufacturing	10.01	10.25	10.24	10.38	414.41	423.33	422.91	427.43
Durable goods	10.54	10.78	10.78	10.84	442.68	452.76	452.76	457.45
Lumber and wood products	8.47	8.67	8.76	8.71	342.19	348.53	358.28	358.14
Furniture and fixtures	7.71	8.07	8.04	8.00	313.05	323.61	322.60	318.40
Stone, clay, and glass products	10.30	10.55	10.57	10.56	436.72	451.54	453.45	458.91
Primary metal industries	12.04	12.25	12.20	12.27	526.15	539.00	531.92	538.65
Blast furnaces and basic steel products	13.89	14.08	14.02	14.13	608.38	629.38	614.08	625.96
Fabricated metal products	10.10	10.32	10.31	10.37	428.24	435.44	431.99	438.65
Machinery, except electrical	10.83	11.05	11.07	11.14	465.69	471.84	470.48	476.79
Electrical and electronic equipment	9.98	10.19	10.16	10.21	413.17	417.79	415.54	422.69
Transportation equipment	13.18	13.49	13.50	13.55	560.15	580.07	581.83	586.72
Motor vehicles and equipment	13.79	14.17	14.17	14.23	591.90	624.90	623.48	628.97
Instruments and related products	9.83	9.97	10.05	10.05	418.89	414.75	421.10	427.13
Miscellaneous manufacturing	7.80	7.99	8.08	8.09	309.66	314.01	319.97	322.79
Nondurable goods	9.26	9.50	9.48	9.54	375.96	384.75	382.04	386.37
Food and kindred products	8.98	9.12	9.04	9.13	365.49	373.01	367.93	375.24
Tobacco manufactures	13.75	13.98	13.98	14.65	562.38	575.98	575.98	590.40
Textile mill products	7.29	7.43	7.44	7.49	306.18	307.60	306.53	309.34
Apparel and other textile products	5.98	6.19	6.20	6.21	223.65	229.03	230.02	231.01
Paper and allied products	11.49	11.70	11.65	11.69	503.26	511.29	504.45	508.52
Printing and publishing	10.39	10.70	10.69	10.68	397.94	411.95	406.22	406.91
Chemicals and allied products	12.55	12.76	12.78	12.87	535.89	539.75	540.59	548.26
Petroleum and coal products	14.77	15.08	15.27	15.34	651.36	674.08	684.10	682.63
Rubber and misc. plastics products	8.98	9.18	9.20	9.26	377.16	381.89	383.64	388.92
Leather and leather products	6.15	6.31	6.34	6.36	236.16	236.63	240.29	240.41
Transportation and public utilities	12.21	12.41	12.41	12.47	479.85	490.20	492.68	491.32
Wholesale trade	9.72	10.01	10.08	10.02	371.30	381.38	385.06	380.76
Retail trade	6.18	6.37	6.39	6.44	179.22	184.73	185.95	185.47
Finance, insurance, and real estate	8.89	9.14	9.29	9.26	322.71	327.21	334.44	329.66
Services	8.71	8.98	9.07	9.08	283.08	291.85	296.59	296.19

1/ See footnote 1, table B-2.

p = preliminary.

Table B-4. Hourly Earnings Index for production or nonsupervisory workers1/ on private nonagricultural payrolls by industry

(1977=100)

Industry	Not seasonally adjusted					Seasonally adjusted						
	Nov. 1987	Sept. 1988	Oct. 1988p/	Nov. 1988p/	Percent change from: Nov. 1987-Nov. 1988	Nov. 1987	July 1988	Aug. 1988	Sept. 1988	Oct. 1988p/	Nov. 1988p/	Percent change from: Oct. 1988-Nov. 1988
Total private nonfarm:												
Current Dollars	175.9	180.7	181.4	181.7	3.3	175.6	179.3	179.5	180.3	181.5	181.5	(2)
Constant (1977) dollars	93.8	92.8	92.9	N.A.	(3)	93.8	93.2	92.9	93.0	93.1	N.A.	(4)
Mining	184.1	186.6	186.5	186.3	1.2	(5)	(5)	(5)	(5)	(5)	(5)	(5)
Construction	156.7	160.6	160.8	160.9	2.7	156.5	158.4	158.6	159.3	159.2	160.7	.9
Manufacturing	176.2	179.7	179.8	180.6	2.5	176.4	178.8	179.3	180.0	180.5	180.8	.2
Transportation and public utilities	178.8	182.6	182.9	183.8	2.8	177.6	181.5	181.9	182.0	182.9	182.5	-.2
Wholesale trade	179.6	184.5	186.0	185.9	3.5	(5)	(5)	(5)	(5)	(5)	(5)	(5)
Retail trade	162.4	168.1	168.4	168.2	3.6	162.4	166.8	166.7	167.1	168.6	168.2	-.2
Finance,insurance, and real estate	191.2	197.0	200.1	199.9	4.6	(5)	(5)	(5)	(5)	(5)	(5)	(5)
Services	185.6	192.3	193.9	194.0	4.5	184.9	190.8	190.9	191.9	194.1	193.2	-.5

1/ See footnote 1, table B-2.

2/ Less than 0.05 percent.

3/ Change is -.4 percent from October 1987 to October 1988, the latest month available.

4/ Change is -.1 percent from September 1988 to October 1988, the latest month available.

5/ These series are not seasonally adjusted since the seasonal component is small relative to the trend-cycle and/or irregular components and consequently cannot be separated with sufficient precision.

N.A. Data not available.

p = preliminary.

NOTE: Beginning in 1989, publication of the Hourly Earnings Index series will no longer be published in this release. For further information, see "Employment Cost Index Series to Replace Hourly Earnings Index," Monthly Labor Review, July 1988, pp. 32-35.

ESTABLISHMENT DATA

ESTABLISHMENT DATA

Table B-5. Indexes of aggregate weekly hours of production or nonsupervisory workers1/ on private nonagricultural payrolls by industry

(1977=100)

Industry	Not seasonally adjusted				Seasonally adjusted					
	Nov. 1987	Sept. 1988	Oct. 1988p/	Nov. 1988p/	Nov. 1987	July 1988	Aug. 1988	Sept. 1988	Oct. 1988p/	Nov. 1988p/
Total private	123.4	127.6	128.3	127.8	122.8	126.4	125.5	126.0	127.1	127.0
Goods-producing industries	102.4	106.3	106.7	105.9	101.2	103.5	102.8	103.1	103.9	104.5
Mining	85.9	84.4	84.9	83.0	84.1	85.6	83.5	82.8	83.5	81.3
Construction	138.0	155.6	157.6	149.1	136.4	142.4	142.5	143.4	145.2	147.2
Manufacturing	96.3	97.8	97.9	98.6	95.1	96.5	96.0	96.3	96.9	97.4
Durable goods	93.9	95.5	95.9	96.9	92.9	94.8	94.2	94.6	95.2	95.7
Lumber and wood products	103.4	105.7	107.1	104.7	103.9	103.9	102.3	101.7	104.8	105.2
Furniture and fixtures	117.2	116.1	117.6	117.0	114.6	115.1	112.0	114.2	114.5	114.2
Stone, clay, and glass products	88.2	90.9	91.0	90.2	87.3	88.0	87.3	87.5	88.3	89.3
Primary metal industries	66.9	70.0	69.4	70.5	66.8	69.0	68.7	69.7	70.1	70.4
Blast furnaces and basic steel products	53.1	55.5	54.1	55.4	54.1	55.3	54.8	55.0	55.0	55.6
Fabricated metal products	92.3	94.0	94.4	95.4	91.2	92.7	92.6	93.1	93.3	94.1
Machinery, except electrical	89.4	93.2	93.4	94.9	89.0	93.7	92.6	93.2	93.7	94.3
Electrical and electronic equipment	103.2	103.6	103.8	105.6	101.5	103.1	102.8	103.1	103.1	103.9
Transportation equipment	100.6	100.0	100.6	102.8	99.1	99.7	99.9	100.2	100.6	101.0
Motor vehicles and equipment	89.7	91.6	91.9	93.2	88.7	88.2	90.9	91.4	91.8	91.8
Instruments and related products	105.6	107.9	109.2	111.5	104.4	108.2	107.7	107.9	110.1	110.3
Miscellaneous manufacturing	87.2	86.3	87.0	87.6	83.6	85.1	84.2	84.2	83.1	83.8
Nondurable goods	99.8	101.2	100.8	101.2	98.5	99.1	98.7	98.7	99.4	99.8
Food and kindred products	102.9	108.4	106.6	105.8	100.9	100.6	100.2	100.1	102.5	103.7
Tobacco manufactures	79.5	78.5	78.8	75.6	73.8	73.7	72.0	69.1	69.6	70.9
Textile mill products	83.9	81.6	81.1	81.6	82.7	81.2	79.9	80.4	80.2	80.2
Apparel and other textile products	87.6	85.1	85.4	85.8	86.1	84.7	83.9	84.5	84.0	84.3
Paper and allied products	102.5	102.7	101.7	103.0	101.4	101.9	101.9	101.4	101.3	102.1
Printing and publishing	135.2	136.3	137.6	138.7	133.4	136.6	137.0	137.5	137.3	136.8
Chemicals and allied products	96.8	99.5	99.0	100.2	96.7	98.7	98.7	98.4	99.8	99.9
Petroleum and coal products	85.5	88.6	89.4	87.6	85.3	86.6	86.6	86.1	88.3	87.6
Rubber and misc. plastics products	120.5	124.3	125.6	127.2	119.6	124.8	124.2	123.9	126.8	125.8
Leather and leather products	58.7	56.7	57.1	56.7	57.5	55.5	54.0	55.8	55.9	55.6
Service-producing industries	135.1	139.3	140.2	139.9	134.7	139.1	138.1	138.7	139.9	139.4
Transportation and public utilities	112.2	116.0	116.8	116.6	111.0	114.7	114.5	114.6	115.3	115.3
Wholesale trade	121.6	127.5	128.5	128.1	121.3	126.3	125.4	126.9	127.3	127.6
Retail trade	124.9	126.9	127.2	127.6	123.8	127.3	126.2	125.7	127.2	126.2
Finance, insurance, and real estate	140.7	140.5	140.8	139.8	141.3	142.1	140.0	140.6	141.3	140.3
Services	154.9	162.1	163.6	162.8	155.3	161.5	160.7	162.0	163.4	163.0

1/ See footnote 1, table B-2.

p = preliminary.

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

Time span	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Over 1-month span:												
1986	57.0	47.3	49.5	50.8	51.9	46.8	51.9	54.1	51.4	53.0	58.9	58.9
1987	50.8	59.2	61.1	62.4	62.4	61.6	70.8	62.2	68.1	67.3	67.8	68.4
1988	61.6	61.6	62.2	63.8	58.1	68.9	61.4	51.9	49.5	p/64.9	p/68.9	
Over 3-month span:												
1986	50.0	47.6	45.7	46.2	46.2	46.2	48..	51.9	50.5	55.9	59.7	59.2
1987	57.6	57.0	65.1	69.2	6[illegible]	71.9	73.8	76.8	74.1	76.5	78.1	73.0
1988	71.6	66.8	67.0	66.8		69.7	68.4	57.3	p/58.6	p/66.8		
Over 6-month span:												
1986	48.1	47.3	43.8	42.7	43.2	47.0	46.5	50.0	55.9	53.2	55.9	58.4
1987	64.6	64.3	63.0	70.3	72.4	77.3	78.4	79.7	82.7	77.8	77.0	76.5
1988	73.5	70.5	70.3	73.8	70.5	68.4	p/65.7	p/71.9				
Over 12-month span:												
1986	42.2	41.6	43.8	44.9	45.7	48.6	46.8	48.6	51.6	53.8	56.5	57.8
1987	63.8	67.3	69.5	73.5	76.8	76.8	78.9	78.9	79.7	78.4	77.8	81.9
1988	77.6	77.6	73.5	p/73.8	p/75.7							

1/ Number of employees, seasonally adjusted, for 1, 3, and 6 month spans, on the payrolls of 185 private nonagricultural industries. Data for the 12-month span are unadjusted.

NOTE: Figures are the percent of industries with employment rising. (Half of the unchanged components are counted as rising.) Data are centered within the spans. Beginning with the release of January 1989 data, the index shown in this table will be replaced by a broader-based index covering 349 private nonagricultural industries and a separate manufacturing index covering 134 industries. p-preliminary.

Senator PROXMIRE. Thank you very much.

What is your feeling about the surprising rise in the work force; that although we had this very strong employment showing in November, because of the rise in the work force, we actually had an increase in unemployment, a slight increase?

Mrs. NORWOOD. Strong employment growth is often accompanied by an increase in the labor force.

The labor force and employment tend to grow in fits and starts as measured in the survey. Thus the fact that we had 560,000 increase in the labor force from October to November needs to be looked at while remembering that we had a decline of 100,000 in September and we had a very, very minimal increase in October. Over the 3 months we really have not had an exaggerated increase in the labor force.

Senator PROXMIRE. I want to test you with the Congressman Obey principle enunciated this morning, and whether you can evade answering this question. It will be an embarrassing question for you, but let me ask you this. On November 22, the administration released its economic forecast for the next 6 years. It had modified its forecast from what it had earlier when it predicted a higher rate of unemployment. Now it says that for unemployment, the forecast calls for a decline from 5.4 percent for 1988 to 5.2 percent for 1989, and then to 5.0 percent from 1991 through 1994.

The forecast also projects a dramatic decline in inflation at the same time, a decline in inflation at the same time you have your drop in unemployment, from 4.3 percent in 1988—get this—to 1.5 percent in 1994.

The question is: If you had to bet your house on this forecast, what kind of odds would you want?

Mrs. NORWOOD. First, let me say that I am not a gambler.

Senator PROXMIRE. We won't let you off the hook just with that answer.

Mrs. NORWOOD. And, above all, I feel very strongly that my house is my most important asset.

There have been a number of forecasts, many of them differing from that of the Council of Economic Advisers. It is true that as we move from now into the next century, we will be having fewer people growing up to labor force age, and therefore it may be somewhat easier than in the past to maintain or sustain a moderate or a lower level of unemployment. There are just fewer people.

In the 1970's we had masses of youngsters growing up to labor force age, coming into the labor force, and exerting a good deal of upward pressure.

Senator PROXMIRE. What you are saying, then is that unemployment may well fall as they predict. But my question is: Is that consistent, then, with diminishing inflation, particularly sharply diminishing inflation over the next 3 or 4 years?

Mrs. NORWOOD. That depends on how we react, I believe, to a number of labor market issues that are facing us.

Senator PROXMIRE. Is there any precedent for this in your memory in the economic history of our country where we have had unemployment at this level and then falling, and inflation going down too?

Mrs. NORWOOD. Well, that is rare; you are quite right.

Senator PROXMIRE. Has it ever occurred?

Mrs. NORWOOD. As you know, people tend to be more interested in our data when they show something bad. When we report high unemployment, they are interested in unemployment data and they are less concerned about prices. If the reverse situation happens, they are only interested in the price data. And right now they are not terribly interested in either.

However, if we look at our price numbers, it is quite clear that there is no evidence now that there is imminent pressure of tremendous inflation. There are a few worrying signs. We have a 4-, 4.5-percent rate of inflation. In the Nixon years that was considered high enough to institute price controls.

Now, remembering the double-digit rates of inflation, it seems relatively low and people have accepted it because their expectations have changed.

In the 1970's, the major influences on the rate of inflation were food prices toward the end of the period, which are often uncontrollable, and oil. There is some evidence that the OPEC countries are beginning to get their act together to raise the price of oil, but it is not at all clear how long that will exist. That will help the economy in the Southwestern part of the country, but it could fuel some additional inflation.

We are also concerned about the costs of health care and other services that seem to be rising at a somewhat higher rate of inflation than the overall. I think it would be very, very, very difficult to significantly contain both of those influences on inflation.

Senator PROXMIRE. Between 1987 and 1988, in the last year, there was a reduction in the unemployment rate from 6.1 percent to an estimated 5.4 percent. That was accompanied by a slight increase in the inflation rate from 3.6 percent to an estimated 4.2 percent.

Does the projection of a decline in inflation to 1.5 percent imply that there would probably have to be a recession over the next 2 or 3 years that would achieve that?

Mrs. NORWOOD. Well, you will recall that we have had recessions when we haven't really had a drop in inflation. I think that the better way to look at that is to look at the developments in the economy which could perhaps lead to upward pressure on the rate of inflation.

As I have said, oil is one thing we have to be very concerned about. The rising costs of the services is another area. At the moment, there is not much upward pressure from wages. Most of the increase that occurred in our employment cost index this year, that is the increase from the previous year, was in the cost to employers of things like Social Security and health insurance.

Senator PROXMIRE. Isn't there always pressure coming on increasing prices from the level of capacity we are operating at? We are operating at 84 percent of capacity. When we get to that level, prices rise because it is necessary for business to bring in less efficient capacity or to pay for the construction of new capacity which costs more and requires higher prices.

Mrs. NORWOOD. That is certainly true. On the other hand, probably the biggest cost pressure comes from the wage side and we are not seeing a lot of that now.

Senator PROXMIRE. But won't you inevitably see it as the unemployment rate diminishes, stays down?

Mrs. NORWOOD. It is certainly possible.

Senator PROXMIRE. That has certainly been our experience, hasn't it?

Now, concerning the 55,000 employment increases supported for the construction industry in November, isn't this a month when construction employment usually declines, and is any of this job gain a seasonal adjustment problem?

Mr. PLEWES. I think there are really three reasons for the increase in construction this time. First of all, there is something real going on. There is an increase in single unit residential construction, and we see that in the other indicators.

But there are two other things that happened this month, too. The weather in November throughout the country was abnormally good. So many of the construction projects that ordinarily would have terminated because of bad weather were kept open. That is a seasonal phenomenon but it is also real employment.

The other thing is that we had a fairly early reference week for our survey. The week including the 12th of the month was fairly early in November. Again, I think because we had a fairly early reference week, a number of the persons that might otherwise have been laid off in construction were kept on the rolls.

So there is something real and something seasonal in this movement, I think.

Senator PROXMIRE. How do you explain the fact that there was no increase in employment reported by department and general merchandise stores?

Mrs. NORWOOD. It is quite clear that the department stores are building up for the Christmas holidays in a much slower fashion than in previous years. We really don't have anything more to add.

Senator PROXMIRE. During the past year, the teenage unemployment rate has fallen from 16.6 percent to 13.9 percent. How much of that is due to the decline in the number of teenagers and how much is due to increased employment among teenagers?

Mrs. NORWOOD. I don't know that I can tell you that offhand. There has been a decline in the labor force of teenagers over the last year of slightly less than 100,000.

Senator PROXMIRE. Can we expect that to continue?

Mrs. NORWOOD. It will continue for a little while and then level off.

Mr. PLEWES. Until about 1994 we see these trends continuing and then it will turn around.

Senator PROXMIRE. So you will have it for the next 5 years, then.

Mrs. NORWOOD. Yes. Then it will turn around. That is the major reason that the labor force will grow much more slowly—at only about half the rate in the future that it has in the past.

But the teenagers had about 100,000 drop in the labor force and about 140,000 increase in employment.

Senator PROXMIRE. You answered this next question in part. During the end of the year, we normally see a large increase in employment in retail trade. The Wall Journal article earlier this week suggested that retail sales right after Thanksgiving were disappointing.

Do you see any signs that retailers are creating fewer jobs this season than in past years?

Mrs. Norwood. There seems to be somewhat less of an employment increase than in previous years. Not an awful lot less, however.

We are seeing that people are beginning to be more careful about expenditures than they were in the past. That is partly the result, I think, of the concerns about the deficit, partly the result of the fallout from the psychology of the stock market drop last fall. So we are seeing less willingness to go out and buy big-ticket items, I believe.

Senator PROXMIRE. Congressman Obey.

Representative OBEY. Thank you, Senator. I don't have many questions this morning, but let me ask a couple.

You indicate that most of November's employment gain occurred among adult women whose employment increased by 380,000, a very large percentage of that total increase.

Do you have any way of knowing how much of that represents a gain in employment for women who are principal earners in the household?

Mrs. NORWOOD. No, we really don't. We do know that the unemployment rate for women who maintain families on their own is still very high. For the month of November it was 7.6 percent, and it has hardly changed very much. It has fluctuated between 7.4 and 8.1 percent over the last 4 months.

Representative OBEY. You indicated earlier in your responses to Senator Proximire the importance of demographics in terms of its effect on unemployment pressures. I think it might be useful if you could provide for us—I certainly would like to have in my office and I think it would probably be useful if it could be inserted in the record in this hearing—a chart simply demonstrating, say if you started in 1970, a chart simply demonstrating what the nominal addition to the job force was each year from 1970 through the present.

If you could also include in that chart an indication of the percentage growth that that represented for each year. And I wonder if you could also try to differentiate between the growth that took place because people were entering the job force simply by age, a function of age, and also the number that indicated entry into the job market of second earners in families.

Mrs. NORWOOD. We will try our best.

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

OVER-THE-YEAR CHANGE AND PERCENT CHANGE IN THE CIVILIAN LABOR FORCE FOR SELECTED GROUPS, 1970-88, ANNUAL AVERAGES

	BOTH SEXES, 16 YRS. AND OVER		BOTH SEXES 16 TO 19 YRS.		MEN, 20 YRS. AND OVER		WOMEN, 20 YRS. AND OVER	
	LEVEL	PERCENT	LEVEL	PERCENT	LEVEL	PERCENT	LEVEL	PERCENT
1970	2037.0	2.5	279.0	4.0	869.0	1.9	888.0	3.2
1971	1611.0	1.9	221.0	3.0	789.0	1.7	603.0	2.1
1972	2652.0	3.1	584.0	7.8	1070.0	2.2	997.0	3.4
1973	2395.0	2.8	453.0	5.6	853.0	1.7	1090.0	3.6
1974	2520.0	2.8	364.0	4.3	947.0	1.9	1210.0	3.9
1975	1826.0	2.0	-1.0	-0.0	615.0	1.2	1209.0	3.8
1976	2383.0	2.5	186.0	2.1	794.0	1.5	1404.0	4.2
1977	2851.0	3.0	295.0	3.3	1060.0	2.0	1496.0	4.3
1978	3242.0	3.3	301.0	3.2	1123.0	2.1	1818.0	5.0
1979	2711.0	2.7	-14.0	-0.1	1144.0	2.1	1580.0	4.1
1980	1978.0	1.9	-260.0	-2.7	840.0	1.5	1398.0	3.5
1981	1730.0	1.6	-390.0	-4.2	742.0	1.3	1379.0	3.4
1982	1534.0	1.4	-462.0	-5.1	783.0	1.4	1214.0	2.9
1983	1346.0	1.2	-355.0	-4.2	764.0	1.3	937.0	2.1
1984	1994.0	1.8	-228.0	-2.8	957.0	1.6	1264.0	2.8
1985	1917.0	1.7	-42.0	-0.5	576.0	1.0	1383.0	3.0
1986	2373.0	2.1	25.0	0.3	1043.0	1.7	1306.0	2.8
1987	2031.0	1.7	62.0	0.8	775.0	1.3	1194.0	2.5
1988	1804.0	1.5	43.0	0.5	673.0	1.1	1087.0	2.2

Representative OBEY. And if you could also add to that what your expectations are over the next 5 years for the same categories, I would appreciate it.

Mrs. NORWOOD. That is a little bit harder, but we certainly can use our projections program and see what we have there until the year 2000.

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

Projections 2000

Labor force projections: 1986 to 2000

According to BLS projections, there will be 139 million persons in the 2000 labor force, representing a slowdown in the rate of growth after 1986; because of population or participation growth rates, blacks, Hispanics, and Asians and others are expected to increase their representation in the labor pool

HOWARD N FULLERTON, JR.

The labor force is projected by the Bureau of Labor Statistics to be 139 million persons in the year 2000. This represents growth of 21 million persons between 1986 to 2000 in the moderate of three alternative labor force projections; well below the 31 million added to the labor force between 1972 and 1986. The projected growth rate of 1.2 percent annually is less than the 2.2-percent annual rate over the 1972–86 period. (See table 1.)

Some trends in the labor force projections—the expected growth in the share of women in the labor force and the drop in the share of workers 55 and older—are the result of anticipated changes in participation rates. Women were only 39 percent of the labor force as recently as 1972; by 2000, they are projected to be 47 percent. The older population, which is growing as a share of the overall population, is projected to have lower labor force participation rates in 2000 and, as a consequence, a smaller share of the labor force. (See table 2.)

Other changes expected between 1986 and 2000 reflect underlying population changes. The proportion of youths (those 16 to 24 years) dropped from 23 percent of the labor force in 1972 to 20 percent in 1986 and is projected to fall further to 16 percent by 2000. The drop in the youth share of the labor force for the 1972–86 period reflects the end of the entry of the baby-boomers, while the projected drop reflects the lower numbers of births in the 1970's. Blacks, who were 10 percent of the labor force in 1972 and 11 percent in 1986, are projected to be 12 percent by 2000. The increased share of the labor force for blacks results from their population growth. Hispanics also are projected to increase their share of the labor force from 7 percent in 1986 to 10 percent by 2000, reflecting both population and participation growth. Asians and others are projected to increase their labor force share from 3 percent in 1986 to 4 percent in 2000, as the result of rapid population increase.[1]

This article presents BLS' first look at the 2000 labor force.[2] The alternative labor force projections are presented by age, sex, race and Hispanic origin. They are based on the Bureau of Census middle population projection and BLS projections of future trends in labor force participation.[3]

Components of labor force projections

Population. There are two major factors that determine labor force growth: changes in population and in labor force participation rates. The process of making projections is not exact; to indicate the possible range of uncertainty, BLS (and the Census Bureau) prepares alternative projections.[4] Labor

Howard N Fullerton, Jr. is a demographic statistician in the Office of Economic Growth and Employment Projections, Bureau of Labor Statistics.

force participation rate projections were prepared for three racial groups and independently for Hispanics by sex and age.[5]

To prepare population projections, assumptions about the future paths of births, deaths, and net migration must be made. The Bureau of Census new population projections used in the labor force projections (and in the other projection articles in this issue) are based on the following assumptions about these major elements needed to project population change:

Net migration. The Bureau of Census assumption for the middle scenario is that both immigration and emigration will be high. The higher immigration assumption reflects the inclusion of undocumented aliens who are added in the middle population projections for the first time. The higher emigration assumption reflects the greater return migration of foreign-born persons to their native countries. The net migration (immigration less emigration) scenario reflects an assumption that new immigration legislation, which will not be fully implemented until the end of 1988, will reduce the level of undocumented migration, but not entirely end it.

Fertility. In the long run, fertility changes are always most important for projecting the population. Between now and 2000, the fertility assumptions would not affect the size of the 2000 population over the age of 16.

There is no Hispanic population projection available that is consistent with the current Bureau of the Census population projection. BLS has decided to use the high migration scenario from the Census Bureau's most recent Hispanic population projection.[6] The assumptions for this projection are for Hispanics to have an ultimate cohort fertility rate of 1.9 children per woman, an ultimate life expectancy at birth of 81.0 years, and yearly net migration of 361,000.[7] The latter number is assumed to include 212,000 undocumented immigrants, consistent with the initial years, but not with the later years of the current overall projection. Future direction and magnitude of immigration, both documented and undocumented, is uncertain at this time. As a consequence, projections of the Hispanic population, because they are affected so much by immigration, are subject to more uncertainty than the overall population.

Table 1. Civilian labor force by sex, age, race, and Hispanic origin, actual 1972, 1979, and moderate growth projections 2000

Group	Level (in thousands)				Change (in thousands)			Percent change		
	1972	1979	1986	Projected, 2000	1972–79	1979–86	1986–2000	1972–79	1979–86	1986–2000
Total, 16 and over	87,037	104,960	117,837	138,775	17,923	12,877	20,938	20.6	12.3	17.8
Men, 16 and over	53,556	60,727	65,423	73,136	7,171	4,696	7,713	13.4	7.7	11.8
16 to 24	11,243	13,645	12,251	11,506	2,402	−1,394	−745	21.4	−10.2	−6.1
25 to 54	33,133	37,926	44,406	53,024	4,793	6,480	8,618	14.5	17.1	19.4
55 and over	9,180	9,156	8,766	8,606	−24	−390	−160	−.3	−4.3	−1.8
Women, 16 and over	33,481	44,233	52,414	65,639	10,752	8,181	13,225	32.1	18.5	25.2
16 to 24	8,943	11,760	11,117	11,125	2,817	−643	8	31.5	−5.5	.1
25 to 54	19,192	28,594	35,159	47,756	7,402	6,565	12,597	38.6	32.2	35.8
55 and over	5,346	5,879	6,138	6,758	533	259	620	10.0	4.4	10.1
White, 16 and over	77,275	91,922	101,801	116,701	14,647	9,879	14,900	19.0	10.7	14.6
Black, 16 and over	8,748	10,665	12,684	16,334	1,917	2,019	3,650	21.9	18.9	28.8
Asian and other,[1] 16 and over	—	2,373	3,352	5,740	—	979	2,388	—	41.3	71.2
Hispanic,[2] 16 and over	—	5,215	8,076	14,086	—	2,861	6,010	—	54.9	74.4

	Percent distribution				Growth rate		
	1972	1979	1986	Projected, 2000	1972–79	1979–86	1986–2000
Total, 16 and over	100.0	100.0	100.0	100.0	2.7	1.7	1.2
Men, 16 and over	61.5	57.9	55.5	52.7	1.8	1.1	.8
16 to 25	12.9	13.0	10.4	8.3	2.8	−1.5	−.4
25 to 54	38.1	36.1	37.7	38.2	1.9	2.3	1.3
55 and over	10.5	8.7	7.4	6.2	(3)	−.6	−.1
Women, 16 and over	38.5	42.1	44.5	47.3	4.1	2.5	1.6
16 to 24	10.3	11.2	9.4	8.0	4.0	−.8	(3)
25 to 54	22.1	25.3	29.8	34.4	4.8	4.1	2.2
55 and over	6.1	5.6	5.2	4.9	1.4	.6	.7
White, 16 and over	88.8	87.6	86.4	84.1	2.5	1.5	1.0
Black, 16 and over	10.1	10.2	10.8	11.8	2.9	2.5	1.8
Asian and other,[1] 16 and over	—	2.3	2.8	4.1	—	5.1	3.9
Hispanic,[2] 16 and over	—	5.0	6.9	10.2	—	6.4	4.1

[1] The "Asian and other" group includes American Indians, Alaskan Natives, Asians, and Pacific Islanders. The historic data are derived by subtracting "Black" from the "Black and other" group; projections are made directly.

[2] Persons of Hispanic origin may be of any race. Labor force data for Hispanics are not available before 1978.

[3] The rate is −0.05 to 0.05 percent.

NOTE: Dash indicates data not available.

Table 2. Civilian labor force participation, by sex, age, race, and Hispanic origin, actual 1972, 1979, and 1986, and moderate growth projections 2000

Group	Actual			Projected, 2000	Growth rate		
	1972	1979	1986		1972–79	1979–86	1986–2000
Total, 16 and over	60.4	63.7	65.3	67.8	0.8	0.4	0.3
Men, 16 and over	79.0	77.8	76.3	74.7	-.2	-.3	-.2
16 to 24	71.3	75.0	73.0	74.3	.7	-.4	.1
25 to 54	95.1	94.4	93.8	92.6	-.1	-.1	-.1
55 and over	53.3	46.6	40.4	34.1	-1.9	-2.0	-1.2
Women, 16 and over	43.9	50.9	55.3	61.5	2.1	1.2	.8
16 to 24	53.0	62.5	64.3	69.5	2.4	.4	.6
25 to 54	51.0	62.3	70.8	80.8	2.9	1.8	.9
55 and over	24.5	23.2	22.1	21.4	-.8	-.7	-.2
White, 16 and over	60.4	63.9	65.5	68.2	.8	.4	.3
Black, 16 and over	60.2	61.4	63.5	66.0	.3	.5	.3
Asian and other,[1] 16 and over	—	65.9	64.9	65.8	—	-.2	.1
Hispanic,[2] 16 and over	—	63.5	65.4	68.7	—	.4	.4

[1] The "Asian and other" group includes American Indians, Alaskan Natives, Asians, and Pacific Islanders. The historic data are derived by subtracting "Black" from the "Black and other" group; projections are made directly.

[2] Persons of Hispanic origin may be of any race. Labor force data for Hispanics are not available before 1978.

NOTE: Dash indicates data not available.

Summary of population changes, 1986–2000. The overall U.S. population, which increased by 1 percent annually between 1972 and 1986, is projected to grow by 0.8 percent yearly to 2000. This slowing reflects the anticipated drop in births as well as the slight drop in net migration. The rate of increase will not be uniform across age, race, or Hispanic origin groups.

As the following tabulation indicates, over the 1972–86 period, the number of persons (ages 18 to 24) entering college or their first job rose, while the number of those (ages 14 to 17) in high school dropped slightly. The number of those (ages 5 to 13) in elementary school dropped more substantially, while the number of preschoolers increased. Over the 1986–2000 period, many of these younger age groups show a reversal of trend; the number of persons ages 18 to 24, which had been increasing during the 1972–86 period, is projected to drop through 2000:

	1972	*1986*	*2000*
Total population (millions)	209.9	241.6	268.3
White	183.3	204.7	221.5
Black	23.6	29.4	35.1
Asian and other	2.9	7.5	11.6
Hispanic	–	18.5	30.3
Years of age:			
0 to 4	17.1	18.1	16.9
5 to 13	39.9	34.2	33.5
14 to 17	16.6	14.8	15.3
18 to 24	26.1	28.0	25.2
65 and older	21.0	29.2	34.9
85 and older	1.5	2.8	4.6
Civilian noninstitutional population 16 and older (millions)	144.1	180.6	204.7

The number of persons ages 65 and older increased more than twice as fast as the overall population during the 1972–86 period; those 85 and older increased more than four times as fast.

Changes in the total population are reflected in the civilian noninstitutional population 16 and older with a lag. Between 1972 and 1986, the civilian noninstitutional population grew by 1.6 percent annually, while over the 1986–2000 horizon, the population is projected to grow significantly more slowly, by 0.9 percent. (See table 3.)

An important event of the post-World War II period is the great flows of migrants documented and undocumented, into and out of this country. In the future, according to these population projections, immigration would be an increasing share of population growth. Immigrants are generally of working age. There are slightly more women than men among the documented entrants. As a consequence of the projected overall decrease in births, net migration, even though declining somewhat, still is projected to continue to be an increasing share of population growth:

	1972–79	*1979–84*	*1986–95*	*1995–2000*
Percent of population	17.2	25.7	29.9	32.2

The effect of the higher net migration is an increase in the number of people of working age and a decrease in the number of older people. To the extent that immigrants have different age, educational, and occupational compositions than the resident population, this would affect the future work force. A summary of the Census Bureau's projections for 2000 and estimates for the 1986 and related earlier years population are displayed in table 4.[8]

Projections of labor force participation change. Trends in labor force participation rates—the second important factor affecting the size of the labor force of the future—were projected by BLS for 114 groups by age, sex, and race or ethnicity. After the rate of change for each sex and race group for the 1979–86 period was estimated, the labor force participation rate for the group was extrapolated by age. The resulting cross-sectional patterns for specific race-sex groups were examined for 2000 and, when these patterns were inconsistent with historical patterns, they were modified. The cohort participation rates were also plotted and, if inconsistent with historic patterns, the projected participation rates were modified. For these two reasons, adjustments mainly affected participation rates for women in the preretirement years. The projected pattern of participation for white women did not result in a drop in participation between ages 25 to 29 and 30 to 34 as it has in the past. However, this was accepted as consistent with developing patterns, though it has yet to manifest itself, reflecting primarily the fact that women increasingly are less likely to withdraw from the labor force after children are born.

The primary methodological change in this set of projections involved the development of projections for five-year-of-age groups for blacks. Participation rates were also calculated for the Asian and other labor force, but after examination of the historical data, there was so much year-to-year variation that the growth patterns in labor force participation of whites were used instead to project the Asian and other labor force.

Labor force participation rates for women of prime working age (25 to 54) and older ages were assumed not to exceed that of men. After examination of the preliminary employment projections, the assumed participation rate of young whites was adjusted upward to reflect anticipated growth in job opportunities for first-time jobseekers and the declining number of youth available for those jobs.

Compositional changes in the labor force

Age. By 2000, prime working-age persons would make up 73 percent of the labor force, up from 67 percent in 1986 (table 1). This reflects underlying demographic changes; the baby-boom generation will still be in the prime working ages, but between 1995 and 2000, the "echo" of the baby boom (their children) are projected to begin entering the labor force. Despite this, the youth in the labor force are still projected to account for a smaller share of the labor force in 2000 than in 1986, 16 percent, compared with 20 percent—although their share is expected to be even lower in 1995. The share of older workers (55 and older) also is projected to shrink between 1986 and 2000 by about 1½ percentage points. The share of workers 55 and older is projected to be slightly lower in 1995, because that is when the group known as the "birth dearth of the 1930's" enters the retirement years. The following tabulation shows the number, in millions, of persons in each major age group for 1972–86 and the rate of growth for 1986–2000.

Period:	*Youth*	*Prime working age*	*Older*
1972	20.2	52.3	14.5
1986	23.4	79.6	14.9
2000	22.6	100.8	15.4
Growth rate:			
1972–86	1.1	3.0	.2
1986–2000	−.2	1.7	.2

The labor force group age 55 and older is projected to decrease between 1986 and 1995, but then increase between 1995 and 2000. During the latter period, this group would be the fastest growing component of the labor force. The youth labor force, which has been decreasing since 1980, is also projected to decline until 1995, before increasing more rapidly than the overall labor force. The prime working-age group is the only one that is projected to grow throughout the period, even though some age groups within this broader age group are expected to decline for at least part of the 1986–2000 period. The prime age work force grew by 3 percent annually between 1980 and 1986; this growth rate is projected to drop to 2.6 percent for the rest of this decade, 1.8 percent for the early 1990's, and less than 1 percent yearly until 2000.

The changes in such broad age groups are a reflection of the changing size of underlying finer age groups, which are, in turn, a reflection of past variability in births. To further explicate the process, we describe the changes in various detailed age groups.

After the baby boom (defined by the Census Bureau as starting in 1946 and ending in 1964), the number of births dropped until 1975, with a modest upswing in 1968–70. Since 1976, births have increased as the women of the baby boom became mothers, the "echo" to the baby boom. As a result of the drop in births that started in 1960, the number of 16-year-olds in the population and labor force began to decline about 1976 and is expected to continue to decline until 1992. (There was a short-lived "boomlet" between 1968 and 1970, resulting in an increase in the number of teenagers during 1986–88.) The number of 17-year-olds began to decline in 1977, 1 year after the number of 16-year-olds. The decline should end 1 year later than for 16-year-olds, or 1993. Looking at larger age groups which are less sensitive to yearly variations in births, we see that the number of 16- to 19-year-olds began dropping in the late 1970's and is projected to continue to do so until the mid-1990's. Thereafter, this age group is projected to increase as the larger number born after 1978—the echo to the baby boom—begins to enter the labor force. The teenage labor force is projected to drop by nearly 1.5 million between 1986 and 1992 and then to increase by 1.4 million between 1992 and 2000.

This effect—reversal in direction over the 1986 and 2000 period—also is projected to prevail for other age groups. Numbers of labor force participants 20 to 24 years of age began to drop in the early 1980's and are projected to decline by 2.4 million people between 1986 and 1997 before beginning to increase. The labor force ages 25 to 29, which has been growing rapidly, is projected to decline from the late 1980's until after 2000. The drop would be 2.9 million between 1986 and 2000. For those in the labor force who are 30 to 34 years old, the projected decline begins in the early 1990's. In the late 1990's, the next older group, ages 35 to 39 starts its decline in absolute numbers. The 30-to-34-year-olds are projected to increase by 2.1 million through the early 1990's and then decline by 2.2 million by 2000. The 35 to 39 group is projected to increase by 4.2 million between 1986 and the mid-1990's and then to decline only slightly by the year 2000.

Race or ethnicity. Blacks are projected to account for 18 percent of labor force growth between now and the end of the century. This would be significantly above their current share of the overall labor force. Blacks made up 11 percent of labor force growth between 1972 and 1979, 16 percent

Table 3. Civilian noninstitutional population, by sex, age, race, and Hispanic origin, actual 1972, 1979, and 1986, and projected to 2000

Group	Level (in thousands)				Change (in thousands)			Growth rate		
	1972	1979	1986	Projected, 2000	1972–79	1979–86	1986–2000	1972–79	1979–86	1986–2000
Total, 16 and over	144,122	164,865	180,589	204,699	20,743	15,723	24,110	1.9	1.3	0.9
Men, 16 and over	67,835	78,021	85,799	97,662	10,186	7,778	12,163	2.0	1.4	1.0
16 to 24	15,769	18,184	16,773	15,489	2,416	−1,411	−1,284	2.1	−1.1	−.8
25 to 54	34,840	40,184	47,343	57,250	5,344	7,159	9,907	2.1	2.4	1.4
55 and over	17,227	19,653	21,683	25,223	2,426	2,030	3,540	1.9	1.4	1.1
Women, 16 and over	76,287	86,844	94,790	106,737	10,557	7,946	11,947	1.9	1.3	.9
16 to 24	16,867	18,827	17,293	15,999	1,940	−1,534	−1,294	1.6	−1.2	−.6
25 to 54	37,595	42,692	49,672	59,094	5,097	6,980	9,422	1.8	2.2	1.2
55 and over	21,805	25,325	27,825	31,644	3,520	2,500	3,819	2.2	1.4	.9
White, 16 and over	127,904	143,808	155,433	171,230	15,904	11,535	15,797	1.7	1.1	.7
Black, 16 and over	14,543	17,366	19,989	24,750	2,823	2,623	4,761	2.6	2.0	1.5
Asian and other,[1] 16 and over	–	3,801	5,164	8,719	–	1,562	3,555	–	5.3	3.8
Hispanic,[2] 16 and over	–	8,208	12,343	20,490	–	4,135	8,147	–	6.0	3.7

[1] The "Asian and other" group includes American Indians, Alaskan Natives, Asians, and Pacific Islanders. The historic data are derived by subtracting "Black" from the "Black and other" group; projections are made directly.

[2] Persons of Hispanic origin may be of any race. Data for Hispanics are not available before 1978.

NOTE: Dash indicates data not available.

SOURCE: Based on U.S. Bureau of Census "middle" population projections.

between 1980 and 1986, and are projected to account for 17 percent between 1986 and 1990. The following tabulation shows the number, in millions, of persons in the labor force and the growth rate, in percent, by race or ethnic origin, 1972–86 and 1986–2000:

	Labor force			*Growth rate*	
Group	*1972*	*1986*	*2000*	*1972-86*	*1986-2000*
Total	87.0	117.8	138.8	2.2	1.2
White	77.3	101.8	116.7	2.0	1.0
Black	8.7	12.7	16.3	2.7	1.8
Asian and other	–	3.4	5.7	–	3.9
Hispanic	–	8.1	14.1	–	4.1

There are projected to be 16.3 million blacks in the labor force in 2000, up 3.7 million from 1986. This represents a higher annual growth rate, 1.8 percent, than those projected for whites and for the overall labor force. Black labor force participation is projected to grow 0.3 percent annually, as is that of whites. By 2000, blacks are projected to account for 12 percent of the labor force, up 1 percentage point from 1986.

The white labor force is projected to grow by 15 million between 1986 and 2000, reaching a level of 117 million. Whites have historically been the largest share of the labor force, but this share has been dropping and is projected to continue to do so—in 1972 it was 89 percent and by 2000, it should be 84 percent. Thus, the white labor force, which also includes nearly all of the Hispanics, is growing more slowly than the overall labor force, 0.2 percent per year less over both the historical period, 1972–86, and the projected period, 1986–2000. This slower growth reflects slower population increases (table 2), because labor force participation of whites is projected to grow at the same rate as the overall labor force.

The Asian and other labor force is projected to increase 71 percent, or by 2.4 million persons, between 1986 and 2000. This increase reflects a high rate of population growth, which, in turn, reflects higher births and immigration of this group. By 2000, persons of Asian and other races would constitute 4 percent of the labor force, up from less than 3 percent in 1986. Over the 1986–2000 period, Asians and others account for 11 percent of the projected growth in the labor force. This represents a slowing in their growth rate from the 1979–86 period during which their population was increasing rapidly due to the entry of refugees. This entry of refugees has virtually stopped, and it is assumed not to occur again over the projection period.

Labor force participation of the Asian and other group is assumed to increase at the same rate as whites at the individual age-sex level. Their participation rate is projected to be lower than that of whites in 2000. This reflects their lower participation in 1986. The lower rate of increase for their overall labor force participation reflects the different age and sex composition of this population group.

The Hispanic labor force is projected to increase 74 percent between 1986 and 2000; among the largest increases projected for any group. By 2000, Hispanics are projected to be 10 percent of the labor force, up from 7 percent in 1986. This increase results in 6 million more Hispanics entering the labor force, for a total of 14 million in 2000.

Hispanic labor force participation, which increased 0.4 percent annually between 1979 and 1986, is projected to continue to increase at that rate over the next 14 years. This reflects the younger age of the Hispanic population—with more young women, overall participation rises as their participation is projected to rise. By contrast, whites and blacks are projected to have slower rates of increase in participation.

Hispanics' share of labor force growth was 22 percent between 1979 and 1986. Given their more rapid population growth, their share of the labor force increment between 1986 and 2000 is projected to be 29 percent. The size of the share is more impressive by subperiod—27 percent for the years 1986 to 1995 and 32 percent for 1995 to 2000. More than a third of population growth in the late 1990's is projected to be Hispanic. As noted earlier, the number of Hispanics is affected by the assumption made regarding future levels of immigration; projections of the share of Hispanics in the labor force could *vary considerably*.

Sex. As in the past, women are projected to account for more than 60 percent of the labor force growth. Over the past 16 years, women have also made up 60 percent of the additions to the labor force. This share is projected to be 64 percent between now and the end of the century. It may be more useful to indicate that since 1979, when the baby-boom generation had almost completed their entry into the labor force, women accounted for 64 percent of labor force additions. For the rest of this decade, and in the early 1990's, women are projected also to make up 64 percent of the net growth in the labor force. In the late 1990's, as the "echo" to the baby boom reaches labor force age and begins entering the labor force, women's share of growth is projected to drop slightly to 62 percent.

These projections show 66 million women in the labor force in 2000, up 13.2 million from 1986 (table 1). This represents an annual rate of growth of 1.6 percent which is below the 3.3-percent rate of the 1972–86 period, during which young women of the baby boom were entering the labor force. With the growth shown in these projections, women would make up 47 percent of the labor force in 2000, up from 39 percent in 1972 and 45 percent in 1986.

Women's labor force participation is projected to increase by 0.8 percent annually—more than twice the overall rate of increase in participation, but half the rate of growth in women's participation over the 1972–86 period. The primary factor behind the slower rate of increase is the level of labor force participation already achieved by women; future increases above past rates are unlikely. The labor force participation rate of women ages 25 to 54, at 70.8 percent in 1986, is projected to reach 80.8 percent by 2000.

The labor force participation of black women has typically been greater than that of white women, except at the younger ages. This is projected to continue through 2000, but the difference is expected to diminish significantly. In 1972, the participation rate of black women—48.8 percent—was 4.6 percentage points above that of white women. By 2000, the difference would be 0.6 points. This reflects the somewhat slower growth in participation by black women and the greater number of young persons in the black female population. Because younger black women's participation is lower than that of white women, this also lowers the difference in participation.

Black women are projected to account for a tenth of labor force growth over the 1986–2000 period; their projected growth rate, 2.1 percent, is greater than that for white women. (See table 5.) For black women, the higher growth rate represents faster population growth as well as growing participation. Thus, the proportion of the labor force made up of black women would increase from 4.5 percent in 1972 to 6.1 percent in 2000.

Table 4. Total population, including armed forces overseas, by age, sex, and race, actual 1972, 1979, and 1986, and projected to 2000

Group	Level (in thousands)				Change (in thousands)			Growth rate		
	1972	1979	1986	Projected, 2000	1972–79	1979–86	1986–2000	1972–79	1979–86	1986–2000
Total	209,896	225,055	241,596	268,264	15,159	16,541	26,668	1.0	1.0	0.8
Years of age:										
0 to 4	17,101	16,063	18,128	16,898	−1,038	2,065	−1,230	−.9	1.7	−.5
5 to 13	39,936	35,592	34,193	33,483	−4,344	−1,399	−710	−1.6	−.6	−.1
14 to 17	15,640	15,611	14,796	15,332	−29	−1,815	536	(1)	−1.6	.3
18 to 24	26,077	30,048	27,973	25,231	3,971	−2,075	−2,742	2.0	−1.0	−.7
25 to 34	27,623	36,203	42,984	37,149	8,580	6,781	−5,835	3.9	2.5	−1.0
35 to 44	22,859	25,176	33,142	43,911	2,317	7,966	10,769	1.4	4.0	2.0
45 to 54	23,687	22,942	22,823	37,223	−745	−119	14,400	−.5	−.1	3.6
55 to 64	19,211	21,448	22,230	24,157	2,237	782	1,927	1.6	.5	.6
65 to 74	12,922	15,338	17,325	18,242	2,416	1,987	917	2.5	1.8	.4
75 to 84	6,555	7,599	9,049	12,017	1,044	1,450	2,968	2.1	2.5	2.0
85 and over	1,542	2,197	2,796	4,821	655	599	1,825	5.2	3.5	3.7
Men	102,591	109,584	117,820	131,185	6,993	8,236	13,365	.9	1.0	.8
Women	107,305	115,472	123,776	137,072	8,167	8,304	13,296	1.1	1.0	.7
White	183,326	194,098	204,671	221,512	10,772	10,573	16,841	.8	.8	.6
Black	23,646	26,417	29,427	35,122	2,771	3,010	5,695	1.6	1.6	1.3
Asian and other[2]	2,924	4,540	7,498	11,630	1,616	2,958	4,132	6.5	7.4	3.2

[1] The rate is −0.05 to 0.05.

[2] The "Asian and other" group includes American Indians, Alaskan Natives, Asians, and Pacific Islanders.

SOURCE: U.S. Bureau of Census. For 1972 and 1979 data, *Preliminary Estimates of the Population of the United States, by Age, Sex, and Race: 1970 to 1981, Current Population Reports*, Series P-25, No. 917; for 1986 data, *Estimates of the Population of the United States, by Age, Sex, and Race: 1980 to 1986, Current Population Reports*, Series P-25, No. 1000; and for 2000 data, *Projections of the Population of the United States, by Age, Sex, and Race 1987 to 2080*, Series No. 1018.

Table 5. Civilian labor force and participation rates by sex, age, race, and Hispanic origin, actual 1972, 1979, and 1986, and moderate growth projections 2000

Group	Participation rate				Level (in thousands)				Change (in thousands)		Percent change		Growth rate	
	Actual			Projected	Actual			Projected						
	1972	1979	1986	2000	1972	1979[1]	1986	2000	1972–86	1986–2000	1972–86	1986–2000	1972–86	1986–2000
Total, 16 and over	60.4	63.7	65.3	67.8	87,037	104,960	117,837	138,775	30,800	20,938	35.4	17.8	2.2	1.2
Men, 16 and over	79.0	77.8	76.3	74.7	53,556	60,727	65,423	73,136	11,867	7,713	22.2	11.8	1.4	.8
16 to 19	58.1	61.5	56.4	60.2	4,478	5,111	4,102	4,501	− 376	399	− 8.4	9.7	− .6	.7
20 to 24	83.9	86.4	85.8	87.5	6,765	8,534	8,149	7,005	1,384	− 1,144	20.5	− 14.0	1.3	− 1.1
25 to 34	95.7	95.3	94.5	93.6	12,349	16,386	19,383	16,559	7,034	− 2,824	57.0	− 14.6	3.3	− 1.1
35 to 44	96.4	95.7	94.8	93.9	10,372	11,532	15,029	20,133	4,657	5,104	44.9	34.0	2.7	2.1
45 to 54	93.2	91.4	91.0	90.1	10,412	10,008	9,994	15,332	− 418	5,338	− 4.0	53.4	− .3	3.6
55 to 64	80.4	72.8	67.3	63.2	7,155	7,213	6,954	7,239	− 201	284	− 2.8	4.1	− .2	.3
65 and over	24.3	19.9	16.0	9.9	2,025	1,943	1,812	1,368	− 213	− 444	− 10.5	− 24.5	− .8	− 2.0
Women, 16 and over	43.9	50.9	55.3	61.5	33,481	44,233	52,414	65,639	18,933	13,225	56.5	25.2	3.3	1.6
16 to 19	45.8	54.2	52.9	59.2	3,576	4,527	3,824	4,379	248	555	6.9	14.5	.5	1.0
20 to 24	59.1	69.0	72.4	78.4	5,365	7,233	7,293	6,746	1,928	− 547	35.9	− 7.5	2.2	− .6
25 to 34	47.8	63.9	71.6	82.3	6,609	11,550	15,209	15,098	8,600	− 111	130.1	− .7	6.1	− .1
35 to 44	52.0	63.6	73.1	84.2	6,026	8,153	12,204	18,438	6,178	6,234	102.5	51.1	5.2	3.0
45 to 54	53.9	58.4	65.9	75.4	6,555	6,891	7,746	14,220	1,191	6,474	18.2	83.6	1.2	4.4
55 to 64	42.1	41.7	42.3	45.8	4,257	4,718	4,940	5,732	683	792	16.0	16.0	1.1	1.1
65 and over	9.3	8.3	7.4	5.4	1,089	1,161	1,196	1,026	109	− 172	10.0	− 14.4	.7	− 1.1
Whites, 16 and over	60.4	63.9	65.5	68.2	77,275	91,922	101,801	116,701	24,526	14,900	31.7	14.5	2.0	1.0
Men	79.6	78.6	76.9	75.3	48,118	53,857	57,216	62,252	9,098	5,036	18.9	8.8	1.2	.6
Women	43.2	50.5	55.0	61.5	29,157	38,065	44,585	54,449	15,428	9,864	52.9	22.1	3.1	1.4
Blacks, 16 and over	60.2	61.4	63.5	66.0	8,748	10,665	12,684	16,334	3,936	3,650	45.0	28.8	2.7	1.8
Men	73.9	71.6	71.2	70.7	4,855	5,556	6,373	7,926	1,518	1,553	31.3	24.4	2.0	1.6
Women	48.8	53.2	57.2	62.1	3,893	5,109	6,311	8,408	2,418	2,097	62.1	33.2	3.5	2.1
Asian and other,[1] 16 and over	–	65.9	64.9	65.8	–	2,373	3,252	5,740	–	2,388	–	71.2	–	3.9
Men	–	76.7	74.9	72.4	–	1,314	1,834	2,958	–	1,124	–	61.3	–	3.5
Women	–	56.0	55.9	60.1	–	1,059	1,518	2,782	–	1,264	–	83.3	–	4.5
Hispanics,[2] 16 and over	–	63.5	65.4	68.7	–	5,215	8,076	14,086	–	6,010	–	74.4	–	4.1
Men	–	81.2	81.0	80.4	–	3,182	4,948	8,303	–	3,355	–	67.8	–	3.8
Women	–	47.4	50.1	56.9	–	2,033	3,128	5,783	–	2,655	–	84.9	–	4.5

[1] The "Asian and other" group includes American Indians, Alaskan Natives, Asians, and Pacific Islanders. The historic data are derived by subtracting "Black" from the "Black and other" group; projections are made directly.

[2] Persons of Hispanic origin may be of any race. Labor force data for Hispanics are not available before 1978.

NOTE: Dash indicates data not available.

White women (including most of the Hispanic women), who accounted for half the labor force growth during the 1972–86 period, are projected to account for less than half of the projected labor force increase over the next 14 years. Their participation rate, which grew by 12 percentage points between 1972 and 1986, is projected to grow more slowly to the year 2000. During both periods, this was a greater increase than for black women, but by 2000, black women are projected to still have slightly greater participation.

The labor force of Hispanic women is projected to increase by 2.7 million to 5.8 million in 2000, an 85-percent increase. Numerically, this growth is projected to exceed that of black women, even though the female Hispanic labor force would still be smaller than that of black women. The growth reflects both population and participation rate increases.

Men have been and are projected to be a majority of the labor force; even though the number of men in the labor force is not changing as dynamically as that of women, it still is changing. It is projected to grow more slowly, by 7.7 million, or 12 percent, during the 1986–2000 period (this compares with 25 percent for women during the same period). Different components of the labor force are growing at different rates; both the older and younger male labor force are projected to drop in size between 1986 and 2000, but both groups are projected to actually increase between 1995 and 2000.

The change in the size of the young male labor force represents the interplay of population dynamics—the echo of the baby boom and projected participation rate increases. The participation of young men is projected to increase modestly over the entire projection period. However, between 1986 and 1995, the number of young men is projected to drop by 1.1 percent yearly, more than offsetting the anticipated rise in participation. By 1995, however, the number of younger groups is projected to increase, and with an increase in participation rates, the number of those in the labor force would then rise.

The change in the number of the older men in the labor force also represents the interplay of population and participation. The 55 to 65 age group, whose population is projected to decrease over the 1986–95 period, is projected to grow more rapidly than the 65 and older group during the 1995–2000 period. Because the younger group has a higher participation rate and their participation is projected to drop more slowly than that of men over age 65, the entire older male labor force is projected to grow over the 1995–2000 period. However, this growth would not be enough to offset the earlier drop; over the 1986–2000 period, the older male labor force is projected to decline by 160,000.

Over the 1986-2000 period, the fastest growing group among men would be ages 45 to 54, the consequence of the aging of the baby-boom generation. This group is above the age of peak participation, but, because baby-boom men would still be in their prime working years in 2000, the prime age male labor force is projected to be a greater proportion of the labor force than in 1986, 1972, or 1979. The labor force of men ages 45 to 54 is projected to grow 6.3 million, and constitute 30 percent of the 1986–2000 labor force increment.

The labor force of black men is projected to grow more rapidly than the overall labor force (1.6 percent annually, compared with 1.2 percent), despite falling participation. This reflects their higher population growth rates. The number of white men in the labor force (including most Hispanics) is projected to grow at only half the rate of the overall labor force. Despite this, white men are projected to account for a quarter of labor force growth and are projected to be 45 percent of the 2000 labor force.

The number of Hispanic men in the labor force is projected to increase by 3.4 million between 1986 and 2000, a greater absolute change than for black men. Their growth rate would be three times that of the overall labor force and more than twice that of black men. By 2000, there are projected to be more Hispanic than black men in the labor force. Hispanic men would make up 6 percent of the 2000 labor force and 16 percent of the labor force growth over the rest of the century. Despite this increase, their participation is anticipated to drop slightly.

Alternative scenarios

The actual world of work in 2000 will certainly be different from that in 1986 in ways that we cannot anticipate. To give an idea of at least some of the uncertainty, two alternative projections of the labor force were prepared. (See table 6.) One assumes slower participation rate changes which is applied to the middle population series, and the other assumes a higher immigration rate and uses the middle participation rate series.

Under the low alternative, the overall 2000 labor force would be 135 million, an expansion of 14 percent over the 1986 level. This slow growth, 1.0 percent annually, is a consequence of the participation rate growing slowly or dropping rapidly. In the middle scenario, overall participation is projected to increase 0.3 percent annually. Under this scenario, it would drop at the same rate.

Also under the low alternative, labor force participation among women is projected to rise more slowly. This is consistent with the view that the rapid increases of the 1970's completed their increase in participation. The rapid rise of the past 2 years would be a cyclical response to the recession of the early 1980's—not a resumption of the high growth of the early and middle 1970's.

Using the participation rates of the middle scenario with the Census Bureau's high migration series, we find that the labor force increases to 141 million in 2000—2 million greater than the middle scenario. The only difference between the middle and the high migration population projections is in the net migration assumption. Despite the higher level of immigration, 160 percent greater, the resulting growth rate of the labor force is only 0.2 percent higher.

For the high migration scenario, it was assumed that Hispanics would be the same proportion of the civilian noninstitutional population in any new projection as they had been in the previous high migration projection. Under this assumption, this Hispanic labor force would grow at the same rate under both the middle and high scenarios and the Hispanic labor force would be the same share under both scenarios. Under the low participation scenario, Hispanics would initially account for 9.4 percent of the labor force and that share would grow by 3.3 percent yearly to 2000, compared with the 4.1-percent gain attained in the middle and high scenarios.

This analysis suggests that Asians and others are a more significant source of labor force growth in the high migration scenario; their share of the labor force would be the same under all three scenarios, but the growth rate is much higher under the high migration scenario—4.4 percent, compared with 3.9 percent in the middle growth scenario, and 3.7 percent in the low scenario.

Other insights

The median age of the labor force in the post-World War II era peaked in 1962, at 40.6 years. With the entry of the baby-boom generation into the labor force, the median age dropped, reaching a low in 1980 of 34.6 years. By 1986, the median age had risen to 35.3 years, an increase of less than 1 year. The median age of the labor force is projected to reach 38.9 years in 2000, 3.6 years above the 1986 level. Even though the age of the population is increasing rapidly, unless older workers remain in the labor force in greater numbers, the 1962 median is not likely to be attained again. As the population ages, more would be in the ages which had—and are projected to continue to have—declining labor force participation. Table 7 shows median ages of the labor force by race and Hispanic origin, for selected historical years and for projected years.

To reinforce the point about older workers, persons ages 55 and older constituted 16.7 percent of the labor force in 1972. With the entry of the baby-boom generation (and the continuing drop in participation of older men), workers 55 and over made up only 14.3 percent in 1979. In 1986, after the baby-boom generation had completed their entry, the older group was only 12.6 percent of the labor force.

Share of labor force growth

If we consider the components of labor force growth, starting in a year for which we have data for all groups, shares of labor force growth for 1976–86 can be compared with the projected share for 1986–2000. Women are pro-

Table 6. Three scenarios of the civilian labor force by sex, age, race, and Hispanic origin, projections 2000

Group	Participation rate			Level (in thousands)		
	High	Moderate	Low	High	Moderate	Low
Total	68.0	67.8	65.7	141,107	138,775	134,517
Men:	74.8	74.7	73.2	74,464	73,136	71,729
16 to 24 years	74.4	74.3	72.7	11,811	11,506	11,261
25 to 54 years	82.6	82.6	80.9	54,009	53,024	52,043
55 years and over	34.2	34.1	33.4	8,644	8,606	8,425
Women:	61.7	61.5	58.8	66,643	65,639	62,788
16 to 24 years	60.6	60.5	58.1	11,365	11,125	10,898
25 to 54 years	80.8	80.8	76.2	48,487	47,756	45,007
55 years and over	21.4	21.4	21.8	6,791	6,758	6,883
White	68.4	68.2	65.9	118,474	116,701	112,918
Black	68.1	68.0	64.8	16,518	16,334	15,031
Asian and other[1]	66.0	65.8	63.9	6,115	5,740	5,568
Hispanic[2]	68.8	68.7	61.9	14,122	14,088	12,675

[1] The "Asian and other" group includes American Indians, Alaskan Natives, Asians, and Pacific Islanders.

[2] Persons of Hispanic origin may be of any race.

jected to account for about the same share of labor force growth as they have in the past. The white share of labor force growth is projected to drop. The black, the Asian and other, and the Hispanic shares are each projected to increase, with the Hispanic share increasing the most. These calculations show that Hispanics, most of whom are white, are sustaining the white share of growth.[9] The non-Hispanic white share (43 percent) is projected to be 18 percentage points less than the 1976–86 share; however, the overall white share is projected to fall only by 7 percentage points. These projections show that non-Hispanic white men, who accounted for 18 percent of labor force growth from 1976 to 1986 when the baby-boom generation was completing its entry into the labor force, would drop to 8 percent of the 1986–2000 increase. This reflects the fact that most non-Hispanic white men are already in the labor force and a slight drop in the participation of older white men. The following tabulation shows the percentage distribution of the labor force by sex, race, and Hispanic origin, and by residency status, 1976–86, and projected, 1986–2000:

Group	*1976–86*	*1986–2000*
Men	38.0	36.8
Women	62.0	63.2
White	78.6	71.2
Black	14.5	17.4
Asian and other	6.9	11.4
Hispanic	17.5	28.7
Non-Hispanic white	61.6	43.3
Men	18.1	8.5
Women	43.5	34.8
Residents	–	76.6
Net migrants	–	23.4

Over the 1972–86 period, the white female labor force of prime working age grew by 12.2 million and that of their white counterparts, by 9.0 million, the second greatest increase. White persons of prime age are projected to have the greatest increment to the 1982–2000 labor force, with the number of women increasing by 9.8 million and men, 6.3 million. Because of the birth dearth, the number of younger white men in the labor force is projected to drop. Because of continuing decreases in participation, the number of older white men in the labor force is also expected to drop. These decreases in the number of younger and older white men offset the prime age white male growth in the labor force. One further refinement indicates that the number of non-Hispanic prime age white men would increase by 4.9 million or 23.4 percent of the 1986-2000 labor force growth.

Over the 1986–2000 period, net migration accounts for almost a fourth of labor force growth. Somewhat more men than women immigrants would join the labor force—the 23.4-percent net migration would be divided into 12.8 percent for men versus 10.6 for women. As the following tabulations shows, most migration is projected to be by whites, with Asians and others having a greater share than blacks (because the migration scenario used for Hispanics is not consistent with that for the main projection, it is not possible to provide a projection of the Hispanic share of labor force growth due to net migration):

	Migrant	*Resident*
Total	23.4	76.6
Men	12.8	24.0
Women	10.6	52.6
White	14.4	56.8
Black	2.3	15.1
Asian and other	6.7	4.7

Dependency ratio. With the baby-boom generation in their prime working years and with the small number of births projected between 1986 and 2000, persons who are working are expected to exceed those who do not:

	Economic dependency ratio (by age)			
	Total	*Under 16*	*16–64*	*Age 65 and over*
1972	134.6	62.3	54.1	18.2
1979	110.2	52.0	37.6	20.6
1986	101.2	46.5	32.9	21.8
1995	94.2	44.0	27.0	23.2
2000	89.8	40.8	26.0	23.0

The economic dependency ratio is the number of those in the total population (including Armed Forces overseas) who are not in the total labor force per 100 persons in the total labor force. This ratio declined steadily over the 1972–86 period as the baby-boom generation entered the labor force. The largest component of the dependency ratio is made up of persons under age 16. However, this ratio has been dropping and is expected to continue to do so throughout the

Table 7. Median ages of the labor force, by sex, race, and Hispanic origin, selected historical years and projected years, 1995 and 2000

Group	Historical				Projected	
	1962	1972	1979	1986	1995	2000
Total	40.5	37.7	34.7	35.3	37.6	38.9
Men	40.5	38.1	35.3	35.6	37.9	39.3
Women	40.4	37.0	33.9	34.9	37.1	38.6
White	40.9	38.0	34.9	35.5	37.9	39.2
Black	38.3	35.4	33.5	33.8	36.1	37.2
Asian and others	–	–	–	35.5	37.2	38.0
Hispanic	–	–	32.2	32.6	34.1	35.1

NOTE: Dash indicates data not available.

entire projection period. With the rising participation of women, the component of the dependency ratio attributed to those ages 16 to 64 has also declined steadily. The change between 1995 and 2000 is modest, reflecting slightly lower participation rates of the largest age group of men, those 45 to 54. The dependency ratio for all persons over 65 has been rising over the entire historical period, a trend projected to continue. The slight drop between 1995 and 2000 reflects the aging of the smaller birth cohort of the 1930's.

Employment-population ratio. With the rise in participation, the employment-population ratio is projected to rise. It has been growing over the last 14 years; like overall labor force participation, the rate of increase is projected to slow:[10]

	1972	*1979*	*1986*	*2000*
Employment-population ratio	57.0	59.9	60.7	63.7

Keeping in mind the 14-year span of the projections, we can look at 15-year cohorts—those 15 to 29, 30 to 44, 45 to 59, and 60 to 74. Each cohort in the labor force will be in the next older group by the end of each of the time intervals discussed here:

Year of birth	*Labor force share*		
	1972	*1986*	*2000*
1955–69	–	34.9	39.9
1940–54	35.2	37.4	28.3
1925–39	28.6	21.2	4.5
1910–24	27.2	6.2	0.3
1895–1909	8.4	0.3	–

The combination of cohort size and stage in the life cycle explain the share of labor force. When a cohort is large, but is at a stage in life when participation is low, such as when entering or leaving the labor force, their share will be small. Those born during 1895–1909 were in the retirement years in 1972, but still accounted for 8.4 percent of the labor force in that year. Those born 1910–24 who entered the labor force in the late 1920's and 1930's, were still almost the same share of the labor force in 1972 as the next generation, despite being in the preretirement years. Those born into this group in the United States were joined by migrants from Europe at a level exceeding the immigration of the 1980's. By 1986, the group born during the 1910–24 period were 6 percent of the labor force and virtually all are projected to be out of the labor force in 2000. Those born during the 1925–39 period could be described as part of the 1930's birth dearth. Although in their prime working-age years in 1972, they made up less than a third of the work force; this share dropped to a fifth by 1986. As they retire, their share drops to less than 5 percent by 2000. Those born during 1940–55 are considered pre- and early baby-boom generation. They also were more than a third of the labor force when they entered the labor force (in 1972). Like the younger edge of the baby-boom generation, their share grew by 1986. However, as they continue to age, their share is projected to drop and in 2000, they are projected to make up less than a third of the labor force. Those born during the 1955–69 period entered the labor force between 1972 and 1986. Once this entry was complete, they accounted for more than a third of the labor force. They may be considered the last part of the baby-boom generation. Their labor force share is projected to increase between now and 2000 as the women in this group continue entering the labor force and as younger smaller cohorts reach working age.

Where are they now?

These changes projected in the labor force by age suggest that it would be interesting to look at some of the major cohorts of the past. Four groups are nominated: the birth dearth of the 1930's, the baby boom of the late 1940's, 1950's, and early 1960's, the birth dearth of the late 1960's and early 1970's, and the echo group of the late 1970's and the 1980's. The following tabulation illustrates the passage of these groups through the labor force:

	Percent of labor force			*Growth rate (percent)*	
	1972	*1986*	*2000*	*1972–86*	*1986–2000*
1930's dearth	18.8	15.1	1.7	.6	−13.3
Baby boom	–	55.5	49.8	–	0.4
1970's dearth	–	6.7	22.8	–	10.4
Echo	–	–	11.2	–	–

The persons in the 1930's birth-dearth group are now in their preretirement years and are projected to be in their late sixties by 2000. The number of these persons in the labor force is projected to plunge in the next 14 years. Their share of the labor force—small in 1986 because of the size of the baby boom—is projected to diminish to near zero by 2000. The baby-boom generation, more than half of the labor force now, will begin shrinking as a share of the labor force as they move towards the years when some may be taking early retirement. Their 2000 labor force is projected to be slightly larger than now—although a smaller percent. The persons in the 1970's birth dearth group are in their teens and their share of labor force is projected to grow as they begin

working; despite their relatively small size, they are expected to represent a fifth of the labor force in 2000. Not all the echo to the baby-boom group has been born as of 1986; in 2000, they are projected to still be entering the labor force, of which they are projected to make up just over a tenth. □

———FOOTNOTES———

[1] The Asian and other race group consists of American Indians, Native Alaskans, Asians, and Pacific Islanders.

[2] These projections replace those described by Howard N Fullerton, Jr. in "The 1995 labor force: BLS's latest projections," *Monthly Labor Review*, November 1985, pp. 17–26; and Howard N Fullerton, Jr. and John Tschetter, "The 1995 labor force: a second look," *Monthly Labor Review*, November 1983, pp. 3–10.

[3] *Projections of the Population of the United States by Age, Sex and Race: 1987 to 2080, Current Population Reports*, Series P-25, No. 1018 (Bureau of Census, forthcoming).

[4] For the most recent evaluation of BLS labor force projections, see Howard N Fullerton, Jr., "How accurate were the 1980 labor force projections?" *Monthly Labor Review*, July 1982, pp. 15–21. An evaluation of the labor force projections to 1985 is in progress. For a description of BLS's current projection methodology, see *Employment Projections for 1995: Data and Methods*, Bulletin 2253 (Bureau of Labor Statistics, 1986).

[5] Hispanics may be of any race; their population and labor force numbers are also included in those for whites, blacks, and Asians and others.

[6] Gregory Spencer, *Projections of the Hispanic Population, 1983 to 2080, Current Population Reports*, Series P-25, No. 995 (Bureau of Census, 1986).

[7] A cohort is a group experiencing the same event during the same time period—for example, immigrants to the United States during the 1960–64 period or those born 1930–34. In this article, only birth cohorts are discussed.

[8] See the following articles in the *Monthly Labor Review*, September 1987: Ronald E. Kutscher, "Overview and implications of the projections to 2000," pp. 3–9; Norman C. Saunders, "Economic projections to the year 2000," pp. 10–18; Valerie A. Personick, "Industry output and employment through the end of the century," pp. 30–45; and George T. Silvestri and John M. Lukasiewicz, "A look at occupational employment trends to the year 2000," pp. 46–63.

[9] For the purpose of deriving the share of non-Hispanic whites, it is assumed that 97 percent of Hispanics are white.

[10] The employment for 2000 is projected to be 130.4 million, with an unemployment rate of 6.0 percent. See Norman C. Saunders, "Economic projections," pp. 10–18.

Representative OBEY. Thank you.

Let me also ask you, since I have been hearing some rather interesting horror stories about what appears to be happening with the budgets of some of the other agencies in town—I am not going to ask you what is happening to yours, I know it is not polite for you to comment at this point anyway, given the fact that the process is still in flux—but let me simply ask you what kinds of progress are you making in terms of redesigning and improving the current population survey? How well do you think you are coming on that?

Mrs. NORWOOD. We have had a series of planning meetings with the Bureau of the Census which, as you know, is involved with us in conducting the survey. There has been a good deal of testing of the use of new technology. And we have some plans which we hope we will be able, over the next—it is probably about a 6- or 7-year project—which we hope we will be able to put into effect.

I believe that the most important part of that effort is the testing really of the questionnaire. Do people really understand what we are asking them?

As you know, you have been very supportive of our efforts to use some of the multidisciplinary techniques in developing a collection procedures laboratory at the Bureau and using some of the techniques of social psychology as well as statistics and linguistics.

We have done some very interesting work there in those areas. For example, we brought in a group of unemployed steelworkers and administered the questionnaire of the current population survey to them, and then had focused group discussions afterwards to find out whether they really understood the survey questions.

Representative OBEY. Did you ever try that with Congressmen?

Mrs. NORWOOD. Well, we would be delighted to arrange to have you come over to our laboratory.

We also brought in some other unemployed workers, and we found some interesting things. There are some concepts like the meaning of layoff and what constitutes unpaid family work that they were not quite sure about.

The encouraging factor is that those who responded about the job search question, which as you know is critical to the definition of unemployment, felt very strongly that they could not say yes unless they had taken some very definite activity in search of work, that it couldn't be just casting their eye over newspaper want ads.

So we are learning a good bit about that and we hope to do a good deal of testing in the laboratory and then later in the field with plans for the results of that research to be incorporated into a new questionnaire sometime around the mid-1990's. That will require, of course, about 2 years of overlap sample which could be fairly expensive. We are looking at ways to reduce that cost, but that is one of the most important aspects of the work that we are doing.

We are also interested in trying to expand some of the data for individual States, a subject that I know you have been interested in for many years. We now have data for only the 11 largest States. It would be useful, we believe, to have monthly statistics from the survey for all 50 States.

On the other hand, there is some interest as well in perhaps improving the data for various demographic groups of the population for whom we have very little, really. Native Americans, for example, we know very little about.

I don't know really which way we will go on that, but that is something that we are examining. In addition, we are giving some thought to other issues.

For example, the concepts of our labor force survey may not really relate very well to the conditions of some groups of the population, such as those living in rural areas. This committee has been very concerned about that situtation and we have, too.

It may be that something special, not a monthly survey but an occasional or one-time survey with different concepts that more closely fit the experience of that population might be needed. We are just at the early stages of thinking about that. But those are the kinds of things that we are focusing on.

Representative OBEY. As you know, it is always very difficult on both ends of Pennsylvania Avenue to get the kind of support that is needed for increased expenditures to increase our knowledge in terms of the database.

Mrs. NORWOOD. I am very well aware of that.

Representative OBEY. The problem is that it just isn't politically sexy. So it is very easy to see those budgets squeezed continually. It is also very dumb.

I hope we fare somewhat better in the coming 2 years, and I do hope that you can continue to make progress in defining what is going on in more than the largest States in the Union, the kind of economic activity that you are talking about, especially in rural areas, because I am convinced that we don't have the foggiest idea of how the economy in counties such as Burnett or Washburn is really performing in my State in comparison to Milwaukee or Dane County or places like that.

It gets frustrating and it leads to people feeling that they are being ignored as well as misunderstood.

That is all, Senator. Thank you.

Senator PROXMIRE. In the years I have been here—and it has been a long time—I can't recall a time when we were more poorly prepared to cope with a recession if it should hit, because we have such an enormous deficit, a huge national debt, and a determination on the part of Congress and the public to do everything we can to hold down spending and not to plunge in, as we have in the past in recessions or depressions, to counter the recession by compensatory fiscal policy.

I understand that on November 20, the General Accounting Office issued a series of transition papers that list the problems the next administration will have to confront, and the paper on Department of Labor issues recommends that the Department needs to act now to be prepared for a future recession.

How much advance warning do we usually receive before a recession strikes?

Mrs. NORWOOD. Very little. It usually comes upon us at times when people talk about turning points, but then they are always hoping that there would not be a turning point.

Senator PROXMIRE. Let me put it this way. Is there any data that the BLS would like to collect that it doesn't that would increase the advance warning of a recession?

Mrs. NORWOOD. I don't know. I would want to think about that before giving you a specific answer. One thing that would be useful to know is job vacancy information, but I would want to give a lot more thought to that.

Representative OBEY. Senator, may I interrupt to simply ask a question, because I have to leave, going back to my other question?

Senator PROXMIRE. Yes.

Representative OBEY. Mrs. Norwood, could you simply tell us or supply for the record the amount of money which the Federal Government dispenses this year, for instance, on the basis of numbers either developed or reported by your shop?

Mrs. NORWOOD. It is rather huge and we will be glad to supply something specific for the record, but I can tell you just offhand that there are billions of dollars of contracts, particularly the Defense Department contracts, that are escalated either by our earnings data or by our producer price data.

We know also that the Federal Government entitlement programs are affected by our CPI as is, on the other side, the revenue that comes into the U.S. Government from taxes, because the income brackets are now indexed. The local area unemployment data are being used in allocation of Federal funds.

Some of the new legislation on worker adjustment provides for the use of data from our mass layoff program which is still in a stage of development and, of course, the extent to which that is developed will depend upon the budget.

There are a whole host of areas in which our data are used and we will try to list them for the record.

Representative OBEY. My only point being that it would be nice if that money is being distributed on the basis of the most accurate numbers it is possible to put together.

Mrs. NORWOOD. I couldn't agree more with that.

Representative OBEY. Thank you, Senator.

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

Impact of BLS Data of the Economy

BLS Series	Application	Impact
Consumer Price Index (CPI)	Adjustment of Federal transfer payments	1% change = $2.8 billion in FY 1986[1]
	Federal tax receipts (pre 1986 tax reform)	1% change = $1.8 billion in FY 1986[2]
	Other applications of the CPI are enumerated in Indexation of Federal Programs (Congressional Research Service)	
Producer Price Index (PPI)	Adjustment of prices in long-term purchase and sales contracts	Estimates range from $93 billion to more than $300 billion in outstanding contracts
Area Wage Survey	Used by the Employment Standards Administration to set the minimum pay for contractors providing services to the Federal Government	About 10,000 wage determinations each year, which involve Service Contracts amounting to approximately $11 billion
Professional, administrative, Technical, and Clerical (PATC) Survey	Used as a basis for making Federal white-collar and private sector pay comparisons as required by law	1% increase in Federal pay costs about $600 million
Current Employment Statistics - Average Hourly Earnings (AHE)	Used to escalate labor component of long-term manufacturing contracts	$90 billion in outstanding defense industry contracts

[1] This estimate was prepared by OMB for FY 1986. We believe that the amount has not changed substantially since then.

[2] Tax brackets were established by law for 1987 and 1988 and will again be indexed beginning in 1989. The personal exemption amount, established by law for 1987, 1988 and 1989, will again be indexed beginning in 1990.

Current Employment Statistics - Average Weekly Earnings (AWE)	Used to escalate workers' compensation payments for:	
	Federal employees	$1.11 billion in payments in FY 1987
	Longshore and labor workers	$ .28 billion in payments in FY 1987
Employment Cost Index (ECI)	Accounts for 40 percent of the input price index used to determine allowable increases under Medicare's Inpatient Prospective Payment System	1% change in the ECI in the late 1980's = $190 million change in Federal expenditures for Medicare
Local Area Unemployment Statistics	Used as input to models which allocate funds for the following:	
	Disadvantaged Adults and Youth	$1.8 billion in FY 1988 appropriations
	Summer Youth	$718 million in FY 1988 appropriations
	Dislocated Workers	$287 million in FY 1988 appropriations
	Operation of State Employment Service	$723 million in FY 1988 appropriations
	HUD - Urban Development Action Grants	$225 million in FY 1988 appropriations
	Economic Development Administration - Public Works Program	$120 million in FY 1988 appropriations
	FEMA - Emergency Food and Shelter	$124 million in FY 1988 appropriations
ES-202 - Wages	Used by BEA for per capital income series which are used by Congress to allocate funds for:	$40 billion allocated in FY 1987
	Rehabilitation Services	
	Aid to Families with Dependent Children	
	Medicaid	
	Vocational Education	
	Alcohol, Drug Abuse and Mental Health Services	

Bureau of Labor Statistics
December 1988

Senator PROXMIRE. Mrs. Norwood, two Princeton scholars have calculated if we have a recession, even one as relatively mild as the 1974–75 recession, that 10 percent of our corporations and proprietorships and individual partnerships would go bankrupt. Of course, that would have a catastrophic effect on employment.

Do you have any calculations as to what the level of unemployment would be if we have a recession like, say, either 1974–75 or like the 1982 recession? What I am talking about, of course, is the fact that we have an enormous private debt and that would trigger bankruptcies in corporations very widely.

We have a huge, much bigger than ever household debt, which means, of course, that many people will be in jeopardy of losing their homes, because they will lose their jobs and they won't have the income to pay the interest that they have to pay.

And I think the Princeton people put those together and said even at this stage—and it is getting worse all the time—that the next recession is likely to be compounded by that.

Mrs. NORWOOD. I haven't seen the Princeton study and I really am not at all sure that it is even useful to try to compare any future recession with a past one because the situation is so very different.

As you quite readily point out, one of the most important differences is the size of the deficit and, importantly, the fact that that deficit is being financed in large part from outside the United States.

Senator PROXMIRE. Let me interrupt to say that it is not the deficit. The Government isn't going to go bankrupt. People are. Households are. Businesses are. It is the size of the private debt.

Mrs. NORWOOD. Yes, but the point is that the deficit means that if there were serious concerns about inflation or other reasons, there would be a need to raise interest rates considerably which would exacerbate the problems of the private sector.

We also have now something that we didn't have before, and that is these absolutely monumental leveraged buyouts, many of which are not really based on economic considerations. Many of these buyouts are going on with very little cash-flow or anticipated cash-flow for some time.

So the situation now is very different and in many ways, I think, more precarious than in past recessions.

Senator PROXMIRE. Is there anybody in Government that is studying that? That is something we know about. We know it is going to have a very serious effect, but it seems to me if we can get some competent and respected studies, we can begin to develop policies to do something about it.

Mrs. NORWOOD. Clearly the Congressional Budget Office has been interested in some of these issues and there are a number of other private organizations that have been looking at them.

Senator PROXMIRE. But you feel that there is no basis on which you could give any kind of estimate as to the level of unemployment if we had a recession such as we have had in the 1970's and in 1982?

Mrs. NORWOOD. We can tell you what the level of unemployment was then.

Senator PROXMIRE. Well, yes, but of course there was an entirely different situation, a situation that was less likely to increase unemployment.

Mrs. NORWOOD. That is right. I think there really have been a number of very important structural changes in the economy that make the 1980's very different from the 1970's.

Senator PROXMIRE. I notice there are great differences in the unemployment figures in November, depending on the State you were talking about. For example, Illinois had a terrific increase in unemployment compared to the rest of the country. It wasn't just 1 percent. It went from 6.6 percent to 7.1 percent. That is a big major increase.

You don't have it for Wisconsin, because you only have it for the 10 largest States, I think. I notice Illinois, Michigan, and Ohio, all Midwestern States, had among the biggest increases.

Mrs. NORWOOD. Yes.

Senator PROXMIRE. New York also had a big increase, and Massachusetts.

Mrs. NORWOOD. Yes, but Illinois did not have a statistically significant increase. One of the difficulties is——

Senator PROXMIRE. When you have a 6.6 to 7.1, that is not statistically significant?

Mrs. NORWOOD. For Illinois it has to be 0.9 of a percent. For Michigan, 0.9 percent; and for Ohio, 0.8 percent. That is one of the great difficulties we have.

Senator PROXMIRE. That is a very, very large increase, though, from 6.6 to 7.1 percent.

Mrs. NORWOOD. It will bounce up, it will bounce down. You really need to look at it over a much longer period of time.

We did have a significant increase in Massachusetts. It is still very low, but that was an increase of 0.7 of a percentage point which is statistically significant. We had a significant small drop in Pennsylvania.

Senator PROXMIRE. Can you tell us, just broadly, are the industrial States in the Midwest and South still lagging behind, or are they starting to catch up with the rest of the country?

Mr. PLEWES. Generally speaking, the industrial States are not as well off as some of the other growth regions. The growth regions I talk about are primarily the Northeast section surrounding Massachusetts, New Jersey, and parts of New York and Pennsylvania that are close to those. But they are improving.

For example, the State of Wisconsin has improved quite a bit. Now the rate there is at 3.7 percent. We use a cutoff point in our charting of 4 percent for going from the shading into white, and Wisconsin in the last couple of months has been in the white. And we look at those as States without great problems in unemployment.

But we have severe problems still, I think we have to point out, in Texas, Louisiana, Mississippi, Alabama, and Arkansas. As the Commissioner said earlier, I think we have to look to oil prices as one of the things that may help there. And problems continue, of course, in West Virginia and in Kentucky and some of the other areas. Things are improving in the Midwestern States, but they aren't good yet.

Senator PROXMIRE. Table A-12 shows that the unemployment rate for Vietnam era veterans is currently lower then for nonveterans, the same age group; 3.7 percent for veterans versus 4 percent for nonveterans. But for the youngest veterans, those 30 to 34 years old, the unemployment rate is 6.3 percent, which is much higher than the 4.6 percent unemployment for nonveterans.

Why are young Vietnam era veterans having such a hard time finding jobs?

Mrs. NORWOOD. There are a number of reasons and there are a number of programs to try to assist them. The adjustment for many of them, particularly the younger ones, takes a longer time.

But the Department of Labor does have a very active office that has done a great deal to help to place those veterans. We found that as veterans get older, the further away they get from their military service, their employment experience becomes very much more like the employment experience of nonveterans. So it is really just the younger ones who have an adjustment problem. They may not be in the right place. They may have psychological problems. They may have skill problems and have to be trained. Those are the ones who need to be helped, and there are, I think, very active programs—we have a very active program in the Department of Labor in that area.

Senator PROXMIRE. You have a table here that indicates some evidence on how close we might be to full employment. It is A-8. It reports that just over 3 million of the workers who are currently unemployed are identified as job losers, which is about 46 percent of the total. The rest are identified as people who voluntarily quit their jobs or are just entering the labor force.

Does that say something to us about how close we are to full employment? In other words, much of this is frictional unemployment, people moving between jobs that are unemployed when we get to the level we are at now?

Mrs. NORWOOD. There clearly is frictional unemployment. But I personally can't believe that 6.6 million jobless people is due to frictional unemployment only. I think that it is partly frictional and it is also, in large part, structural. I think we have some really important structural problems, people who just do not have the skills, the education, the experience that is necessary, or who do not live where the jobs are. These people are usually disproportionately black and Hispanic, particularly black.

Senator PROXMIRE. On the day before Thanksgiving, the Office of Management and Budget gave you its proposed budget for the Bureau of Labor Statistics for fiscal 1990.

Is OMB preparing any significant cuts in your budget for fiscal 1990?

Mrs. NORWOOD. As you know, Senator, that is an area that I cannot discuss. That budget is in process. As a matter of fact, we are still trying to figure out what it all means, together with many other agencies all across the Government.

Senator PROXMIRE. Well, can you give us some hints as to the effect the fiscal 1990 budget would have on the scope and quality of the statistics that BLS collects and publishes?

Mrs. NORWOOD. I can only tell you that our experience has been that there is never enough to do all the things that we need and that I think the country needs.

Senator PROXMIRE. How big is your budget?

Mrs. NORWOOD. Oh, it is somewhere in the neighborhood of $250 million.

Senator PROXMIRE. How does that compare with what it was——

Mrs. NORWOOD. Oh, it is considerably larger than when I took office, for example. But a large part of the change has been in what are called mandatories. That is, rent increases and, for us the very important costs of conducting surveys—travel, telephone, mail, and other things of that sort.

And then we have the money in our budget that is not used by us at BLS but is paid to each of the 50 States for the data collection and processing that the States do in cooperation with us so that we can reduce the burden on respondents and also get some State and area data as well. The States have had some sizable increases, partly because their salaries, which had tended to be quite low, have been increasing and their other costs have as well, and partly because we continually are asked by the Congreess to do more.

The big problem that I think statistical agencies have, at least one like ours, is that when we are given more money it is generally to do something new. It is very, very difficult to get money to improve the quality of something that is already in existence because people feel that so long as we are giving them the data it must be all right.

So it is very, very hard to find the resources that are necessary to shore up the quality of the things that we do. The economy is changing and the social and economic phenomena that we measure keep changing all the time. And if we don't change to keep up with that change, then the data we produce will not be very relevant to current conditions.

So the approach that we have always taken is to try, when we are pushed very hard, to eliminate things rather than to reduce their quality and to take those resources and put them into other activities. That is always a serious problem because nobody likes you to remove any statistical series no matter how good or bad it is.

We have succeeded reasonably well, but we have a very long way to go.

Senator PROXMIRE. Mrs. Norwood, thank you very, very much. You have done a marvelous job for 10 years and I hope you have at least 50 more.

The committee will stand adjourned.

[Whereupon, at 10:30 a.m., the committee adjourned, subject to the call of the Chair.]

O

98-835 (208)