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# SPECIAL DELIVERY

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ATTN: CHRISTINA

/// Research

PROBLEMS?

Mark Fudge

Phone 523-8271

Campbell Soup has an outstanding child care program, right across the street from corporate headquarters, that began in 1983 after two employees suggested the idea. It's open to all employees, and accepts children aged three months to kindergarten.

Costs are evenly divided between employer and employee, and the parents who work for Campbell Soup have expressed a great deal of satisfaction.

Programs like this reduce employee turnover and rates of absenteeism. They lift employee morale, and loyalty to a firm. And they make the recruitment of new personnel easier. And we're not just talking about women. Earlier this month, Du Pont surveyed 4,000 of its people -- and found that more than half of the men surveyed were using child care.

Taking the broader view, these policies have real implications for the quality of talent available to businesses in this country -- and the quality of the goods and services they provide.

But perhaps the most important and far-reaching challenge facing both private enterprise, and public policy-makers, is education.

The second priority of the three I've outlined -- investing in our future workers -- will be absolutely critical in the near future.

Simply put, we're going to have to close the skills gap, and get serious about public education -- by making parents, schools, and business accountable. The fact is that the current pool of applicants for entry-level jobs lack the most basic skills -- and all of us, including business, are going to have to do something about it.

This will require more than throwing more money at the school systems. Money alone won't do it. In the last couple of decades we've seen federal spending on public education increase by a thousand percent -- and spending from all sources increase by 600 percent.

At the same time, we've watched the quality of public education slip. Everyone's got their favorite horror story. One of mine takes place in Washington, in a fast food restaurant downtown, where the power went out.

There were four young people at the registers -- those registers with pictures of burgers, shakes, and fries for the cashiers to press. No skills required. Just some eye-hand coordination. And when the power failed in that business, so did the kids. Well, at the far end of the counter, an elderly lady pulled out a pad and a pencil -- and started adding up people's orders for them.

High-tech -- minus low-tech -- equals no-tech.

David Kearns of Xerox complains that American companies are "doing the school's product recall work for them." He, like many executives, resents that. Meanwhile, those who work in the nation's schools blame parents, churches, families, and community agencies, saying "we're doing work they ought to have done."

There is an alternative. And that's for us to stop blaming the students -- stop blaming the schools -- stop blaming other institutions -- and start getting involved.

3-M Company in Minneapolis did. They started a program that brings women in technical occupations into the schools, to encourage girls to prepare for scientific and technical careers.

The New Jersey Public Service Electric and Gas Company matches black high school students with successful black managers, who provide inspiration, career guidance, and advice.

Maybe you've heard success stories like these -- maybe you've got a few of your own. But essentially, American business has a choice to make: train, or miss the train.

Government can help, here. I believe that the Bush administration should and will push for more accountability from public schools; ensure that funds are spent wisely; work with governors on state curricula, student achievement, and teacher motivation and incentives; and devote funds to programs from Head Start, to magnet schools, to a college savings bond program.

But beyond funding, beyond pedagogy, beyond content and back-to-basics curricula, we're talking about a fundamental cultural shift -- a change that we're all going to have to work to bring about -- re-asserting the value of learning in America.

For this country's young people, this means constantly reminding them not simply to "stay in school," but also letting them know why they should stay in school: that those who drop out commit economic suicide.

You and I understand the connection between education, and success -- but young minds often don't, if the choice is between studying calculus, and selling crack.

Former Labor Secretary James Mitchell once said, "We need young men and women who are zealous in maintaining a high ethical standard in their community, professional, business, labor, political, and civic organizations.

"In short," he said, "We need men and women who are willing to accept a challenge -- who are willing to become engaged in the business of the community, the state, and the nation."

colleges, your role in this kind of training is particularly important, if we want to remain competitive. I say "remain," because the news isn't all bad.

Over the last six years we've made unprecedented social and economic progress in this country. We're in the sixth year of the longest peacetime economic expansion in U.S. history. Nearly 3 million people have risen above the poverty line. More people are working today than ever before. Real GNP is still rising -- up 22 percent over the past five years.

And all of us have participated in, and benefitted from, this growth. More than 15 million new jobs have been created during the current expansion -- 94 percent of them full-time. Black employment has risen more than 25 percent since 1982; the number of black teenagers with jobs has increased over 50 percent. Hispanic employment is up by over a third.

The jobs created in the current expansion have, in fact, been anything but the "McJobs" you may have read about. Since 1982, the number of minimum wage jobs has declined by 25 percent, while those paying over \$10 an hour have increased by 50 percent. We are making significant and measurable progress.

But we have work to do. We are a nation known for good ideas, but we're still not working smart. The technology for the video cassette recorder, for instance, was developed here -- but the machines themselves are now manufactured abroad. The idea of quality circles in management first developed here -- but the Japanese were the first to apply quality circles to their daily operations. Robots, too, were first developed in this country, but then mass-produced abroad.

This country will maintain neither its wages nor its wealth if we continue to act as a test-bed for the rest of the world. The competitiveness of our companies, and our national economy, demand that we translate good ideas into competitive products.

Rates of exchange are no excuse. Not long ago there were complaints that the dollar was too strong. Now it's too weak. It's not enough to simply balance trade, or adjust currencies; to maintain our standard of living, trade must be balanced while supporting a high wage level at home -- and that will only happen if we develop a highly productive, highly-skilled workforce.

Otherwise, as one economist recently put it, we might as well "let the price of the dollar adjust to the point where one dollar equals one yen, and sell the entire economics building at the University of Chicago, brick by brick, to the Japanese to use as a disco." Our products would be cheap at that point -- but so would our national income.

There is another alternative, of course. And that is to develop a workforce of highly productive, creative, educated workers --

taking advantage of emerging technologies to produce a wide range of goods and services. That scenario is not necessarily that far off.

Already, almost half of American workers have already experienced major technological changes in their jobs -- and are enthusiastic about those changes. More than half have told the Bureau of Labor Statistics that technology has increased their job independence, and three-fourths believe that technology has made their jobs more interesting. We in Washington are busy talking about homework regulation when we should be talking about people working at home by computer.

I'm going to spend a few minutes sketching out what the immediate future holds for us, in terms of human capital. Then I'll talk about what we can do, together, to make the most effective use of this changing workforce.

In the next ten years, the supply of labor will grow more slowly than at any time since World War II. The profile of the workforce will shift -- dramatically.

The average worker will be older. Women will account for two-thirds of workforce growth in the next decade. Native, white males, if not exactly an endangered species, will no longer be typical workers. They'll comprise 15 percent of the new entrants to the labor force, compared to almost 50 percent today.

New entrants will primarily be women, blacks, hispanics, and immigrants. Those are groups traditionally disadvantaged because of discrimination, lack of education, or language barriers. Our most pressing responsibility is to see that these people are prepared for the work that will be available to them.

The jobs created in the near future will be more complex -- demanding better reading, writing, and reasoning skills. Our demographic destiny will lead to a severe shortage of qualified workers to fill the jobs being created by technology and in services -- unless we do a better job of developing the talent to fill those jobs.

We are headed for a significant -- and expanding -- and expensive -- skills gap. This gap must be narrowed. If we move quickly, together, over the next ten years we will be able to offer a job to everyone who wants one.

Precisely because these demographic changes are basic and enduring, what we do today will matter powerfully tomorrow. We must never be forced to import talent from overseas.

We talk about minimum wage, when we should be talking about maximum bonuses. We talk about maximum hours, when we should be talking about minimum skills. We talk about import quotas, when we should be talking about quality exports.

We cannot afford, given the challenges of the immediate future, not to make the most productive use of our talent. We cannot allow American workers to become an underdeveloped resource, if we hope to improve the quality of life here, and remain competitive abroad.

What we need to build on is the quality of the American workforce -- by that I mean their self-esteem, their skills, their education, their adaptability. Only then can we assure the quality of American goods and services -- and a better standard of living for all Americans.

By insisting that we need to improve the quality of American labor, I'm not blaming the workers. This challenge must be met by unions, school leadership, all levels of government, and by private enterprise.

We need more intense and creative cooperation on quality in the workforce. And you are in an ideal position to catalyze it. Over half of the jobs created in the coming ten years will require education beyond high school.

None of your schools will have to face declining enrollments, if you're willing to work out exactly what local business and industry need. It may sound strange for an educational institution, but you must, in fact, be market-driven.

How? You can coordinate your curricula to respond to changing requirements on the part of employers -- being careful to balance immediate needs with more long-term, flexible skills. You can ensure that your schools provide practical, realistic career counseling.

You can forge closer partnerships with local businesses, to better focus students on the world they're preparing to meet. You can create better links between your schools and communities through a liaison officer, who can provide local forecasting and planning of education needs, to match skills to demand.

This month's Governing magazine has some hard numbers on what that kind of work does for local economic development. In 1987 the Illinois Community College Board spent \$3.73 million of its own funds on specialized training for its 39 community college districts. This was supplemented by fees from businesses, JTPA money, and other state funds.

The result was the creation or retention of nearly 22,000 jobs and assistance to more than 5,500 companies last year. The colleges also helped 3,200 firms prepare bids on government contracts, which eventually netted more than \$66 million in contracts. Not bad for a \$3 and 3/4 million investment.

An opportunity, in fact, to attain what I consider the true meaning of "full employment": beyond a percentage of people at work, an assurance that people have work worth doing.

Good pay isn't all there is to a good job, of course. And neither are good wages all there is to good pay. Our workers' prosperity today, in fact, is unprecedented. Wages have been rising faster than inflation during this administration -- but benefits have been rising even faster than that.

Wages and salaries have grown about 36 percent. The value of benefits like medical insurance and pension payments, education, and time off, have risen 48 percent. Taken together, total compensation has risen about 40 percent -- about a third faster than inflation.

So that's the road we've travelled. And make no mistake about it -- Americans are better off today than they were eight years ago. I see no reason why -- with the right policies in place -- they can't become even better off in the years ahead.

We are standing at a very firm point in our economic evolution. I am optimistic about our future. But the road ahead -- the road to full employment in the truest sense -- will be one of great challenges. Not just for the comfortable in America, but most especially for those who have not yet made it in our expanding economy.

The road to full employment -- at a GNP growth rate of three percent a year -- with ever-greater levels of productivity and material well-being for our people -- is a worthy goal. So today I'm going to suggest three steps toward truly full employment.

In the first place, we need to get serious about public education. Imagine a company with nearly three million employees whose job is to produce human widgets. It processes over 45 million widgets a year. While it takes twelve years to produce the final product, 700,000 widgets drop off of the assembly line before they are done. Another 700,000 each year don't meet the customer specifications, and never make it into the market place.

Imagine that over the years this company has produced increasingly rigid, hollow widgets -- when every market survey called for flexible widgets. Finally, imagine that this company's widgets ranked among the lowest on all international comparisons of durability, shelf-life, warranty and functional suitability.

It does not take a Harvard MBA to figure out how long this company will stay in business. Unless, of course, the company is our school system. And the widgets are our 45 million elementary and secondary school students. And the investors and

shareholders who pour \$170 billion a year into this enterprise are the American taxpayers.

Despite recent, hopeful trends that the skill level of workers is increasing, the cold hard truth is that our educational system is still sorely inadequate. If this doesn't change soon, the stockholders -- the American people -- may well have to liquidate the company and start over.

But something can be done about it. New partnerships between business and schools and labor and schools are springing up all over the country. The Toledo School District, for example, in partnership with the American Federation of Teachers, has been up-grading the professionalism of teachers by requiring that teachers educate other teachers. Instructors have a controlling voice in establishing teaching standards and training and screening new applicants.

And for the past several years, teachers in Seattle have had an active employee involvement program negotiated with the local National Education Association to provide innovative curricula and special teacher projects.

No industry in this country is more dependent on a committed workforce for its success than education. A sustained and long-term commitment to a more cooperative and productive relationship between teachers, principals, local school boards -- together with local business -- can enhance the quality of the American workforce, improve productivity, and contribute to keeping us on full course toward full employment.

The second step toward full employment is for business to invest in the education, training, and retraining of its own people. The world isn't what it used to be. Free market ideas are taking hold around the world -- Europe, Africa, the Pacific Rim... even communist nations seem affected. China is in transition. Possibly even the Soviet Union.

It wasn't long ago that Americans didn't need to worry about competition. But with the deregulation of our internal markets and the rise of foreign producers -- all that has changed. Just look around. The results are more goods and lower prices.

We are also in the midst of technological revolution: the explosion of communication and information, of changes in materials and genetics and computers and artificial intelligence. We stand to benefit immeasurably from these advances in ways that make the industrial revolution pale by comparison.

However, this is the age of portable technology and portable capital. Ideas and money can move around the world in minutes, if not seconds. No nation any longer has a monopoly on invention. So we must compete for that too.

If we hope to compete along these broader dimensions, everyone holding a job in this country must be as well-prepared and as highly-skilled as possible. That means retraining -- on an order of magnitude and intensity that we've never known before.

Continuing education and retraining opportunities must become a reality through a joint commitment between labor, management, educators, families, individuals, and public policy makers from all levels of government.

The third step toward full employment is to develop more effective partnerships between managers and workers. The old antagonistic approach no longer works. We need new methods for a new age.

For too long, the American workplace has been organized not around principles of teamwork, but hierarchy. We've seen reams of management books and articles in the last ten years.

If they've taught us anything, it is that the best-run companies in America are those which involve their employees in every aspect of their business -- including strategic decisionmaking. The worst-run companies are those that treat their employees like interchangeable -- or worse, expendable -- parts.

Fortunately, a number of businesses on the cutting edge, including several of the large automobile manufacturers, are forging new kinds of partnerships with their employees. The enterprise is being viewed as a partnership between management and workers -- where each is a stakeholder and a trustee.

And what we see -- and will see more of in the future -- are personnel systems which engender motivation and commitment -- by involving workers in management and rewarding them with innovative profit sharing arrangements.

I have seen that future here in Michigan -- and it works. Giving employees a share in their business will guarantee that business will get a share of the world-markets of tomorrow.

The road ahead can bring us full employment. The increasingly tight labor market we're already feeling can be a source of unprecedented opportunity. The message of the 1990s is potentially the most positive this nation has ever known:

-- that everyone who wants a good job can and will be educated and prepared to have a good job;

-- that workers can and must be continually re-trained as the demands of work change; and

-- that managers and workers can and will build momentum through interests held in common, rather than through controversy.

These three steps can take us a long way down the road to meaningful, full employment for all Americans.

Two final thoughts:

To anyone who suggests that America is somehow headed for decline, I have one answer: expansions and economic growth don't die of old age, but from bad policies.

And to anyone who believes that our future is uncertain and intangible, I have one suggestion: look at the children who started first grade this month. They are our future. They will be the graduating class of the year 2000. If we do well by them, there is nothing they can't accomplish.

Thank you. God Bless you.

The high school graduating class of the year 2000 is already halfway through the first grade. Tell me: Are these kids being taught the skills they will need to lead productive lives in the 21<sup>st</sup> century?



In accordance with your request, enclosed are tables presenting our latest comparative labor force statistics for the United States, Canada, Australia, Japan, and six European nations. Unless otherwise noted, the data are adjusted to U.S. concepts. The tables update and revise previously published data. Major revisions are included for Germany and the Netherlands.

Data for Germany for 1987 onward reflect the incorporation of employment statistics based on their 1987 Population Census, which indicated the level of employment was about one million higher than previously estimated. The impact of this change was to lower the adjusted unemployment rate by 0.4 percentage point. When historical data benchmarked to the 1987 Population Census become available from the German Federal Statistical Office, the Bureau will revise its comparative measures for earlier years. Until that time, there will be a break in series at 1987 for Germany.

For the Netherlands, the historical comparative labor force statistics have been revised back to 1973. The Dutch labor force survey was revamped in 1987. The new survey revealed a large increase in the number of persons employed, particularly those working less than 20 hours a week. These persons, many of whom are students and housewives, had not been enumerated in earlier surveys or quarterly statistics of employed persons. The new survey also reported a sharp increase in the unemployed looking for part-time work and fewer unemployed seeking full-time work. The Bureau has benchmarked the historical data to the new survey estimates of employment and unemployment. The impact of this revision was to raise employment by 10 percent and unemployment by 7 percent and to lower the adjusted unemployment rate by 0.2 percentage point for 1973 to 1985.

Sincerely,

*Edwin R. Dean*

EDWIN R. DEAN  
Acting Associate Commissioner for  
Productivity and Technology

Enclosure

COMPARATIVE LABOR FORCE STATISTICS  
FOR TEN COUNTRIES,  
1959-1988

Prepared by:  
U.S. Department of Labor  
Bureau of Labor Statistics  
October 1989

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## GENERAL NOTES

This document presents selected international labor force statistics for 10 countries -- the United States, Canada, Australia, Japan, and 6 European countries. Data for all 10 countries are shown on most tables. (Tables 3 and 9 exclude the Netherlands, and Table 10 relates to only 5 countries.) Unless otherwise noted, the data are adjusted to U.S. concepts. This compendium is updated twice each year, usually in May and September.

**BREAKS IN SERIES:** There are breaks in the data series for Germany (1983, 1987), Italy (1986), the Netherlands (1983), and Sweden (1987). For both Germany and the Netherlands, the 1983 breaks reflect the replacement of labor force survey results tabulated by the national statistical offices with those tabulated by the European Community Statistical Office, EUROSTAT. The Dutch figures for 1983 onward also reflect the replacement of man-year employment data with data from the Dutch Survey of Employed Persons. The impact of the changes was to lower the adjusted unemployment rate by 0.3 percentage point for Germany and about 2 percentage points for the Netherlands. The 1987 break for Germany reflects the incorporation of employment statistics based on their 1987 Population Census which indicated that the level of employment was about one million higher than previously estimated. The impact of this change was to lower the adjusted unemployment rate by 0.4 percentage point. When historical data benchmarked to the 1987 Census become available, BLS will revise its comparative measures for Germany. For Italy, the break in series reflects a change in the survey questionnaire resulting in a significant increase in the number of people reported as seeking work in the past 30 days. The impact was to increase the Italian unemployment rates approximating U.S. concepts by 1.2 percentage points. Sweden introduced a new questionnaire. Questions regarding current availability were added and the period of active workseeking was reduced from 60 days to 4 weeks. These changes resulted in lowering Sweden's unemployment rate by 0.5 percentage point.

For Australia, data have been revised to incorporate results from the 1986 Census of Population from 1984 onward.

**OTHER COMPARATIVE SERIES:** Three organizations compile internationally "comparable" series of unemployment rates for groups of developed countries. The BLS series, shown in this supplement, provides unemployment rates adjusted to U.S. concepts, insofar as possible. The Paris-based Organization for Economic Cooperation and Development (OECD) publishes "Standardized Unemployment Rates" (SURS) for 15 member countries (see OECD, Quarterly Labor Force Statistics, Appendix Section). The SURS are adjusted to International Labour Office (ILO) concepts which are more general than U.S. concepts. The third organization, the Statistical Office of the European Communities (EUROSTAT), publishes comparable unemployment rates for European Community countries based on their own specific interpretation of ILO concepts. These concepts are close to U.S. concepts, but there are some differences. Table 10 compares the unemployment rates published by these three organizations.

**FOR FURTHER INFORMATION SEE:** (1) Joyanna Moy, "An Analysis of Unemployment and Other Labor Market Indicators in 10 Countries," Monthly Labor Review, April 1988, pp. 39-50; and (2) Constance Sorrentino, "The Uses of the European Community Labor Force Surveys for International Unemployment Comparisons," paper prepared for the Statistical Office of the European Communities, October 1987. (Copies available from the Bureau of Labor Statistics upon request. Call 202-523-9301.)

Table 1. Civilian Working Age Population, 1959-1988

Year	United States	Canada	Australia	Japan	France	Germany	Italy	Netherlands	Sweden	United Kingdom
Civilian Working Age Population (1) (thousands)										
1959	115,329	11,278	NA	64,030	30,982	43,103	36,754	NA	5,458	38,614
1960	117,245	11,494	NA	64,990	31,144	43,468	37,130	NA	5,514	38,952
1961	118,771	11,708	NA	65,820	31,467	43,647	37,358	NA	5,577	39,287
1962	120,153	11,940	NA	67,330	32,305	43,972	37,815	NA	5,643	39,804
1963	122,416	12,179	NA	69,170	33,196	44,232	38,083	NA	5,703	40,036
1964	124,485	12,453	7,668	71,000	33,707	44,525	38,515	NA	5,769	40,281
1965	126,513	12,755	7,830	72,650	34,261	44,909	38,724	NA	5,840	40,481
1966	128,058	13,083	8,023	74,090	34,615	45,174	39,276	NA	5,909	40,631
1967	129,874	13,444	8,208	75,340	34,947	45,111	39,456	NA	5,955	40,779
1968	132,028	13,805	8,403	76,550	35,372	45,163	39,833	NA	5,991	40,874
1969	134,335	14,162	8,612	77,580	35,753	45,570	39,781	NA	6,039	41,006
1970	137,085	14,528	8,819	78,610	36,166	46,094	40,279	NA	6,106	41,101
1971	140,216	14,872	9,036	79,560	36,598	46,687	40,385	NA	6,158	41,320
1972	144,126	15,186	9,238	80,470	36,987	47,100	40,780	NA	6,179	41,452
1973	147,096	15,526	9,425	82,150	37,366	47,594	41,186	9,750	6,199	40,799
1974	150,120	15,924	9,614	83,170	37,745	47,904	41,745	9,885	6,224	40,951
1975	153,153	16,323	9,763	84,190	38,079	48,018	42,131	9,803	6,257	41,119
1976	156,150	16,701	9,957	85,160	38,366	48,128	42,312	9,960	6,287	41,312
1977	159,033	17,051	10,136	86,070	38,743	48,418	42,529	10,103	6,321	41,557
1978	161,910	17,377	10,406	87,020	39,073	48,788	43,000	10,256	6,360	41,821
1979	164,863	17,702	10,575	88,000	39,431	49,255	43,436	10,415	6,396	42,115
1980	167,745	18,053	10,778	89,080	39,852	49,849	43,860	10,588	6,441	42,443
1981	170,130	18,368	10,994	89,930	40,181	50,344	44,184	10,744	6,479	42,733
1982	172,271	18,608	11,204	90,920	40,577	50,714	44,847	10,871	6,514	42,938
1983	174,215	18,805	11,401	92,080	40,882	50,928	45,457	10,996	6,553	43,191
1984	176,383	18,996	11,605	93,230	41,176	51,113	45,853	11,131	6,586	43,491
1985	178,206	19,190	11,852	94,410	41,501	51,262	46,174	11,271	6,606	43,735
1986	180,587	19,397	12,084	95,630	41,764	51,468	46,252	11,403	6,634	43,982
1987	182,753	19,642	12,315	96,960	42,159	51,598	46,327	11,531	6,661	44,200
1988	184,613	19,890	12,594	98,250	42,406	51,721	46,786	11,631	6,684	44,433

NA = Not available.

(1) Data relate to the civilian noninstitutionalized working age population, except that the institutionalized working age population is included in Japan and Germany. Working age is defined as 16-year-olds and over in the United States, France, and Sweden; 15-year-olds and over in Australia, Canada, Germany, and Japan; and 14-year-olds and over in Italy. The lower age limit was raised from 15 to 16 in 1973 in the United Kingdom and from 14 to 15 in 1975 for the Netherlands.

Table 2. Labor Force, Employment, and Unemployment, 1959-1988

Year	United States (1)	Canada	Australia	Japan	France	Germany	Italy	Nether-lands	Sweden	United Kingdom
Total Labor Force (thousands)										
Approximating U.S. concepts										
1959	70,157	6,406	NA	43,530	19,510	26,080	21,450	NA	(2)3,655	24,450
1960	71,489	6,581	NA	44,330	19,590	26,280	21,190	NA	(2)3,715	24,650
1961	72,359	6,696	NA	44,820	19,590	26,500	21,230	NA	3,741	24,850
1962	72,675	6,796	NA	45,260	19,650	26,610	21,080	NA	3,764	25,160
1963	73,839	6,928	NA	45,640	19,870	26,710	20,640	NA	3,771	25,370
1964	75,109	7,113	4,611	46,260	20,100	26,730	20,630	NA	3,768	25,490
1965	76,401	7,319	4,745	47,000	20,240	26,830	20,290	NA	3,792	25,660
1966	77,892	7,599	4,930	48,080	20,450	26,770	20,010	NA	3,842	25,740
1967	79,565	7,853	5,099	49,040	20,660	26,220	20,190	NA	3,820	25,710
1968	80,990	8,051	5,221	49,920	20,770	26,170	20,210	NA	3,867	25,580
1969	82,972	8,291	5,368	50,380	21,050	26,440	20,050	NA	3,895	25,540
1970	84,889	8,487	5,562	50,970	21,380	26,740	20,100	NA	3,953	25,480
1971	86,355	8,727	5,707	51,350	21,570	26,920	20,080	NA	4,000	25,320
1972	88,847	8,981	5,833	51,550	21,720	26,870	19,840	NA	4,008	25,560
1973	91,203	9,358	5,974	52,820	22,000	27,050	19,980	5,310	4,012	25,800
1974	93,670	9,720	6,121	52,680	22,240	26,930	20,250	5,390	4,077	25,820
1975	95,453	10,054	6,238	52,770	22,340	26,650	20,430	5,430	4,161	26,070
1976	97,826	10,277	6,313	53,340	22,590	26,430	20,660	5,490	4,184	26,240
1977	100,665	10,574	6,428	54,060	22,900	26,400	20,910	5,570	4,204	26,380
1978	103,882	10,970	6,513	54,850	23,060	26,530	20,940	5,630	4,240	26,580
1979	106,559	11,305	6,589	55,450	23,240	26,780	21,240	5,740	4,300	26,660
1980	108,544	11,646	6,765	55,980	23,370	27,050	21,530	5,970	4,348	26,840
1981	110,315	11,973	6,882	56,560	23,530	27,180	21,700	6,190	4,364	26,920
1982	111,872	12,001	6,983	57,220	23,740	27,230	21,790	6,250	4,389	26,880P
1983	113,226	12,185	7,068	58,350	23,710	(3)27,190	21,940	(3)6,270	4,409	26,910P
1984	115,241	12,391	7,206	58,720	23,860	27,280	22,070	6,360	4,426	27,340P
1985	117,167	12,609	7,371	59,060	23,920	27,500	22,200	6,380	4,460	27,530P
1986	119,540	12,823	7,658	59,650	24,000	27,620	(3)22,710	6,470	4,484	27,700P
1987	121,602	13,090	7,828	60,290	24,090	(3)28,890P	22,760	6,590P	(3)4,519	28,020P
1988	123,378	13,353	8,044	61,100	24,140	29,080P	23,100P	6,660P	4,565	28,270P

Continued on the following page.

Table 2. Labor Force, Employment, and Unemployment, 1959-1988--Continued

Year	United States	Canada (4)	Australia (1)	Japan	France	Germany	Italy	Netherlands	Sweden	United Kingdom
Civilian Labor Force (thousands)										
Approximating U.S. concepts										
1959	68,369	6,286	NA	43,320	18,480	25,850	21,020	NA	(2)3,609	23,880
1960	69,628	6,462	NA	44,120	18,520	25,990	20,820	NA	(2)3,669	24,130
1961	70,459	6,575	NA	44,610	18,530	26,160	20,830	NA	3,695	24,380
1962	70,614	6,670	NA	45,040	18,720	26,210	20,680	NA	3,718	24,720
1963	71,833	6,805	NA	45,430	19,100	26,290	20,240	NA	3,725	24,940
1964	73,091	6,994	4,559	46,040	19,430	26,270	20,220	NA	3,720	25,070
1965	74,455	7,207	4,689	46,780	19,650	26,360	19,900	NA	3,744	25,240
1966	75,770	7,493	4,862	47,850	19,850	26,290	19,620	NA	3,795	25,320
1967	77,347	7,747	5,022	48,810	20,070	25,730	19,800	NA	3,773	25,290
1968	78,737	7,951	5,140	49,690	20,190	25,690	19,780	NA	3,822	25,180
1969	80,734	8,194	5,284	50,140	20,470	25,960	19,620	NA	3,851	25,160
1970	82,771	8,395	5,478	50,730	20,800	26,240	19,720	NA	3,909	25,110
1971	84,382	8,639	5,624	51,120	21,000	26,420	19,660	NA	3,955	24,950
1972	87,034	8,897	5,752	51,320	21,150	26,340	19,450	NA	3,963	25,190
1973	89,429	9,276	5,901	52,590	21,430	26,540	19,590	5,200	3,971	25,440
1974	91,949	9,639	6,053	52,440	21,660	26,400	19,900	5,280	4,036	25,470
1975	93,775	9,974	6,169	52,530	21,750	26,130	20,090	5,330	4,123	25,730
1976	96,158	10,203	6,244	53,100	22,000	25,900	20,290	5,390	4,148	25,900
1977	99,009	10,500	6,358	53,820	22,310	25,870	20,510	5,470	4,168	26,050
1978	102,251	10,895	6,443	54,610	22,460	26,000	20,570	5,530	4,203	26,260
1979	104,962	11,231	6,519	55,210	22,660	26,250	20,850	5,630	4,262	26,350
1980	106,940	11,573	6,693	55,740	22,800	26,520	21,120	5,860	4,312	26,520
1981	108,670	11,899	6,810	56,320	22,950	26,650	21,320	6,080	4,327	26,590
1982	110,204	11,926	6,910	56,980	23,160	26,700	21,410	6,140	4,350	26,720P
1983	111,550	12,109	6,997	58,110	23,140	(3)26,650	21,590	(3)6,170	4,369	26,750P
1984	113,544	12,316	7,135	58,480	23,300	26,760	21,670	6,260	4,385	27,170P
1985	115,461	12,532	7,300	58,820	23,360	26,970	21,800	6,280	4,418	27,370P
1986	117,834	12,746	7,588	59,410	23,440	27,090	(3)22,290	6,370	4,443	27,540P
1987	119,865	13,011	7,758	60,050	23,540	(3)28,360P	22,350	6,490P	(3)4,480	27,860P
1988	121,669	13,275	7,974	60,860	23,580	28,550P	22,660P	6,560P	4,530	28,110P

Continued on the following page.

Table 2. Labor Force, Employment, and Unemployment, 1959-1988--Continued

Year	United States (1)	Canada (4)	Australia (1)	Japan	France	Germany	Italy	Nether- lands	Sweden	United Kingdom
Labor Force (thousands)										
As published (5)										
1959	70,157	6,242	NA	44,330	18,883	26,337	21,879	4,144	(2)3,603	23,745
1960	71,489	6,411	NA	45,110	18,887	26,518	21,545	4,192	(2)3,662	24,072
1961	72,359	6,521	NA	45,620	18,870	26,772	21,535	4,235	3,688	24,351
1962	72,675	6,615	NA	46,140	19,024	26,845	21,306	4,319	3,712	24,628
1963	73,839	6,748	NA	46,520	19,377	26,930	20,852	4,381	3,720	24,767
1964	75,109	6,933	4,559	47,100	19,664	26,922	20,870	4,467	3,718	24,953
1965	76,401	7,141	4,689	47,870	19,857	27,034	20,612	4,512	3,742	25,139
1966	77,892	7,493	4,862	48,910	20,014	26,962	20,367	4,555	3,792	25,237
1967	79,565	7,747	5,022	49,830	20,198	26,409	20,507	4,580	3,775	25,105
1968	80,990	7,951	5,140	50,610	20,286	26,291	20,555	4,620	3,822	25,022
1969	82,972	8,194	5,284	50,980	20,525	26,535	20,369	4,670	3,855	25,028
1970	84,889	8,395	5,478	51,530	20,857	26,817	20,436	4,725	3,913	25,001
1971	86,355	8,639	5,624	51,860	21,024	27,002	20,404	4,762	3,961	24,747
1972	88,847	8,897	5,752	51,990	21,182	26,990	20,293	4,781	3,970	24,991
1973	91,203	9,276	5,901	53,260	21,456	27,195	20,490	4,780	3,977	25,272
1974	93,670	9,639	6,053	53,100	21,690	27,147	20,714	4,807	4,043	25,360
1975	95,453	9,974	6,169	53,230	21,764	26,884	20,946	4,900	4,129	25,536
1976	97,826	10,203	6,244	53,780	22,013	26,651	21,285	4,932	4,155	25,687
1977	100,665	10,500	6,358	54,520	22,322	26,577	21,607	4,972	4,174	25,796
1978	103,882	10,895	6,443	55,320	22,463	26,692	21,730	5,030	4,209	25,993
1979	106,559	11,231	6,519	55,960	22,666	26,923	22,075	5,101	4,268	26,235
1980	108,544	11,573	6,693	56,500	22,800	27,217	22,372	5,299	4,318	26,283
1981	110,315	11,899	6,810	57,070	22,953	27,416	22,665	5,485	4,332	26,235
1982	111,872	11,926	6,910	57,740	23,163	27,542	(3)22,416	5,654	4,356	26,098
1983	113,226	12,109	6,997	58,890	23,142	27,589	22,697	5,639	4,375	26,222
1984	115,241	12,316	7,135	59,270	23,304	27,629	22,933	5,669	4,391	26,760
1985	117,167	12,532	7,300	59,630	23,357	27,844	23,117	5,710	4,424	27,239
1986	119,540	12,746	7,588	60,200	23,444	28,032	23,467	5,740	4,386	27,446
1987	121,602	13,011	7,758	60,840	23,542	(3)29,361	23,669	NA	(3)4,421	27,576
1988	123,378	13,275	7,974	61,660	23,587	29,534	23,988	NA	4,471	28,501

Continued on the following page.

Table 2. Labor Force, Employment, and Unemployment, 1959-1988--Continued

Year	United States (1)	Canada	Australia	Japan	France	Germany	Italy	Nether-lands	Sweden	United Kingdom
Total Employment (thousands)										
Approximating U.S. concepts										
1959	66,418	6,056	NA	42,550	19,220	25,570	20,450	NA	(2)3,595	23,790
1960	67,639	6,161	NA	43,580	19,320	26,000	20,430	NA	(2)3,652	24,120
1961	67,646	6,257	NA	44,160	19,360	26,340	20,560	NA	3,686	24,370
1962	68,763	6,428	NA	44,670	19,380	26,460	20,500	NA	3,709	24,490
1963	69,768	6,577	NA	45,050	19,570	26,590	20,160	NA	3,709	24,550
1964	71,323	6,807	4,548	45,720	19,860	26,630	20,090	NA	3,710	24,870
1965	73,034	7,056	4,684	46,430	19,930	26,770	19,600	NA	3,748	25,120
1966	75,017	7,348	4,853	47,430	20,130	26,700	19,280	NA	3,783	25,180
1967	76,590	7,557	5,005	48,410	20,240	25,880	19,520	NA	3,740	24,890
1968	78,173	7,693	5,127	49,330	20,220	25,880	19,510	NA	3,782	24,770
1969	80,140	7,929	5,272	49,810	20,570	26,270	19,370	NA	3,822	24,770
1970	80,796	8,011	5,472	50,380	20,850	26,600	19,460	NA	3,894	24,700
1971	81,340	8,192	5,600	50,710	20,990	26,760	19,440	NA	3,899	24,340
1972	83,966	8,428	5,682	50,820	21,110	26,680	19,100	NA	3,901	24,490
1973	86,838	8,843	5,838	52,140	21,410	26,860	19,260	5,150	3,914	24,970
1974	88,515	9,206	5,959	51,950	21,610	26,510	19,630	5,200	3,997	25,030
1975	87,524	9,364	5,935	51,770	21,440	25,760	19,740	5,160	4,094	24,900
1976	90,420	9,551	6,015	52,260	21,590	25,540	19,870	5,200	4,118	24,700
1977	93,673	9,725	6,070	52,960	21,770	25,500	20,070	5,300	4,129	24,730
1978	97,679	10,062	6,108	53,610	21,860	25,660	20,090	5,350	4,146	24,930
1979	100,421	10,469	6,181	54,280	21,880	26,000	20,320	5,450	4,212	25,250
1980	100,907	10,781	6,356	54,840	21,900	26,280	20,610	5,620	4,262	24,990
1981	102,042	11,075	6,488	55,300	21,780	26,090	20,660	5,650	4,256	24,130
1982	101,194	10,693	6,488	55,860	21,820	25,670	20,630	5,620	4,252	23,880P
1983	102,510	10,751	6,371	56,790	21,740	(3)25,290	20,670	(3)5,510	4,258	23,770P
1984	106,702	11,007	6,565	57,110	21,540	25,310	20,790	5,590	4,290	24,150P
1985	108,856	11,298	6,768	57,500	21,480	25,490	20,890	5,740	4,335	24,470P
1986	111,303	11,608	7,044	57,980	21,510	25,760	(3)21,030	5,830	4,367	24,620P
1987	114,177	11,940	7,199	58,560	21,560	(3)27,080P	21,010	5,940P	(3)4,435	25,170P
1988	116,677	12,322	7,468	59,550	21,700	27,260P	21,310P	6,000P	4,493	25,940P

Continued on the following page.

Table 2. Labor Force, Employment, and Unemployment, 1959-1988--Continued

Year	United States	Canada (4)	Australia (1)	Japan	France	Germany	Italy	Netherlands	Sweden	United Kingdom
Civilian Employment (thousands)										
Approximating U.S. concepts										
1959	64,630	5,936	NA	42,340	18,190	25,340	20,020	NA	(2)3,549	23,220
1960	65,778	6,042	NA	43,370	18,250	25,710	20,060	NA	(2)3,606	23,600
1961	65,746	6,136	NA	43,950	18,300	26,000	20,160	NA	3,640	23,900
1962	66,702	6,302	NA	44,450	18,450	26,060	20,100	NA	3,663	24,050
1963	67,762	6,454	NA	44,840	18,800	26,170	19,760	NA	3,663	24,120
1964	69,305	6,688	4,496	45,500	19,190	26,170	19,680	NA	3,662	24,450
1965	71,088	6,944	4,628	46,210	19,340	26,290	19,210	NA	3,700	24,700
1966	72,895	7,242	4,785	47,200	19,530	26,220	18,890	NA	3,736	24,760
1967	74,372	7,451	4,928	48,180	19,650	25,390	19,130	NA	3,693	24,470
1968	75,920	7,593	5,046	49,100	19,640	25,400	19,080	NA	3,737	24,370
1969	77,902	7,832	5,188	49,570	19,990	25,790	18,940	NA	3,778	24,390
1970	78,678	7,919	5,388	50,140	20,270	26,100	19,080	NA	3,850	24,330
1971	79,367	8,104	5,517	50,480	20,420	26,260	19,020	NA	3,854	23,970
1972	82,153	8,344	5,601	50,590	20,540	26,150	18,710	NA	3,856	24,120
1973	85,064	8,761	5,765	51,910	20,840	26,350	18,870	5,040	3,873	24,610
1974	86,794	9,125	5,891	51,710	21,030	25,980	19,280	5,090	3,956	24,680
1975	85,846	9,284	5,866	51,530	20,850	25,240	19,400	5,060	4,056	24,560
1976	88,752	9,477	5,946	52,020	21,000	25,010	19,500	5,100	4,082	24,360
1977	92,017	9,651	6,000	52,720	21,180	24,970	19,670	5,200	4,093	24,400
1978	96,048	9,987	6,038	53,370	21,260	25,130	19,720	5,250	4,109	24,610
1979	98,824	10,395	6,111	54,040	21,300	25,470	19,930	5,340	4,174	24,940
1980	99,303	10,708	6,284	54,600	21,330	25,750	20,200	5,510	4,226	24,670
1981	100,397	11,001	6,416	55,060	21,200	25,560	20,280	5,540	4,219	23,800
1982	99,526	10,618	6,415	55,620	21,240	25,140	20,250	5,510	4,213	23,720P
1983	100,834	10,675	6,300	56,550	21,170	(3)24,750	20,320	(3)5,410	4,218	23,610P
1984	105,005	10,932	6,494	56,870	20,980	24,790	20,390	5,490	4,249	23,990P
1985	107,150	11,221	6,697	57,260	20,920	24,960	20,490	5,640	4,293	24,310P
1986	109,597	11,531	6,974	57,740	20,950	25,230	(3)20,610	5,730	4,326	24,460P
1987	112,440	11,861	7,129	58,320	21,010	(3)26,550P	20,590	5,840P	(3)4,396	25,010P
1988	114,968	12,244	7,398	59,310	21,140	26,730P	20,870P	5,900P	4,458	25,780P

Continued on the following page.

Table 2. Labor Force, Employment, and Unemployment, 1959-1988--Continued

Year	United States (1)	Canada (4)	Australia (1)	Japan	France	Germany	Italy	Nether- lands	Sweden	United Kingdom
Employment (thousands)										
As published (5)										
1959	66,418	5,870	NA	43,350	18,584	25,797	20,349	4,092	(2)3,543	23,315
1960	67,639	5,965	NA	44,360	18,611	26,247	20,330	4,162	(2)3,599	23,711
1961	67,646	6,055	NA	44,980	18,629	26,591	20,427	4,213	3,633	24,011
1962	68,763	6,225	NA	45,560	18,748	26,690	20,337	4,297	3,657	24,156
1963	69,768	6,375	NA	45,950	19,066	26,744	20,045	4,356	3,659	24,226
1964	71,323	6,609	4,496	46,550	19,413	26,753	19,966	4,445	3,660	24,570
1965	73,034	6,862	4,628	47,300	19,541	26,887	19,502	4,487	3,698	24,800
1966	75,017	7,242	4,785	48,270	19,688	26,801	19,175	4,519	3,733	24,869
1967	76,590	7,451	4,928	49,200	19,762	25,950	19,401	4,505	3,695	24,548
1968	78,173	7,593	5,046	50,020	19,732	25,968	19,383	4,552	3,737	24,447
1969	80,140	7,832	5,188	50,400	20,041	26,356	19,209	4,621	3,782	24,453
1970	80,796	7,919	5,388	50,940	20,327	26,668	19,325	4,679	3,854	24,389
1971	81,340	8,104	5,517	51,210	20,439	26,817	19,295	4,700	3,860	24,038
1972	83,966	8,344	5,601	51,260	20,571	26,744	18,996	4,673	3,862	24,204
1973	86,838	8,761	5,765	52,590	20,863	26,922	19,185	4,670	3,879	24,717
1974	88,515	9,125	5,891	52,370	21,058	26,565	19,601	4,672	3,962	24,801
1975	87,524	9,284	5,866	52,230	20,863	25,810	19,716	4,640	4,062	24,665
1976	90,420	9,477	5,946	52,710	21,016	25,591	19,859	4,654	4,088	24,494
1977	93,673	9,651	6,000	53,420	21,188	25,547	20,062	4,701	4,099	24,525
1978	97,679	9,987	6,038	54,080	21,262	25,699	20,159	4,757	4,115	24,740
1979	100,421	10,395	6,111	54,790	21,305	26,047	20,377	4,821	4,180	25,062
1980	100,907	10,708	6,284	55,360	21,333	26,328	20,674	4,973	4,232	24,796
1981	102,042	11,001	6,416	55,810	21,203	26,144	20,752	5,005	4,225	23,928
1982	101,194	10,618	6,415	56,380	21,240	25,709	(3)20,493	4,999	4,219	23,472
1983	102,510	10,675	6,300	57,330	21,168	25,331	20,557	4,965	4,224	23,356
1984	106,702	10,932	6,494	57,660	20,981	25,363	20,629	4,980	4,255	23,761
1985	108,856	11,221	6,697	58,070	20,915	25,540	20,735	5,076	4,299	24,145
1986	111,303	11,531	6,974	58,530	20,955	25,804	20,856	5,135	4,269	24,266
1987	114,177	11,861	7,129	59,110	21,010	(3)27,132	20,836	NA	(3)4,337	24,706
1988	116,677	12,244	7,398	60,110	21,144	27,301	21,103	NA	4,399	26,207

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Table 2. Labor Force, Employment, and Unemployment, 1959-1988--Continued

Year	United States (1)	Canada (4)	Australia (1)	Unemployment (thousands)									
				Approximating U.S. concepts									
				Japan	France	Germany	Italy	Nether-lands	Sweden	United Kingdom			
1959	3,740	350	NA	980	290	510	1,000	NA	(2)60	660			
1960	3,852	420	NA	750	270	280	760	NA	(2)63	530			
1961	4,714	439	NA	660	230	160	670	NA	55	480			
1962	3,911	368	NA	590	270	150	580	NA	55	670			
1963	4,070	351	NA	590	300	120	480	NA	62	830			
1964	3,786	306	63	540	240	100	540	NA	58	620			
1965	3,366	263	61	570	310	70	690	NA	44	540			
1966	2,875	251	76	650	320	70	730	NA	59	570			
1967	2,975	296	94	630	420	340	670	NA	80	830			
1968	2,817	358	94	590	550	290	700	NA	85	810			
1969	2,832	362	96	570	480	170	680	NA	73	770			
1970	4,093	476	91	590	530	140	640	NA	59	770			
1971	5,016	535	107	640	580	160	640	NA	101	980			
1972	4,882	553	150	730	610	190	740	NA	107	1,070			
1973	4,365	515	136	680	590	190	720	160	98	820			
1974	5,156	514	162	730	630	420	620	190	80	790			
1975	7,929	690	302	1,000	900	890	690	270	67	1,180			
1976	7,406	726	298	1,080	1,000	890	790	290	66	1,540			
1977	6,991	849	358	1,100	1,130	900	840	270	75	1,660			
1978	6,202	908	405	1,240	1,200	870	850	280	94	1,650			
1979	6,137	836	408	1,170	1,360	780	920	290	88	1,420			
1980	7,637	865	409	1,140	1,470	770	920	350	86	1,850			
1981	8,273	898	394	1,260	1,750	1,090	1,040	540	108	2,790			
1982	10,678	1,308	495	1,360	1,920	1,560	1,160	630	137	3,000P			
1983	10,717	1,434	697	1,560	1,970	(3)1,900	1,270	(3)760	151	3,140P			
1984	8,539	1,384	641	1,610	2,320	1,970	1,280	770	136	3,180P			
1985	8,312	1,311	603	1,560	2,440	2,010	1,310	640	125	3,060P			
1986	8,237	1,215	613	1,670	2,490	1,860	1,680	640	117	3,080P			
1987	7,425	1,150	629	1,730	2,530	1,810P	1,760	650P	(3)84	2,850P			
1988	6,701	1,031	576	1,550	2,440	1,820P	1,790P	660P	72	2,330P			

Continued on the following page.

Table 2. Labor Force, Employment, and Unemployment, 1959-1988--Continued

Year	United States (1)	Canada (4)	Australia (1)	Japan	France	Germany	Italy	Nether-lands	Sweden	United Kingdom
	Unemployment (thousands)									
	As published (6)									
1959	3,740	372	NA	980	299	540	1,530	49	(2)60	430
1960	3,852	446	NA	750	276	271	1,215	29	(2)63	361
1961	4,714	466	NA	660	241	181	1,108	21	55	340
1962	3,911	390	NA	590	276	154	969	21	55	472
1963	4,070	374	NA	590	311	186	807	24	62	541
1964	3,786	324	63	540	251	169	904	21	58	383
1965	3,366	280	61	570	316	147	1,110	25	44	339
1966	2,875	251	76	650	326	161	1,192	36	59	368
1967	2,975	296	94	630	436	459	1,106	75	80	557
1968	2,817	358	94	590	554	323	1,172	68	85	575
1969	2,832	362	96	570	484	179	1,160	49	73	575
1970	4,093	476	91	590	530	149	1,111	45	59	612
1971	5,016	535	107	640	585	185	1,109	62	101	709
1972	4,882	553	150	730	611	246	1,297	108	107	787
1973	4,365	515	136	680	593	273	1,305	110	98	555
1974	5,156	514	162	730	632	582	1,113	135	80	559
1975	7,929	690	302	1,000	901	1,074	1,230	(3)260	67	871
1976	7,406	726	298	1,080	997	1,060	1,426	278	66	1,193
1977	6,991	849	358	1,100	1,134	1,030	1,545	271	75	1,271
1978	6,202	908	405	1,240	1,201	993	1,571	273	94	1,253
1979	6,137	836	408	1,170	1,361	876	1,698	281	88	1,173
1980	7,637	865	409	1,140	1,467	889	1,698	325	86	1,487
1981	8,273	898	394	1,260	1,750	1,272	1,913	480	108	2,307
1982	10,678	1,308	495	1,360	1,923	1,833	(3)1,923	655	137	2,626
1983	10,717	1,434	697	1,560	1,974	2,258	2,140	801	151	2,866
1984	8,539	1,384	641	1,610	2,323	2,265	2,304	822	136	2,999
1985	8,312	1,311	603	1,560	2,443	2,304	2,381	767	125	3,114
1986	8,237	1,215	613	1,670	2,489	2,228	2,611	711	117	3,180
1987	7,425	1,150	629	1,730	2,532	2,229	2,832	686	(3)84	2,880
1988	6,701	1,031	576	1,550	2,443	2,242	2,885	682	72	2,370

Continued on the following page.

Table 2. Labor Force, Employment, and Unemployment, 1959-1988--Continued

Year	United States (1)	Canada	Australia	Japan	France	Germany	Italy	Nether-lands	Sweden	United Kingdom
	Unemployment Rate (percent)									
	Approximating U.S. concepts									
1959	5.3	5.5	NA	2.3	1.5	2.0	4.7	NA	(2)1.6	2.7
1960	5.4	6.4	NA	1.7	1.4	1.1	3.6	NA	(2)1.7	2.2
1961	6.5	6.6	NA	1.5	1.2	.6	3.2	NA	1.5	1.9
1962	5.4	5.4	NA	1.3	1.4	.6	2.8	NA	1.5	2.7
1963	5.5	5.1	NA	1.3	1.5	.4	2.3	NA	1.6	3.3
1964	5.0	4.3	NA	1.2	1.2	.4	2.6	NA	1.5	2.4
1965	4.4	3.6	1.3	1.2	1.5	.3	3.4	NA	1.2	2.1
1966	3.7	3.3	1.6	1.4	1.6	.3	3.6	NA	1.5	2.2
1967	3.7	3.8	1.8	1.3	2.0	1.3	3.3	NA	2.1	3.2
1968	3.5	4.4	1.8	1.2	2.6	1.1	3.5	NA	2.2	3.2
1969	3.4	4.4	1.8	1.1	2.3	.6	3.4	NA	1.9	3.0
1970	4.8	5.6	1.6	1.2	2.5	.5	3.2	NA	1.5	3.0
1971	5.8	6.1	1.9	1.2	2.7	.6	3.2	NA	2.5	3.9
1972	5.5	6.2	2.6	1.4	2.8	.7	3.7	NA	2.7	4.2
1973	4.8	5.5	2.3	1.3	2.7	.7	3.6	3.0	2.4	3.2
1974	5.5	5.3	2.6	1.4	2.8	1.6	3.1	3.5	2.0	3.1
1975	8.3	6.9	4.8	1.9	4.0	3.3	3.4	5.0	1.6	4.5
1976	7.6	7.1	4.7	2.0	4.4	3.4	3.8	5.3	1.6	5.9
1977	6.9	8.0	5.6	2.0	4.9	3.4	4.0	4.8	1.8	6.3
1978	6.0	8.3	6.2	2.3	5.2	3.3	4.1	5.0	2.2	6.2
1979	5.8	7.4	6.2	2.1	5.9	2.9	4.3	5.1	2.0	5.3
1980	7.0	7.4	6.0	2.0	6.3	2.8	4.3	5.9	2.0	6.9
1981	7.5	7.5	5.7	2.2	7.4	4.0	4.8	8.7	2.5	10.4
1982	9.5	10.9	7.1	2.4	8.1	5.7	5.3	10.1	3.1	11.2P
1983	9.5	11.8	9.9	2.7	8.3	(3)7.0	5.8	(3)12.1	3.4	11.7P
1984	7.4	11.2	8.9	2.7	9.7	7.2	5.8	12.1	3.1	11.6P
1985	7.1	10.4	8.2	2.6	10.2	7.3	5.9	10.0	2.8	11.1P
1986	6.9	9.5	8.0	2.8	10.4	6.7	7.4	9.9	2.6	11.2P
1987	6.1	8.8	8.0	2.5	10.5	(3)6.3P	7.7	9.9P	1.9	10.2P
1988	5.4	7.7	7.2	2.5	10.1	6.3P	7.8P	9.9P	1.6	8.2P

Continued on the following page.

Table 2. Labor Force, Employment, and Unemployment, 1959-1988--Continued

Year	United States	Canada (4)	Australia (1)	Japan	France	Germany	Italy	Netherlands	Sweden	United Kingdom
	Civilian Unemployment Rate (percent)									
	Approximating U.S. concepts									
1959	5.5	5.6	(7)2.1	2.3	1.6	2.0	4.8	NA	(2)1.7	2.8
1960	5.5	6.5	(7)1.6	1.7	1.5	1.1	3.7	NA	(2)1.7	2.2
1961	6.7	6.7	(7)3.0	1.5	1.2	.6	3.2	NA	1.5	2.0
1962	5.5	5.5	(7)2.9	1.3	1.4	.6	2.8	NA	1.5	2.7
1963	5.7	5.2	(7)2.3	1.3	1.6	.5	2.4	NA	1.7	3.3
1964	5.2	4.4	1.4	1.2	1.2	.4	2.7	NA	1.6	2.5
1965	4.5	3.6	1.3	1.2	1.6	.3	3.5	NA	1.2	2.1
1966	3.8	3.4	1.6	1.4	1.6	.3	3.7	NA	1.6	2.3
1967	3.8	3.8	1.9	1.3	2.1	1.1	3.4	NA	2.1	3.3
1968	3.6	4.5	1.8	1.2	2.7	.6	3.5	NA	2.2	3.2
1969	3.5	4.4	1.8	1.1	2.3	.6	3.5	NA	1.9	3.1
1970	4.9	5.7	1.6	1.2	2.5	.5	3.2	NA	1.5	3.1
1971	5.9	6.2	1.9	1.3	2.8	.6	3.3	NA	2.6	3.9
1972	5.6	6.2	2.6	1.4	2.9	.7	3.8	NA	2.7	4.2
1973	4.9	5.5	2.3	1.3	2.8	.7	3.7	3.1	2.5	3.2
1974	5.6	5.3	2.7	1.4	2.9	1.6	3.1	3.6	2.0	3.1
1975	8.5	6.9	4.9	1.9	4.1	3.4	3.4	5.1	1.6	4.6
1976	7.7	7.1	4.8	2.0	4.5	3.4	3.9	5.4	1.6	5.9
1977	7.1	8.1	5.6	2.0	5.1	3.5	4.1	4.9	1.8	6.4
1978	6.1	8.3	6.3	2.3	5.3	3.3	4.1	5.1	2.2	6.3
1979	5.8	7.4	6.3	2.1	6.0	3.0	4.4	5.2	2.1	5.4
1980	7.1	7.5	6.1	2.0	6.4	2.9	4.4	6.0	2.0	7.0
1981	7.6	7.5	5.8	2.2	7.6	4.1	4.9	8.9	2.5	10.5
1982	9.7	11.0	7.2	2.4	8.3	5.8	5.4	10.3	3.1	11.2P
1983	9.6	11.8	10.0	2.7	8.5	7.1	5.9	(3)12.3	3.5	11.7P
1984	7.5	11.2	9.0	2.8	10.0	7.4	5.9	12.3	3.1	11.7P
1985	7.2	10.5	8.3	2.6	10.4	7.5	6.0	10.2	2.8	11.2P
1986	7.0	9.5	8.1	2.8	10.6	6.9	7.5	10.0	2.6	11.2P
1987	6.2	8.8	8.1	2.9	10.8	6.4P	7.9P	10.0P	1.9	10.2P
1988	5.5	7.8	7.2	2.5	10.4	6.4P	7.9P	10.1P	1.6	8.3P

Continued on the following page.

Table 2. Labor Force, Employment, and Unemployment, 1959-1988--Continued

Year	United States (1)	Canada (4)	Australia (1)	Unemployment Rate (percent)						
				Japan	France	Germany	Italy	Nether-lands	Sweden	United Kingdom
				As published (8)						
1959	5.3	6.0	(7)2.1	2.2	1.6	2.6	7.0	1.5	(2)1.7	2.2
1960	5.4	7.0	(7)1.6	1.7	1.5	1.3	5.6	.9	(2)1.7	1.6
1961	6.5	7.2	(7)3.0	1.4	1.3	.8	5.1	.6	1.5	1.5
1962	5.4	5.9	(7)2.9	1.3	1.5	.7	4.5	.6	1.5	2.0
1963	5.5	5.5	(7)2.3	1.3	1.6	.8	3.9	.7	1.7	2.4
1964	5.0	4.7	1.4	1.1	1.3	.8	4.3	.6	1.6	1.8
1965	4.4	3.9	1.3	1.2	1.6	.7	5.4	.7	1.2	1.5
1966	3.7	3.4	1.6	1.3	1.6	.7	5.9	1.0	1.6	1.5
1967	3.7	3.8	1.9	1.3	2.2	2.1	5.4	2.0	2.1	2.3
1968	3.5	4.5	1.8	1.2	2.7	1.5	5.7	1.8	2.2	2.5
1969	3.4	4.4	1.8	1.1	2.4	.9	5.7	1.3	1.9	2.5
1970	4.8	5.7	1.6	1.1	2.4	.7	5.4	1.1	1.5	2.6
1971	5.8	6.2	1.9	1.2	2.8	.8	5.4	1.6	2.5	3.3
1972	5.5	5.5	2.6	1.4	2.9	1.1	6.4	2.8	2.7	3.7
1973	4.8	5.5	2.3	1.3	2.8	1.2	6.4	2.8	2.5	2.6
1974	5.5	5.3	2.7	1.4	2.9	2.6	5.4	3.5	2.0	2.6
1975	8.3	6.9	4.9	1.9	4.1	4.7	5.9	5.0	1.6	4.0
1976	7.6	7.1	4.8	2.0	4.5	4.6	6.7	5.3	1.6	5.5
1977	6.9	8.1	5.6	2.0	5.1	4.5	7.2	5.1	1.8	5.8
1978	6.0	8.3	6.3	2.2	5.3	4.3	7.2	5.1	2.2	5.7
1979	5.8	7.4	6.3	2.1	6.0	3.8	7.7	5.1	2.1	5.3
1980	7.0	7.5	6.1	2.0	6.4	3.8	7.6	5.9	2.0	6.8
1981	7.5	7.5	5.8	2.2	7.6	5.5	8.4	9.1	2.5	10.4
1982	9.5	11.0	7.2	2.4	8.3	7.5	8.6	12.6	3.1	10.9
1983	9.5	11.8	10.0	2.6	8.5	9.1	9.4	17.0	3.5	11.7
1984	7.4	11.2	9.0	2.7	10.0	9.1	10.0	17.3	3.1	11.7
1985	7.1	10.5	8.3	2.6	10.5	9.3	10.3	15.9	2.8	11.8
1986	6.9	9.5	8.1	2.8	10.6	9.0	11.1	14.7	2.7	11.8
1987	6.1	8.8	8.1	2.5	10.8	8.9	12.0	13.9	1.9	10.4
1988	5.4	7.8	7.2	2.5	10.4	8.8	13.7	13.7	1.6	8.3

Continued on the following page.

Table 2. Labor Force, Employment, and Unemployment, 1959-1988--Continued

Footnotes:

NA = Not available.

P = Preliminary.

- (1) Published and adjusted data are identical.
- (2) The Swedish labor force survey was initiated in 1961. The published data for 1959-1960 are estimates made by the Organization for Economic Cooperation and Development.
- (3) Break in series. Based on the former series, the adjusted unemployment rate would be 1.2 percentage points lower for Italy and 2 percentage points higher for the Netherlands. For Germany, the adjusted unemployment rate based on the former series would be approximately 0.3 percentage point higher in 1983 and 0.4 percentage point higher in 1987. For Sweden, the 1986 unemployment rate based on the new series would be approximately 0.5 percentage point lower.
- (4) Published and adjusted data are identical from 1966 onward. There is a break in the as published series for Canada as of 1966, resulting from sampling changes and a raising of the lower age limit from 14 to 15. The effect was to lower the as published unemployment rate by about 0.4 percentage point. The adjusted series for Canada prior to 1966 are based on BLS estimates and do not show a break in series.
- (5) Including military personnel for the United States, Japan, Germany, Italy, and Sweden.
- (6) For the United States, Canada, Australia, Japan, Italy, and Sweden, unemployment as recorded by sample labor force surveys; for France, annual estimates of unemployment; and for Germany, the Netherlands, and the United Kingdom, the registered unemployed.
- (7) The Australian labor force survey was initiated in 1964. Unemployment rates for 1959-1963 are estimates made by an Australian researcher.
- (8) For Canada, Australia, and France, unemployment as a percent of the civilian labor force; for the United States, Japan, Italy, and Sweden, unemployment as a percent of the civilian labor force plus career military personnel; for Germany and the Netherlands, registered unemployed as a percent of employed wage and salary workers plus the unemployed; for the United Kingdom, registered unemployed as a percent of the civilian labor force plus military personnel. Published rates shown for Germany, the Netherlands, and the United Kingdom cannot be computed from data contained in this table.

Note: Data for the United States relate to the population 16 years of age and over. Published data for Canada, France, Germany, and Italy relate to the population 14 years of age and over; for Sweden, to the population aged 16 to 74; and for Australia, Japan, the Netherlands, and the United Kingdom, to the population 15 years of age and over. Beginning in 1966, published data for Canada relate to the population 15 years of age and over; beginning in 1971, published data for France relate to the population 15 years of age and over; beginning in 1973, published data for the United Kingdom relate to the population 16 years of age and over; and beginning in 1986, published data for Sweden relate to the population aged 16 to 64. The adjusted statistics have been adapted, insofar as possible, to the age at which compulsory schooling ends in each country. Therefore, adjusted statistics for France relate to the population 16 years of age and over; for Germany, to the population 15 years of age and over; and for the Netherlands, to the population 14 years of age and over for 1973-1974, and to the population 15 years of age and over from 1975 onward. The age limits of adjusted statistics for Canada (except for 1959-1965), Australia, Japan, Italy, and the United Kingdom coincide with the age limits of the published statistics. Statistics for Sweden remain at the lower age limit of 16, but have been adjusted to include persons older than the upper age limit.

Table 3. Quarterly Unemployment Rates, Seasonally Adjusted, 1984-1989

Period	United States	Canada	Australia	Japan	France (1)	Germany (1)	Italy (1,2)	Sweden	United Kingdom (1)
1984	I 7.4	I 7.7	I 7.4	I 11.2	I 9.3	I 7.2	I 5.8	I 3.1	I 11.6
	II 7.4	II 7.3	II 7.4	II 11.3	II 9.7	II 7.2	II 5.8	II 3.1	II 11.6
	III 7.3	III 7.3	III 7.3	III 11.1	III 9.0	III 7.3	III 5.6	III 3.0	III 11.6
	IV 7.2	IV 7.2	IV 7.0	IV 10.5	IV 8.6	IV 7.3	IV 5.6	IV 3.0	IV 11.5
1985	I 7.1	I 7.2	I 7.2	I 10.9	I 8.5	I 7.3	I 5.9	I 2.8	I 11.1
	II 7.2	II 7.2	II 7.2	II 10.5	II 8.4	II 7.3	II 5.8	II 2.9	II 11.3
	III 7.1	III 7.1	III 7.1	III 10.1	III 8.0	III 7.3	III 5.8	III 2.7	III 11.1
	IV 7.0	IV 7.0	IV 7.0	IV 10.0	IV 7.8	IV 7.3	IV 6.0	IV 2.7	IV 11.0
1986	I 6.9	I 6.9	I 6.9	I 9.5	I 8.0	I 6.7	I 7.4	I 2.6	I 11.1
	II 6.9	II 6.9	II 6.9	II 9.5	II 7.7	II 6.9	II 7.2	II 2.7	II 11.1
	III 6.9	III 6.9	III 6.9	III 9.5	III 8.2	III 6.8	III 7.3	III 2.6	III 11.2
	IV 6.8	IV 6.8	IV 6.8	IV 9.3	IV 8.3	IV 6.6	IV 7.7	IV 2.5	IV 11.1
1987	I 6.1	I 6.5	I 6.2	I 8.8	I 8.0	I 6.3	I 7.7	I 1.9	I 10.2
	II 6.2	II 9.0	II 8.0	II 8.2	II 3.0	II 6.3	II 7.4	II 2.0	II 10.9
	III 5.9	III 5.9	III 8.6	III 7.9	III 2.8	III 6.3	III 7.8	III 1.9	III 10.5
	IV 5.8	IV 8.1	IV 7.9	IV 7.9	IV 2.7	IV 6.3	IV 7.9	IV 1.7	IV 9.4
1988	I 5.4	I 5.6	I 7.8	I 7.7	I 7.2	I 6.3	I 7.8	I 1.6	I 8.2
	II 5.4	II 7.6	II 7.8	II 7.5	II 2.5	II 6.3	II 7.8	II 1.6	II 9.0
	III 5.4	III 7.8	III 7.6	III 7.5	III 2.5	III 6.3	III 7.7	III 1.6	III 8.5
	IV 5.3	IV 7.7	IV 7.7	IV 7.8	IV 2.4	IV 6.1	IV 7.7	IV 1.4	IV 7.5
1989	I 5.1	I 7.5	I 7.6	I 6.6	I 2.4	I 5.8	I 7.6	I 1.4	I 7.0
	II 5.2	II 7.6	II 7.6	II 6.6	II 2.3	II 5.7	II 7.8	II 1.3	II 6.5
	III 5.2	III 7.5	III 7.6	III 6.1	III 2.3	III 5.7	III 7.8	III 1.3	III 6.2

Continued on the following page.

Total Labor Force Basis

Table 3. Quarterly Unemployment Rates, Seasonally Adjusted, 1984-1989--Continued

Period	United States	Canada	Australia	Japan	France (1)	Germany (1)	Italy (1,2)	Sweden	United Kingdom (1)
Civilian Labor Force Basis									
1984	7.5	11.2	9.0	2.8	10.0	7.4	5.9	3.1	11.7
I	7.9	11.3	9.4	2.8	9.5	7.3	6.0	3.2	11.8
II	7.5	11.4	9.1	2.8	9.9	7.4	5.9	3.1	11.7
III	7.4	11.2	8.8	2.8	10.1	7.4	6.1	3.1	11.6
IV	7.3	11.1	8.6	2.7	10.4	7.4	5.6	3.0	11.6
1985	7.2	10.5	8.3	2.6	10.4	7.5	6.0	2.8	11.2
I	7.3	11.0	8.6	2.6	10.5	7.5	5.9	3.0	11.4
II	7.3	10.6	8.4	2.6	10.4	7.5	5.8	2.9	11.2
III	7.2	10.2	8.1	2.6	10.5	7.4	5.9	2.8	11.1
IV	7.1	10.1	7.9	2.8	10.4	7.4	6.1	2.7	11.1
1986	7.0	9.5	8.1	2.8	10.6	6.9	(3)7.5	2.6	11.2
I	7.0	9.6	7.9	2.7	10.4	7.1	7.4	2.7	11.1
II	7.2	9.6	7.8	2.8	10.6	6.9	7.4	2.6	11.2
III	7.0	9.5	8.3	2.9	10.7	6.8	7.5	2.6	11.3
IV	6.8	9.4	8.4	2.8	10.8	6.7	7.9	2.6	11.1
1987	6.2	8.8	8.1	2.9	10.8	(3)6.4	7.9	(3)1.9	10.2
I	6.6	9.5	8.3	3.0	10.9	6.3	7.6	2.0	11.0
II	6.3	9.0	8.1	3.0	10.9	6.4	7.8	1.9	10.6
III	6.0	8.6	8.0	2.8	10.8	6.4	8.0	1.9	10.0
IV	5.9	8.1	8.0	2.7	10.5	6.4	8.1	1.7	9.4
1988	5.5	7.8	7.2	2.5	10.4	6.4	7.9	1.6	8.3
I	5.7	7.8	7.6	2.7	10.4	6.4	7.9	1.7	9.0
II	5.5	7.7	7.5	2.5	10.4	6.4	7.9	1.6	8.6
III	5.5	7.8	7.0	2.6	10.4	6.4	8.0	1.6	8.0
IV	5.3	7.7	6.8	2.4	10.2	6.3	7.9	1.4	7.5
1989									
I	5.2	7.6	6.6	2.4	10.1	5.9	7.7	1.4	7.0
II	5.3	7.6	6.1	2.3	10.1	5.8	8.0	1.3	6.6
III	5.2	7.4				5.7		1.3	6.2

(1) Preliminary for the United Kingdom from 1984 onward, for Germany from 1987 onward, for Italy from 1988 onward, and for France from 1989 onward.

(2) Quarterly data are for January, April, July, and October.

(3) Break in series. For Italy, the first half 1986 rate based on the former series was 6.2 percent on a total labor force basis and 6.4 percent on a civilian basis. For Germany, the 1987 rate based on the former series was 6.7 percent on a total labor force basis and 6.8 percent on a civilian basis. For Sweden, the 1986 rate based on the new series was 2.2 percent on both bases.

Note: Quarterly figures for France, Germany, Italy, and the United Kingdom are calculated by applying annual adjustment factors to quarterly published data, and therefore should be viewed as only approximate indicators of unemployment under U.S. concepts.

Table 4. Labor Force Participation Rates by Sex, 1960-1988

Year	United States	Canada	Australia	Japan	France	Germany	Italy	Netherlands	Sweden	United Kingdom
Total Labor Force Basis										
Both Sexes										
1960	60.0	56.7	NA	68.0	60.8	60.1	56.5	NA	66.8	62.6
1961	60.0	56.6	NA	67.9	60.2	60.2	56.2	NA	66.5	62.7
1962	59.5	56.3	NA	67.0	59.1	60.0	55.2	NA	66.2	62.7
1963	59.3	56.3	NA	65.8	58.5	59.8	53.6	NA	65.6	62.9
1964	59.4	56.6	59.7	65.0	58.5	59.4	53.0	NA	64.8	62.8
1965	59.5	56.9	60.2	64.5	58.1	59.1	51.9	NA	64.4	62.9
1966	59.8	57.6	60.9	64.7	58.1	58.6	50.4	NA	64.5	62.9
1967	60.2	58.0	61.6	64.9	58.1	57.5	50.7	NA	63.6	62.6
1968	60.3	57.9	61.5	65.0	57.8	57.3	50.2	NA	64.1	62.1
1969	60.8	58.1	61.7	64.7	57.9	57.4	49.9	NA	64.0	61.8
1970	61.0	58.1	62.5	64.6	58.2	57.4	49.4	NA	64.3	61.6
1971	60.7	58.3	62.6	64.4	58.0	57.0	49.2	NA	64.5	60.9
1972	60.9	58.8	62.6	63.9	57.8	56.4	48.2	NA	64.4	61.2
1973	61.3	60.0	62.9	64.1	58.0	56.2	48.1	53.9	64.3	62.8
1974	61.7	60.7	63.2	63.2	58.0	55.6	48.1	53.9	65.1	62.6
1975	61.6	61.3	63.4	62.5	57.8	54.9	48.1	54.8	66.1	63.0
1976	62.0	61.3	63.0	62.5	58.0	54.3	48.4	54.6	66.2	63.1
1977	62.6	61.7	63.0	62.6	58.2	53.9	48.7	54.6	66.1	63.1
1978	63.5	62.9	62.2	62.9	58.1	53.8	48.3	54.4	66.3	63.2
1979	64.0	63.6	61.9	62.8	58.1	53.8	48.5	54.6	66.8	62.9
1980	64.1	64.3	62.3	62.7	57.8	53.7	48.6	55.8	67.1	62.9
1981	64.2	64.9	62.2	62.7	57.7	53.4	48.7	57.0	67.0	62.6
1982	64.3	64.2	61.9	62.8	57.7	53.1	48.2	56.9	67.0	62.2P
1983	64.4	64.5	61.6	63.2	57.2	(1)52.8	47.9	(1)56.5	66.9	61.9P
1984	64.7	65.0	61.7	62.8	57.2	52.8	47.7	56.6	66.8	62.5P
1985	65.1	65.4	61.8	62.4	56.9	53.1	47.7	56.1	67.1	62.6P
1986	65.6	65.8	63.0	62.2	56.7	53.1	48.3P	56.2	67.2	62.6P
1987	65.9	66.4	63.2	62.0	56.4	(1)55.4P	48.3P	56.6P	(1)67.4P	63.0P
1988	66.2	66.9	63.5	62.0	56.2P	55.7P	48.9P	56.8P	67.9P	63.2P

Continued on the following page.

Table 4. Labor Force Participation Rates by Sex, 1960-1988--Continued

Year	United States	Canada	Australia	Japan	France	Germany	Italy	Netherlands	Sweden	United Kingdom
Total Labor Force Basis										
1960	83.9	83.1	NA	84.4	NA	82.9	82.7	NA	NA	87.8
1961	83.4	82.2	NA	84.4	NA	83.0	82.2	NA	87.3	87.4
1962	82.6	81.5	NA	83.7	82.1	82.5	81.0	NA	85.6	86.9
1963	82.0	81.0	NA	82.6	80.8	82.2	79.7	NA	84.0	87.2
1964	81.6	80.5	85.5	81.6	80.7	81.8	79.2	NA	83.3	86.5
1965	81.3	80.2	85.3	81.2	79.9	81.4	78.0	NA	82.4	86.1
1966	81.1	80.1	85.4	81.2	79.8	80.9	76.5	NA	81.9	85.6
1967	81.1	79.6	85.2	81.1	79.5	79.8	76.6	NA	80.7	85.2
1968	80.8	78.9	84.8	81.8	78.6	79.5	75.7	NA	80.4	84.3
1969	80.5	78.6	84.5	81.6	78.4	79.4	75.0	NA	79.4	83.6
1970	80.3	78.1	84.4	81.6	78.2	79.2	74.2	NA	78.8	82.8
1971	79.7	77.6	84.1	82.0	77.3	78.3	74.0	NA	78.3	81.5
1972	79.5	77.8	83.9	82.0	76.5	76.7	72.6	NA	77.6	81.3
1973	79.3	78.4	83.4	82.0	76.2	75.9	71.8	79.6	77.2	82.7
1974	79.2	78.9	82.9	81.7	76.0	74.7	71.5	79.6	77.2	81.1
1975	78.4	78.6	82.5	81.3	75.1	73.7	71.1	80.1	77.3	81.2
1976	78.0	77.8	81.7	81.1	74.8	72.8	70.9	79.6	76.8	81.2
1977	78.1	77.9	81.2	80.5	74.5	72.2	70.1	78.9	75.9	80.6
1978	78.3	78.3	80.0	80.2	73.9	72.0	69.3	78.0	75.3	80.1
1979	78.2	78.6	79.7	80.0	73.3	71.8	68.9	77.4	75.4	79.4
1980	77.8	78.6	79.4	79.7	72.5	71.2	68.5	77.7	75.2	79.2
1981	77.4	78.6	79.1	79.7	72.1	70.4	68.4	77.8	74.1	78.9
1982	77.0	77.2	78.6	79.4	71.5	69.6	67.4	76.6	73.8	77.9
1983	76.8	76.9	77.9	79.3	70.5	(1)69.1	66.7	(1)76.0	73.2	77.0
1984	76.8	76.7	77.5	78.6	69.9	68.6	66.2	75.3	72.7	76.8
1985	76.7	76.8	76.8	78.0	69.1	68.8	65.9	74.4	72.9	76.6
1986	76.7	76.8	76.8	77.7	68.6	68.4	(1)65.9	72.7	72.8	76.1
1987	76.6	76.7	76.4	77.2	67.8	NA	65.5P	72.0P	(1)72.5P	76.1P
1988	76.6	76.7	76.3	77.0	NA	NA	66.2P	NA	72.9P	76.1P

Continued on the following page.

Table 4. Labor Force Participation Rates by Sex, 1960-1988--Continued

Year	United States	Canada	Australia	Japan	France	Germany	Italy	Netherlands	Sweden	United Kingdom
Total Labor Force Basis										
Female										
1960	37.8	30.1	NA	52.7	NA	41.2	32.3	NA	NA	39.9
1961	38.1	31.0	NA	52.4	NA	41.0	32.5	NA	46.1	40.2
1962	38.0	31.3	NA	51.3	38.3	40.7	31.6	NA	47.1	40.5
1963	38.3	31.9	NA	50.0	38.2	40.7	29.7	NA	47.6	40.8
1964	38.7	32.9	33.8	49.3	38.3	40.3	28.8	NA	46.8	41.2
1965	39.3	33.8	34.9	48.8	38.2	40.0	27.8	NA	46.6	41.8
1966	40.3	35.4	36.4	49.2	38.2	39.4	26.5	NA	47.3	42.2
1967	41.2	36.5	37.9	49.6	38.6	38.4	26.6	NA	46.8	42.0
1968	41.6	37.1	38.4	49.2	38.8	38.5	26.5	NA	48.0	41.9
1969	42.7	38.0	39.0	48.8	39.2	38.5	26.6	NA	48.8	42.1
1970	43.4	38.4	40.4	48.7	39.8	38.5	26.4	NA	50.0	42.2
1971	43.4	39.4	41.0	47.7	40.2	38.5	26.3	NA	50.9	42.1
1972	43.9	40.2	41.2	46.8	40.6	38.6	25.6	NA	51.5	42.9
1973	44.8	41.9	42.4	47.3	41.1	38.9	26.1	28.5	51.7	44.7
1974	45.7	43.0	43.5	45.7	41.4	38.8	26.5	28.7	53.3	45.7
1975	46.4	44.4	44.5	44.8	41.7	38.4	26.8	29.5	55.2	46.3
1976	47.4	45.2	44.3	44.9	42.4	38.1	27.6	29.9	55.8	46.6
1977	48.5	46.1	44.9	45.7	43.2	37.8	28.9	30.6	56.7	47.0
1978	50.0	47.9	44.5	46.4	43.5	37.8	28.8	31.1	57.5	47.7
1979	51.0	49.0	44.3	46.6	44.0	37.9	29.5	32.1	58.5	47.8
1980	51.6	50.4	45.5	46.6	44.3	38.1	30.1	34.3	59.3	47.9
1981	52.2	51.8	45.5	46.7	44.5	37.6	30.4	36.7	60.1	47.7
1982	52.7	51.8	45.5	47.0	44.9	38.4	30.3	37.7	60.5	47.8P
1983	53.0	52.6	45.6	48.0	45.0	(1)38.4	30.5	(1)37.4	60.8	48.1P
1984	53.7	53.7	46.1	47.8	45.5	38.8	30.5	38.2	61.1	49.3P
1985	54.5	54.6	47.1	47.6	45.6	39.1	30.7	38.2	61.5	49.7P
1986	55.4	55.4	49.3	47.6	45.8	39.4	(1)31.9	40.0	61.7	50.2P
1987	56.1	56.4	50.1	47.6	45.9	NA	32.3P	41.8P	(1)62.6P	51.0P
1988	56.6	57.4	50.7	47.9	NA	NA	32.9P	NA	63.2P	51.3P

Continued on the following page.

Table 4. Labor Force Participation Rates by Sex, 1960-1988--Continued

Year	United States	Canada	Australia	Japan	France	Germany	Italy	Netherlands	Sweden	United Kingdom
Civilian Labor Force Basis										
Both Sexes										
1960	59.4	56.2	NA	67.9	59.5	59.8	56.1	NA	66.5	61.9
1961	59.3	56.2	NA	67.8	58.7	59.9	55.8	NA	66.2	62.1
1962	58.8	55.9	NA	66.9	57.9	59.6	54.7	NA	65.9	62.1
1963	58.7	55.9	NA	65.7	57.5	59.4	53.1	NA	65.3	62.3
1964	58.7	56.2	59.4	64.8	57.6	59.0	52.5	NA	64.5	62.2
1965	58.9	56.5	59.9	64.4	57.4	58.7	51.4	NA	64.1	62.4
1966	59.2	57.3	60.6	64.6	57.3	58.2	50.0	NA	64.2	62.3
1967	59.6	57.6	61.2	64.8	57.4	57.0	50.2	NA	63.4	62.0
1968	59.6	57.6	61.2	64.9	57.1	56.9	49.7	NA	63.8	61.6
1969	60.1	57.9	61.4	64.6	57.3	57.0	49.3	NA	63.8	61.4
1970	60.4	57.8	62.1	64.5	57.5	56.9	49.0	NA	64.0	61.1
1971	60.2	58.1	62.2	64.2	57.4	56.6	48.7	NA	64.2	60.4
1972	60.4	58.6	62.3	63.8	57.2	55.9	47.7	NA	64.1	60.8
1973	60.8	59.7	62.6	64.0	57.3	55.8	47.6	53.3	64.1	62.4
1974	61.2	60.5	63.0	63.0	57.4	55.1	47.7	53.4	64.8	62.2
1975	61.2	61.1	63.2	62.4	57.1	54.4	47.7	54.4	65.9	62.6
1976	61.6	61.1	62.7	62.4	57.3	53.8	48.0	54.1	66.0	62.7
1977	62.3	61.6	62.7	62.5	57.6	53.4	48.2	54.1	65.9	62.7
1978	63.2	62.7	61.9	62.8	57.5	53.3	47.8	53.9	66.1	62.8
1979	63.7	63.4	61.6	62.7	57.5	53.3	48.0	54.1	66.6	62.6
1980	63.8	64.1	62.1	62.6	57.2	53.2	48.2	55.3	66.9	62.5
1981	63.9	64.8	61.9	62.6	57.1	52.9	48.3	56.6	66.8	62.2
1982	64.0	64.1	61.7	62.7	57.1	52.6	47.7	56.5	66.8	62.2P
1983	64.0	64.4	61.4	63.1	56.6	(1)52.3	47.5	(1)56.1	66.7	61.9P
1984	64.4	64.8	61.5	62.7	56.6	52.4	47.3	56.2	66.6	62.5P
1985	64.8	65.3	61.6	62.3	56.3	52.6	47.2	55.7	66.9	62.6P
1986	65.3	65.7	62.8	62.1	56.1	52.6	(1)47.8	55.9	67.0	62.6P
1987	65.6	66.2	63.0	61.9	55.8	(1)55.0P	47.9P	56.3P	(1)67.3P	63.0P
1988	65.9	66.7	63.3	61.9	55.6P	55.2P	48.4P	56.4P	67.8P	63.3P

Continued on the following page.

Table 4. Labor Force Participation Rates by Sex, 1960-1988--Continued

Year	United States	Canada	Australia	Japan	France	Germany	Italy	Netherlands	Sweden	United Kingdom
Civilian Labor Force Basis										
Male										
1960	83.3	82.8	NA	84.2	NA	82.7	82.4	NA	NA	86.8
1961	82.9	81.8	NA	84.3	NA	82.7	81.8	NA	87.1	86.6
1962	82.0	81.1	NA	83.6	81.0	82.2	80.6	NA	85.4	86.2
1963	81.4	80.6	NA	82.5	79.8	81.9	79.2	NA	83.7	86.4
1964	81.0	80.1	85.3	81.5	79.9	81.4	78.7	NA	83.0	85.8
1965	80.7	79.9	85.1	81.1	79.2	80.9	77.5	NA	82.2	85.4
1966	80.4	79.8	85.2	81.4	79.1	80.5	76.0	NA	81.6	84.9
1967	80.4	79.3	84.9	81.0	78.8	79.3	76.1	NA	80.4	84.5
1968	80.1	78.6	84.5	81.7	77.8	79.0	75.2	NA	80.1	83.6
1969	79.8	78.3	84.2	81.5	77.7	78.9	74.4	NA	79.1	82.9
1970	79.7	77.8	84.1	81.5	77.4	78.7	73.7	NA	78.5	82.1
1971	79.1	77.3	83.8	81.9	76.5	77.8	73.4	NA	78.0	80.8
1972	79.0	77.5	83.6	81.9	75.7	76.1	72.0	NA	77.3	80.7
1973	78.8	78.2	83.2	81.9	75.5	75.3	71.2	79.2	76.8	82.1
1974	78.7	78.7	82.7	81.6	75.3	74.1	71.0	79.1	76.7	80.5
1975	77.9	78.4	82.2	81.2	74.3	73.1	70.6	79.8	77.0	80.7
1976	77.5	77.6	81.5	81.0	74.0	72.1	70.4	79.2	76.5	80.6
1977	77.7	77.7	81.0	80.4	73.7	71.6	69.5	78.5	75.6	80.1
1978	77.9	78.1	79.8	80.1	73.1	71.3	68.7	77.6	75.1	79.6
1979	77.8	78.5	79.4	79.9	72.5	71.1	68.3	76.8	75.1	78.9
1980	77.4	78.4	79.1	79.6	71.7	70.6	67.9	77.2	74.9	78.7
1981	77.0	78.4	78.8	79.6	71.3	69.7	67.8	77.3	73.8	78.3
1982	76.6	77.0	78.4	79.3	70.7	68.9	66.9	76.1	73.5	78.1P
1983	76.4	76.7	77.6	79.2	69.6	(1)68.3	66.2	(1)75.6	72.9	77.2P
1984	76.4	76.6	77.3	78.5	69.0	68.0	65.6	74.9	72.4	77.0P
1985	76.3	76.6	76.5	77.9	68.3	68.1	65.3	73.9	72.5	76.7P
1986	76.3	76.6	76.6	77.6	67.7	67.7	(1)65.2	72.2	72.5	76.2P
1987	76.2	76.6	76.1	77.1	66.9	NA	64.8P	71.6P	(1)72.2P	76.2P
1988	76.2	76.6	76.1	76.9	NA	NA	65.5P	NA	72.6P	76.3P

Continued on the following page.

Table 4. Labor Force Participation Rates by Sex, 1960-1988--Continued

Year	United States	Canada	Australia	Japan	France	Germany	Italy	Nether-lands	Sweden	United Kingdom
1960	37.7	30.1	30.1	52.7	41.2	32.3	32.3	NA	NA	39.8
1961	38.1	31.0	31.0	52.4	41.0	32.5	32.5	NA	46.1	40.1
1962	37.9	31.3	NA	51.3	40.7	31.6	31.6	NA	47.1	40.5
1963	38.3	31.9	NA	50.0	40.7	29.7	29.7	NA	47.6	40.7
1964	38.7	32.9	33.8	49.3	40.3	28.8	28.8	NA	46.8	41.2
1965	39.3	33.8	34.8	48.8	40.0	27.8	27.8	NA	46.6	41.7
1966	40.3	35.4	36.3	49.2	38.2	39.4	26.5	NA	47.3	42.1
1967	41.1	36.5	37.8	49.6	38.5	38.4	26.6	NA	46.8	41.9
1968	41.6	37.1	38.3	49.2	38.8	38.5	26.5	NA	48.0	41.9
1969	42.7	38.0	39.0	48.8	39.2	38.5	26.6	NA	48.8	42.0
1970	43.3	38.3	40.4	48.7	39.8	38.5	26.4	NA	50.0	42.2
1971	43.4	39.4	41.0	47.7	40.2	38.5	26.3	NA	50.9	42.0
1972	43.9	40.2	41.2	46.6	40.6	38.6	25.6	NA	51.5	42.8
1973	44.7	41.9	42.4	47.3	41.0	38.9	26.1	28.5	51.7	44.6
1974	45.7	43.0	43.5	45.7	41.4	38.8	26.5	28.7	53.3	45.7
1975	46.3	44.4	44.5	44.8	41.7	38.4	26.8	29.5	55.2	46.2
1976	47.3	44.3	44.9	44.9	42.4	38.1	27.6	29.9	55.8	46.5
1977	48.4	46.0	44.8	45.7	43.2	37.8	28.9	30.6	56.7	47.0
1978	50.0	47.9	44.5	46.4	43.5	37.8	28.8	31.1	57.5	47.6
1979	50.9	49.0	44.3	44.0	44.0	37.9	29.5	32.1	58.5	47.8
1980	51.5	50.4	45.5	44.3	44.3	38.1	30.1	34.3	59.3	47.8
1981	52.1	51.7	45.5	46.7	44.5	37.6	30.4	36.7	60.1	47.6
1982	52.6	51.7	45.4	47.0	44.9	38.4	30.3	37.7	60.5	47.8P
1983	52.9	52.6	45.5	48.0	44.9	38.4	30.5	37.4	60.8	48.1P
1984	53.6	53.6	46.1	47.8	45.4	38.8	30.5	38.2	61.1	49.3P
1985	54.5	54.6	47.0	47.6	45.5	39.1	30.7	38.2	61.5	49.7P
1986	55.3	55.3	49.2	47.6	45.7	39.4	31.9	40.0	61.7	50.2P
1987	56.0	56.4	50.0	47.6	45.9	NA	32.3P	41.8P	62.6P	51.0P
1988	56.6	57.4	50.7	47.6	NA	NA	32.9P	NA	63.2P	51.3P

Civilian Labor Force Basis

Female

Continued on the following page.

Table 4. Labor Force Participation Rates by Sex, 1960-1988--Continued

NA = Not available.  
P = Preliminary.  
(1) Break in series.

Note: Data relate to the total or civilian labor force approximating U.S. concepts as a percent of the total or civilian noninstitutionalized working age population. Working age is defined as 16-year-olds and over in the United States, France, and Sweden; 15-year-olds and over in Australia, Canada, Germany, and Japan; and 14-year-olds and over in Italy. For the United Kingdom, the lower age limit was raised from 15 to 16 in 1973. For the Netherlands, the lower age limit was raised from 14 to 15 in 1975. The institutionalized working age population is included in Japan and Germany.

Table 5.-Employment-Population Ratios by Sex, 1959-1988

Year	United States	Canada	Australia	Japan	France	Germany	Italy	Netherlands	Sweden	United Kingdom
1959	56.7	53.1	NA	66.2	60.0	59.0	55.0	NA	65.3	60.9
1960	56.8	53.0	NA	66.8	60.0	59.4	54.5	NA	65.7	61.3
1961	56.1	52.9	NA	66.9	59.5	59.9	54.5	NA	65.6	61.5
1962	56.3	53.3	NA	66.1	58.3	59.6	53.6	NA	65.2	61.0
1963	56.1	53.5	NA	64.9	57.6	59.5	52.4	NA	64.5	60.8
1964	56.4	54.1	58.9	64.2	57.8	59.2	51.6	NA	63.8	61.2
1965	56.8	54.8	59.4	63.7	57.2	59.0	50.1	NA	63.7	61.6
1966	57.6	55.7	60.0	63.8	57.2	58.5	48.6	NA	63.5	61.5
1967	58.0	55.8	60.4	64.1	57.0	56.8	49.0	NA	62.3	60.6
1968	58.2	55.3	60.4	64.2	56.2	56.7	48.5	NA	62.7	60.2
1969	58.7	55.6	60.6	64.0	56.6	57.0	48.2	NA	62.8	60.0
1970	58.0	54.8	61.5	63.9	56.7	57.1	47.9	NA	63.3	59.7
1971	57.2	54.8	61.4	63.6	56.5	56.7	47.6	NA	62.9	58.5
1972	57.5	55.2	61.0	63.0	56.2	56.0	46.4	NA	62.7	58.7
1973	58.3	56.7	61.5	63.3	56.4	55.8	46.3	52.2	62.7	60.8
1974	58.3	57.5	61.5	62.3	56.4	54.7	46.6	52.0	63.8	60.7
1975	56.5	57.1	60.4	61.3	55.4	53.1	46.5	52.1	65.0	60.2
1976	57.3	56.9	60.0	61.2	55.4	52.5	46.6	51.7	65.1	59.4
1977	58.3	56.8	59.5	61.4	55.4	52.1	46.7	51.9	65.0	59.1
1978	59.7	57.7	58.3	61.4	55.1	52.0	46.3	51.7	64.8	59.2
1979	60.3	58.9	58.1	61.5	54.7	52.2	46.4	51.8	65.5	59.6
1980	59.6	59.5	58.6	61.4	54.2	52.2	46.6	52.5	65.8	58.5
1981	59.4	60.1	58.6	61.3	53.4	51.3	46.4	52.1	65.3	56.1
1982	58.2	57.2	57.5	61.3	53.0	50.1	45.6	51.2	64.9	55.3P
1983	58.3	56.9	55.5	61.5	52.4	49.1	45.1	(1)49.6	64.6	54.7P
1984	59.9	57.7	56.2	61.1	51.6	49.0	44.9	49.8	64.7	55.2P
1985	60.5	58.6	56.8	60.8	51.1	49.2	44.8	50.5	65.2	55.6P
1986	61.1	59.6	58.0	60.5	50.8	49.5	(1)44.7	50.7	65.4	55.6P
1987	61.9	60.5	58.1	60.2	50.5	(1)51.9P	44.6P	51.1P	(1)66.2P	56.6P
1988	62.6	61.7	59.0	60.5	50.5P	52.2P	45.1P	51.1P	66.9P	58.0P

Total Employment Basis

Both sexes

Continued on the following page.

Table 5. Employment-Population Ratios by Sex, 1959-1988--Continued

Year	Civilian Employment Basis									
	United States	Canada	Australia	Japan	France	Germany	Italy	Netherlands	Sweden	United Kingdom
Both sexes										
1959	56.0	52.6	NA	66.1	58.7	58.8	54.5	NA	65.0	60.1
1960	56.1	52.6	NA	66.7	58.6	59.1	54.0	NA	65.4	60.6
1961	55.4	52.4	NA	66.8	58.2	59.6	54.0	NA	65.3	60.8
1962	55.5	52.8	NA	66.0	57.1	59.3	53.2	NA	64.9	60.4
1963	55.4	53.0	NA	64.8	56.6	59.2	51.9	NA	64.2	60.2
1964	55.7	53.7	58.6	64.1	56.9	58.8	51.1	NA	63.5	60.7
1965	56.2	54.4	59.1	63.6	56.4	58.6	49.6	NA	63.4	61.0
1966	56.9	55.4	59.6	63.7	56.4	58.0	48.1	NA	63.2	60.9
1967	57.3	55.4	60.0	64.0	56.2	56.3	48.5	NA	62.0	60.0
1968	57.5	55.0	60.0	64.1	55.5	56.2	47.9	NA	62.4	59.6
1969	58.0	55.3	60.2	63.9	55.9	56.6	47.6	NA	62.6	59.5
1970	57.4	54.5	61.1	63.8	56.0	56.6	47.4	NA	63.1	59.2
1971	56.6	54.5	61.0	63.4	55.8	56.2	47.1	NA	62.6	58.0
1972	57.0	54.9	60.6	62.9	55.5	55.5	45.9	NA	62.4	58.2
1973	57.8	56.4	61.2	63.2	55.8	55.4	45.8	51.7	62.5	60.3
1974	57.8	57.3	61.3	62.2	55.7	54.2	46.2	51.5	63.6	60.3
1975	56.1	56.9	60.1	61.2	54.8	52.6	46.0	51.6	64.8	59.7
1976	56.8	56.7	59.7	61.1	54.7	52.0	46.1	51.2	64.9	59.0
1977	57.9	56.6	59.2	61.2	54.4	51.6	46.3	51.5	64.8	58.7
1978	59.3	57.5	58.0	61.3	54.4	51.5	45.9	51.2	64.6	58.8
1979	59.9	58.7	57.8	61.4	54.0	51.7	45.9	51.3	65.3	59.2
1980	59.2	59.3	58.3	61.3	53.5	51.7	46.1	52.0	65.6	58.1
1981	59.0	59.9	58.4	61.2	52.8	50.8	45.9	51.6	65.1	55.7
1982	57.8	57.1	57.3	61.2	52.3	49.6	45.2	50.7	64.7	55.2P
1983	57.9	56.8	55.3	61.4	51.8	(1)48.6	44.7	(1)49.2	64.4	54.7P
1984	59.5	57.5	56.0	61.0	51.0	48.5	44.5	49.3	64.5	55.2P
1985	60.1	58.5	56.5	60.6	50.4	48.7	44.4	50.0	65.0	55.6P
1986	60.7	59.4	57.7	60.4	50.2	49.0	44.2	50.2	65.2	55.6P
1987	61.5	60.4	57.9	60.1	49.8	(1)51.5P	44.1P	50.6P	66.0P	56.6P
1988	62.3	61.6	58.7	60.4	49.9P	51.7P	44.6P	50.7P	66.7P	58.0P

Continued on the following page.

Table 5. Employment-Population Ratios by Sex, 1959-1988--Continued

Year	United States	Canada	Australia	Japan	France	Germany	Italy	Netherlands	Sweden	United Kingdom
Civilian Employment Basis										
Male										
1960	78.9	76.9	NA	82.8	NA	82.0	79.5	NA	NA	85.0
1961	77.6	75.8	NA	83.2	NA	82.3	79.4	NA	86.3	84.9
1962	77.7	76.3	NA	82.7	80.1	81.8	78.6	NA	84.2	83.9
1963	77.1	76.2	NA	81.5	79.0	81.6	77.6	NA	82.6	83.5
1964	77.3	76.5	84.5	80.6	79.2	81.1	77.0	NA	81.9	83.7
1965	77.5	76.9	84.4	80.2	78.4	80.7	75.2	NA	81.5	83.5
1966	77.9	77.1	84.2	80.1	78.2	80.3	73.5	NA	80.6	82.9
1967	78.0	76.3	83.8	80.0	77.6	78.2	73.9	NA	78.8	81.5
1968	77.8	75.1	83.5	80.7	76.4	78.1	73.0	NA	78.2	80.6
1969	77.6	74.9	83.2	80.5	76.5	78.5	72.4	NA	77.7	80.0
1970	76.2	73.4	83.2	80.5	76.3	78.3	71.9	NA	77.4	79.2
1971	74.9	72.7	82.7	80.9	75.3	77.4	71.6	NA	76.2	77.3
1972	75.0	73.0	82.0	80.6	74.4	75.6	69.9	NA	75.4	76.8
1973	75.5	74.3	81.8	80.8	74.2	74.9	69.3	77.1	75.1	79.1
1974	74.9	74.9	81.1	80.5	73.9	73.0	69.4	76.9	75.5	77.9
1975	71.7	73.5	79.1	79.5	72.1	70.6	68.8	76.7	76.0	76.7
1976	72.0	72.7	78.3	79.2	71.7	69.9	68.5	75.9	75.6	75.5
1977	72.8	72.0	77.3	78.7	71.1	69.5	67.5	75.5	74.5	74.7
1978	73.8	72.2	75.5	78.2	70.2	69.4	66.8	74.8	73.5	74.6
1979	73.8	73.3	75.3	78.2	69.4	69.5	66.3	74.1	73.7	74.5
1980	72.0	73.0	75.1	77.9	68.5	68.9	66.0	73.9	73.6	72.8
1981	71.3	72.9	75.1	77.8	67.4	67.4	65.6	72.0	72.0	69.3
1982	69.0	68.5	73.4	77.4	66.3	65.4	64.4	69.5	71.3	68.9P
1983	68.8	67.5	70.1	77.1	65.0	(1)64.0	63.5	(1)67.2	70.4	67.7P
1984	70.7	68.0	70.6	76.4	63.5	63.6	62.9	66.6	70.2	67.8P
1985	70.9	68.7	70.4	75.9	62.3	63.7	62.5	67.4	70.5	67.9P
1986	71.0	69.5	70.7	75.4	61.8	63.8	(1)61.8	66.5	70.6	67.4P
1987	71.5	70.1	70.2	74.9	61.2	NA	61.3P	66.3P	(1)70.9P	68.1P
1988	72.0	70.9	70.9	75.0	NA	NA	61.9P	NA	71.5P	69.7P

Continued on the following page.

Table 5. Employment-Population Ratios by Sex, 1959-1988--Continued

Year	United States	Canada	Australia	Japan	France	Germany	Italy	Netherlands	Sweden	United Kingdom
Civilian Employment Basis										
Female										
1960	35.5	28.6	NA	51.8	NA	40.5	31.0	NA	NA	38.9
1961	35.4	29.4	NA	51.6	NA	40.7	31.1	NA	45.0	39.3
1962	35.6	29.9	NA	50.6	37.4	40.4	30.4	NA	46.3	39.4
1963	35.8	30.5	NA	49.3	37.2	40.4	28.8	NA	46.5	39.4
1964	36.3	31.6	32.9	48.7	37.5	40.1	27.7	NA	45.9	40.1
1965	37.1	32.6	34.0	48.1	37.3	39.9	26.6	NA	45.8	40.8
1966	38.3	34.2	35.4	48.4	37.2	39.3	25.2	NA	46.4	41.2
1967	39.0	35.1	36.6	48.9	37.3	38.0	25.3	NA	45.7	40.7
1968	39.6	35.5	37.1	48.7	37.1	38.0	25.1	NA	47.0	40.8
1969	40.7	36.2	37.7	48.3	37.7	38.2	25.1	NA	47.9	41.1
1970	40.8	36.1	39.3	48.2	38.1	38.2	25.0	NA	49.1	41.2
1971	40.4	36.8	39.7	47.2	38.4	38.1	24.9	NA	49.5	40.7
1972	41.0	37.4	39.6	46.2	38.7	38.3	24.1	NA	50.0	41.4
1973	42.0	39.1	40.9	46.8	39.2	38.6	24.5	27.3	50.3	43.4
1974	42.6	40.2	41.7	45.1	39.4	38.1	25.1	27.1	52.0	44.3
1975	42.0	40.8	41.4	44.0	39.2	37.0	25.3	27.1	54.0	44.4
1976	43.2	41.4	41.5	44.1	39.5	36.6	25.8	27.3	54.7	44.1
1977	44.5	41.7	41.5	44.9	39.9	36.2	26.9	28.2	55.4	44.3
1978	46.4	43.3	41.0	45.5	40.2	36.1	26.9	28.4	56.1	44.7
1979	47.5	44.7	40.7	45.7	40.2	36.4	27.3	29.2	57.2	45.4
1980	47.7	46.2	41.9	45.7	40.1	36.7	27.9	31.0	58.0	44.8
1981	48.0	47.4	42.1	45.7	39.8	35.7	28.0	31.9	58.5	43.3
1982	47.7	46.1	41.5	45.9	39.9	35.8	27.7	32.6	58.4	42.8P
1983	48.0	46.5	40.8	46.7	39.9	(1)35.2	27.6	(1)31.9	58.6	42.8P
1984	49.5	47.6	41.7	46.5	39.7	35.3	27.6	32.7	59.1	43.7P
1985	50.4	48.8	42.9	46.3	39.6	35.5	27.8	33.4	59.7	44.4P
1986	51.4	49.9	44.9	46.2	39.7	36.1	(1)28.1	34.7	60.1	44.8P
1987	52.5	51.2	45.7	46.2	39.6	NA	28.5P	35.7P	(1)61.4P	46.0P
1988	53.4	52.6	46.8	46.6	NA	NA	28.9P	NA	62.2P	47.3P

Continued on the following page.

Table 5. Employment-Population Ratios by Sex, 1959-1988--Continued

NA = Not available.  
P = Preliminary.  
(1) Break in series.

NOTE: Data relate to total or civilian employment approximating U.S. concepts as a percent of the total or civilian noninstitutionalized working age population. Working age is defined as 16-year-olds and over in the United States, France, and Sweden; 15-year-olds and over in Australia, Canada, Germany, and Japan; and 14-year-olds and over in Italy. For the United Kingdom, the lower age limit was raised from 15 to 16 in 1973. For the Netherlands, the lower age limit was raised from 14 to 15 in 1975. The institutionalized working age population is included in Japan and Germany.

Table 6. Civilian Employment by Economic Sector, 1960-1988 (in thousands)

Year	United States	Canada	Australia	Japan	France	Germany	Italy	Netherlands	Sweden	United Kingdom
	Civilian Employment									
1960	65,778	5,965	NA	43,370	18,595	25,954	20,064	4,162	3,513	23,660
1965	71,088	6,862	4,614	46,200	19,540	26,418	19,210	4,487	3,673	24,776
1970	78,678	7,919	5,388	50,140	20,328	26,169	19,083	4,679	3,836	24,381
1971	79,367	8,104	5,518	50,470	20,440	26,317	19,016	4,700	3,842	24,165
1972	82,153	8,344	5,602	50,580	20,571	26,214	18,730	4,673	3,845	24,139
1973	85,064	8,761	5,765	51,900	20,863	26,411	18,914	4,670	3,861	24,716
1974	86,794	9,125	5,891	51,710	21,059	26,038	19,346	4,672	3,944	24,803
1975	85,846	9,284	5,867	51,530	20,864	25,285	19,476	4,640	4,044	24,720
1976	88,752	9,477	5,946	52,020	21,016	25,059	19,605	4,654	4,070	24,509
1977	92,017	9,651	6,000	52,720	21,188	25,014	19,794	4,710	4,081	24,538
1978	96,048	9,987	6,016	53,360	21,263	25,169	19,867	4,757	4,097	24,697
1979	98,824	10,395	6,098	54,040	21,305	25,516	20,097	4,821	4,162	25,079
1980	99,303	10,708	6,276	54,600	21,334	25,797	20,383	4,973	4,214	25,004
1981	100,397	11,001	6,399	55,060	21,203	25,610	20,486	5,005	4,207	24,011
1982	99,526	10,618	6,405	55,620	21,240	25,177	20,431	4,999	4,201	23,584
1983	100,834	10,675	6,289	56,550	21,168	24,793	20,467	4,927	4,206	23,288
1984	105,005	10,932	6,474	56,870	20,981	24,839	20,392	4,980	4,237	23,734
1985	107,150	11,221	6,708	57,260	20,914	25,010	20,492	5,076	4,281	24,116
1986	109,597	11,531	6,949	57,740	20,955	25,267	20,614	5,135	4,314	24,434
1987	112,440	11,861	7,100	58,320	21,010	25,476	20,591	NA	4,384	24,987
1988	114,968	12,245	7,366	59,310	21,144	25,631	20,868	NA	4,455	25,433

Continued on the following page.

Table 6. Civilian Employment by Economic Sector, 1960-1988 (in thousands)--Continued

Year	United States	Canada	Australia	Japan	France	Germany	Italy	Netherlands	Sweden	United Kingdom
Agriculture (1)										
1960	5,572	795	NA	12,800	4,305	3,623	6,514	409	544	1,118
1965	4,477	694	448	10,500	3,473	2,876	5,031	341	421	952
1970	3,567	604	432	8,490	2,751	2,262	3,839	289	314	784
1971	3,510	607	424	7,840	2,612	2,134	3,817	281	300	764
1972	3,598	575	440	7,310	2,468	2,018	3,550	277	287	735
1973	3,572	573	422	6,810	2,345	1,924	3,438	272	276	736
1974	3,613	579	408	6,540	2,242	1,842	3,373	267	264	699
1975	3,505	564	405	6,380	2,156	1,773	3,244	263	261	687
1976	3,453	561	390	6,210	2,082	1,682	3,217	261	254	685
1977	3,426	553	398	6,110	2,013	1,589	3,119	248	248	684
1978	3,550	574	381	6,100	1,954	1,536	3,053	256	250	680
1979	3,508	590	396	5,860	1,908	1,481	2,985	257	242	666
1980	3,529	583	407	5,510	1,854	1,437	2,896	246	237	654
1981	3,519	600	416	5,330	1,791	1,408	2,731	244	237	639
1982	3,570	561	412	5,250	1,732	1,395	2,525	241	236	632
1983	3,541	590	416	5,060	1,677	1,391	2,517	247	230	622
1984	3,469	588	402	4,860	1,627	1,376	2,390	247	218	615
1985	3,338	575	412	4,820	1,582	1,360	2,262	248	208	616
1986	3,350	570	425	4,700	1,534	1,338	2,212	248	204	603
1987	3,400	566	412	4,640	1,481	1,311	2,138	NA	189	592
1988	3,326	556	431	4,480	1,428	1,283	2,033	NA	188	582

Continued on the following page.

Table 6. Civilian Employment by Economic Sector, 1960-1988 (in thousands)--Continued

Year	United States	Canada	Australia	Japan	France	Germany	Italy	Netherlands	Sweden	United Kingdom
Industry (2)										
1960	21,995	1,906	NA	12,380	6,976	11,912	6,855	1,644	1,420	10,900
1965	24,311	2,233	1,653	15,010	7,486	12,501	7,174	1,797	1,553	11,117
1970	26,080	2,360	1,886	17,880	7,812	12,465	7,586	1,778	1,456	10,531
1971	25,182	2,383	1,916	18,140	7,869	12,530	7,613	1,757	1,424	10,156
1972	25,828	2,439	1,898	18,290	7,929	12,315	7,472	1,683	1,396	9,940
1973	27,258	2,586	1,945	19,210	8,076	12,348	7,466	1,661	1,401	10,110
1974	27,213	2,688	1,963	19,020	8,131	11,941	7,634	1,632	1,434	10,080
1975	25,302	2,613	1,870	18,370	7,883	11,243	7,663	1,576	1,449	9,632
1976	26,310	2,701	1,866	18,520	7,810	11,042	7,561	1,520	1,416	9,345
1977	27,343	2,675	1,845	18,510	7,773	10,944	7,662	1,509	1,375	9,324
1978	28,810	2,750	1,785	18,550	7,650	10,958	7,626	1,525	1,328	9,312
1979	29,797	2,884	1,785	18,740	7,540	11,055	7,641	1,523	1,326	9,344
1980	29,136	2,931	1,816	19,180	7,475	11,136	7,767	1,518	1,327	9,059
1981	28,995	2,983	1,829	19,300	7,266	10,885	7,722	1,453	1,286	8,242
1982	27,070	2,694	1,775	19,210	7,139	10,478	7,594	1,399	1,237	7,817
1983	27,016	2,608	1,649	19,470	6,941	10,112	7,403	1,315	1,223	7,448
1984	28,617	2,695	1,670	19,630	6,691	10,029	7,036	1,361	1,228	7,389
1985	28,805	2,728	1,714	19,820	6,485	10,028	6,890	1,381	1,244	7,363
1986	29,130	2,789	1,730	19,760	6,364P	10,112	6,816	1,329	1,257	7,180
1987	29,209	2,870	1,759	19,560	6,261P	10,100P	6,709	NA	1,262	7,156P
1988	29,676	3,012	1,820	20,120	6,212P	10,074P	6,783	NA	1,267	7,125P

Continued on the following page.

Table 6. Civilian Employment by Economic Sector, 1960-1988 (in thousands)--Continued

Year	United States	Canada	Australia	Japan	France	Germany	Italy	Netherlands	Sweden	United Kingdom
Manufacturing										
1960	17,149	1,471	NA	9,430	5,250	8,907	4,813	1,213	1,120	8,517
1965	19,190	1,636	1,207	11,450	5,373	9,483	4,894	1,290	1,206	8,666
1970	20,746	1,768	1,340	13,750	5,593	9,779	5,293	1,261	1,064	8,465
1971	19,606	1,766	1,358	13,820	5,676	9,835	5,329	1,250	1,054	8,202
1972	19,943	1,823	1,344	13,810	5,749	9,652	5,223	1,200	1,046	7,934
1973	21,054	1,927	1,374	14,420	5,882	9,697	5,270	1,181	1,066	7,979
1974	21,025	1,978	1,380	14,250	5,953	9,479	5,438	1,178	1,120	8,030
1975	19,457	1,871	1,275	13,430	5,798	9,010	5,447	1,160	1,138	7,654
1976	20,261	1,921	1,289	13,440	5,745	8,807	5,435	1,108	1,100	7,411
1977	20,889	1,888	1,281	13,350	5,721	8,770	5,473	1,092	1,060	7,461
1978	21,784	1,956	1,220	13,220	5,640	8,751	5,420	1,074	1,023	7,427
1979	22,459	2,071	1,221	13,290	5,556	8,793	5,409	1,067	1,026	7,395
1980	21,942	2,111	1,246	13,630	5,495	8,842	5,485	1,067	1,025	7,081
1981	21,817	2,124	1,252	13,800	5,321	8,598	5,384	1,048	984	6,365
1982	20,286	1,928	1,214	13,740	5,249	8,321	5,277	1,032	946	6,005
1983	19,946	1,879	1,143	14,010	5,136	8,006	5,113	993	941	5,664
1984	20,995	1,954	1,145	14,330	4,997	7,933	4,876	975	953	5,579
1985	20,879	1,960	1,139	14,480	4,854	8,012	4,761	984	968	5,578
1986	20,962	1,989	1,143	14,390	4,742P	8,126	4,715	988	983	5,451
1987	20,935	2,018	1,158	14,200	4,629P	NA	4,635	NA	970	NA
1988	21,320	2,104	1,193	14,500	NA	NA	4,718	NA	974	NA

Continued on the following page.

Table 6. Civilian Employment by Economic Sector, 1960-1988 (in thousands)--Continued

Year	United States	Canada	Australia	Japan	France	Germany	Italy	Netherlands	Sweden	United Kingdom
Services (3)										
1960	38,212	3,264	NA	18,190	7,314	10,419	6,696	2,109	1,550	11,642
1965	42,301	3,934	2,514	20,690	8,581	11,041	7,005	2,349	1,699	12,709
1970	49,031	4,955	3,070	23,770	9,765	11,442	7,656	2,612	2,066	13,066
1971	50,675	5,114	3,178	24,510	9,959	11,653	7,584	2,662	2,118	13,246
1972	52,727	5,330	3,265	24,980	10,173	11,881	7,709	2,713	2,162	13,466
1973	54,234	5,602	3,399	25,880	10,442	12,139	8,009	2,737	2,185	13,870
1974	55,968	5,858	3,520	26,140	10,684	12,255	8,339	2,773	2,246	14,024
1975	57,039	6,108	3,592	26,770	10,825	12,269	8,568	2,801	2,334	14,404
1976	58,989	6,215	3,690	27,290	11,124	12,335	8,828	2,872	2,400	14,474
1977	61,248	6,424	3,757	28,100	11,400	12,481	9,012	2,953	2,458	14,530
1978	63,688	6,661	3,850	28,720	11,659	12,675	9,187	2,974	2,519	14,705
1979	65,519	6,920	3,917	29,440	11,857	12,980	9,471	3,041	2,594	15,068
1980	66,638	7,194	4,053	29,910	12,005	13,224	9,720	3,209	2,650	15,291
1981	67,883	7,418	4,154	30,430	12,146	13,317	10,033	3,308	2,684	15,129
1982	68,886	7,363	4,218	31,160	12,369	13,304	10,311	3,359	2,728	15,135
1983	70,277	7,478	4,224	32,020	12,549	13,290	10,547	3,364	2,753	15,219
1984	72,919	7,650	4,402	32,380	12,662	13,434	10,966	3,371	2,792	15,730
1985	75,006	7,918	4,581	32,620	12,847	13,622	11,340	3,448	2,828	16,138
1986	77,117	8,173	4,794	33,280	13,057P	13,826	11,587	3,558	2,853	16,651
1987	79,832	8,424	4,930	34,120	13,269P	14,065P	11,744	NA	2,933	17,239P
1988	81,966	8,678	5,115	34,710	13,505P	14,274P	12,051	NA	3,000	17,726P

NA = Not available.

P = Preliminary.

(1) Agriculture, forestry, hunting, and fishing.

(2) Manufacturing, mining, and construction.

(3) Transportation, communication, public utilities, trade, finance, public administration, private household services, and miscellaneous services.

Note: For some countries, data have not been fully adjusted for comparability with U.S. definitions. Because of rounding, subtotals may not add to totals.

Table 7. Percent Distribution of Civilian Employment by Economic Sector, 1960-1988

Year	United States	Canada	Australia	Japan	France	Germany	Italy	Netherlands	Sweden	United Kingdom
Civilian Employment										
Each Year	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Agriculture (1)										
1960	8.5	13.3	NA	29.5	23.2	14.0	32.5	9.8	15.5	4.7
1965	6.3	10.1	9.7	22.7	17.8	10.9	26.2	7.6	11.5	3.8
1970	4.5	7.6	8.0	16.9	13.5	8.6	20.1	6.2	8.2	3.2
1971	4.4	7.5	7.7	15.5	12.8	8.1	20.1	6.0	7.8	3.2
1972	4.4	6.9	7.8	14.4	12.0	7.7	19.0	5.9	7.5	3.0
1973	4.2	6.5	7.3	13.1	11.2	7.3	18.2	5.8	7.1	3.0
1974	4.2	6.4	6.9	12.6	10.6	7.1	17.4	5.7	6.7	2.8
1975	4.1	6.1	6.9	12.4	10.3	7.0	16.7	5.7	6.5	2.8
1976	3.9	5.9	6.6	11.9	9.9	6.7	16.4	5.6	6.2	2.8
1977	3.7	5.7	6.6	11.6	9.5	6.4	15.8	5.3	6.1	2.8
1978	3.7	5.7	6.3	11.4	9.2	6.1	15.4	5.4	6.1	2.8
1979	3.6	5.7	6.5	10.8	9.0	5.8	14.9	5.3	5.8	2.7
1980	3.6	5.4	6.5	10.1	8.7	5.6	14.2	5.0	5.6	2.6
1981	3.5	5.4	6.5	9.7	8.4	5.5	13.3	4.9	5.6	2.7
1982	3.6	5.3	6.4	9.4	8.2	5.5	12.4	4.8	5.6	2.7
1983	3.5	5.5	6.6	8.9	7.9	5.6	12.3	5.0	5.5	2.7
1984	3.3	5.4	6.2	8.5	7.8	5.5	11.7	5.0	5.2	2.6
1985	3.1	5.1	6.1	8.4	7.6	5.4	11.0	4.9	4.9	2.6
1986	3.1	4.9	6.1	8.1	7.3	5.3	10.7	4.8	4.7	2.5
1987	3.0	4.8	5.8	8.0	7.0	5.2	10.4	NA	4.3	2.4
1988	2.9	4.5	5.9	7.6	6.8	5.0	9.7	NA	4.2	2.3

Continued on the following page.

Table 7. Percent Distribution of Civilian Employment by Economic Sector, 1960-1988--Continued

Year	United States	Canada	Australia	Japan	France	Germany	Italy	Netherlands	Sweden	United Kingdom
Industry (2)										
1960	33.4	32.0	NA	28.5	37.5	45.9	34.2	39.5	40.4	46.1
1965	34.2	32.5	35.8	32.5	38.3	47.3	37.4	40.0	42.3	44.9
1970	33.1	29.8	35.0	35.7	38.4	47.6	39.8	38.0	38.0	43.2
1971	31.7	29.4	34.7	35.9	38.5	47.6	40.0	37.4	37.1	42.0
1972	31.4	29.2	33.9	36.2	38.5	47.0	39.9	36.0	36.3	41.2
1973	32.0	29.5	33.7	37.0	38.7	46.8	39.5	35.6	36.3	40.9
1974	31.4	29.5	33.3	36.8	38.6	45.9	39.5	34.9	36.4	40.6
1975	29.5	28.1	31.9	35.6	37.8	44.4	39.4	34.0	35.8	39.0
1976	29.6	28.5	31.4	35.6	37.2	44.1	38.6	32.7	34.8	38.1
1977	29.7	27.7	30.8	35.1	36.7	43.8	38.7	32.0	33.7	38.0
1978	30.0	27.5	29.7	34.8	36.0	43.5	38.4	32.1	32.4	37.7
1979	30.2	27.7	29.3	34.7	35.4	43.3	38.0	31.6	31.9	37.3
1980	29.3	27.4	28.9	35.1	35.0	43.2	38.1	30.5	31.5	36.2
1981	28.9	27.1	28.6	35.0	34.3	42.5	37.7	29.0	30.6	34.3
1982	27.2	25.4	27.7	34.5	33.6	41.6	37.2	28.0	29.4	33.1
1983	26.8	24.4	26.2	34.4	32.8	40.8	36.2	26.7	29.1	32.0
1984	27.2	24.6	25.8	34.5	31.9	40.4	34.5	27.3	29.0	31.1
1985	26.9	24.3	25.6	34.6	31.0	40.1	33.6	27.2	29.1	30.5
1986	26.6	24.2	24.9	34.2	30.4P	40.0	33.1	25.9	29.1	29.4
1987	26.0	24.2	24.8	33.5	29.8P	39.6P	32.6	NA	28.8	28.6P
1988	25.8	24.6	24.7	33.9	29.4P	39.3P	32.5	NA	28.4	28.0P

Continued on the following page.

Table 7. Percent Distribution of Civilian Employment by Economic Sector, 1960-1988--Continued

Year	United States	Canada	Australia	Japan	France	Germany	Italy	Netherlands	Sweden	United Kingdom
Manufacturing										
1960	26.1	24.7	NA	21.7	28.2	34.3	24.0	29.1	31.9	36.0
1965	27.0	23.8	26.2	24.8	27.5	35.9	25.5	28.8	32.8	35.0
1970	26.4	22.3	24.9	27.4	27.5	37.4	27.7	27.0	27.7	34.7
1971	24.7	21.8	24.6	27.4	27.8	37.4	28.0	26.6	27.4	33.9
1972	24.3	21.8	24.0	27.3	27.9	36.8	27.9	25.7	27.2	32.9
1973	24.8	22.0	23.8	27.8	28.2	36.7	27.9	25.3	27.6	32.3
1974	24.2	21.7	23.4	27.6	28.3	36.4	28.1	25.2	28.4	32.4
1975	22.7	20.2	21.7	26.1	27.8	35.6	28.0	25.0	28.1	31.0
1976	22.8	20.3	21.7	25.8	27.3	35.2	27.7	23.8	27.0	30.2
1977	22.7	19.6	21.4	25.3	27.0	35.1	27.6	23.2	26.0	30.4
1978	22.7	19.6	20.3	24.8	26.5	34.8	27.3	22.6	25.0	30.1
1979	22.7	19.9	20.0	24.6	26.1	34.5	26.9	22.1	24.6	29.5
1980	22.1	19.7	19.9	25.0	25.8	34.3	26.9	21.5	24.3	28.3
1981	21.7	19.3	19.6	25.1	25.1	33.6	26.3	20.9	23.4	26.5
1982	20.4	18.2	18.9	24.7	24.7	33.1	25.8	20.6	22.5	25.5
1983	19.8	17.6	18.2	24.8	24.3	32.3	25.0	20.2	22.4	24.3
1984	20.0	17.9	17.7	25.2	23.8	31.9	23.9	19.6	22.5	23.5
1985	19.5	17.5	17.0	25.3	23.1	32.0	23.2	19.4	22.6	23.1
1986	19.1	17.2	16.5	24.9	22.6P	32.2	22.9	19.2	22.8	22.3
1987	18.6	17.0	16.3	24.3	22.0P	NA	22.5	NA	22.1	NA
1988	18.5	17.2	16.2	24.4	NA	NA	22.6	NA	21.9	NA

Continued on the following page.

Table 7. Percent Distribution of Civilian Employment by Economic Sector, 1960-1988--Continued

Year	United States	Canada	Australia	Japan	France	Germany	Italy	Netherlands	Sweden	United Kingdom
Services (3)										
1960	58.1	54.7	NA	41.9	39.3	40.1	33.4	50.7	44.1	49.2
1965	59.5	57.3	54.5	44.8	43.9	41.8	36.5	52.4	46.3	51.3
1970	62.3	62.6	57.0	47.4	48.0	43.7	40.1	55.8	53.9	53.6
1971	63.8	63.1	57.6	48.6	48.7	44.3	39.9	56.6	55.1	54.8
1972	64.2	63.9	58.3	49.4	49.5	45.3	41.2	58.1	56.2	55.8
1973	63.8	63.9	59.0	49.9	50.0	46.0	42.3	58.6	56.6	56.1
1974	64.5	64.2	59.8	50.6	50.7	47.1	43.1	59.4	56.9	56.5
1975	66.4	65.8	61.2	52.0	51.9	48.5	44.0	60.4	57.7	58.3
1976	66.5	65.6	62.0	52.5	52.9	49.2	45.0	61.7	59.0	59.1
1977	66.6	66.6	62.6	53.3	53.8	49.9	45.5	62.7	60.2	59.2
1978	66.3	66.7	64.0	53.8	54.8	50.4	46.2	62.5	61.5	59.5
1979	66.3	66.6	64.2	54.5	55.7	50.9	47.1	63.1	62.3	60.1
1980	67.1	67.2	64.6	54.8	56.3	51.3	47.7	64.5	62.9	61.2
1981	67.6	67.4	64.9	55.3	57.3	52.0	49.0	66.1	63.8	63.0
1982	69.2	69.3	65.9	56.0	58.2	52.8	50.5	67.2	64.9	64.2
1983	69.7	70.0	67.2	56.6	59.3	53.6	51.5	68.3	65.4	65.4
1984	69.4	70.0	68.0	56.9	60.4	54.1	53.8	67.7	65.9	66.3
1985	70.0	70.6	68.3	57.0	61.4	54.5	55.3	67.9	66.1	66.9
1986	70.4	70.9	69.0	57.6	62.3P	54.7	56.2	69.3	66.1	68.2
1987	71.0	71.0	69.4	58.5	63.2P	55.2P	57.0	NA	66.9	69.0P
1988	71.3	70.9	69.4	58.5	63.9P	55.7P	57.8	NA	67.3	69.7P

NA = Not available.

P = Preliminary.

(1) Agriculture, forestry, hunting, and fishing.

(2) Manufacturing, mining, and construction.

(3) Transportation, communication, public utilities, trade, finance, public administration, private household services, and miscellaneous services.

Note: For some countries data have not been fully adjusted for comparability with U.S. definitions. Because of rounding, subtotals may not add to totals.

Table 8. Civilian Unemployment Rates by Sex, 1960-1988

Year	United States	Canada	Australia	Japan (1)	France	Germany	Italy	Netherlands	Sweden	United Kingdom
1960	5.4	7.1	NA	NA	NA	NA	NA	NA	NA	2.1
1961	6.4	7.3	NA	NA	NA	NA	NA	NA	NA	1.9
1962	5.2	6.0	NA	NA	NA	NA	NA	NA	NA	2.7
1963	5.2	5.5	NA	NA	NA	NA	NA	NA	NA	3.4
1964	4.6	4.5	.9	NA	.9	.3	2.2	NA	1.4	2.4
1965	4.0	3.7	.9	NA	1.0	.2	3.0	NA	0.8	2.1
1966	3.2	3.3	1.1	NA	1.1	.3	3.2	NA	1.3	2.3
1967	3.1	3.9	1.3	NA	1.5	1.4	2.9	NA	2.0	3.5
1968	2.9	4.6	1.2	NA	1.9	1.0	2.9	NA	2.3	3.6
1969	2.8	4.3	1.2	NA	1.5	.6	2.7	NA	1.8	3.5
1970	4.4	5.6	1.1	1.2	1.5	.5	2.5	NA	1.4	3.5
1971	5.3	6.0	1.3	1.2	1.7	.5	2.5	NA	2.4	4.3
1972	5.0	5.8	2.0	1.5	1.8	.7	2.9	NA	2.5	4.8
1973	4.2	4.9	1.6	1.3	1.6	.6	2.7	NA	2.2	3.6
1974	4.9	4.8	1.9	1.4	1.8	1.5	2.3	2.9	1.7	3.2
1975	7.9	6.2	3.8	1.8	2.9	3.3	2.5	3.9	1.4	5.0
1976	7.1	6.3	3.9	2.2	3.1	3.1	2.7	4.1	1.3	6.4
1977	6.3	7.3	4.6	2.0	3.6	2.9	2.8	3.3	1.5	6.7
1978	5.3	7.5	5.4	2.2	3.9	2.7	2.8	3.6	2.1	6.3
1979	5.1	6.6	5.2	1.9	4.3	2.3	3.0	3.6	1.9	5.6
1980	6.9	6.9	5.1	1.7	4.4	2.3	2.9	4.2	1.7	7.4
1981	7.4	7.0	4.8	2.0	5.5	3.4	3.3	6.9	2.4	11.5
1982	9.9	11.0	6.4	2.1	6.2	5.2	3.8	8.6	3.0	11.8P
1983	9.9	12.0	9.7	2.5	6.6	6.4	4.1	11.1	3.4	12.3P
1984	7.4	11.2	8.7	2.5	8.0	6.4	4.2	11.0	3.0	12.0P
1985	7.0	10.3	7.9	2.4	8.7	6.4	4.3	8.8	2.8	11.5P
1986	6.9	9.3	7.7	2.4	8.8	5.7	(2)5.2	7.9	2.6	11.6P
1987	6.2	8.5	7.8	2.5	8.6	NA	5.5	7.4P	1.9	10.7P
1988	5.5	7.4	6.8	2.5	8.1	NA	5.5P	NA	1.6	8.6P

Continued on the following page.

Table 8. Civilian Unemployment Rates by Sex, 1960-1988--Continued

Year	United States	Canada	Australia	Japan (1)	France	Germany	Italy	Netherlands	Sweden	United Kingdom
1960	5.9	4.9	NA	NA	NA	1.5	4.1	NA	NA	2.3
1961	7.2	5.0	NA	NA	NA	.8	4.1	NA	2.4	2.0
1962	6.2	4.4	NA	NA	2.3	.8	3.8	NA	1.7	2.7
1963	6.5	4.4	NA	NA	2.5	.6	3.2	NA	2.2	3.3
1964	6.2	4.1	2.6	NA	1.9	.5	3.8	NA	1.8	2.5
1965	5.5	3.5	2.4	NA	2.4	.3	4.4	NA	1.7	2.1
1966	4.8	3.4	2.7	NA	2.6	.3	4.9	NA	2.0	2.1
1967	5.2	3.7	3.2	NA	3.4	1.1	4.7	NA	2.3	2.9
1968	4.4	4.4	3.2	NA	4.3	1.3	5.2	NA	2.1	2.5
1969	4.7	4.7	3.2	NA	3.8	.7	5.4	NA	1.9	2.3
1970	5.9	5.8	2.8	2.2	4.2	.6	5.2	NA	1.7	2.3
1971	6.9	6.6	3.1	3.0	4.6	.8	5.2	NA	2.8	3.3
1972	6.6	7.0	3.9	3.4	4.7	.8	5.9	NA	3.0	3.3
1973	6.0	6.7	3.6	2.6	4.6	.9	6.2	4.3	2.8	2.6
1974	6.7	6.4	4.1	3.2	4.7	1.8	5.2	5.6	2.4	3.0
1975	9.3	8.1	7.0	3.9	6.1	3.6	5.8	8.2	2.0	4.0
1976	8.4	8.4	6.4	4.0	6.9	4.5	6.5	8.6	2.0	5.3
1977	8.2	9.4	7.5	4.3	7.5	4.4	6.8	7.6	2.2	5.8
1978	7.2	9.6	7.9	4.3	7.6	4.4	6.8	8.6	2.4	6.2
1979	6.8	8.8	8.2	4.1	8.5	4.1	7.3	8.8	2.3	5.0
1980	7.4	8.4	7.9	3.3	9.5	3.8	7.4	9.7	2.3	6.3
1981	7.9	8.3	7.4	3.5	10.6	5.1	8.1	12.9	2.7	9.0
1982	9.4	10.9	8.5	3.5	11.2	6.9	8.6	13.4	3.4	10.4p
1983	9.2	11.6	10.4	3.7	11.2	8.3	9.4	14.8	3.5	10.9p
1984	7.6	11.3	9.5	3.3	12.6	8.9	9.4	14.3	3.2	11.3p
1985	7.4	10.7	8.8	3.1	13.0	9.1	9.4	12.7	2.9	10.7p
1986	7.1	9.8	8.7	3.3	13.1	8.5	11.8	13.3	2.7	10.7p
1987	6.2	9.3	8.6	3.7	13.6	NA	12.2	14.6p	2.1	9.7p
1988	5.6	8.3	7.9	3.2	13.3	NA	12.3p	NA	1.6	7.9p

NA = Not available.  
P = Preliminary.

(1) For 1977-80 and 1984-88, rates are based on the special surveys taken in March 1977-80 and February 1984-88. Rates for 1970-76 are based on adjustment factors from the March 1977 survey and for 1981-83, on March 1980 and February 1984 adjustment factors.  
(2) Break in series.

Table 9. Civilian Unemployment Rates by Age, 1984-1988

Age Group	United States	Canada	Australia	Japan	France (1)	Germany (1)	Italy	Sweden	United Kingdom (1)
1984									
All working ages	7.5	11.2	9.0	2.8	9.6	6.7	5.9	3.1	11.8
Under 25 years	14.0	17.8	16.8	5.0	26.2	10.5	21.9	6.1	19.7
Teenagers (2)	18.9	20.0	22.3	7.0	37.8	11.6	29.8	5.0	22.3
20-24 years	11.5	16.6	12.9	4.4	23.6	9.8	17.9	6.7	17.9
25 years and over	5.8	9.3	6.2	2.4	6.7	5.8	2.8	2.6	9.5
1985									
All working ages	7.2	10.5	8.3	2.6	10.3	6.9	6.0	2.8	11.2
Under 25 years	13.6	16.4	15.2	4.8	27.6	10.0	22.1	5.8	17.7
Teenagers (2)	18.6	18.7	20.3	7.5	36.6	10.6	30.4	4.6	19.8
20-24 years	11.1	15.1	11.5	4.2	25.6	9.6	18.3	6.4	16.4
25 years and over	5.6	8.7	5.9	2.3	7.5	6.2	2.9	2.3	9.3
1986									
All working ages	7.0	9.5	8.1	2.8	10.3	6.7	(3)7.5	2.6	11.2
Under 25 years	13.3	15.1	15.0	5.2	25.3	8.0	(3)25.5	5.7	18.0
Teenagers (2)	18.3	16.8	20.1	7.5	31.3	7.0	(3)33.0	4.4	20.1
20-24 years	10.7	14.1	11.2	4.6	24.0	8.5	(3)22.1	6.3	16.7
25 years and over	5.4	8.0	5.7	2.5	7.9	6.3	(3)3.9	2.1	9.2
1987									
All working ages	6.2	8.8	8.1	2.9	10.8	6.9	NA	(3)1.9	10.7
Under 25 years	12.2	13.7	14.9	5.3	24.7	7.6	NA	(3)4.1	15.8
Teenagers (2)	16.9	15.1	20.0	8.1	28.4	6.9	NA	(3)3.9	18.0
20-24 years	9.7	12.8	11.1	4.5	24.0	8.0	NA	(3)4.5	14.3
25 years and over	4.8	7.5	5.9	2.5	8.6	6.7	NA	(3)1.4	9.2
1988									
All working ages	5.5	7.8	7.2	2.5	10.3	NA	NA	1.6	8.8P
Under 25 years	11.0	12.0	13.4	4.9	23.6	NA	NA	3.3	12.8P
Teenagers (2)	15.3	13.2	17.4	7.5	24.2	NA	NA	3.3	13.8P
20-24 years	8.7	11.2	10.4	4.2	23.5	NA	NA	3.6	12.1P
25 years and over	4.2	6.7	5.3	2.2	8.4	NA	NA	1.3	7.6P

NA = Not available.

P = Preliminary.

(1) French data are for March; German data are for June; and U.K. data are for April-June.

(2) 16-to 19-year-olds in the United States, France, Sweden, and the United Kingdom; 15-to 19-year-olds in Canada, Australia, and Japan; and 14-to 19-year olds in Germany and Italy.

(3) Break in series.

Table 10. BLS, OECD, and EUROSTAT Comparative Unemployment Rates, Selected Countries, 1984-1988

	BLS Series		OECD	EUROSTAT
	Civilian Basis	Total Basis	SURS Total Basis	Civilian Basis (1)
<b>1984</b>				
France	10.0	9.7	9.7	9.9
Germany	7.4	7.2	7.1	7.1
Italy	5.9	5.8	9.3	9.5
Netherlands	12.3	12.1	11.8	12.5
United Kingdom	11.7	11.6	11.7	11.4
<b>1985</b>				
France	10.4	10.2	10.2	10.3
Germany	7.5	7.3	7.2	7.3
Italy	6.0	5.9	9.6	9.4
Netherlands	10.2	10.0	10.6	10.4
United Kingdom	11.2	11.1	11.2	11.5
<b>1986</b>				
France	10.6	10.4	10.4	10.4
Germany	6.9	6.7	6.4	6.5
Italy	(2)7.5	(2)7.4	10.5	10.6
Netherlands	10.0	9.9	9.9	10.3
United Kingdom	11.2	11.2	11.2	11.5
<b>1987</b>				
France	10.8	10.5	10.5	10.5
Germany	(2)6.4	(2)6.3	6.2	6.4
Italy	7.9	7.7	11.2	10.1
Netherlands	10.0	9.9	9.6	10.2
United Kingdom	10.2	10.2	10.2	10.6
<b>1988</b>				
France	10.4	10.1	10.1	10.2
Germany	6.4	6.3	6.2	6.4
Italy	7.9	7.8	11.3	10.6
Netherlands	10.1	9.9	9.5	10.3
United Kingdom	8.3	8.2	8.3	8.7

NA = Not available.

(1) Excludes conscripts but includes career military.

(2) Break in series.

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Statement of

Dr. Janet L. Norwood  
Commissioner  
Bureau of Labor Statistics

before the

Joint Economic Committee  
UNITED STATES CONGRESS

October 6, 1989

Mr. Chairman and Members of the Committee:

It is a pleasure to be back this month to provide the Committee with a few comments to supplement this morning's Employment Situation release.

Employment showed little growth in September, and the unemployment rate remained within the narrow range in which it has been since the beginning of spring. The overall jobless rate (including the resident armed forces), at 5.2 percent, and the civilian worker rate, at 5.3, were both about the same as the 5.1 and 5.2 percent figures of the previous month.

A slowdown in job growth can be seen in both of our surveys. The number of jobs reported in the business survey rose by 210,000 in September (after seasonal adjustment), but about 75,000 of that increase represented a return to company payrolls of workers who had been on strike in August. The household survey's estimate of total civilian

-2-

employment was essentially unchanged in September and, in fact, has not shown any real growth since June.

The most disturbing feature of September's business survey data was the large decline in manufacturing employment — 105,000. One-third of this decline took place in automobile factories, where inventory controls have led to wide fluctuations in employment levels over recent months. Real growth in overall factory employment ended last March; since then, we have lost 135,000 factory jobs. Several individual manufacturing industries have had small job losses for several months, and these were joined by others in September, as 16 of the 20 major manufacturing industries experienced declines after seasonal adjustment. Further evidence of weakness comes from the manufacturing diffusion index, which shows that twice as many of the 141 industries experienced job losses as had job gains. In spite of these developments, it should be noted that the factory workweek remains near its all-time high.

September employment in the construction industry was unchanged from August. Since the beginning of the year, the number of construction jobs has increased by only about 50,000. Employment dipped slightly in the mining industry, but remained about 15,000 above the January level.

The real strength in the September numbers was in the services industry, where about 105,000 jobs were added from August to September. Employment in business and health services increased by 45,000 each. This was a very strong job gain for business services, the biggest in a year and a half. The return to work of strikers, mostly in the telephone industry, accounted for nearly all of the 90,000 increase in transportation and public utilities. Most of the 95,000 increase in government employment represented an expansion in local education at the beginning of the school year.

Little movement has occurred in most of the household survey measures in recent months, and the trend continued in September. The civilian jobless rate has been at 5.2 or 5.3 percent in every month since April, and the quarterly rates have actually been in that narrow range for a full year now. The proportion of the population that is at work, although somewhat lower than in recent months, is still near its record high. In September, the unemployment rate for adult women fell a bit to 4.5 percent, but the jobless rate for adult men rose four-tenths of a percentage point to 4.8

percent. And the volatile rate for black teenagers jumped to 37.3 percent.

Data on discouraged workers, covering the third quarter of the year, were published this morning. There were 815,000 discouraged workers in the third quarter of 1989:

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the series has been trending downward slowly, with the decline totaling 115,000 over the year.

In summary, the labor market data released today show widespread employment weakness in manufacturing, but continued strength in the services industry. The unemployment rate remains close to 5 percent, the lowest range it has been at in 15 years.

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

## Unemployment rates of all civilian workers by alternative seasonal adjustment methods

Month and year	X-11 ARIMA method							X-11 method		
	Unad-justed rate	Official procedure	Concurrent (as first computed)	Concurrent (revised)	Stable	Total	Residual	12-month extrapolation (before 1980)	official method (before 1980)	Range (cols. 2-9)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1988										
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	5.4	5.3	5.3	.1
November.....	5.2	5.4	5.4	5.3	5.4	5.3	5.4	5.4	5.4	.1
December.....	5.0	5.3	5.3	5.3	5.3	5.3	5.4	5.3	5.4	.1
1989										
January.....	6.0	5.4	5.4	5.4	5.5	5.4	5.3	5.4	5.5	.2
February.....	5.6	5.1	5.2	5.2	5.2	5.2	5.0	5.1	5.2	.2
March.....	5.2	5.0	5.0	5.0	5.0	5.0	4.8	5.0	5.0	.2
April.....	5.1	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	-
May.....	5.0	5.2	5.2	5.2	5.2	5.1	5.3	5.2	5.1	.2
June.....	5.5	5.3	5.3	5.3	5.2	5.4	5.4	5.3	5.3	.2
July.....	5.3	5.2	5.2	5.3	5.2	5.3	5.3	5.3	5.3	.1
August.....	5.1	5.2	5.2	5.2	5.1	5.2	5.3	5.2	5.2	.2
September....	5.1	5.3	5.3	5.3	5.3	5.3	5.2	5.3	5.3	.1

SOURCE: U.S. DEPARTMENT OF LABOR  
Bureau of Labor Statistics  
October 1989

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#### THE EMPLOYMENT SITUATION: SEPTEMBER 1989

Payroll employment showed little growth and unemployment was about unchanged in September, the Bureau of Labor Statistics of the U.S. Department of Labor reported today. The overall jobless rate was 5.2 percent and the civilian worker rate was 5.3 percent; they had been 5.1 and 5.2 percent, respectively, in August.

Nonagricultural payroll employment, as measured by the survey of business establishments, rose by 210,000 in September to 109.1 million, but about 75,000 of the increase represented a return to work of persons who had been on strike. Total civilian employment, as measured by the survey of households, was about unchanged over the month.

#### Unemployment (Household Survey Data)

The number of persons unemployed, 6.6 million, and the civilian worker unemployment rate, 5.3 percent, were essentially unchanged in September. Both measures have shown little movement since the spring. Jobless rates were about unchanged over the month for teenagers (15.1 percent), whites (4.5 percent), Hispanics (8.3 percent), and blacks (11.6 percent), although the rate for black teenagers rose to 37.3 percent. While the unemployment rate for adult men increased 0.4 percentage point to 4.8 percent, the rate for adult women edged down to 4.5 percent. (See tables A-2 and A-3.)

#### Civilian Employment and the Labor Force (Household Survey Data)

Total civilian employment was virtually unchanged in September at a seasonally adjusted level of 117.5 million. At 62.9 percent, the employment-population ratio (the proportion of the working-age population that was employed) remained close to the level that has held throughout 1989. (See table A-2.)

The civilian labor force (124.0 million) and the labor force participation rate (66.4 percent) were also about the same as in the previous month, after seasonal adjustment. The labor force has increased by 2.0 million over the past 12 months. (See table A-2.)

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

Category	Quarterly averages		Monthly data			Aug.- Sept. change
	1989	1989	July	Aug.	Sept.	
	II	III				
HOUSEHOLD DATA	Thousands of persons					

Labor force 1/.....	125,464	125,690	125,622	125,706	125,742	36
Total employment 1/..	118,964	119,189	119,125	119,285	119,158	-127
Civilian labor force...	123,790	124,005	123,956	124,018	124,040	22
Civilian employment...	117,289	117,504	117,459	117,597	117,456	-141
Unemployment.....	6,501	6,501	6,497	6,421	6,584	163
Not in labor force....	62,388	62,597	62,527	62,580	62,686	106
Discouraged workers..	869	815	N.A.	N.A.	N.A.	N.A.

## Percent of labor force

Unemployment rates:						
All workers 1/.....	5.2	5.2	5.2	5.1	5.2	0.1
All civilian workers:	5.3	5.2	5.2	5.2	5.3	.1
Adult men.....	4.4	4.5	4.3	4.4	4.8	.4
Adult women.....	4.8	4.7	5.0	4.7	4.5	-.2
Teenagers.....	15.1	14.8	14.7	14.5	15.1	.6
White.....	4.5	4.5	4.6	4.5	4.5	.0
Black.....	11.2	11.2	10.9	11.1	11.6	.5
Hispanic origin....	8.1	8.8	9.0	9.0	8.3	-.7

## ESTABLISHMENT DATA

## Thousands of jobs

Nonfarm employment....	108,339	P108,895	108,767	P108,855	P109,064	P209
Goods-producing.....	25,664	P25,651	25,669	P25,696	P25,588	P-108
Service-producing....	82,676	P83,244	83,098	P83,159	P83,476	P317

## Hours of work

Average weekly hours:						
Total private.....	34.7	P34.7	34.8	P34.6	P34.6	P0
Manufacturing.....	41.1	P41.0	41.0	P40.9	P41.0	P0.1
Overtime.....	3.8	P3.8	3.9	P3.7	P3.8	P.1

1/ Includes the resident Armed Forces.

P=preliminary.

N.A.=not available.

## Discouraged Workers (Household Survey Data)

At a seasonally adjusted level of 815,000 in the July-September period, the number of discouraged workers—persons who want to work but have not looked for jobs because they believe they cannot find any—was about unchanged from the second quarter. Over the past year, the number of discouraged workers has declined by about 115,000. (See table A-14.)

## Industry Payroll Employment (Establishment Survey Data)

Total nonagricultural payroll employment increased by 210,000 in September to 109.1 million, seasonally adjusted. This increase would have been much smaller if not for the return to payrolls of about 75,000 workers involved in strikes in August. The diffusion index of 349 industries fell below 50 percent, indicating that more industries lost than gained jobs in September. (See tables B-1 and B-6.)

In the goods-producing sector, factory employment fell by 105,000. Whereas the bulk of the decrease occurred in the durable goods sector, it

was very widespread, with 16 of the 20 individual manufacturing industries showing employment reductions. The largest occurred in the auto industry—35,000. Employment in the electrical equipment industry fell by 10,000 over the month and has declined by 55,000 since last November. In primary metals, where employment had changed little since late last year, the number of workers fell by 10,000 in September. Fabricated metal products has had small job losses for 7 consecutive months. Employment in apparel and other textile products fell by 10,000 over the month, returning to last October's employment level. The mining industry also showed a small job loss, while construction employment was unchanged for the second consecutive month.

In the service-producing sector, employment in transportation and public utilities increased by 90,000 over the month, primarily reflecting the return to work of telephone workers from strikes. Services industry employment rose by 105,000, as both business and health services showed strong job gains of 45,000. Government employment was also a strong gainer, with an increase of 95,000 over the month; most of this occurred in local education. Finance, insurance, and real estate employment grew by 10,000 in September. Wholesale trade showed a small job gain, while employment in retail trade was little changed; job growth in these two industries has been quite slow for most of this year.

Despite the slower growth in recent months, total payroll employment in September was nearly 2.9 million above its year-ago level. Virtually all of this gain—2.6 million—took place in the service-producing sector.

#### Weekly Hours (Establishment Survey Data)

The average workweek for production or nonsupervisory workers on private nonagricultural payrolls was unchanged in September at 34.6 hours, seasonally adjusted. The manufacturing workweek and factory overtime both edged up 0.1 hour to 41.0 and 3.8 hours, respectively, offsetting small decreases in the previous month. (See table B-2.)

The index of aggregate weekly hours of private production or nonsupervisory workers rose 0.2 percent in September to 128.6 (1977=100), after seasonal adjustment. This follows a decrease of 0.6 percent in the previous month. The manufacturing index fell 0.7 percent to 95.6. (See table B-5.)

#### Hourly and Weekly Earnings (Establishment Survey Data)

Both average hourly and average weekly earnings of private production or nonsupervisory workers increased 0.5 percent in September, after seasonal adjustment. Prior to seasonal adjustment, average hourly earnings rose 16 cents to \$9.76 and average weekly earnings increased \$3.63 to \$338.67, as many youths earning comparatively low wages left summer jobs and returned to school. Over the year, average hourly earnings increased by 3.8 percent, while average weekly earnings rose 3.5 percent. (See tables B-3 and B-4.)

The Employment Situation for October 1989 will be released on Friday, November 3, at 8:30 A.M. (EST).

HOUSEHOLD DATA

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 <sup>1/</sup>				
	Sept. 1988	Aug. 1989	Sept. 1989	Sept. 1988	May 1989	June 1989	July 1989	Aug. 1989	Sept. 1989
TOTAL									
Noninstitutional population <sup>2/</sup> .....	186,666	188,286	188,428	186,666	187,854	187,995	188,149	188,286	188,428
Labor force <sup>2/</sup> .....	123,546	127,132	125,530	123,688	125,283	125,768	125,622	125,706	125,742
Participation rate <sup>3/</sup> .....	66.2	67.5	66.6	66.3	66.7	66.9	66.8	66.8	66.7
Total employed <sup>2/</sup> .....	117,178	120,780	119,200	117,074	118,888	119,207	119,125	119,285	119,156
Employment-population ratio <sup>4/</sup> .....	62.8	64.1	63.3	62.7	63.3	63.4	63.3	63.4	63.2
Resident Armed Forces.....	1,704	1,688	1,702	1,704	1,673	1,666	1,666	1,688	1,702
Civilian employed.....	115,474	119,092	117,498	115,370	117,215	117,541	117,459	117,597	117,456
Agriculture.....	3,250	3,633	3,329	3,176	3,112	3,096	3,219	3,307	3,257
Nonagricultural industries.....	112,225	115,460	114,169	112,194	114,102	114,445	114,240	114,290	114,199
Unemployed.....	6,368	6,352	6,330	6,614	6,395	6,561	6,497	6,421	6,584
Unemployment rate <sup>5/</sup> .....	5.2	5.0	5.0	5.3	5.1	5.2	5.2	5.1	5.2
Not in labor force.....	63,119	61,155	62,899	62,978	62,571	62,228	62,527	62,580	62,686
Men, 16 years and over									
Noninstitutional population <sup>2/</sup> .....	89,577	90,384	90,456	89,577	90,167	90,237	90,315	90,384	90,456
Labor force <sup>2/</sup> .....	68,465	70,587	69,123	68,604	69,114	69,507	69,245	69,337	69,272
Participation rate <sup>3/</sup> .....	76.4	78.1	76.4	76.6	76.7	77.0	76.7	76.7	76.6
Total employed <sup>2/</sup> .....	65,282	67,431	65,875	65,015	65,713	66,110	65,961	65,934	65,601
Employment-population ratio <sup>4/</sup> .....	72.9	74.6	72.8	72.6	72.9	73.3	73.0	72.9	72.5
Resident Armed Forces.....	1,540	1,519	1,531	1,540	1,511	1,501	1,499	1,519	1,531
Civilian employed.....	63,742	65,912	64,344	63,475	64,202	64,609	64,462	64,415	64,070
Unemployed.....	3,183	3,157	3,248	3,589	3,401	3,397	3,284	3,403	3,672
Unemployment rate <sup>5/</sup> .....	4.6	4.5	4.7	5.2	4.9	4.9	4.7	4.9	5.3
Women, 16 years and over									
Noninstitutional population <sup>2/</sup> .....	97,089	97,902	97,972	97,089	97,687	97,758	97,834	97,902	97,972
Labor force <sup>2/</sup> .....	55,082	56,544	56,407	55,084	56,169	56,261	56,377	56,370	56,470
Participation rate <sup>3/</sup> .....	56.7	57.8	57.6	56.7	57.5	57.6	57.6	57.6	57.6
Total employed <sup>2/</sup> .....	51,896	53,349	53,325	52,059	53,175	53,097	53,164	53,352	53,557
Employment-population ratio <sup>4/</sup> .....	53.5	54.5	54.4	53.6	54.4	54.3	54.3	54.5	54.7
Resident Armed Forces.....	164	169	171	164	162	165	167	169	171
Civilian employed.....	51,732	53,180	53,154	51,895	53,013	52,932	52,997	53,183	53,386
Unemployed.....	3,186	3,195	3,081	3,025	2,994	3,164	3,213	3,018	2,912
Unemployment rate <sup>5/</sup> .....	5.8	5.7	5.5	5.5	5.3	5.6	5.7	5.4	5.2

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

2/ 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).

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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 <sup>1/</sup>				
	Sept. 1988	Aug. 1989	Sept. 1989	Sept. 1988	May 1989	June 1989	July 1989	Aug. 1989	Sept. 1989
TOTAL									
Civilian noninstitutional population.....	184,962	186,598	186,726	184,962	186,161	186,329	186,483	186,598	186,726
Civilian labor force.....	121,842	125,444	123,828	121,984	123,610	124,102	123,956	124,018	124,040
Participation rate.....	65.9	67.2	66.3	66.0	66.4	66.6	66.5	66.5	66.4
Employed.....	115,474	119,092	117,498	115,370	117,215	117,541	117,459	117,597	117,456
Employment-population ratio <sup>2/</sup> .....	62.4	63.8	62.9	62.4	63.0	63.1	63.0	63.0	62.9
Unemployed.....	6,368	6,352	6,330	6,614	6,395	6,561	6,497	6,421	6,584
Unemployment rate.....	5.2	5.1	5.1	5.4	5.2	5.3	5.2	5.2	5.3
Men, 20 years and over									
Civilian noninstitutional population.....	80,751	81,754	81,790	80,751	81,524	81,592	81,679	81,754	81,790
Civilian labor force.....	62,942	64,167	63,771	62,884	63,503	63,831	63,656	63,643	63,721
Participation rate.....	77.9	78.5	78.0	77.9	77.9	78.2	77.9	77.8	77.9
Employed.....	60,402	61,603	61,113	59,979	60,798	61,093	60,921	60,853	60,583
Employment-population ratio <sup>2/</sup> .....	74.8	75.4	74.7	74.3	74.6	74.9	74.6	74.4	74.2
Agriculture.....	2,325	2,529	2,419	2,249	2,284	2,256	2,342	2,364	2,339
Nonagricultural industries.....	58,077	59,074	58,694	57,730	58,514	58,837	58,579	58,489	58,344
Unemployed.....	2,540	2,564	2,658	2,905	2,705	2,737	2,734	2,790	3,038
Unemployment rate.....	4.0	4.0	4.2	4.6	4.3	4.3	4.3	4.4	4.8
Women, 20 years and over									
Civilian noninstitutional population.....	89,735	90,684	90,771	89,735	90,432	90,526	90,607	90,684	90,771
Civilian labor force.....	51,172	52,000	52,558	50,991	52,171	52,231	52,463	52,373	52,443
Participation rate.....	57.0	57.3	57.9	56.8	57.7	57.7	57.9	57.8	57.8
Employed.....	48,556	49,352	50,040	48,535	49,690	49,661	49,850	49,905	50,089
Employment-population ratio <sup>2/</sup> .....	54.1	54.4	55.1	54.1	54.9	54.9	55.0	55.0	55.2
Agriculture.....	642	682	701	638	628	610	627	644	701
Nonagricultural industries.....	47,914	48,670	49,339	47,897	49,062	49,051	49,223	49,261	49,388
Unemployed.....	2,616	2,648	2,518	2,456	2,480	2,570	2,613	2,468	2,353
Unemployment rate.....	5.1	5.1	4.8	4.8	4.8	4.9	5.0	4.7	4.5
Both sexes, 16 to 19 years									
Civilian noninstitutional population.....	14,477	14,160	14,166	14,477	14,224	14,211	14,196	14,160	14,166
Civilian labor force.....	7,728	9,276	7,498	8,109	7,936	8,040	7,837	8,003	7,876
Participation rate.....	53.4	65.5	52.9	56.0	55.8	56.6	55.2	56.5	55.6
Employed.....	6,516	8,137	6,345	6,856	6,726	6,786	6,687	6,840	6,583
Employment-population ratio <sup>2/</sup> .....	45.0	57.5	44.8	47.4	47.3	47.8	47.1	48.3	47.2
Agriculture.....	282	422	209	289	200	230	249	300	216
Nonagricultural industries.....	6,234	7,715	6,136	6,567	6,526	6,556	6,438	6,540	6,467
Unemployed.....	1,212	1,140	1,153	1,253	1,210	1,254	1,150	1,163	1,193
Unemployment rate.....	15.7	12.3	15.4	15.5	15.2	15.6	14.7	14.5	15.1

1/ The population figures are not adjusted for seasonal variations; therefore,

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

Identical numbers appear in the unadjusted and seasonally adjusted columns.

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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 <sup>1/</sup>				
	Sept. 1988	Aug. 1989	Sept. 1989	Sept. 1988	May 1989	June 1989	July 1989	Aug. 1989	Sept. 1989
WHITE									
Civilian noninstitutional population.....	158,422	159,470	159,549	158,422	159,200	159,297	159,400	159,470	159,549
Civilian labor force.....	104,959	107,597	106,195	105,036	106,164	106,455	106,424	106,446	106,325
Participation rate.....	66.3	67.5	66.6	66.3	66.7	66.8	66.8	66.8	66.6
Employed.....	100,177	102,938	101,600	100,058	101,465	101,693	101,581	101,670	101,535
Employment-population ratio <sup>2/</sup> .....	63.2	64.6	63.7	63.2	63.7	63.8	63.7	63.8	63.6
Unemployed.....	4,782	4,659	4,595	4,978	4,699	4,762	4,843	4,777	4,791
Unemployment rate.....	4.6	4.3	4.3	4.7	4.4	4.5	4.6	4.5	4.5
Men, 20 years and over									
Civilian labor force.....	54,872	55,766	55,433	54,839	55,249	55,557	55,437	55,377	55,413
Participation rate.....	78.4	78.8	78.3	78.3	78.3	78.7	78.4	78.3	78.3
Employed.....	52,910	53,868	53,416	52,579	53,248	53,500	53,343	53,282	53,097
Employment-population ratio <sup>2/</sup> .....	75.6	76.2	75.5	75.1	75.5	75.8	75.5	75.3	75.0
Unemployed.....	1,962	1,898	2,017	2,260	2,001	2,057	2,094	2,095	2,316
Unemployment rate.....	3.6	3.4	3.6	4.1	3.6	3.7	3.8	3.8	4.2
Women, 20 years and over									
Civilian labor force.....	43,397	43,886	44,358	43,191	44,084	44,050	44,302	44,169	44,192
Participation rate.....	56.7	56.8	57.4	56.4	57.2	57.1	57.4	57.2	57.2
Employed.....	41,495	41,948	42,570	41,413	42,282	42,236	42,411	42,372	42,527
Employment-population ratio <sup>2/</sup> .....	54.2	54.3	55.1	54.1	54.9	54.8	55.0	54.9	55.0
Unemployed.....	1,902	1,938	1,788	1,778	1,803	1,814	1,891	1,798	1,665
Unemployment rate.....	4.4	4.4	4.0	4.1	4.1	4.1	4.3	4.1	3.8
Both sexes, 16 to 19 years									
Civilian labor force.....	6,690	7,945	6,405	7,006	6,831	6,848	6,685	6,900	6,720
Participation rate.....	56.7	69.1	55.9	59.4	59.0	59.2	57.9	60.0	58.6
Employed.....	5,772	7,122	5,614	6,066	5,936	5,957	5,827	6,016	5,910
Employment-population ratio <sup>2/</sup> .....	48.9	61.9	49.0	51.4	51.3	51.5	50.5	52.3	51.6
Unemployed.....	918	823	790	940	895	891	858	884	810
Unemployment rate.....	13.7	10.4	12.3	13.4	13.1	13.0	12.8	12.8	12.1
Men.....	14.2	10.3	12.9	14.5	14.8	13.4	12.4	12.9	13.3
Women.....	13.2	10.4	11.7	12.3	11.2	12.6	13.4	12.7	10.8
BLACK									
Civilian noninstitutional population.....	20,762	21,060	21,085	20,762	20,936	21,012	21,038	21,060	21,085
Civilian labor force.....	13,178	13,694	13,481	13,201	13,444	13,600	13,555	13,448	13,515
Participation rate.....	63.5	65.0	63.9	63.6	64.1	64.7	64.4	63.9	64.1
Employed.....	11,764	12,197	11,956	11,758	11,968	11,982	12,082	11,958	11,940
Employment-population ratio <sup>2/</sup> .....	56.7	57.9	56.7	56.6	57.0	57.0	57.4	56.8	56.6
Unemployed.....	1,414	1,497	1,524	1,443	1,476	1,618	1,473	1,490	1,574
Unemployment rate.....	10.7	10.9	11.3	10.9	11.0	11.9	10.9	11.1	11.6
Men, 20 years and over									
Civilian labor force.....	6,126	6,263	6,246	6,117	6,207	6,200	6,205	6,189	6,247
Participation rate.....	74.3	74.7	74.6	74.2	74.3	74.1	74.1	73.8	74.7

Employed.....	5,620	5,686	5,682	5,563	5,622	5,619	5,629	5,580	5,620
Employment-population ratio2/.....	68.1	67.8	67.9	67.5	67.3	67.2	67.2	66.6	67.2
Unemployed.....	506	578	564	554	586	581	576	609	627
Unemployment rate.....	8.3	9.2	9.0	9.1	9.4	9.4	9.3	9.8	10.0
Women, 20 years and over									
Civilian labor force.....	6,192	6,338	6,369	6,174	6,340	6,405	6,394	6,359	6,356
Participation rate.....	59.9	60.3	60.6	59.8	60.6	61.2	61.0	60.5	60.4
Employed.....	5,558	5,710	5,731	5,575	5,740	5,732	5,759	5,762	5,743
Employment-population ratio2/.....	53.8	54.4	54.5	54.0	54.9	54.7	54.9	54.9	54.6
Unemployed.....	633	628	639	599	600	674	635	597	607
Unemployment rate.....	10.2	9.9	10.0	9.7	9.5	10.5	9.9	9.4	9.6
Both sexes, 16 to 19 years									
Civilian labor force.....	861	1,092	865	910	897	994	956	900	912
Participation rate.....	39.5	50.3	39.4	41.7	41.3	45.7	44.0	41.4	41.5
Employed.....	585	801	544	620	606	631	694	616	572
Employment-population ratio2/.....	26.8	36.9	24.7	28.4	27.9	29.0	31.9	28.3	26.0
Unemployed.....	275	291	322	290	291	363	262	284	340
Unemployment rate.....	32.0	26.6	37.2	31.9	32.4	36.5	27.4	31.6	37.3
Men.....	32.5	24.6	34.4	31.9	36.9	33.5	22.1	30.0	34.1
Women.....	31.5	28.9	39.6	31.9	28.4	40.2	33.1	33.4	40.3
HISPANIC ORIGIN									
Civilian noninstitutional population.....	13,419	13,853	13,894	13,419	13,731	13,772	13,813	13,853	13,894
Civilian labor force.....	9,086	9,494	9,332	9,061	9,428	9,272	9,433	9,364	9,326
Participation rate.....	67.7	68.5	67.2	67.5	68.7	67.3	68.3	67.6	67.1
Employed.....	8,444	8,666	8,610	8,373	8,686	8,524	8,587	8,521	8,550
Employment-population ratio2/.....	62.9	62.6	62.0	62.4	63.3	61.9	62.2	61.5	61.5
Unemployed.....	642	828	722	688	742	748	846	843	776
Unemployment rate.....	7.1	8.7	7.7	7.5	7.9	8.1	9.0	9.0	8.3

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

2/ Civilian employment as a percent of the 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.

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Table A-4. Selected employment indicators

(In thousands)

Category	Not seasonally adjusted				Seasonally adjusted				
	Sept. 1988	Aug. 1989	Sept. 1989	Sept. 1988	May 1989	June 1989	July 1989	Aug. 1989	Sept. 1989
CHARACTERISTIC									
Civilian employed, 16 years and over.....	115,474	119,092	117,498	115,370	117,215	117,541	117,459	117,597	117,456
Married men, spouse present.....	40,815	40,880	40,856	40,513	40,902	41,102	41,039	40,636	40,572
Married women, spouse present.....	29,031	28,665	29,608	28,836	29,739	29,481	29,552	29,220	29,461
Women who maintain families.....	6,188	6,298	6,379	6,253	6,331	6,403	6,456	6,342	6,437
MAJOR INDUSTRY AND CLASS OF WORKER									
Agriculture:									
Wage and salary workers.....	1,626	1,958	1,686	1,612	1,610	1,550	1,695	1,803	1,671
Self-employed workers.....	1,500	1,494	1,523	1,421	1,358	1,412	1,434	1,420	1,441
Unpaid family workers.....	123	181	120	137	127	126	126	137	135
Nonagricultural industries:									
Wage and salary workers.....	103,400	106,390	105,287	103,501	105,245	105,519	105,321	105,259	105,355
Government.....	17,035	16,887	17,513	17,145	17,230	17,261	17,519	17,591	17,619
Private industries.....	86,365	89,503	87,775	86,356	88,015	88,259	87,803	87,668	87,737
Private households.....	1,077	1,217	1,011	1,119	1,128	1,140	1,093	1,146	1,054
Other industries.....	85,288	88,286	86,764	85,237	86,887	87,118	86,710	86,522	86,682
Self-employed workers.....	8,592	8,797	8,586	8,570	8,516	8,570	8,606	8,625	8,569
Unpaid family workers.....	232	273	296	230	322	241	239	264	296
PERSONS AT WORK PART TIME <sup>1/</sup>									
All industries:									
Part time for economic reasons.....	4,704	5,125	4,487	5,097	4,837	4,957	4,750	4,785	4,682
Slack work.....	2,041	2,250	2,097	2,266	2,296	2,318	2,311	2,282	2,330
Could only find part-time work.....	2,191	2,415	1,991	2,339	2,343	2,289	2,138	2,107	2,171
Voluntary part time.....	15,375	12,460	15,666	15,270	15,316	15,416	15,652	15,614	15,542
Nonagricultural industries:									
Part time for economic reasons.....	4,458	4,849	4,229	4,862	4,609	4,801	4,505	4,553	4,612
Slack work.....	1,885	2,084	1,935	2,102	2,102	2,190	2,185	2,129	2,174
Could only find part-time work.....	2,113	2,309	1,910	2,317	2,301	2,236	2,057	2,024	2,090
Voluntary part time.....	14,906	11,985	15,215	14,819	14,976	14,977	15,219	15,094	15,109

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

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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			
	1988		1989		1989			
	III	IV	I	II	III	July	Aug.	Sept.
U-1 Persons unemployed 15 weeks or longer as a percent of the civilian labor force.....	1.3	1.2	1.1	1.1	1.1	1.2	1.1	1.1
U-2 Job losers as a percent of the civilian labor force.....	2.5	2.5	2.4	2.3	2.4	2.4	2.4	2.4
U-3 Unemployed persons 25 years and over as a percent of the civilian labor force for persons 25 years and over.....	4.2	4.1	4.0	4.0	4.0	4.0	4.0	4.1
U-4 Unemployed full-time jobseekers as a percent of the full-time civilian labor force.....	5.1	5.0	4.9	4.9	4.9	4.9	4.9	5.0
U-5a Total unemployed as a percent of the labor force, including the resident Armed Forces.....	5.4	5.3	5.1	5.2	5.2	5.2	5.1	5.2
U-5b Total unemployed as a percent of the civilian labor force.....	5.5	5.3	5.2	5.3	5.2	5.2	5.2	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.....	7.6	7.5	7.2	7.2	7.2	7.2	7.1	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.....	8.4	8.2	7.9	7.9	7.9	N.A.	N.A.	N.A.

N.A. = not available.

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Table A-6. Selected unemployment indicators, seasonally adjusted

Category	Number of unemployed persons (in thousands)				Unemployment rates <sup>1/</sup>				
	Sept. 1988	Aug. 1989	Sept. 1989	Sept. 1988	May 1989	June 1989	July 1989	Aug. 1989	Sept. 1989
CHARACTERISTIC									
Total, 16 years and over.....	6,614	6,421	6,584	5.4	5.2	5.3	5.2	5.2	5.3
Men, 16 years and over.....	3,589	3,403	3,672	5.4	5.0	5.0	4.8	5.0	5.4
Men, 20 years and over.....	2,905	2,790	3,038	4.6	4.3	4.3	4.3	4.4	4.8
Women, 16 years and over.....	3,025	3,018	2,912	5.5	5.3	5.6	5.7	5.4	5.2
Women, 20 years and over.....	2,456	2,468	2,353	4.8	4.8	4.9	5.0	4.7	4.5
Both sexes, 16 to 19 years.....	1,253	1,163	1,193	15.5	15.2	15.6	14.7	14.5	15.1
Married men, spouse present.....	1,316	1,312	1,424	3.1	2.9	2.8	2.9	3.1	3.4
Married women, spouse present.....	1,133	1,189	1,154	3.8	3.8	3.8	3.8	3.9	3.8
Women who maintain families.....	548	552	529	8.1	8.3	7.9	8.7	8.0	7.6
Full-time workers.....	5,293	5,183	5,255	5.1	4.8	4.8	4.9	4.9	5.0
Part-time workers.....	1,328	1,253	1,330	7.4	6.9	7.7	7.2	6.9	7.3
Labor force time lost <sup>2/</sup> .....	--	--	--	6.3	5.9	6.1	6.0	5.9	5.9
INDUSTRY									
Nonagricultural private wage and salary workers	4,969	4,971	5,021	5.4	5.2	5.3	5.4	5.4	5.4
Goods-producing industries.....	1,871	1,844	1,825	6.4	5.8	6.2	6.2	6.4	6.3
Mining.....	67	48	61	8.6	4.5	3.7	5.5	6.5	8.5
Construction.....	608	638	648	9.6	9.3	10.0	10.5	10.3	10.4
Manufacturing.....	1,196	1,158	1,116	5.4	4.9	5.2	5.0	5.2	5.1
Durable goods.....	677	623	613	5.2	4.5	4.6	4.7	4.8	4.7
Nondurable goods.....	519	535	503	5.8	5.5	6.1	5.5	5.9	5.5
Service-producing industries.....	3,098	3,127	3,196	5.0	4.9	4.9	5.0	4.9	5.0
Transportation and public utilities.....	237	234	298	3.8	4.0	4.4	4.2	3.6	4.7
Wholesale and retail trade.....	1,438	1,424	1,374	6.2	5.5	6.0	6.2	6.0	5.8
Finance and service industries.....	1,423	1,470	1,524	4.4	4.7	4.3	4.4	4.4	4.5
Government workers.....	474	489	505	2.7	2.9	3.0	2.8	2.7	2.8
Agricultural wage and salary workers.....	195	169	140	10.8	10.3	11.0	8.5	8.6	7.7

<sup>1/</sup>Unemployment as a percent of the civilian labor force.

<sup>2/</sup> 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				
	Sept. 1988	Aug. 1989	Sept. 1989	Sept. 1988	May 1989	June 1989	July 1989	Aug. 1989	Sept. 1989
DURATION									
Less than 5 weeks.....	3,308	3,022	3,355	3,116	3,041	3,309	3,149	3,071	3,156
5 to 14 weeks.....	1,632	2,152	1,737	1,896	2,017	1,999	1,927	2,011	2,036
15 weeks and over.....	1,428	1,178	1,237	1,568	1,313	1,258	1,472	1,305	1,370
15 to 26 weeks.....	644	612	664	775	702	659	846	737	789
27 weeks and over.....	784	566	573	793	611	599	626	567	581
Average (mean) duration, in weeks.....	13.3	11.3	11.3	13.5	11.8	11.1	12.0	11.3	11.4
Median duration, in weeks.....	4.8	5.0	4.2	5.7	5.3	5.5	5.6	5.0	5.0
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.....	51.9	47.6	53.0	47.4	47.7	50.4	48.1	48.1	48.1
5 to 14 weeks.....	25.6	33.9	27.4	28.8	31.7	30.4	29.4	31.5	31.0
15 weeks and over.....	22.4	18.5	19.5	23.8	20.6	19.2	22.5	20.4	20.9
15 to 26 weeks.....	10.1	9.6	10.5	11.8	11.0	10.0	12.9	11.5	12.0
27 weeks and over.....	12.3	8.9	9.1	12.1	9.6	9.1	9.6	8.9	8.8

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Table A-8. Reason for unemployment

(Numbers in thousands)

Reasons	Not seasonally adjusted				Seasonally adjusted				
	Sept. 1988	Aug. 1989	Sept. 1989	Sept. 1988	May 1989	June 1989	July 1989	Aug. 1989	Sept. 1989
NUMBER OF UNEMPLOYED									
Job losers.....	2,732	2,766	2,586	3,079	2,724	2,765	2,920	2,984	2,915
On layoff.....	636	736	631	833	790	806	822	873	828
Other job losers.....	2,096	2,030	1,955	2,246	1,934	1,958	2,097	2,111	2,087
Job leavers.....	1,099	1,122	1,162	985	1,114	1,023	1,010	1,040	1,039
Reentrants.....	1,821	1,814	1,997	1,767	1,852	2,051	1,934	1,768	1,946
New entrants.....	717	650	585	761	683	742	724	628	629
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	43.5	40.9	46.7	42.7	42.0	44.3	46.5	44.6
On layoff.....	10.0	11.6	10.0	12.6	12.4	12.3	12.5	13.6	12.7
Other job losers.....	32.9	32.0	30.9	34.1	30.3	29.8	31.8	32.9	32.0
Job leavers.....	17.3	17.7	18.4	14.9	17.5	15.5	15.3	16.2	15.9
Reentrants.....	28.6	28.6	31.5	26.8	29.1	31.2	29.4	27.5	29.8
New entrants.....	11.3	10.2	9.2	11.5	10.7	11.3	11.0	9.8	9.6
UNEMPLOYED AS A PERCENT OF THE CIVILIAN LABOR FORCE									
Job losers.....	2.2	2.2	2.1	2.5	2.2	2.2	2.4	2.4	2.4
Job leavers.....	.9	.9	.9	.8	.9	.8	.8	.8	.8
Reentrants.....	1.5	1.4	1.6	1.4	1.5	1.7	1.6	1.4	1.6
New entrants.....	.6	.5	.5	.6	.6	.6	.6	.5	.5

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

Sex and age	Number of unemployed persons (in thousands)				Unemployment rates <sup>1/</sup>				
	Sept. 1988	Aug. 1989	Sept. 1989	Sept. 1988	May 1989	June 1989	July 1989	Aug. 1989	Sept. 1989
	Total, 16 years and over.....	6,614	6,421	6,584	5.4	5.2	5.3	5.2	5.2
16 to 24 years.....	2,457	2,420	2,444	10.9	10.4	11.3	10.7	10.9	11.2
16 to 19 years.....	1,253	1,163	1,193	15.5	15.2	15.6	14.7	14.5	15.1
16 to 17 years.....	650	565	518	19.6	16.2	17.5	17.8	18.1	16.8
18 to 19 years.....	615	609	683	12.8	14.5	14.9	12.4	12.5	14.2
20 to 24 years.....	1,204	1,257	1,251	8.4	7.7	8.9	8.6	8.8	8.9
25 years and over.....	4,179	4,031	4,182	4.2	4.0	4.0	4.0	4.0	4.1
25 to 54 years.....	3,733	3,556	3,698	4.4	4.2	4.1	4.2	4.1	4.3
55 years and over.....	436	468	461	2.9	2.9	3.3	3.1	3.1	3.0
Men, 16 years and over.....	3,589	3,403	3,672	5.4	5.0	5.0	4.8	5.0	5.4
16 to 24 years.....	1,329	1,328	1,380	11.3	11.0	11.5	10.4	11.4	12.1
16 to 19 years.....	684	613	634	16.4	17.0	15.8	13.4	14.7	15.8
16 to 17 years.....	367	290	311	20.8	18.8	20.0	17.4	17.4	19.8
18 to 19 years.....	329	315	334	13.5	15.7	13.6	10.7	12.7	13.5
20 to 24 years.....	645	715	746	8.5	7.7	9.2	8.7	9.6	10.1
25 years and over.....	2,270	2,106	2,324	4.1	3.7	3.7	3.7	3.7	4.1
25 to 54 years.....	2,014	1,800	1,992	4.3	3.9	3.7	3.9	3.8	4.2
55 years and over.....	255	291	313	2.9	2.9	3.0	3.1	3.3	3.6
Women, 16 years and over.....	3,025	3,018	2,912	5.5	5.3	5.6	5.7	5.4	5.2
16 to 24 years.....	1,128	1,092	1,064	10.5	9.8	11.0	11.1	10.2	10.1
16 to 19 years.....	569	530	559	14.5	13.4	15.4	16.0	14.4	14.5
16 to 17 years.....	283	275	207	18.2	13.4	14.7	18.3	18.8	13.7
18 to 19 years.....	286	294	349	12.0	13.3	16.2	14.4	12.4	14.8
20 to 24 years.....	559	542	505	8.2	7.7	8.6	8.4	7.9	7.6
25 years and over.....	1,909	1,925	1,858	4.3	4.4	4.4	4.4	4.2	4.1
25 to 54 years.....	1,719	1,756	1,705	4.5	4.6	4.5	4.6	4.5	4.3
55 years and over.....	181	178	147	2.9	3.0	3.8	3.2	2.7	2.2

<sup>1/</sup> Unemployment as a percent of the civilian labor force.

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

(Numbers in thousands)

Employment status	Not seasonally adjusted				Seasonally adjusted <sup>1/</sup>				
	Sept. 1988	Aug. 1989	Sept. 1989	Sept. 1988	May 1989	June 1989	July 1989	Aug. 1989	Sept. 1989
Civilian noninstitutional population.....	26,540	27,128	27,177	26,540	26,981	27,031	27,082	27,128	27,177
Civilian labor force.....	16,884	17,846	17,632	16,910	17,364	17,607	17,618	17,589	17,688
Participation rate.....	63.6	65.8	64.9	63.7	64.4	65.1	65.1	64.8	65.1
Employed.....	15,297	16,154	15,898	15,301	15,707	15,795	15,934	15,910	15,892
Employment-population ratio <sup>2/</sup> .....	57.6	59.5	58.5	57.7	58.2	58.4	58.8	58.6	58.5
Unemployed.....	1,586	1,692	1,735	1,609	1,657	1,812	1,684	1,680	1,796
Unemployment rate.....	9.4	9.5	9.8	9.5	9.5	10.3	9.6	9.5	10.1
Not in labor force.....	9,656	9,282	9,545	9,630	9,617	9,424	9,464	9,539	9,489

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

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

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

(Numbers in thousands)

Occupation	Civilian employed		Unemployed		Unemployment rate	
	Sept. 1988	Sept. 1989	Sept. 1988	Sept. 1989	Sept. 1988	Sept. 1989
Total, 16 years and over/.....	115,474	117,498	6,368	6,330	5.2	5.1
Managerial and professional specialty.....	29,537	30,493	624	715	2.1	2.3
Executive, administrative, and managerial.....	14,302	14,882	322	405	2.2	2.6
Professional specialty.....	15,235	15,611	302	310	1.9	1.9
Technical, sales, and administrative support.....	35,509	35,728	1,573	1,499	4.2	4.0
Technicians and related support.....	3,676	3,486	92	91	2.5	2.5
Sales occupations.....	13,575	13,939	658	617	4.6	4.2
Administrative support, including clerical.....	18,259	18,302	822	791	4.3	4.1
Service occupations.....	15,223	15,626	1,056	1,089	6.5	6.5
Private household.....	851	778	53	37	5.9	4.5
Protective service.....	1,971	1,983	66	101	3.3	4.9
Service, except private household and protective.....	12,400	12,864	936	951	7.0	6.9
Precision production, craft, and repair.....	13,514	13,838	603	665	4.3	4.6
Mechanics and repairers.....	4,281	4,507	140	166	3.2	3.6
Construction trades.....	5,145	5,247	288	328	5.3	5.9
Other precision production, craft, and repair.....	4,088	4,084	175	170	4.1	4.0
Operators, fabricators, and laborers.....	18,106	18,158	1,513	1,482	7.7	7.5
Machine operators, assemblers, and inspectors.....	8,156	8,349	715	629	8.1	7.0
Transportation and material moving occupations.....	5,056	5,129	224	267	4.2	4.9
Handlers, equipment cleaners, helpers, and laborers.....	4,893	4,681	573	586	10.5	11.1
Construction laborers.....	899	768	145	148	13.9	16.1
Other handlers, equipment cleaners, helpers, and laborers.....	3,994	3,912	429	438	9.7	10.1
Farming, forestry, and fishing.....	3,586	3,656	258	177	6.7	4.6

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

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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				Unemployed				
	Sept. 1988	Sept. 1989	Sept. 1988	Sept. 1989	Sept. 1988	Sept. 1989	Number		Percent of labor force		
						Sept. 1988	Sept. 1989	Sept. 1988	Sept. 1989		
<b>VIETNAM-ERA VETERANS</b>											
Total, 30 years and over.....	7,890	7,928	7,261	7,249	7,008	6,999	253	251	3.5	3.5	
30 to 44 years .....	5,826	5,409	5,540	5,114	5,344	4,926	196	187	3.5	3.7	
30 to 34 years .....	633	440	592	406	554	382	33	24	6.4	6.0	
35 to 39 years .....	2,070	1,673	1,965	1,561	1,894	1,486	71	75	3.6	4.8	
40 to 44 years .....	3,123	3,296	2,983	3,146	2,896	3,058	87	88	2.9	2.8	
45 years and over .....	2,064	2,519	1,721	2,136	1,664	2,072	57	63	3.3	3.0	
<b>NONVETERANS</b>											
Total, 30 to 44 years .....	20,631	21,665	19,645	20,572	18,958	19,877	687	695	3.5	3.4	
30 to 34 years .....	9,175	9,401	8,779	8,966	8,439	8,669	340	297	3.9	3.3	
35 to 39 years .....	6,928	7,506	6,593	7,121	6,405	6,867	188	255	2.9	3.6	
40 to 44 years .....	4,528	4,758	4,273	4,485	4,114	4,341	159	143	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.

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

(Numbers in thousands)

State and employment status	Not seasonally adjusted1/				Seasonally adjusted2/				
	Sept. 1928	Aug. 1929	Sept. 1929	Sept. 1928	Mar. 1929	June 1929	July 1929	Aug. 1929	Sept. 1929
California									
Civilian noninstitutional population.....	20,903	21,192	21,227	20,903	21,085	21,122	21,147	21,192	21,227
Civilian labor force.....	13,999	14,455	14,409	14,053	14,331	14,286	14,443	14,358	14,452
Employed.....	13,298	13,782	13,695	13,330	13,546	13,489	13,674	13,706	13,716
Unemployed.....	701	674	715	723	785	797	769	652	736
Unemployment rate.....	5.0	4.7	5.0	5.1	5.5	5.6	5.3	4.5	5.1
Florida									
Civilian noninstitutional population.....	9,755	9,978	9,996	9,755	9,924	9,942	9,965	9,978	9,992
Civilian labor force.....	6,135	6,310	6,198	6,133	6,227	6,344	6,286	6,209	6,194
Employed.....	5,824	5,968	5,843	5,831	5,827	5,960	5,930	5,884	5,848
Unemployed.....	310	342	355	302	400	384	356	325	346
Unemployment rate.....	5.1	5.4	5.7	4.9	6.4	6.1	5.7	5.2	5.6
Illinois									
Civilian noninstitutional population.....	8,720	8,708	8,711	8,720	8,698	8,701	8,699	8,708	8,711
Civilian labor force.....	5,772	5,925	5,974	5,745	5,899	5,934	5,860	5,869	5,944
Employed.....	5,462	5,637	5,644	5,395	5,563	5,609	5,533	5,540	5,576
Unemployed.....	310	347	330	350	336	325	327	349	368
Unemployment rate.....	5.4	5.8	5.5	6.1	5.7	5.5	5.6	5.9	6.2
Massachusetts									
Civilian noninstitutional population.....	4,598	4,604	4,605	4,598	4,598	4,600	4,601	4,604	4,605
Civilian labor force.....	3,125	3,243	3,112	3,139	3,196	3,166	3,183	3,191	3,190
Employed.....	3,031	3,117	2,978	3,043	3,080	3,040	3,041	3,060	2,990
Unemployed.....	94	126	134	96	116	126	142	131	137
Unemployment rate.....	3.0	3.9	4.3	3.1	3.6	4.0	4.5	4.1	4.4
Michigan									
Civilian noninstitutional population.....	7,043	7,100	7,101	7,043	7,095	7,097	7,104	7,100	7,101
Civilian labor force.....	4,611	4,766	4,689	4,611	4,581	4,630	4,646	4,673	4,682
Employed.....	4,305	4,449	4,339	4,274	4,273	4,291	4,331	4,352	4,305
Unemployed.....	306	317	349	337	308	339	315	321	377
Unemployment rate.....	6.6	6.7	7.5	7.3	6.7	7.3	6.8	6.9	8.1
New Jersey									
Civilian noninstitutional population.....	6,044	6,066	6,068	6,044	6,059	6,062	6,064	6,066	6,068
Civilian labor force.....	3,941	4,035	3,974	3,973	3,952	3,971	3,976	3,990	4,014
Employed.....	3,807	3,864	3,803	3,823	3,834	3,806	3,814	3,810	3,828
Unemployed.....	134	171	171	150	118	165	162	180	186
Unemployment rate.....	3.4	4.2	4.3	3.8	3.0	4.2	4.1	4.5	4.6

## New York

Civilian noninstitutional population.....	13,804	13,816	13,817	13,804	13,809	13,812	13,814	13,816	13,817
Civilian labor force.....	8,513	8,734	8,595	8,554	8,770	8,705	8,674	8,557	8,549
Employed.....	8,159	8,313	8,147	8,184	8,307	8,266	8,269	8,127	8,132
Unemployed.....	354	421	448	370	463	439	405	430	417
Unemployment rate.....	4.2	4.8	5.2	4.3	5.3	5.0	4.7	5.0	5.4

## North Carolina

Civilian noninstitutional population.....	4,934	5,016	5,021	4,934	5,000	5,006	5,014	5,016	5,021
Civilian labor force.....	3,352	3,484	3,445	3,358	3,467	3,463	3,444	3,432	3,454
Employed.....	3,248	3,363	3,324	3,237	3,340	3,339	3,327	3,304	3,315
Unemployed.....	104	121	121	121	127	124	117	128	139
Unemployment rate.....	3.1	3.5	3.5	3.6	3.7	3.6	3.4	3.7	4.0

## Ohio

Civilian noninstitutional population.....	8,263	8,318	8,320	8,263	8,310	8,313	8,320	8,318	8,320
Civilian labor force.....	5,287	5,517	5,460	5,311	5,434	5,490	5,450	5,469	5,481
Employed.....	4,985	5,257	5,192	5,004	5,138	5,183	5,157	5,209	5,216
Unemployed.....	302	261	269	307	296	307	293	260	265
Unemployment rate.....	5.7	4.7	4.9	5.8	5.4	5.6	5.4	4.8	5.0

## Pennsylvania

Civilian noninstitutional population.....	9,385	9,433	9,435	9,385	9,424	9,427	9,433	9,433	9,435
Civilian labor force.....	5,881	5,919	5,862	5,827	5,920	5,917	5,823	5,768	5,813
Employed.....	5,584	5,686	5,625	5,523	5,649	5,678	5,562	5,520	5,571
Unemployed.....	297	233	237	304	271	239	261	248	242
Unemployment rate.....	5.1	3.9	4.0	5.2	4.6	4.0	4.5	4.3	4.1

## Texas

Civilian noninstitutional population.....	12,007	11,996	11,998	12,007	11,987	11,990	11,989	11,996	11,998
Civilian labor force.....	8,341	8,452	8,266	8,321	8,250	8,223	8,241	8,352	8,253
Employed.....	7,749	7,843	7,745	7,732	7,762	7,721	7,645	7,729	7,731
Unemployed.....	591	610	521	589	488	502	596	623	522
Unemployment rate.....	7.1	7.2	6.3	7.1	5.9	6.1	7.2	7.5	6.3

- 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.

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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			
	1988	1989	1988	1989			1989
	III	III	III	IV	I	II	III
TOTAL							
Total not in labor force.....	61,798	61,447	62,959	62,865	62,482	62,388	62,597
Do not want a job now.....	56,816	56,153	58,202	57,491	57,310	57,046	57,853
Current activity:							
Goes to school.....	3,774	3,855	7,022	6,229	6,365	6,292	7,312
Ill, disabled.....	4,447	4,694	4,453	4,730	4,528	4,782	4,659
Keeping house.....	25,380	24,028	25,331	24,588	24,550	24,062	23,988
Retired.....	17,044	18,026	16,825	17,251	17,179	17,407	17,688
Other activity.....	6,171	5,550	4,571	4,693	4,688	4,503	4,206
Want a job now.....	4,982	5,294	5,276	5,418	5,313	5,331	5,509
Reason not looking:							
School attendance.....	808	912	1,387	1,412	1,279	1,274	1,477
Ill health, disability.....	791	915	794	750	910	965	889
Home responsibilities.....	1,237	1,307	1,128	1,145	1,177	1,151	1,169
Think cannot get a job.....	952	835	941	951	855	869	815
Job-market factors.....	600	513	599	597	562	519	511
Personal factors.....	351	322	341	354	293	350	305
Other reasons/.....	1,194	1,325	1,026	1,160	1,093	1,072	1,159
Men							
Total not in labor force.....	20,000	20,135	20,926	21,084	20,861	20,839	21,101
Do not want a job now.....	18,311	18,322	19,100	19,062	19,085	18,929	19,284
Want a job now.....	1,689	1,813	1,920	1,985	1,946	1,932	2,031
Reason not looking:							
School attendance.....	379	440	669	716	632	639	705
Ill health, disability.....	376	503	379	351	420	471	487
Think cannot get a job.....	448	351	447	446	410	410	340
Other reasons/.....	487	519	425	473	484	412	470
Women							
Total not in labor force.....	41,798	41,311	42,035	41,781	41,621	41,549	41,496
Do not want a job now.....	38,505	37,831	39,103	38,428	38,225	38,118	38,569
Want a job now.....	3,293	3,481	3,356	3,433	3,367	3,399	3,478
Reason not looking:							
School attendance.....	429	472	718	697	646	635	742
Ill health, disability.....	415	412	415	399	491	494	403
Home responsibilities.....	1,237	1,307	1,128	1,145	1,177	1,151	1,169
Think cannot get a job.....	504	484	494	505	445	460	475
Other reasons.....	708	806	601	688	609	660	689
White							

Total not in labor force.....	52,518	52,175	53,447	53,325	52,980	52,888	53,074
Do not want a Job now.....	48,975	48,513	49,728	49,381	49,280	49,060	49,320
Want a Job now.....	3,545	3,658	3,691	3,854	3,844	3,835	3,774
Reason not looking: School attendance.....	517	607	908	911	885	906	1,003
Ill health, disability.....	552	597	556	511	704	684	583
Home responsibilities.....	902	898	806	828	793	835	793
Think cannot get a Job.....	583	509	600	676	570	527	514
Other reasons1/.....	991	1,048	821	928	892	882	881

## Black

Total not in labor force.....	7,284	7,347	7,497	7,471	7,445	7,542	7,555
Do not want a Job now.....	6,134	5,875	6,227	6,182	6,134	6,303	5,971
Want a Job now.....	1,150	1,472	1,241	1,259	1,315	1,325	1,613
Reason not looking: School attendance.....	197	264	316	374	335	316	430
Ill health, disability.....	222	310	217	206	206	261	297
Home responsibilities.....	265	362	270	272	343	266	365
Think cannot get a Job.....	317	296	290	210	253	323	272
Other reasons1/.....	149	239	147	197	178	160	250

1/ Includes small number of men not looking for work because of "home responsibilities."

NOTE: Detail may not add to not-in-labor force totals because of the weighting procedures.

ESTABLISHMENT DATA

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Table B-1. Employees on nonagricultural payrolls by industry

(In thousands)

Industry	Not seasonally adjusted				Seasonally adjusted					
	Sept.	July	Aug.	Sept.	Sept.	May	June	July	Aug.	Sept.
	1988	1989	1989P/	1989P/	1988	1989	1989	1989	1989P/	1989P/
Total.....	106,601	108,540	108,638	109,453	106,207	108,310	108,607	108,767	108,855	109,064
Total private.....	89,416	91,733	91,967	91,874	88,736	90,623	90,884	91,016	91,075	91,189
Goods-producing industries.....	25,757	25,904	26,142	26,041	25,313	25,672	25,648	25,669	25,696	25,588
Mining.....	728	714	740	734	719	722	715	706	730	725
Oil and gas extraction.....	406.5	406.4	409.3	405.7	404	401	402	404	405	403
Construction.....	5,442	5,622	5,672	5,598	5,163	5,283	5,283	5,314	5,316	5,316
General building contractors.....	1,426.3	1,463.8	1,479.1	1,451.6	1,374	1,388	1,384	1,391	1,401	1,398
Manufacturing.....	19,587	19,568	19,730	19,709	19,431	19,667	19,650	19,649	19,650	19,547
Production workers.....	13,413	13,296	13,458	13,461	13,263	13,426	13,400	13,410	13,406	13,309
Durable goods.....	11,523	11,490	11,538	11,535	11,464	11,594	11,567	11,549	11,553	11,471
Production workers.....	7,712	7,618	7,670	7,682	7,653	7,735	7,706	7,697	7,700	7,624
Lumber and wood products.....	783.0	786.5	787.4	781.0	763	771	769	767	764	760
Furniture and fixtures.....	531.5	523.6	527.5	529.7	530	534	534	536	529	528
Stone, clay, and glass products.....	611.6	612.5	613.2	607.4	600	604	603	602	601	595
Primary metal industries.....	781.1	776.0	783.6	779.9	779	787	787	785	787	777
Blast furnaces and basic steel products.....	276.7	277.5	276.1	274.4	277	276	276	277	276	274
Fabricated metal products.....	1,443.9	1,430.3	1,435.2	1,442.9	1,436	1,452	1,449	1,446	1,441	1,434
Machinery, except electrical.....	2,094.6	2,145.1	2,142.5	2,147.3	2,098	2,150	2,151	2,154	2,153	2,149
Electrical and electronic equipment.....	2,077.8	2,027.6	2,032.4	2,026.2	2,072	2,050	2,041	2,040	2,032	2,020
Transportation equipment.....	2,053.1	2,023.3	2,035.1	2,041.8	2,044	2,076	2,062	2,046	2,070	2,034
Motor vehicles and equipment.....	865.5	828.5	846.7	847.1	859	876	861	844	873	840
Instruments and related products.....	755.0	781.4	783.6	781.2	756	778	779	781	782	782
Miscellaneous manufacturing.....	391.9	383.4	397.0	397.5	386	392	392	392	394	392
Nondurable goods.....	8,063	8,078	8,192	8,174	7,967	8,073	8,083	8,100	8,097	8,076
Production workers.....	5,701	5,678	5,788	5,779	5,610	5,691	5,694	5,713	5,706	5,685
Food and kindred products.....	1,707.8	1,711.2	1,755.5	1,756.3	1,627	1,656	1,663	1,678	1,670	1,673
Tobacco manufactures.....	58.1	49.5	52.2	54.6	55	53	52	53	52	52
Textile mill products.....	730.0	717.3	730.9	730.3	726	728	729	730	729	726
Apparel and other textile products.....	1,090.8	1,061.3	1,093.2	1,088.0	1,085	1,095	1,093	1,094	1,094	1,083
Paper and allied products.....	694.5	702.6	704.1	699.4	693	697	697	701	701	697
Printing and publishing.....	1,566.7	1,605.4	1,606.4	1,604.4	1,573	1,603	1,607	1,609	1,611	1,611
Chemicals and allied products.....	1,074.4	1,099.0	1,102.6	1,095.0	1,072	1,094	1,096	1,091	1,095	1,093
Petroleum and coal products.....	164.2	166.0	166.3	165.0	162	162	163	163	163	163

Rubber and misc. plastics products.....	830.7	831.2	838.6	839.7	830	843	841	841	842	839
Leather and leather products.....	145.8	134.1	142.2	140.7	144	142	142	140	140	139
Service-producing industries.....	80,844	82,636	82,496	83,412	80,894	82,638	82,959	83,098	83,159	83,476
Transportation and public utilities.....	5,627	5,737	5,624	5,763	5,581	5,700	5,716	5,736	5,625	5,717
Transportation.....	3,410	3,503	3,521	3,598	3,355	3,484	3,500	3,524	3,539	3,552
Communication and public utilities.....	2,217	2,234	2,103	2,165	2,216	2,216	2,216	2,212	2,086	2,165
Wholesale trade.....	6,090	6,279	6,291	6,281	6,071	6,222	6,230	6,237	6,254	6,263
Durable goods.....	3,591	3,722	3,725	3,712	3,590	3,685	3,693	3,700	3,706	3,712
Nondurable goods.....	2,499	2,557	2,566	2,569	2,481	2,537	2,537	2,537	2,548	2,551
Retail trade.....	19,266	19,684	19,757	19,702	19,188	19,528	19,551	19,586	19,620	19,624
General merchandise stores.....	12,404.8	12,425.2	12,428.6	12,435.9	2,452	2,491	2,493	2,482	2,483	2,436
Food stores.....	13,123.2	13,290.2	13,298.8	13,291.6	3,122	3,245	3,262	3,274	3,292	3,292
Automotive dealers and service stations.....	12,132.9	12,182.6	12,182.9	12,172.9	2,115	2,159	2,155	2,155	2,153	2,154
Eating and drinking places.....	16,449.7	16,535.4	16,576.8	16,551.0	6,296	6,348	6,362	6,370	6,385	6,397
Finance, insurance, and real estate.....	6,706	6,913	6,918	6,853	6,695	6,790	6,808	6,815	6,834	6,844
Finance.....	3,282	3,357	3,358	3,330	3,288	3,320	3,320	3,324	3,335	3,337
Insurance.....	2,087	2,142	2,141	2,132	2,092	2,123	2,129	2,131	2,135	2,138
Real estate.....	1,337	1,414	1,419	1,391	1,315	1,347	1,359	1,360	1,364	1,369
Services.....	25,970	27,216	27,235	27,234	25,888	26,711	26,931	26,973	27,046	27,153
Business services.....	15,701.8	15,826.3	15,864.1	15,898.8	5,651	5,776	5,799	5,786	5,800	5,846
Health services.....	17,229.2	17,685.8	17,717.5	17,738.9	7,228	7,570	7,616	7,648	7,694	7,739
Government.....	17,185	16,807	16,671	17,579	17,471	17,687	17,723	17,751	17,780	17,876
Federal.....	2,968	3,033	3,010	2,978	2,985	2,999	2,995	3,000	2,998	2,996
State.....	4,016	3,921	3,932	4,096	4,038	4,119	4,136	4,145	4,161	4,171
Local.....	10,201	9,853	9,729	10,505	10,398	10,569	10,592	10,606	10,621	10,709

P = preliminary.

ESTABLISHMENT DATA

ESTABLISHMENT DATA

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

Industry	Not seasonally adjusted					Seasonally adjusted				
	Sept.	July	Aug.	Sept.	Sept.	May	June	July	Aug.	Sept.
	1988	1989	1989P/	1989P/	1988	1989	1989	1989	1989P/	1989P/
Total private.....	34.8	35.1	34.9	34.7	34.7	34.6	34.6	34.8	34.6	34.5
Minings.....	42.2	42.5	42.8	43.0	(2)	(2)	(2)	(2)	(2)	(2)
Construction.....	38.4	38.9	38.9	38.6	(2)	(2)	(2)	(2)	(2)	(2)
Manufacturing.....	41.3	40.5	40.8	41.1	41.1	41.0	41.0	41.0	40.9	41.0
Overtime hours.....	4.2	3.7	3.8	4.1	3.9	3.8	3.8	3.9	3.7	3.8
Durable goods.....	42.0	40.9	41.2	41.6	41.9	41.5	41.5	41.5	41.5	41.5
Overtime hours.....	4.3	3.7	3.8	4.1	4.1	3.9	3.9	4.0	3.9	3.9
Lumber and wood products.....	40.3	39.5	40.4	40.2	40.1	39.7	39.8	39.6	40.2	40.0
Furniture and fixtures.....	40.1	38.8	39.8	40.1	39.6	39.4	39.4	39.5	39.6	39.6
Stone, clay, and glass products.....	42.8	42.5	42.8	42.7	42.3	41.9	42.2	42.3	42.5	42.3
Primary metal industries.....	44.0	42.6	42.5	42.6	43.9	43.2	43.3	43.0	42.9	42.5
Blast furnaces and basic steel products..	44.7	43.2	43.0	42.5	44.5	43.6	43.7	43.2	43.4	42.3
Fabricated metal products.....	42.1	40.7	41.1	41.5	42.0	41.7	41.5	41.5	41.4	41.4
Machinery, except electrical.....	42.7	41.9	41.7	42.2	42.7	42.5	42.5	42.4	42.2	42.2
Electrical and electronic equipment.....	41.0	40.0	40.7	41.1	40.9	40.7	40.7	40.6	40.9	41.1
Transportation equipment.....	43.0	41.6	41.6	42.7	43.0	42.5	42.5	42.6	42.5	42.7
Motor vehicles and equipment.....	44.1	41.4	41.4	43.7	44.1	42.8	42.7	42.6	42.8	43.7
Instruments and related products.....	41.6	40.8	40.7	40.8	41.5	41.1	41.3	41.4	41.0	40.8
Miscellaneous manufacturing.....	39.3	38.6	39.3	39.6	39.2	39.6	39.4	39.3	39.5	39.5
Nondurable goods.....	40.5	40.0	40.2	40.5	40.2	40.2	40.3	40.2	40.2	40.2
Overtime hours.....	4.1	3.7	3.8	4.1	3.7	3.7	3.6	3.8	3.6	3.7
Food and kindred products.....	40.8	40.9	41.1	41.2	40.3	40.5	40.7	41.0	40.7	40.7
Tobacco manufactures.....	41.2	37.9	37.3	39.6	(2)	(2)	(2)	(2)	(2)	(2)
Textile mill products.....	41.4	40.6	41.3	41.1	41.0	41.4	41.4	41.2	41.0	40.7
Apparel and other textile products.....	37.1	36.7	37.1	37.1	37.1	37.1	37.1	37.0	37.0	37.1
Paper and allied products.....	43.7	42.9	43.1	43.7	43.2	43.3	43.3	43.2	43.4	43.2
Printings and publishing.....	38.5	37.4	37.8	38.3	38.1	37.7	37.8	37.6	37.7	37.9
Chemicals and allied products.....	42.3	42.2	42.0	42.7	42.3	42.1	42.5	42.5	42.3	42.7
Petroleum and coal products.....	44.8	44.3	43.7	44.1	(2)	(2)	(2)	(2)	(2)	(2)
Rubber and misc. plastics products.....	41.7	40.8	41.1	41.5	41.7	41.5	41.5	41.4	41.4	41.5
Leather and leather products.....	37.5	37.8	38.5	38.3	37.5	37.4	37.9	37.7	38.2	38.3
Transportation and public utilities.....	39.5	39.8	39.3	39.4	39.4	39.5	39.4	39.4	38.9	39.3
Wholesale trade.....	38.1	38.3	38.1	38.1	38.1	37.9	38.0	38.1	38.0	38.1
Retail trade.....	29.1	29.9	29.6	28.8	29.1	28.9	28.9	29.2	28.8	28.7
Finance, insurance, and real estate.....	35.8	36.3	35.8	35.7	(2)	(2)	(2)	(2)	(2)	(2)

Services.....	32.5	33.1	32.9	32.6	32.6	32.5	32.5	32.8	32.6	32.7
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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.

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

Industry	Average hourly earnings				Average weekly earnings			
	Sept.	July	Aug.	Sept.	Sept.	July	Aug.	Sept.
	1988	1989	1989P/	1989P/	1988	1989	1989P/	1989P/
Total private.....	\$9.40	\$9.63	\$9.60	\$9.76	\$327.12	\$338.01	\$335.04	\$338.67
Seasonally adjusted.....	9.37	9.69	9.68	9.73	325.14	337.21	334.93	336.66
Minins.....	12.82	12.95	13.04	13.19	541.00	550.38	558.11	567.17
Construction.....	13.16	13.33	13.33	13.48	505.34	518.54	518.54	520.33
Manufacturing.....	10.25	10.47	10.44	10.54	423.33	424.04	425.95	433.19
Durable goods.....	10.78	10.99	10.98	11.09	452.76	449.49	452.38	461.34
Lumber and wood products.....	8.69	8.92	8.93	8.97	350.21	352.34	360.77	360.59
Furniture and fixtures.....	8.09	8.26	8.29	8.41	324.41	320.49	329.94	337.24
Stone, clay, and glass products.....	10.55	10.75	10.76	10.81	451.54	456.88	460.53	461.59
Primary metal industries.....	12.24	12.40	12.35	12.41	538.54	528.24	524.88	528.67
Blast furnaces and basic steel products..	14.07	14.33	14.28	14.35	628.93	619.06	614.04	609.88
Fabricated metal products.....	10.34	10.53	10.50	10.63	435.31	426.57	431.55	441.15
Machinery, except electrical.....	11.09	11.35	11.34	11.46	473.54	475.57	472.88	483.61
Electrical and electronic equipment.....	10.19	10.41	10.41	10.46	417.79	416.40	423.69	429.91
Transportation equipment.....	13.44	13.61	13.70	13.83	577.92	566.18	569.92	590.54
Motor vehicles and equipment.....	14.10	14.07	14.21	14.42	621.81	582.50	588.29	630.15
Instruments and related products.....	9.99	10.31	10.28	10.33	415.58	420.65	418.40	421.46
Miscellaneous manufacturing.....	8.01	8.29	8.19	8.35	314.79	319.99	321.87	330.66
Nondurable goods.....	9.50	9.77	9.71	9.80	384.73	390.80	390.34	396.90
Food and kindred products.....	9.11	9.35	9.27	9.32	371.69	382.42	381.00	383.98
Tobacco manufactures.....	14.09	16.34	15.61	14.21	580.51	619.29	582.25	562.72
Textile mill products.....	7.43	7.66	7.70	7.76	307.60	311.00	318.01	318.94
Apparel and other textile products.....	6.21	6.28	6.32	6.40	230.39	230.48	234.47	237.44
Paper and allied products.....	11.72	12.04	11.92	12.01	512.16	516.52	513.75	524.84
Printing and publishing.....	10.70	10.83	10.90	11.04	411.95	405.04	412.02	422.83
Chemicals and allied products.....	12.75	13.12	13.09	13.15	539.33	553.66	549.78	561.51
Petroleum and coal products.....	15.01	15.34	15.25	15.45	672.45	679.56	666.43	681.35
Rubber and misc. plastics products.....	9.22	9.45	9.44	9.51	384.47	385.56	387.98	394.67
Leather and leather products.....	6.30	6.54	6.54	6.60	236.25	247.21	251.79	252.76
Transportation and public utilities.....	12.40	12.58	12.50	12.67	489.80	500.68	491.25	499.20
Wholesale trade.....	10.04	10.40	10.35	10.44	382.52	398.32	394.34	397.76
Retail trade.....	6.38	6.49	6.49	6.61	185.66	194.05	192.10	190.37
Finance, insurance, and real estate.....	9.14	9.59	9.49	9.60	327.21	348.12	339.74	342.72
Services.....	9.00	9.33	9.29	9.48	292.50	308.82	305.64	309.05

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1/ See footnote 1, table B-2.

F = preliminary.

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TABLE B-4. Average hourly earnings of production or nonsupervisory workers on private nonagricultural payrolls by industry, seasonally adjusted

Industry	Sept.	May	June	July	Aug.	Sept.	Percent change from:
	1988	1989	1989	1989	1989P/	1989P/ Aug. 1989- Sept. 1989	
Total private <sup>2/</sup> :							
Current dollars.....	\$9.37	\$9.60	\$9.62	\$9.69	\$9.68	\$9.73	0.5
Constant (1977) dollars <sup>3/</sup> .....	4.83	4.77	4.77	4.79	4.79	N.A.	(4)
Construction.....	13.07	13.32	13.32	13.42	13.37	13.39	.1
Manufacturing.....	10.25	10.42	10.45	10.48	10.52	10.54	.2
Excluding overtime <sup>5/</sup> .....	9.78	9.97	9.99	10.01	10.05	10.07	.2
Transportation and public utilities	12.37	12.54	12.54	12.61	12.51	12.64	1.0
Wholesale trade.....	10.03	10.28	10.33	10.44	10.39	10.44	.5
Retail trade.....	6.36	6.49	6.52	6.54	6.56	6.58	.3
Finance, insurance, and real estate	9.18	9.45	9.53	9.68	9.56	9.64	.8
Services.....	9.00	9.33	9.34	9.46	9.43	9.48	.5

1/ See footnote 1, table B-2.

2/ Includes mining, not shown separately, because its seasonal component is too small to be separated out with sufficient precision.

3/ The Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W) is used to deflate this series.

4/ Change was 0.0 percent from July 1989 to August 1989, the latest month available.

5/ Derived by assuming that overtime hours are paid at the rate of time and one-half.

N.A. = not available.

P/ = preliminary.

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

(1977=100)

Industry	Not seasonally adjusted			Seasonally adjusted						
	Sept. 1988	July 1989	Aug. 1989P/	Sept. 1989P/	Sept. 1988	May 1989	June 1989	July 1989	Aug. 1989P/	Sept. 1989P/
Total private.....	126.9	131.2	131.1	130.0	125.6	127.6	128.1	129.2	128.4	128.6
Goods-producing industries.....	104.9	103.6	105.5	105.6	101.8	102.4	102.5	103.0	103.1	102.5
Minins.....	82.7	80.7	85.3	85.0	81.1	81.8	81.2	80.3	83.7	83.3
Construction.....	149.7	156.1	158.1	154.5	138.1	138.2	139.3	142.7	143.0	142.9
Manufacturing.....	97.2	94.5	96.3	97.1	95.7	96.4	96.4	96.3	96.3	95.6
Durable goods.....	95.0	91.6	92.8	93.9	94.1	94.3	94.0	93.8	93.9	92.9
Lumber and wood products.....	107.1	105.4	107.6	106.3	103.7	103.7	103.4	102.6	103.6	102.8
Furniture and fixtures.....	114.4	107.9	112.0	113.4	112.6	112.9	112.6	113.2	111.9	111.6
Stone, clay, and glass products.....	93.0	92.3	93.0	91.6	89.6	89.3	89.8	90.0	90.2	88.6
Primary metal industries.....	69.3	66.2	66.7	66.5	68.9	68.2	68.5	67.9	67.8	66.0
Blast furnaces and basic steel products..	54.8	52.7	52.2	51.1	54.2	52.3	52.6	52.0	52.8	51.2
Fabricated metal products.....	92.4	87.6	89.1	90.7	91.5	91.7	90.8	90.7	90.2	89.7
Machinery, except electrical.....	91.2	91.9	91.4	92.8	91.2	93.7	93.8	94.0	93.3	92.9
Electrical and electronic equipment.....	101.4	94.9	97.2	98.1	100.6	98.4	97.8	97.6	98.0	97.7
Transportation equipment.....	100.5	94.1	95.0	98.3	100.0	100.5	99.5	98.6	100.1	97.8
Motor vehicles and equipment.....	92.3	80.8	83.3	87.5	92.3	90.2	88.1	85.7	89.5	86.7
Instruments and related products.....	113.6	114.7	114.9	115.5	113.7	115.8	116.1	116.9	115.8	115.8
Miscellaneous manufacturing.....	86.8	81.9	87.4	88.1	84.8	85.6	86.2	85.7	87.0	86.1
Nondurable goods.....	100.4	98.9	101.4	101.9	98.2	99.5	99.9	100.1	99.8	99.6
Food and kindred products.....	108.2	108.6	112.8	113.4	100.4	103.3	104.3	106.4	105.1	105.3
Tobacco manufactures.....	82.9	62.5	66.2	75.2	74.3	69.6	69.0	70.5	66.9	68.0
Textile mill products.....	81.9	78.5	81.6	81.0	80.6	81.5	81.5	81.3	80.6	79.7
Apparel and other textile products.....	84.6	81.5	85.1	84.6	84.2	85.4	85.2	84.9	84.9	84.2
Paper and allied products.....	103.2	102.1	102.9	103.7	101.7	102.3	102.3	102.7	103.2	102.1
Printing and publishing.....	137.9	136.3	137.8	139.6	137.2	137.8	138.3	137.7	138.1	138.7
Chemicals and allied products.....	99.2	101.3	101.4	102.3	98.7	100.5	101.8	101.5	101.2	101.8
Petroleum and coal products.....	86.0	86.3	85.3	85.7	84.1	83.5	84.3	83.2	83.4	83.5
Rubber and misc. plastics products.....	117.9	115.2	117.4	118.8	117.8	119.6	118.9	118.8	119.2	118.9
Leather and leather products.....	56.2	52.2	56.5	55.5	55.4	54.7	55.5	54.7	55.0	54.6
Service-producing industries.....	139.2	146.5	145.2	143.5	138.8	141.5	142.2	143.7	142.4	143.0
Transportation and public utilities.....	115.3	118.8	114.7	118.1	114.1	117.3	117.3	117.7	113.4	116.7
Wholesale trade.....	124.4	128.7	128.3	128.0	123.8	126.1	126.7	127.2	127.2	127.5

Retail trade.....	126.2	132.6	131.9	128.0	125.9	127.2	127.4	128.9	127.5	126.9
Finance, insurance, and real estate.....	140.7	147.6	145.9	143.4	140.9	141.9	142.7	145.0	143.3	143.6
Services.....	163.3	173.9	173.1	171.2	163.2	167.5	169.0	170.8	170.3	171.3

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1/ See footnote 1, table B-2.

P = preliminary.

ESTABLISHMENT DATA

ESTABLISHMENT DATA

Table B-6. Diffusion indexes of employment change, seasonally adjusted

(Percent)

Time span	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept	Oct.	Nov.	Dec.
Private nonagricultural payrolls, 349 industries/												
Over 1-month span:												
1987.....	55.6	59.3	61.0	61.9	58.6	59.7	65.3	60.6	63.0	67.8	64.5	60.7
1988.....	60.7	63.5	63.0	62.8	61.3	67.2	63.6	58.0	55.4	63.9	68.2	64.6
1989.....	68.3	60.5	61.0	58.2	55.6	59.7	55.6	P/56.3	P/47.4			
Over 3-month span:												
1987.....	60.7	62.0	66.6	65.2	65.8	65.9	67.8	71.1	71.2	72.3	70.9	65.9
1988.....	64.8	65.6	69.5	70.2	71.1	71.9	71.2	64.2	65.3	70.1	73.4	74.6
1989.....	71.6	70.1	64.5	61.9	61.6	60.7	P/62.5	P/52.1				
Over 6-month span:												
1987.....	67.3	65.8	64.8	66.8	67.6	69.5	71.3	73.5	73.2	71.5	71.8	72.2
1988.....	69.9	70.2	71.5	73.9	73.9	69.1	70.2	74.6	73.5	73.9	74.5	75.8
1989.....	75.1	69.5	68.2	66.0	P/63.5	P/58.5						
Over 12-month span:												
1987.....	66.6	68.2	68.2	71.8	71.9	72.5	72.2	74.1	75.4	72.5	73.8	76.9
1988.....	76.2	76.1	74.8	74.6	75.8	74.9	78.1	75.5	75.5	74.8	74.9	74.1
1989.....	73.2	P/72.5	P/69.1									
Manufacturing payrolls, 141 industries/												
Over 1-month span:												
1988.....	58.5	56.0	55.0	59.9	58.5	61.7	59.6	51.1	49.3	62.8	64.9	58.5
1989.....	62.4	53.5	52.2	49.6	46.8	48.6	49.6	P/47.2	P/34.8			
Over 2-month span:												
1987.....	52.1	51.4	59.6	61.3	58.5	62.8	67.0	71.6	68.4	70.6	67.7	64.5
1988.....	63.1	61.0	62.4	64.9	67.4	67.0	64.5	58.2	62.1	66.7	71.3	70.9
1989.....	67.4	63.8	55.7	51.8	49.3	48.6	P/49.6	P/35.5				
Over 6-month span:												
1987.....	57.4	56.7	55.3	62.4	64.9	67.0	67.4	70.6	71.3	69.5	69.5	68.1
1988.....	65.3	66.3	67.7	69.5	66.7	64.2	66.0	70.9	68.8	69.9	71.6	74.1
1989.....	69.5	58.5	55.7	52.8	P/50.4	P/40.4						

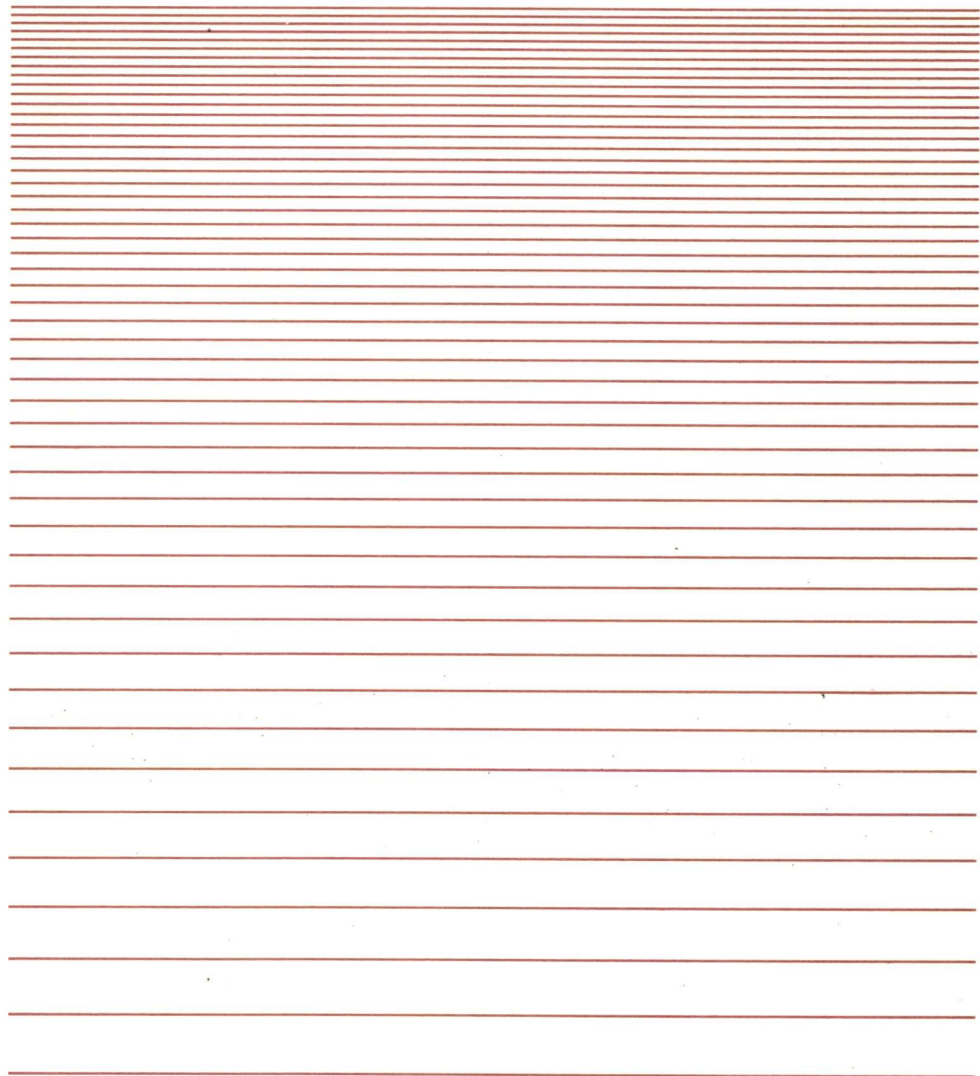
Over 12-month span:												
1987.....	55.3	58.5	58.5	63.5	66.3	67.4	71.6	72.7	71.6	69.1	68.4	72.3
1988.....	73.8	70.2	70.9	71.6	72.0	69.9	70.9	69.1	71.6	70.2	69.9	67.0
1989.....	63.1	P/63.1	P/55.3									

1/ Based on seasonally adjusted data for 1-, 3-, and 6-month spans and unadjusted data for the 12-month span. Data are centered within the span. P=preliminary.  
 NOTE: Figures are the percent of industries with

employment increases plus one-half of the industries with unchanged employment, where 50 percent indicates an equal balance between industries with increases and decreases employment.

# INVESTING IN PEOPLE

*A Strategy to Address America's Workforce Crisis*



Commission on Workforce Quality and Labor Market Efficiency

*We gratefully acknowledge the opportunity to share our main title with Investing in People: The Economics of Population Quality (1981) by Theodore W. Schultz. It is our pleasure to share a title with this distinguished scholar who has made such a major contribution to the analysis of investments in human capital.*

# INVESTING IN PEOPLE

*A Strategy to Address America's Workforce Crisis*

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A Report to the Secretary of Labor and  
the American People

Commission on Workforce Quality  
and Labor Market Efficiency



U.S. Department of Labor

Washington, D.C.

Labor Day 1989

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# LETTER OF TRANSMITTAL

Labor Day 1989

The Honorable Elizabeth Dole  
Secretary of Labor  
U.S. Department of Labor  
Washington, DC 20210

Dear Madam Secretary:

The Commission on Workforce Quality and Labor Market Efficiency was established on July 11, 1988, with the charge to make specific recommendations by September 1989, on ways to increase the excellence of the American workforce. On behalf of the Commission, it is my pleasure to submit our report, *Investing in People: A Strategy to Address America's Workforce Crisis*.

At the beginning of the Commission's work, we had hoped to identify two or three major initiatives that might produce immediate, significant improvements in workforce quality. We have since learned that there are no simple, easy solutions. Rather, we have identified a need for action on many fronts, action that will require the close cooperation of business, labor, and government at all levels.

Our concern for workforce quality has led us to recommend incentives to inspire greater student achievement. We have asked the business community to help by relating career opportunity to school performance and by supporting incentive programs for improved performance by teachers and schools.

We have also made recommendations to establish an environment that encourages employer investments in workforce quality. To complement these initiatives, government is urged to provide education and training programs that address needs unlikely to be met by the private sector.

To enhance the efficiency with which the workforce is employed, we have proposed ways to create more flexible working arrangements, to facilitate the matching of workers with jobs, and to increase productivity through employee relations innovations.

While our nation's workforce problems may seem daunting, they are not beyond solution. If we care enough, if we are willing to commit ourselves to doing that which is necessary, America can experience a rebirth of productivity, competitiveness, and family well-being. If our commitment falls short, however, it will surely be impossible to maintain our standard of living or our position as a leader of nations.

On behalf of the Commissioners, I would like to acknowledge the splendid contributions of our staff. Led by Dr. David L. Crawford and Dr. Laurie J. Bassi, this outstanding team made our year's work effective, efficient, and very enjoyable.

Finally, all the Commissioners thank you for supporting our efforts while assuring our continued independence as a bipartisan Commission. We wish you great success in your leadership of the national discussion of our recommendations.

Respectfully,

A handwritten signature in cursive script that reads "Richard F. Schubert".

Richard F. Schubert  
Chairman

# MEMBERS OF THE COMMISSION ON WORKFORCE QUALITY AND LABOR MARKET EFFICIENCY

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# EXECUTIVE SUMMARY

In 1987, *Workforce 2000* warned the nation that a crisis of workforce quality was at hand, a crisis that would threaten the very foundations of the American economy. Today, demographic trends, technological change, and increased international competition already are creating shortages of skilled workers and an excess of unskilled workers, problems that are likely to worsen in the years ahead.

In *Investing in People*, the Commission on Workforce Quality and Labor Market Efficiency offers its response to the challenges posed by *Workforce 2000*. The Commission calls for:

- A public/private partnership under the leadership of the Secretary of Labor.

- Additional human capital investments by states, communities, individuals, and American business.

- A reallocation of federal human resource expenditures.

- A sustained increase in federal expenditures on human resource programs.

These initiatives are essential if America is to resolve its workforce crisis. Without them, America's workforce will be undereducated, undertrained, and ill-equipped to compete in the twenty-first century.

## 1. THE FOUNDATION OF WORKFORCE QUALITY

Vast numbers of American students cannot meet the educational requirements of today's workplace, much less those of the next century. The Commission believes that this lack of achievement stems in large part from the lack of incentives for effort and achievement in school. Only a handful of the best college-bound students strive to meet the rigorous entry standards of the most selective universities, while for all others, a high-school diploma seems sufficient to secure access to post-secondary education. Most of those bound directly for the workplace know that the quality of their school work and the grades they receive will have little effect on their immediate employment prospects and virtually no effect on their entry-level wage rate. The Commission recommends:

- Presidential leadership in the development of specific national education goals and timetables.

- Continued efforts by the business community to work with schools to help students understand and meet the educational standards that are required for labor market success.

Strengthening the relationship between school and work by making high-school transcripts and national achievement test scores integral parts of employers' evaluations of job applicants.

The prospects for greater student effort and achievement will be improved if student incentives are accompanied by incentives for improving the quality of instruction. The Commission recommends:

Creation of incentives to inspire the best efforts of teachers, administrators, and school districts.

Encouragement of experimental restructuring of schools.

## 2. LIFETIME EDUCATION AND TRAINING

America must develop a coherent system of lifetime education and training. As a first step, it is essential to create a business environment that encourages employers to invest more in their workers. The Commission recommends:

A corporate income tax credit for education and training expenses.

A personal income tax exemption for all employer-provided education and training benefits.

Encouragement of multi-employer training programs.

Government programs that serve the least skilled and most disadvantaged individuals are the other essential part of a coherent system of lifetime education and training. The Commission recommends:

Renewed national commitment to basic skills education for adults.

Sharpened focus of the Job Training Partnership Act (JTPA) on those most in need of training.

Increased funding of JTPA.

Increased funding for grants for post-secondary training and education.

Establishment of a Cabinet-level committee to coordinate human resource policy.

## 3. PUTTING QUALITY TO WORK

America faces labor shortages requiring the most efficient use of the skills that already exist within the population. Tensions between work and family responsibilities prevent some individuals from full labor market participation. The Commission recommends:

Federal support of community-based child care resource and referral organizations.

Increased subsidy of the child care expenses of low-income working families.

Encouragement of flexible employment arrangements such as flextime and part-time work.

Additional initiatives can facilitate the matching of job seekers with job vacancies. The Commission recommends:

Establishment of performance standards for the public employment service.

Increased "experience rating" of the unemployment insurance system.

Increased sensitivity of U.S. immigration policy to labor market needs.

Finally, productivity can be enhanced by encouraging innovative approaches to labor-management relations. The Commission recommends:

Assistance for employers and employees as they explore the potential gains from worker participation, innovative compensation arrangements, and pension portability.

Establishment of a task force to review public policies related to labor-management relations.

## 4. UNDERSTANDING THE WORKFORCE

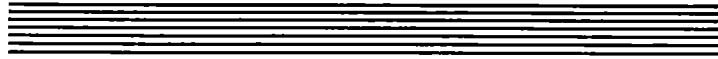
It is essential that human resource policies be informed by accurate data and careful research. In reviewing policy, the Commission has been dismayed by the paucity of information on many important issues. To assure that future decisions can be based on more complete information about the American workforce, the Commission recommends:

Increased funding for the Bureau of Labor Statistics to develop quick turnaround household surveys, support longitudinal data bases, and conduct pilot studies of new data methods.

Increased funding to the Departments of Labor and Education to conduct experimental evaluations of human resource programs, study the labor market status of disadvantaged individuals, and collect information on best employment practices.

# INVESTING IN PEOPLE

*A Strategy to Address America's Workforce Crisis*



# INTRODUCTION

## THE CHALLENGE

America's ability to shape the course of the twenty-first century will depend largely on the productivity of the American workforce. Competitive advantage has replaced military might as the principal source of global influence. Our major trading partners have realized that their productivity will determine both their international power and standard of living. These countries have made substantial commitments to educate and train their workforces. America has, in many respects, failed to do the same.

We as a nation stand at a crossroads; one road leads to increased competitiveness, higher standards of living, and a strong presence in the international community; the other, to economic decline. Our most formidable competitors have chosen the former. So too must we.

This country has always been willing to commit enormous energy and resources in times of short-run emergencies such as those posed by wars or domestic financial crises. When danger is imminent, the urgency is obvious. It is always more difficult to make long-run commitments in response to long-run threats. Nonetheless, some of our greatest achievements have been the result of such commitments. When the Soviet Union put Sputnik into orbit in 1957, the nation was shocked that we were behind in the space race. We realized that the true cost of losing the space race would be felt not immediately but for generations to come. Our understanding of the enormity of the long-run costs compelled us to take immediate action, despite the absence of an immediate threat. We established a national program of investment in education, training, and research. Our sustained investments were inspired by a shared vision of a nation second to none in its mathematical and scientific capability, a nation that could win the space race.

Today, we require a similar vision to inspire a national strategy of sustained investment in human resources over the next decade. Such a strategy will shape both our economic future and our position in the community of nations for many decades to come.

In 1987, the Department of Labor issued *Workforce 2000*, which documented an emerging crisis in the American workplace. That report warned the nation that demographic trends, technological change, and increased international competition could weaken our economic position in the next century. The crisis envisioned in *Workforce 2000* has begun to emerge. Increased demand for highly skilled workers, combined with an aging workforce, has already

created shortages of skilled workers, shortages that are likely to grow for many years. At the same time, many low-skill workers are having increasing difficulty finding employment.

This report responds to the challenges posed by *Workforce 2000*. It offers a national strategy to avert economic decline by improving the quality of our workforce. This strategy is based on a partnership between the private sector and all levels of government. While the investments necessary for improving workforce quality must come primarily from the private sector, all levels of government will be called upon to provide funds for programs that can fill the gaps in our nation's system of lifetime education and training. The leadership of the federal government, and particularly that of the Secretary of Labor, will be critical.

## EVIDENCE OF AN EMERGING CRISIS

Employers report increasing difficulty in finding the job applicants they need. While part of this difficulty is attributable to recent reductions in unemployment, it is also a result of the "skills gap," the inadequate supply of American workers with the skills required by employers. The projections in *Workforce 2000* indicate that today's gap is likely to widen as the skill requirements of new jobs increase faster than the skill levels of the labor force.

One major factor contributing to the skills gap is the low levels of achievement among students leaving our nation's schools. Employers report that alarming numbers of young job applicants have such poor reading and computation skills that it is impossible to provide them with job-specific training. These problems are particularly acute for the 25 percent of students who leave school before high-school graduation. Perhaps more troubling is the fact that many of those who do graduate possess little more than rudimentary language and mathematics skills.

From the top to the bottom of the American talent pool, our students' academic achievements have failed to keep pace with the competitive requirements of the international marketplace. Our best mathematics students would be ranked just average in almost any Pacific rim nation. Too few of our brightest students are taking the arduous courses of study necessary to prepare for occupations in science, mathematics, and engineering.

Moreover, the skills shortfall is not confined to new or prospective workers. Large numbers of experienced workers have skills that are now obsolete or soon will be made obsolete by changes in technology or by declines in specific industries. With technological change accelerating and international competition increasing, the life cycles of products, technologies, and industries from initial expansion to

final contraction have shortened. Shorter cycles will result in even more rapid obsolescence of workers' skills and will heighten our need for retraining systems.

Retraining, however, usually requires basic reading and computational skills that are well beyond those currently possessed by many experienced workers. At least 20 million, and possibly as many as 40 million, adults today experience substantial literacy problems. Employers' retraining costs are much larger for employees with limited reading and computation abilities. American firms' difficulties in retraining these workers further reduce our ability to compete in the world marketplace.

If the skills gap continues to widen, both sides of the labor market will suffer. Many employers will not be able to hire the types of workers they need to compete in international markets. Some employers will bid up the wage rate of the skilled workers they can find, thereby creating higher costs and diminishing competitiveness. Other employers will be tempted to use foreign workers or to relocate production in foreign countries. Inevitably, some high-skill jobs will remain vacant while large numbers of low-skill workers will remain unemployed. The burden of this unemployment is likely to fall most heavily on minorities. Pockets of chronic unemployment amid otherwise tight labor markets could lead to social and political conflict.

## THE VISION

Eliminating the skills gap and enhancing our nation's competitive position will require a substantial, ongoing national commitment to investment in human resources. To be effective, such a commitment must be based on a shared vision of our nation's potential.

We envision American students treating learning as a matter of highest priority. We envision American high schools with nearly 100 percent graduation rates, producing students whose achievements compare favorably with those of their peers in other developed countries. We envision an America in which virtually every adult can read and in which post-secondary education or training is a right rather than a privilege. We envision an America in which workers can find high-quality jobs and employers can find high-quality workers. We envision an America in which all employers are committed to substantial investments in the education and training of their workers. We envision an America without barriers to labor force participation and with full utilization of the skills of the nation's citizenry. We envision an American labor relations system based on cooperation.

Such an America would be, and would deserve to be, a major political and economic power in the twenty-first century.

## A NOTE ON FISCAL RESPONSIBILITY

We have considered the fiscal implications of the strategy we recommend to pursue our vision. Throughout our deliberations we have been mindful of the importance of reducing the current budget deficit. At the same time, we are convinced that, because today's skills deficit is so enormous, wisely chosen investments in human capital will yield substantial returns.

We believe that much can be accomplished through additional investments from states, communities, individuals, and American business, and through a careful reallocation of current federal expenditures on human resources. There is likely, however, to be a clear and pressing need for a sustained increase in federal expenditure on human resource programs.

We are still the world's most wealthy nation, but we are at risk for want of human resources. We must not accept a workforce that is undereducated, undertrained, and ill-equipped to compete in the twenty-first century.

## A NOTE ON LABOR AND MANAGEMENT COOPERATION

In a spirit of cooperation and in pursuit of mutual goals, business and labor have worked together as peers and allies on this Commission. Many of our recommendations call for a spirit of cooperation like that which invigorated our work.

Often the report refers to "business" or the "business community." Consistent with our shared vision and sense of shared responsibility, we intend for these terms to include both management and labor. We recognize that all elements of the business community must work together to achieve our mutual goals.

## THE COMMISSION'S STRATEGY

Pursuing our vision of America's potential will require coordinated action on many fronts. There is widespread agreement that investments in physical capital and in research and development should be increased. These activities, while important, are outside our charge to focus on human resource development. Given the brevity of our time together and the magnitude of our task, we did not address the economic, developmental, or health needs of young

children, though these issues are closely related to workforce quality and are clearly important. In light of the many efforts already underway, we also did not address the impacts of substance abuse on the labor force participation of young adults or its overall impact on workplace efficiency.

The initiative we present rests on three pillars:

- Creating incentives to improve student motivation and achievement.
- Improving workforce quality through public and private investments in lifetime education and training.
- Improving the efficiency with which workers' existing skills are utilized.

Chapters 1, 2, and 3 of this report contain the results of our deliberations on each of these themes, as well as specific recommendations for action by the private sector, the education community, and all levels of government. In our review of human resource policy, we have been dismayed by the dearth of reliable data and research on many important questions. Chapter 4 contains our recommendations for improving the data-gathering and research activities of the federal government so that our leaders' future decisions can be based on more complete information about the American workforce.

# 1. THE FOUNDATION OF WORKFORCE QUALITY

People begin to acquire labor market skills long before they enter the labor market. Indeed, the quality of early life at home exerts a powerful influence on the quality of later life at work. The school is second only to the family in its importance as a source of the education that forms the foundation for a lifetime of career options. Post-secondary studies, government training programs, and employer-provided education and training all build on this critical foundation. The schools' contribution to workforce quality is, therefore, a substantial one.

For too many Americans, the foundation is shaky. The educational task before our nation is enormous. Vast numbers of our students fail to meet the educational requirements of the workplace or match the academic accomplishments of their counterparts abroad. Employers report that many young people's skills are insufficient to qualify them for entry-level jobs. Even taking into account institutional and cultural differences, the consistent and significant underachievement of American students, relative to their counterparts in other countries, is of grave concern. U.S. students lag behind in science and mathematics at every grade level and at every stratum of ability and background. Compared with students in the developed countries of Western Europe and the Pacific rim, the average mathematics attainment of students in our middle and secondary schools places them in the bottom quartile. Worse perhaps, the top 5 percent of college-bound high-school seniors in the U.S. have scores in advanced mathematics comparable to the average score of all Japanese seniors.

The time has come for this country to make a commitment to education, a commitment as ambitious and aggressive as our past commitment to space exploration. Our national leaders must establish national education goals to provide a framework within which state and local governments—along with educators, the business community, and parents—can develop plans for action and establish systems of measurement and incentives for success. It is vital that the nation be charged to work together and act aggressively to meet ambitious goals.

***1. The President should lead governors, mayors, educators, the business community, parents, and all citizens in developing specific national education goals and timetables. The goals should include: reducing school dropout rates; increasing attendance rates; improving test scores and achievement levels; increasing parental participation; and ensuring that our nation's youth graduate with the basic skills necessary to be successful in the workplace.***

Once national goals and timetables are set, it will be necessary for our students to expend the effort required to achieve these goals. Currently, our schools and parents expect less of our young people than is expected of students in other developed nations. The greater importance attributed to education by our international competitors and the greater efforts of their students account for much of the shortfall in American students' achievement. Indeed, a recent study of 13-year-olds in the U.S., Korea, Spain, Ireland, the United Kingdom, and Canada produced these ranks for U.S. students: last in average mathematics proficiency; nearly last in average science proficiency; last in the amount of mathematics homework reported; nearly last in the amount of science homework; and first only in the percent watching five or more hours of television each day. To be sure, there are other significant differences between our education system and those of other countries; our management of curricula and resources is less centralized, and our schools place less emphasis on science and mathematics. Nevertheless, there can be no doubt that increased effort by American students would contribute significantly to increased educational achievement.

We believe that many students lack sufficient incentives to inspire their wholehearted engagement with learning and, furthermore, that many aspects of the American education and employment systems are inconsistent with the interests of learning. For example, while the admission standards of the most prestigious colleges and universities create strong incentives for the handful of students who aspire to attend these select schools, most post-secondary institutions have longstanding "open admissions" policies that guarantee access for any resident holding a high-school diploma. Consequently, students need merely to graduate from high school to gain admission to college, a situation that offers few incentives to study hard or otherwise prepare for college work. Similarly, students who choose to go directly to work rather than pursue post-secondary education find that their immediate earnings prospects are unrelated to their school performance and, hence, see little reason to study.

Accordingly, it is important to create incentives that both justify and reward scholastic effort. This is particularly true for our lowest achievers, many of whom believe they have little to gain from school work. A number of strategies have been offered to counter academic underachievement. Examples of these strategies include those

imposed by the schools ("no pass, no play" rules for school-sponsored sports programs), those imposed by states (linking driver's license eligibility to continued enrollment in school), those offered by philanthropists (free college tuition for all who qualify), and those offered by business/education partnerships (jobs for all students who meet a prescribed educational standard). While it is too early to judge the success of these approaches, we believe they offer models that can be adapted to a variety of situations.

Most of the recommendations in this chapter focus on engaging students in the learning process. No one of these recommendations in isolation, or even the combination of all of them, is sufficient to solve America's educational problems. Nonetheless, we believe that engaging students' self-interest in their studies is an important step, offering opportunities to promote achievement that are missing from most current reform efforts.

If this strategy is to work; however, businesses must play a significant role in creating incentives for achievement. During the past decade, the business community has, in fact, substantially increased its involvement in the schools. We applaud these efforts and call for their expansion.

Of all the contributions that the business community makes, the most important one is to help students understand the world of work and its relationship to what is learned in school. Many young people, particularly those in low-income urban areas, have very little understanding of the nexus of school and work. Nothing can make this relationship more clear than an assurance from the business community that jobs will be available for those students who earn adequate educational credentials.

***2. The business community should increase its presence in the schools, work with parents and school personnel, talk directly with students, and show through their hiring and promotion decisions that academic achievements will be rewarded. Increased involvement of the business community will be particularly valuable in low-income urban areas.***

Business can make additional contributions by providing schools with the information that they need to develop course content and instructional methods that meet the current and emerging needs of the workplace. Increasingly, employees will have to work in cooperative groups, be able to make decisions about production problems and processes, and develop the ability to acquire new skills and behavior on the job. We urge schools to adjust their instructional methods to match more closely the situation students will later face in the workplace.

**3. Schools should encourage the business community to provide the information needed to develop classroom instruction that anticipates emerging workplace needs. These techniques, emphasizing less interpersonal competition, more cooperative effort, and increased problem-solving abilities, should be used throughout a child's entire education. Schools should also create the flexibility of schedules and educational formats necessary to enable students of different abilities to meet the higher standards of performance that are required by employers.**

Another vehicle for creating incentives for students to stay in school and study harder is to develop curricula in which applied, "hands-on" instructional techniques are used to teach basic reading and mathematics to students who do not choose purely academic courses of study. The National Assessment of Vocational Education has reported evidence that many students who do not succeed in traditional courses of study can meet reasonable standards of accomplishment when course work is combined with applied training that gives meaning to their studies. Proposals offered by the Administration and legislation introduced by members of Congress to reauthorize the Vocational Education Act call for increased use of vocational technical education as a vehicle for basic skills instruction. We encourage these and related initiatives.

**4. Schools should offer applied instruction, such as vocational technical education, that emphasizes transferable academic skills including reading, mathematics, science, communication, and problem-solving.**

Students who pursue traditional academic studies also need incentives to inspire effort. In many countries, such incentives are created by competitive admissions policies that limit access to post-secondary education. In this country, however, we are committed to open admissions to most public post-secondary institutions. This commitment may inadvertently undermine incentives for many college-bound students, leaving them underprepared for college curricula.

**5. The Secretary of Education should institute a review of post-secondary admissions policies and their implications for the performance of students who aspire to post-secondary education. The review should focus on opportunities to inspire elementary and secondary level students to prepare more diligently for college study.**

In addition to creating incentives for students to study harder in school, we need to encourage students to undertake and excel in scientific and technical fields. Science instruction at the elementary

school level is scarce at best. Few teachers are trained to teach elementary science, and students often receive no exposure to the sciences until they reach middle school. By then it is too late; most U.S. students never catch up to students in societies where early science instruction is emphasized. Moreover, too few of our youngsters aspire to enter scientific fields, a shortage of interest that is most pronounced among women and minorities. We believe that schools should aggressively encourage such aspirations, and that industries that rely on a scientific and technical workforce should assist the schools in this endeavor.

***6. Primary and secondary schools, in partnership with the business community, should encourage the pursuit of scientific and technical courses of study, particularly by minority and female students. Given the absence of an adequate supply of elementary school teachers able to teach science, federal and state governments should give immediate priority to: the development of a kindergarten through twelfth grade plan of study in the sciences; the design of a curriculum that provides hands-on experience for children of all ages; and the more effective use of talented science teachers and community resources. In the long run, special attention should be given to the creation of an adequate supply of elementary school teachers able to teach science.***

An improved curriculum and better trained teachers will have more impact on students if they have incentives for accomplishment. Immediate rewards are likely to encourage effort more effectively than rewards that come later in life.

***7. High-school students who excel in science and mathematics should be rewarded with business internships or grants for further study.***

Another way that employers can reward students for their achievements is by offering them good jobs upon completion of school. Currently, however, students have few means of communicating their accomplishments to employers. Typically, when job applicants authorize the release of their transcripts to prospective employers, schools fail to deliver the transcripts in a timely manner. Since hiring decisions for entry-level jobs are usually made quite quickly, even short delays can create problems. Employers often have difficulty interpreting the transcripts they do receive and are forced to make decisions with little information regarding an applicant's actual academic accomplishments. Lack of information is a particular problem for small employers, few of whom can afford employment testing.

Making transcripts an integral part of the employment process will sharpen students' awareness of the importance of grades and other indicators of school performance. We believe that this heightened awareness will lead to greater effort and, consequently, to greater achievement.

***8. Schools should develop easily understood transcripts which, at the request of students, are readily available to employers. These transcripts should contain documentable measures of achievement in a variety of fields, as well as attendance records. State governments should provide assistance to facilitate the standardization of transcripts so that they will be more easily understood.***

The creation of a voluntary achievement testing program could provide an additional way for students to document their accomplishments. Such a program could focus on a test measuring competencies in a variety of academic and vocational areas. It would be necessary to develop a new test since tests currently in widespread use are not sufficiently broad in scope to meet the wide-ranging requirements of the achievement testing program that we envision. Students who take the new test would be certified at different levels of proficiency in the content areas of their choice. After taking the examinations, students could choose whether to distribute the results to prospective employers or post-secondary institutions. An additional advantage of such a testing program is that the process of documenting students' skills and achievements would call attention to differences in student achievement across teachers and school districts. Increased awareness of such differences would create incentives for improved performance by teachers and school systems.

There is a risk, however, that widespread use of test scores by employers could place students from relatively underfunded school districts at an additional disadvantage. It is important, therefore, that any initiative for increased testing of high-school students be accompanied by aggressive efforts to equalize resources across school districts. We want to emphasize that our aim is to increase opportunity by increasing achievement, and that both equalizing resources and increasing incentives will be necessary if we are to succeed.

***9. National educational and employers' associations should work together to develop easily understood credentials, based on voluntary achievement testing programs, that assess student proficiency levels in a wide variety of academic and vocational areas. Testing programs must be accompanied by efforts to equalize resources across school districts.***

Schools and employers should further strengthen the linkage between school and work by establishing school-based employment

services. While most schools contribute significantly to the college placement process, few schools offer similar job placement support for students who do not go directly to college. Some State Employment Security agencies have already established job placement services in high schools, and further experimentation would be worthwhile. Such programs hold special promise in low-income urban areas where young job applicants typically have very little information regarding job opportunities.

***10. Schools should work with State Employment Security agencies and Private Industry Councils to establish school-based employment services with direct connections to employers. Employers, both large and small, should be encouraged to provide information on job openings and to consider filling vacancies with recent accomplished high-school graduates. Students should be provided with evidence that the system works for those who have the necessary skills.***

The prospects for greater student effort and achievement will be improved if student incentives are accompanied by incentives for improving the quality of teachers. Raising the level of teachers' subject matter competence will no doubt raise student achievement. The quality of teaching can be improved by recruiting individuals with proven substantive competencies and by ensuring that all teachers are masters of the subjects they teach.

***11. State departments of education should improve instruction by developing teaching opportunities for individuals who have substantive competencies but lack education training, by instituting more rigorous testing of new teachers, and by requiring retraining of existing teachers who lack substantive competencies.***

Teachers who do their jobs well should be professionally recognized and rewarded in ways that promote collegiality and additional effort by all instructional staff within an individual school. Consequently, rewards should be based both on measures of outstanding individual performance and on evidence of outstanding achievement by faculties of entire schools. Possible rewards at the local, state, and national level would range from public recognition, to promotion, to financial bonuses. The business community should be an active partner in creating and supporting these incentive systems. In all cases, rewards should be based on observable criteria such as gains in student achievement or measures of a teacher's substantive competencies. We acknowledge successful ongoing teacher incentive programs that provide greater status, responsibility, and compensation. Such programs have been implemented in Dade County, Florida; Rochester, New York; and the state of California.

***12. Teachers who do their jobs well, either as individuals or as members of school faculties, should be recognized and rewarded, both professionally and financially. All levels of government should work with the private sector to establish incentives for teacher excellence.***

Just as students and teachers need incentives to inspire achievement, so too do individual school administrators and school systems. Experience has shown that public recognition is an effective means of encouraging such achievement. We urge the expansion of public recognition programs at every level of government and encourage the development of district or state-level comparisons based on data from the National Assessment of Educational Progress. Such comparisons would not only facilitate recognition programs, but would also allow identification of the most effective educational strategies.

***13. Federal, state, and local governments should increase their efforts to give public recognition to school administrators and school systems whose students and teachers display significant gains. Additional funding for the National Assessment of Educational Progress would facilitate such efforts.***

This nation's need for educational reform cannot be overstated. The recommendations in this chapter will help to improve the quality of our students, our teachers, our curricula, and our schools, but there is reason to believe that more fundamental change will be required. We are now witnessing a major restructuring of businesses and other organizations across America, frequently resulting in profound changes in employee-management relations. While educational organizations face unique problems and challenges, it is clear that the time has come to consider an analogous restructuring of our schools and that much can be learned from successful restructuring of other organizations. This learning could be facilitated by the interaction of private sector managers and employees with their school system counterparts.

***14. The U.S. Department of Education, in cooperation with state departments of education, should encourage experimentation involving fundamental restructuring of schools. Encouragement should include grants, technical assistance, and regulatory flexibility. The business community should offer schools the benefit of its experience in organizational restructuring.***

## 2. LIFETIME EDUCATION AND TRAINING

America must develop a coherent system for providing post-secondary education and training to adults. We believe that the need for a system of lifetime training and retraining is large and growing. Since over two-thirds of today's workers will remain in the labor market beyond the year 2000, the labor force of the early twenty-first century is, in substantial part, the labor force that we have today. That labor force is deficient. Between 20 and 40 million adults today have literacy problems, making it difficult for them to be trained or retrained. Each year, additional workers with literacy deficiencies enter the workforce; one in 10 of our 17-year-olds is functionally illiterate. One-half of all 18-year-olds have failed to master basic language, mathematics, and analytic skills. Employers report difficulty both in hiring skilled workers and in finding entry-level applicants who can read and compute well enough to participate usefully in employer-provided training programs.

Today's labor force does not meet our current needs, and our needs are increasing as technological change accelerates and foreign competition intensifies. Researchers have consistently found modest but steady increases in the average skill requirements of a broad array of jobs. *Workforce 2000* projects that the jobs of the early twenty-first century will be very different from the jobs of today, again requiring substantially higher skills. At the same time, the American workforce will be aging, a circumstance that will force us to retrain experienced workers if we are to meet the demand for new skills.

We believe that responsibility for investing in the workforce of the future resides primarily in the private sector. It is important, therefore, to establish an environment that encourages private investment in human capital. The first section of this chapter proposes changes that will help create such an environment.

While private investment in human capital is crucial, it will not be sufficient to meet all our needs. Public initiatives at the federal, state, and local levels will be required to fill the gaps in our system of lifetime education and training. If we are to fill these gaps, we must reverse the decline in federal monies devoted to human resource programs. Between 1978 and 1988, federal expenditures on these programs fell from 0.85 percent to 0.45 percent of the Gross National Product. These low levels of funding make it impossible to serve many who are in need. For example, for every three adults now enrolled in Adult Basic Education programs, there is one on a waiting list. Given the increasing importance of workforce literacy, we cannot afford to continue turning away people who want to learn.

In addition to increasing the level of public resources, we must focus our expenditures on those economically disadvantaged persons whose needs are unlikely to be met by private investment alone. The Job Training Partnership Act (JTPA), America's largest federal training program, is not sufficiently targeted on such individuals. Below we discuss the JTPA amendments that the Secretary of Labor has recently proposed to address this problem. These amendments also encourage coordination across programs and agencies. In the second section of this chapter, we make recommendations regarding the funding, focus, and coordination of our public education and training programs.

## EMPLOYER INVESTMENTS IN HUMAN CAPITAL

If we are to maintain our status as a major economic power, we must create an American workforce that can adapt to increasingly sophisticated methods of production. Adaptation will require retraining, and retraining will in turn require that workers (both young and old) have strong reading, computation, problem-solving, and reasoning skills. Both basic skills instruction and retraining will require substantial new investments.

U.S. firms are already spending significant amounts of money on the education and training of their workers. It has been estimated that employers currently spend \$30 billion annually on formal training. While this amount seems large, it is important to remember that these expenditures are spread across 108 million workers and equal only 1.4 percent of firms' payroll expenses. In addition, the expenditures are very unevenly distributed across workers, with high-wage workers receiving the vast majority of the training.

One major obstacle that inhibits employer-provided training is that workers who leave a firm take their skills with them. Workers' mobility reduces employers' expected returns on training investments, thereby reducing the level of those investments. In some countries, such as Germany and Sweden, widespread use of apprenticeship programs helps to lengthen the period of time that workers stay with the firm, thereby giving the firm a longer period of time to recoup its investment. In other countries where employment relationships between many workers and their employers are long lasting, mobility of human capital is a lesser concern. According to a report from the Organisation for Economic Cooperation and Development, the average U.S. worker has been in his job for 7.2 years. Of the 14 member countries included in the report, only Australia has lower average job tenure. In the U.S., where there are limited numbers of apprenticeship programs and where job turnover is relatively high, public policies are needed to encourage human capital investment.

The difficulty that employers have in recouping their investment in human capital is similar to the problem that firms face when they invest in research and development. The benefits of research and development often spill over to other firms and the rest of society. As a result, such investments may produce greater benefits for others than for the firm making the investment. Consequently, we use tax policy to create incentives for research and development. As is the case with research and development, one employer's investment in training may benefit other employers when trained workers move between firms (the mobility problem). Just as society can benefit from additional expenditures on research and development, so too can we benefit from additional human capital investments.

France has already established a refundable training tax credit which essentially requires all firms to spend at least a minimum amount on education and training. Under this system, firms must either spend a specified minimum percentage of their payroll to train their employees or pay that same percentage into a government administered training fund. The experience in France indicates that virtually all employers make at least the minimum required training expenditure; that is, few firms actually pay the tax. While we do not endorse the specific approach chosen by France, we do believe that the time has come for America to establish a corporate income tax credit to stimulate human capital investment.

There are several concerns that should guide the design of such a tax credit. First, a tax incentive for training should be carefully designed so that it stimulates new investment and does not subsidize training that would have occurred in the absence of tax incentives. The research and development tax credit focused incentives by basing the credit on the difference between current expenditures and the average of expenditures over the three previous years. We advocate a similar approach for the training tax credit. For technical reasons, however, we suggest the use of a longer base period.

A second important concern about the design of a training tax credit is the definition of allowable expenditures (i.e., those that qualify for the credit). Since many categories of expenditures could be distantly related to training, the credit must be based on fairly narrow and specific expenditure categories. In the absence of such limitations, firms would have incentives to adopt extremely broad definitions of training expenses. It is important, however, to limit the definition without limiting employers' choices regarding the content and intensity of training. We suggest that the training tax credit be based on expenditures in the following categories: compensation of employees whose sole duties are the design, implementation, or presentation of training programs; the purchase or development of instructional materials and equipment; and payments to third parties (e.g., schools) that provide education or training services.

A final important question is whether the tax credit should be limited to expenditures for the training of a particular category of workers. For example, the credit could be restricted to training expenditures for employees who are nonexempt under the Fair Labor Standards Act. A restriction of this type would reduce the revenue loss associated with the credit and would focus the subsidy on those workers who currently receive the least training. A potential problem with a restricted credit is that it would not encourage the broad spectrum of training that many believe is required. We encourage the Department of Labor to consider this issue as specific tax credit proposals are developed.

***15. The federal government should create a tax credit to encourage employers to increase expenditures on education and training, guided by the concerns discussed above.<sup>1</sup>***

The extent and content of employer-provided education and training are major determinants of workers' economic futures. Consequently, workers want to participate in the design of these programs. Recent successful collaborations between unions and management in the automobile and telecommunications industries, as well as participative training programs in the computer and health care industries, have shown the tremendous value of worker input in the design and operation of training programs.

***16. Employers should be encouraged to seek input from workers in making decisions about training. The Department of Labor should collect and disseminate information on successful collaborative training programs.***

Just as the corporate tax treatment of employer-provided education and training expenses can affect the level of human capital investment, so too can the personal tax rules. For 10 years ending in 1988, employer-provided education was not treated as taxable income to the employee. With the expiration of section 127 of the personal income tax code at the end of 1988, employer-provided education benefits became taxable income if the education was not required for the employee's current position. This new treatment discourages workers from accepting employer-provided education related to new occupations. Many low and middle income workers cannot afford to pay taxes on these benefits, even if the education is crucial for advancement. Tax provisions that discourage preparation for new occupations make little sense in a rapidly changing economy, where our workforce must adapt with increasing speed.

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<sup>1</sup> Commissioner Becker has requested that we note his dissent from this recommendation.

**17. *Personal income tax rules should be changed, restoring the exemption for employer-provided education and training benefits that are not directly related to an employee's current job. Reinstating section 127 of the personal income tax code would achieve this objective.***

Other obstacles that discourage firms from investing more in their workers are the difficulty and expense associated with creating effective training programs. Most firms are not primarily in the business of providing education or training, and many are not familiar with the most effective instructional techniques. These problems are particularly acute for small firms, but even large firms may encounter difficulty providing training in highly specialized skills. Many of these employers would benefit from technical assistance. One promising focus for such assistance is computerized education and training techniques that can often be a cost-effective method of providing training to employees.

**18. *The federal government should encourage the provision of basic skills education, as well as specific job training, by providing technical assistance and collecting information on "best practices." In particular, the use of computerized training methods should be encouraged through the dissemination of information on the use of computers in military, apprenticeship, and other forms of training.***

Another way that firms can reduce the difficulties of providing training is to form multi-employer training programs. The premise of such programs is simple; employers are more willing to invest in their workers' training if they know that other employers in the industry are doing the same. That way, when workers move between firms, the firms' investments are exchanged rather than lost. Unionized construction firms already have multi-employer apprenticeship programs, created under collective bargaining agreements. Individual employers support these programs through contributions to a centralized training fund. The workers who are trained emerge with a set of specific job skills, competencies, and credentials that are of value to many employers.

Programs of this type hold promise for the non-unionized sector as well, but may be viewed as violations of U.S. antitrust laws. The antitrust concern is analogous to that raised regarding multi-firm research and development activities. This concern was addressed through the passage of the National Cooperative Research Act of 1984, which permits the establishment of certain research and development partnerships. A similar legislative initiative may be needed to allow for employer training cooperatives in non-unionized industries.

***19. Employers should be encouraged to work together to establish training programs and certification procedures for skills that workers gain through on-the-job training. Antitrust laws may need to be amended to allow non-unionized employers to cooperate in the provision of training.***

Vendor-provided training is most commonly used by small employers who do not have training programs of their own. Thirty-one percent of all formal, employer-provided training is purchased outside the firm. Working in partnership with business, community colleges are becoming an increasingly vital and dynamic source of education, training, and retraining, by providing customized classes responsive to employers' evolving needs. We endorse these partnerships and encourage their expansion.

As is the case with other types of training, vendor-provided training is most valuable when workers leave the training with certified competencies or other credentials that are well understood and widely valued by employers. Certification programs for many types of training have already been developed by state governments and professional associations. An added advantage of such programs is that they provide both workers and employers with information about the quality of training provided by different vendors. For example, vendors that produce large numbers of graduates who pass the state's occupational test gain a good reputation, making it more difficult for ineffective or fraudulent programs to survive.

***20. The federal government should provide technical assistance to state governments, professional associations, and the business community as they develop explicit standards for job skills and competencies based on specific occupational tests. The results of these tests should be used to create easily understood, portable credentials that certify a worker's skills.***

## GOVERNMENT TRAINING PROGRAMS

Although the private sector has an important role to play in providing lifetime education and training, we cannot realistically expect private employers to meet the universe of need, especially for those individuals with the most severe skill deficiencies. Even if primary and secondary schools are greatly improved, there will always be some individuals who leave school without the basic skills needed to function effectively in the workplace. Providing a "second chance" for those who are severely disadvantaged has been, and must continue to be, a major role of government training programs at the federal, state, and community levels.

An enormous number of adults with literacy problems today will still be part of the workforce well into the twenty-first century.

Increasing the literacy of native-born adults and strengthening the English proficiency of immigrants will be continuing needs. Current government support for the provision of basic education to adults, however, falls far short of meeting those needs. Our literacy programs now serve only 1 to 2 percent of eligible adults. Waiting lists for adult basic education classes average 35 percent of enrollment; waiting lists in urban areas are even longer.

In this country, we are strongly committed to publicly supported education for children and teenagers through the high-school level. This commitment takes the form of a right, established in the constitution of every state. Although relevant federal and state programs exist, the commitment to meeting the basic skill needs of adults is much weaker. That weakness is inconsistent with the importance of upgrading the skill level of the nation's workforce. It has been estimated, for example, that the current waiting lists for programs funded by the Adult Basic Education Act could be eliminated at a cost of \$64 million per year. While this estimate might prove to be conservative if program expansion produces greater demand, it points to one way that our commitment to basic skills education could be strengthened at a relatively low cost.

It is important to recognize, however, that many individuals with young children will have difficulty taking advantage of basic skills education programs unless affordable child care is available. In Chapter 3 we address this issue and make recommendations for increasing the availability and affordability of child care.

***21. Federal and state governments should work together to ensure lifetime access to basic skills education for adults, with the objective of eliminating illiteracy among adults by the year 2000.***

Federal education and training programs were strengthened in 1982 by the passage of JTPA, which focused services on economically disadvantaged adults and youth. Nonetheless, there is room for improving JTPA's effectiveness in providing services to those who need them most. The combined effect of the JTPA's performance incentives and funds allocation formula makes it difficult for deliverers to serve individuals in need of remedial education. As a result, the program tends to "cream," serving some individuals among the economically disadvantaged population who are likely to find employment without assistance. Creaming reduces the effectiveness of the program by devoting resources to some individuals who derive little or no net benefit from participation. In its recent report, the JTPA Advisory Committee suggested changes that would result in more intensive and coordinated services for those among the economically disadvantaged who could benefit most from participation. Amendments proposed by both the Secretary of Labor and members of Congress are consistent with the Committee's suggestions.

**22. We endorse Job Training Partnership Act amendments to increase targeting of resources on those in need of remedial education, to improve coordination of JTPA with other human resource systems, and to increase the emphasis on basic skills remediation.**

Since its enactment in 1982, JTPA has received no increases in funding. Because of inflation, real expenditures are now 25 percent below the 1982 level. In 1987, Title II-A of JTPA (the title receiving the largest allocation) had an annual budget of \$1.9 billion, enabling it to serve only 5 percent of the eligible population of disadvantaged youth and adults.

**23. The level of funding for Title II-A of the Job Training Partnership Act should be increased to enable a greater percentage of the eligible population to be served. In addition, expenditures should be indexed to assure that future funding levels keep pace with inflation.**

Cost/benefit studies indicate that the Job Corps' residential program (Title IV-B of JTPA), which provides a structured and supportive learning environment for extremely disadvantaged youth, is an effective education and training program. We believe that the proven success of the Job Corps program justifies its expansion.

**24. The level of funding for the Job Corps program should be increased.**

Recent legislative changes have reduced the share of JTPA funds to be allocated at the state level by governors. This change has had the unfortunate effect of increasing the difficulty of arranging training programs, such as industry-wide collaborative programs, that span service delivery areas within a state. While we make no recommendation to address this problem, we suggest that the Secretary of Labor consider allocating a significant portion of discretionary JTPA funds to statewide programs.

An additional concern about current government training programs is that many economically disadvantaged men face financial barriers to their participation. Current training programs provide little or no financial support to participants. Since men are typically ineligible for welfare programs, they may find it difficult to sustain themselves and their families while participating in training programs. Efforts are needed to draw low-income men, particularly black men, into training programs and into the labor force.

**25. The federal government should expand and strengthen training programs for the disadvantaged with emphasis on the needs of low-income men with family responsibilities. These programs should provide opportunities for structured work experience, with precisely defined objectives, responsibilities, and duration.**

Disabled persons are another group that can benefit from programs to enhance employability. Limited resources, however, force us to make difficult choices about who will be served by these programs. We can either spend small amounts of money on a large number of people, or we can concentrate our resources on those who stand to make substantial gains. Just as we want JTPA to focus on the severely disadvantaged because they are likely to benefit most, we want our disability programs to focus on those among the disabled who are likely to realize the largest labor market gains.

***26. Vocational rehabilitation and disability programs should try to identify and focus on those individuals who are most likely to gain substantial economic benefit from program participation.***

Another significant public initiative for training and education is student grants and loans. While both grants and loans for student aid have grown in real terms since the 1970s, the growth in loans has been much more dramatic. A recent study by the American Council of Education reports that low-income minority students are less likely to obtain a Guaranteed Student Loan than are similar low-income white students. Other research indicates that grants encourage higher rates of participation in post-secondary education among minorities.

***27. Additional federal resources should be devoted to training and education grants for low-income students who have graduated from high school or received a general equivalency diploma.***

The responsibility for federally supported education and training programs is shared by a variety of federal and state agencies: the Department of Labor's JTPA program is administered by local Private Industry Councils; under the Job Opportunities and Basic Skills (JOBS) component of the Family Support Act, the Department of Health and Human Services funds training programs for welfare recipients through state welfare departments; and adult basic education and vocational education programs are administered through state education departments. This fragmentation and associated administrative complexity make it difficult to integrate training services, respond strategically to evolving workforce needs, and use limited resources efficiently. The necessary coordination across executive agencies can only be achieved through Presidential leadership.

***28. The President should create a permanent committee, including business and labor representatives as well as the Secretaries of Commerce, Education, Health and Human Services, Housing and Urban Development, and Labor, to coordinate human resource policy on a continuing basis. The committee's first task should be to merge education and training programs wherever possible.***

### 3. PUTTING QUALITY TO WORK

There are two fundamental ways to improve the quality of the workforce. One is to invest in the labor market skills of the population; the other is to make more efficient use of the skills that already exist. The previous two chapters have focused on the former; here we consider the latter.

One way to promote labor market efficiency is to reduce the barriers that prevent some individuals from fully participating in the labor force. One of these barriers is employment discrimination against minorities, women, older workers, and disabled persons. Although employment discrimination is prohibited by a variety of state and federal laws, there is a continuing need for vigilance and active enforcement on the part of responsible agencies. These laws are motivated by principles of fairness, but their enforcement creates the additional benefit of promoting efficiency by focusing labor market decisions on objective factors such as skill requirements and applicants' qualifications. We have no new anti-discrimination initiative to recommend, but we encourage the vigorous enforcement of existing laws.

Another way to promote labor market efficiency is to create supportive work environments that ease the tension between work and family responsibilities, thereby facilitating the labor force participation of individuals with such responsibilities. In coming decades, the slow growth of the labor force will create incentives for employers to create supportive work environments. The recommendations in the first section of this chapter suggest several ways to facilitate this process.

Matching job seekers with job vacancies is another important factor determining the efficiency with which the labor market operates. Human resources are wasted if qualified applicants are available while jobs go unfilled. The second set of recommendations in this chapter offers ways to facilitate the process of matching workers with jobs so that the skills already available in the labor market are used more effectively.

Another fundamental determinant of labor market efficiency is the level of worker productivity. The third set of recommendations in this chapter offers ways to increase productive efficiency through worker participation in the management process and through innovative compensation arrangements.

## FACILITATING WORK/FAMILY BALANCING

As women's labor force participation has increased, both dual-earner couples and families headed by single working mothers have become much more common. American workers, both men and women, who in the past had an adult partner in the home, now find themselves juggling work and family responsibilities which are likely to be in frequent, and unavoidable, conflict. The pressures come in many forms including difficulties with child care and elder care arrangements as well as family illness. From the employer's perspective, work/family conflicts lead to unscheduled absences, tardiness, misuse of working time, and difficulty in retaining valued employees and attracting new ones.

Some employers already realize that they can no longer adhere to the old principle that family issues have no place at work. Enlightened self-interest has inspired a few of them to establish programs to help employees solve work/family problems. Emerging labor shortages will undoubtedly induce additional employers to do the same. There is a compelling public interest in accelerating the process of creating supportive work environments that enable all workers to be full participants in the workforce.

The labor force participation rate of married women with young children has, on average, increased more than one percentage point each year since 1950. Today, 63 percent of all mothers with children under the age of 14 are in the labor force. This economic change has brought about unprecedented social changes, including increased needs for day care for pre-school children and after-school care for many older children.

We have confined our deliberations to the child care needs of parents who are employed, seeking employment, or participating in an education or training program. As noted in the Introduction, the developmental needs of disadvantaged children whose parents are not in the labor force was deemed beyond our purview.

Throughout our year-long deliberations, we followed the considerable number of legislative initiatives designed to address the child care issue. Because of the rapid evolution of these initiatives, it was not possible for us to endorse a particular bill. We have, therefore, chosen to make recommendations that describe certain features for strengthening our child care system while maximizing parental choice among a variety of affordable, quality child care options.

Community-based resource and referral organizations have demonstrated their effectiveness both in providing the information that parents need to make appropriate choices and in stimulating the supply of child care services. In most communities, however, these organizations are inadequately funded. We are convinced that an

expansion of community-based resource and referral organizations would have three major benefits. First, it would help parents find appropriate child care arrangements while preserving maximum parental choice. Second, it would enhance each community's ability to identify and react to its own needs and priorities, including pre-school and after-school programs, sick child care, and transportation. Third, it would serve as a magnet for community-based, public/private partnerships, thereby creating a vehicle for employer involvement and support. In sum, community-based resource and referral organizations can create a facilitative network without adding an additional layer of government. We strongly urge federal leadership to encourage the expansion of community-based child care resource and referral organizations.

**29.** *The federal government should provide grants to the states to support the efforts of community-based child care resource and referral organizations.*

The child care concerns of many parents are aggravated by the high cost of quality care. Child care is a financial burden to many families; it is virtually unaffordable to a large number of low-income Americans. For these people, child care problems can be a serious barrier to job training and employment.

Under current tax law, a child care tax credit is available to families with working parents who have children under the age of 15. A high degree of flexibility in the program allows parents to select from a wide variety of arrangements. We are persuaded that the existing tax credit for child care is an extremely useful way to help parents with their child care expenses while maintaining parental choice. The principal drawback to the current credit is its irrelevance to poor families because they typically pay no income taxes. This problem could be corrected by making the credit refundable to low-income parents.

**30.** *The existing child care income tax credit should be made refundable to parents too poor to pay income taxes.*

Even after the credit is made refundable, many families will still lack the resources to pay for quality child care. We believe that the federal government should provide additional child care subsidies to low-income families. We have been unable to agree on a choice among the alternative ways to provide increased subsidy, such as a more generous child care tax credit, vouchers, or grants to child care providers. We do agree, however, that increased federal subsidization should be targeted on low-income families.

**31. *The federal government should increase its subsidization of the child care expenses of low-income families.***<sup>2</sup>

Another way to help families with their dependent care needs is to encourage employers to provide dependent care benefits. Such encouragement could take the form of tax incentives or matching grants for employers, but we are concerned about the fiscal implications of these approaches. A second way to encourage the provision of dependent care benefits is to demonstrate the returns that employers can expect from such programs. While anecdotal evidence suggests that employer-sponsored child care initiatives improve employee morale and reduce tardiness and absenteeism, little hard evidence exists on the ability of these initiatives to improve employees' productivity or employers' profitability. Many employers, especially smaller ones, are likely to be more willing to provide child care or other work/family support if such support can be demonstrated to have positive, bottom-line effects.

**32. *Government should support and disseminate research that examines the effectiveness and profitability of different types of employer-sponsored dependent care arrangements. The Secretary of Labor should encourage employers to offer the types of benefits that are found to be most effective.***

Another important issue related to the labor force participation of individuals with young children is employers' parental leave policies. The availability of such policies can greatly improve parents' abilities to fulfill both their family and work responsibilities. After extensive deliberation, we have been unable to reach agreement on whether employers should or should not be required by law to provide parental leave. As a result, we have chosen not to make any recommendation on mandated parental leave. We do, however, strongly encourage employers to make such leaves available, and we expect that future labor shortages will compel many employers to do so.

A related dilemma in creating supportive work environments is the need to offer employees flexible work schedules without jeopardizing the firm's productivity and profitability. Such flexibility may be particularly valuable for older workers and women with young children. Some employers have already adopted a variety of flexible scheduling arrangements, including flextime, part-time employment, and leaves of absence. Of the many employers who have not yet introduced scheduling flexibility, some may find it difficult to do so because of the nature of their business. We believe, however, that other employers would be able to adopt these arrangements and may simply need encouragement to do so.

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<sup>2</sup> Commissioner Becker has requested that we note his dissent from this recommendation.

**33.** *Public and private employers, in cooperation with employees, should increase the availability of flextime, leaves, career-oriented part-time employment with fringe benefits, and other arrangements to increase work schedule flexibility. The Secretary of Labor should use her position of leadership to expand such arrangements within the Department of Labor and to encourage their adoption by other public and private employers.*

**34.** *Federal and state governments should examine existing overtime laws to determine whether they can be modified to facilitate voluntary flextime arrangements without compromising the protection of workers provided by the overtime laws.*

## MATCHING WORKERS AND JOBS

One way to enhance labor market efficiency is to facilitate the process of matching the skills that are needed by employers with the skills job seekers bring to the labor market. Several existing institutions and programs influence this matching process including the public employment service, the unemployment insurance system, U.S. immigration policy, and programs for dislocated workers. Since the General Accounting Office has already initiated a major evaluation of dislocated worker programs, we chose not to devote additional resources to a second evaluation. This section focuses on the public employment service, the unemployment insurance system, the enhancement of workers' geographic mobility, and immigration policy.

The public employment service (ES) is made up of the U.S. Employment Service and individual State Employment Security agencies, all supported by an annual federal budget of approximately \$800 million. This federal/state system is responsible for delivering a variety of labor market services including: the matching of job seekers with job vacancies through testing, assessment, and referral activities; the enforcement of the job search requirements of unemployment insurance and other programs; and data collection for the Bureau of Labor Statistics.

Given the significance of these activities, it is important to find ways to make the ES as effective as possible. The most promising way to improve the ES would be to develop a system of accountability similar to that used in JTPA. Accountability must, however, be introduced in ways that both recognize the multiple functions assigned to the ES and preserve and enhance the flexibility available at the state level.

The Resource Allocation Formula (RAF), a system for creating accountability in the ES, was tried in the past with little success. The RAF was a performance-based allocation mechanism that encountered major problems of inflexibility and difficulty in measurement. Eventually this formula was abandoned. Since then, however, our experience with JTPA has taught us a great deal about the use of performance standards in employment and training programs. Much of what has been learned could now be used by the ES. The Secretary of Labor already has the statutory authority under the 1982 Wagner-Peyser amendments to set performance standards for the ES; we urge the Secretary to consider performance standards for the ES similar to those used by JTPA.

Some adjustments would be needed to accommodate the mission of the ES. Standards should be based on placement rates, wage rates, client characteristics, new job orders, differences in state economies, and efforts to integrate ES services with other federal, state, and local employment and training programs. There will inevitably be costs associated with implementing performance standards, but the JTPA experience convinces us that the benefits of such an undertaking would justify the costs. Once ES performance standards are in place, states should be encouraged to consider innovative methods to meet the standards.

***35. The Department of Labor should reconsider the use of performance standards for the employment service in light of what has been learned from the experience with the Job Training Partnership Act.***

Another major institution affecting labor market efficiency is the unemployment insurance (UI) system. This system is a combination of federal and state programs which fund payments to laid-off workers with payroll taxes collected from employers. One major concern about today's UI system is the surprisingly small percentage of unemployed individuals who receive UI benefits. Between 1980 and 1988, the percentage of the unemployed who received benefits fell from 50 percent to 32 percent. This change has already prompted a substantial effort by the Department of Labor to understand and address this problem. Unfortunately the process will take at least two years of data collection and analysis. We strongly endorse this effort and expect that the results of the study will be of great use in resolving the coverage problem. While it would be premature for us to make recommendations on the coverage issue, other important UI issues related to experience rating, employer incentives, and the solvency of state systems can and should be addressed.

The UI system is financed by payroll taxes that are "experience rated"; that is, each firm's tax payments are based on the extent to which its employees use the UI system. The experience rating is, however, incomplete; firms that make heavy use of layoffs have tax obligations that are smaller than the UI benefits paid to workers laid off by those firms. Other firms that use layoffs sparingly have tax obligations that are larger than the UI benefits paid to their laid-off workers. The system results in a subsidy from firms that use layoffs sparingly to firms that make heavy use of layoffs.

The degree of experience rating within each state is determined by the minimum and maximum tax rates set by the state UI system. If a firm is at the maximum tax rate, layoffs will not increase the firm's tax obligation. Hence, firms who are facing the maximum tax rate have an incentive to respond to economic downturns by laying off workers rather than by cutting back on workers' hours. There is substantial evidence that firms at the maximum tax rate do, in fact, tend to use this option; that is, research indicates that our current UI system encourages layoffs.

Another important aspect of the UI system is the fact that employers pay taxes on workers' wages up to a maximum level of earnings, called the tax base. If the tax base is too low, employers have an incentive to substitute smaller numbers of high-skill workers (with high earnings) for larger numbers of low-skill workers (with low earnings). While the magnitude of this incentive is likely to be small, it should, nonetheless, be eliminated.

Finally, a state's choice of a UI tax base and rate schedule affects not only firms' decisions about hiring and laying off workers, this choice also affects the solvency of the state's UI system. Many states rely on tax surcharges to increase their UI solvency, which has the undesirable effect of reducing the degree of experience rating in the system. The preferred alternative is for states to adjust their tax rates and tax base to increase both their fund solvency and their degree of experience rating.

***36. State Unemployment Insurance systems should be modified to increase the degree of "experience rating" and reduce the risk of fund insolvency. The degree of experience rating can be increased by changing the tax base, tax rates, and other features of state systems (such as non-charged benefits). Measures taken to reduce risks of insolvency should be designed to increase, rather than decrease, the level of experience rating in states. The Unemployment Insurance Service of the Department of Labor should encourage the adoption of such changes by providing technical assistance and by monitoring the degree of experience rating of individual state systems.***

One perennial difficulty in matching workers and jobs is that the job vacancies and the unemployed workers are often in different parts of the country. It is in the public interest to help job seekers explore opportunities in other locations and relocate when necessary. Currently, moving expenses are subsidized through the personal income tax. Despite this subsidization, however, a geographic mismatch of workers and jobs remains.

***37. The federal government should develop programs to encourage nationwide job search and worker relocation. In particular, these programs should provide residents of each state with information about job openings in other states and develop creative, low-cost measures to provide transportation for job seekers and workers who relocate.***

Immigration is another important factor influencing the operation of the labor market. The current focus of immigration policy is on the humanitarian principles of family reunification and refugee resettlement. During fiscal years 1985-1987, an average of 591,078 immigrants legally entered the United States each year. Fewer than 9 percent of these immigrants entered under worker preferences, which by law are subject to an annual cap of 54,000. In fact, immigrants admitted as workers accounted for less than 4 percent of all immigration because their spouses and unmarried minor children used more than one-half of the available visas in the worker preference categories.

In designing immigration policy, it is important to recognize that long-term market forces are likely to correct labor shortages, even if immigration policies are not adjusted. By using immigration policies to relieve shortages, we may miss the opportunity to draw additional U.S. citizens into the economic mainstream. We should always try, therefore, to train citizens to fill labor shortages. In some cases, however, it may be necessary to draw on foreign workers more heavily than we do today.

***38. Although our immigration policy should be made more responsive to labor market needs, we must always strive to upgrade the skills of American citizens before we draw on foreign workers to fill shortages. Increased sensitivity to labor market needs should be achieved without compromising the humanitarian objectives of immigration policy. To establish a sound basis for revising immigration policy, the Department of Labor should focus significant research effort on the likely impacts of proposed changes in immigration policy on skills gaps and wage structures.***

## WORKER PARTICIPATION AND COMPENSATION

A growing body of evidence indicates that worker productivity can be increased through innovations in employee relations. Programs that allow employees to participate in workplace decisions affecting their jobs appear to have a particularly strong effect on performance and productivity. Financial incentives such as gainsharing and ownership programs give employees a stake in the goals of the firm and can create incentives for employees to advance those goals. Available research suggests that participation, financial incentives, and other innovations are particularly effective when they are introduced as a package.

Work environments that involve a high degree of participation typically have low rates of worker turnover. With greater stability, firms are willing to invest more in the training of their workers, thereby increasing workers' productivity and earnings as well as firms' profits. Increasing worker participation may, therefore, be an essential component in creating a more productive, high-wage economy.

One obstacle to the implementation of participation programs is our lack of knowledge regarding which types of programs are most effective in different contexts. Most of the information we have comes from success stories; we know very little about situations in which the programs have failed. We need carefully designed experiments in a variety of environments where the programs are not introduced as a result of prior problems (or successes) and where the situation before and after can be carefully observed.

Another obstacle that inhibits increased use of participation programs in non-union firms is Section 8(a)(2) of the National Labor Relations Act. This section of the Act creates potential confusion about the legality of participation programs by making it an unfair labor practice for an employer to "dominate or interfere (with) . . . or contribute financial or other support" to a labor organization. A company-sponsored participation program could be considered a labor organization if it addressed terms and conditions of employment and could, therefore, be illegal. Experts at the Department of Labor and elsewhere believe that the potential for litigation in this area has inhibited participation programs.

***39. The federal government should encourage worker participation by disseminating information on "best practices," by setting an example with participation programs for federal employees, and by clarifying the legality of cooperative programs under the National Labor Relations Act.***

While the structure of employee compensation is, and should be, set by the private sector, the federal government can help to enhance labor market efficiency by providing information on innovative and "best practice" compensation arrangements.

***40. The Department of Labor should conduct research and disseminate information to help employers and employees explore the promises and problems of innovative compensation plans.***

Pensions and other fringe benefits are an important component of employee compensation. As our workforce has become more mobile, we have become increasingly concerned about the portability of pensions and other fringe benefits.

***41. The Secretary of Labor should initiate a study of both the opportunities and problems involved in adding portability features to existing public and private pension programs and other fringe benefits.***

Effective relations between labor and management are also an important factor in ensuring workforce quality and labor market efficiency. Many observers believe that our labor laws and policies are an outmoded remnant of an era when adversarial relationships were the norm. These observers also suggest that the present system of labor-management relations and the consequent employment practices impede efforts to develop greater cooperation between labor and management. Questions about the relationship between public policy and labor-management relations are complex and deserve a separate, in-depth examination by a task force of leaders from labor, business (including small business), and government. Among other issues, this task force should address worker participation; ways to restructure the union certification process to reduce litigation and delay; the distinction between mandatory and permissive bargaining topics; and issues concerning the definition of bargaining units.

***42. The Secretary of Labor should create a tripartite task force to examine labor-management relations and to provide recommendations for public policy.***

## 4. UNDERSTANDING THE WORKFORCE

It is imperative that our human resource policy be informed by accurate data and careful research. The collection, analysis, and dissemination of information is a traditional and appropriate role of government. Today the Department of Labor, through its Bureau of Labor Statistics (BLS), plays a major role in the federal government's data collection effort. While the quality of data currently collected by the BLS is exceptional, budgetary limitations have constrained the ability of the BLS to develop new data sources in response to emerging needs. The first section of this chapter establishes the pressing need for additional support of the BLS.

In addition to collecting data, both the Departments of Labor and Education conduct and support a broad array of research, evaluation, and information dissemination activities intended to inform public policy and private action. It is essential that these activities be guided by rigorous standards of social science research and that they be carefully focused on the most pressing policy issues. In the second section of this chapter, we make suggestions concerning a human resource research agenda for the 1990s.

### LABOR MARKET DATA FOR THE 1990s

Data provided by the BLS are used by the government to implement programs, monitor the economy, allocate funds, and index transfer payments. These data are also used by the private sector for economic planning, collective bargaining, wage administration, and escalation of long-term contracts. Financial markets around the world await the monthly BLS releases to judge the future outlook of the American economy and the likely directions of financial markets.

The data provided by the BLS affect billions of dollars of public and private expenditures. For example, a 1 percent increase in the Consumer Price Index (CPI) leads to increased federal expenditures on entitlement programs and reduced revenues from (indexed) income tax receipts totaling \$5 billion. One-half of the U.S. population live in households where income is directly affected by changes in the CPI. Changes in the Producer Price Index can trigger as much as \$300 billion worth of changes in long-term contracts. Local area unemployment statistics are important components of formulae which allocate billions of dollars of federal funds to states and local areas. Finally, wage information collected by the BLS affected nearly \$40 billion in 1987 funding for Rehabilitation Services, Aid to Families with Dependent Children (AFDC), Medicaid, vocational education, alcohol and drug abuse programs, and mental health services.

The BLS experienced budget reductions in the late 1970s and extremely deep cuts in the early 1980s. As a result, BLS eliminated 19 major data collection programs in 1982 alone. Since that time there has been a series of across-the-board reductions in the BLS budget. In this climate, it has been extremely difficult to undertake new initiatives and to incorporate new methodological improvements into existing programs. Rather, considerable effort has been made simply to protect and preserve the integrity of current data dissemination efforts.

There is a pressing need for quick access to new household survey data. While regular monthly employment surveys are processed very quickly, it takes at least two years to set up, collect, and analyze new household surveys in response to special needs. It is difficult, if not impossible, for policymakers to wait two years for answers to their questions. In recent years the BLS has developed a capability to conduct timely surveys of firms, but resource constraints have prohibited comparable innovation for household surveys. Such surveys would cost \$1 million annually, and would cut by one-half the time needed to answer pressing policy questions. This is but one example of an important need that has gone unmet for want of a relatively small amount of money.

***43. The funding of the data collection and dissemination efforts of the Bureau of Labor Statistics should be significantly increased. New resources should be devoted to the development of quick turnaround household surveys, support of longitudinal data bases, and pilot studies of new data methods. For more specific information on priority initiatives, see Commission background paper #44.***

## A HUMAN RESOURCE RESEARCH AGENDA FOR THE 1990s

Quality, nonpartisan labor market research is the best foundation for labor market policy. Absent this research, policy will be based, at best, on intuition and, at worst, on special interests. As a part of our effort to review human resource policy, we commissioned a series of background papers summarizing a broad spectrum of academic and nonacademic research on subjects relevant to our charter. The titles and authors of these papers are listed in Appendix 3. The dearth of reliable information on many important questions frustrated many paper authors and impeded our deliberations.

This paucity of research is due in large part to low levels of government funding for human resource research. Since 1975, inflation-adjusted funding levels for research and evaluation have been cut by 52 percent in the Department of Labor, while those in the Department of Education have been cut by 63 percent. We

believe that it is essential that the Departments of Labor and Education take the lead in addressing this problem by increasing their support of research.

One particularly important focus for their research is the effectiveness of government-funded human resource programs. Policymakers need to know which programs work, which do not, and why. Unfortunately, answering these questions is often expensive and time consuming. For example, the process of evaluating JTPA is expected to cost \$20 million and take a total of six years (ending in 1992). This commitment to research is entirely reasonable since the program spends nearly \$4 billion each year. One reason for the expense of the JTPA evaluation is the high cost of conducting experiments in which randomly selected individuals participate in a program and are then compared to individuals who are not participants. This experimental approach, modeled on those used in medicine and the physical sciences, has produced most of what little we know about the effectiveness of training programs. Unfortunately, we know even less about the long-run effects of training programs because long-run experiments are particularly expensive and time consuming. Hence, we call for an increased commitment to principles of experimental design in the long-run evaluation of human resource programs.

Another important focus for Department of Labor funded research is to develop a better understanding of emerging labor market trends. The growth in the proportion of minority men with low earnings is an example of an important but poorly understood trend. A better understanding of this, as well as other phenomena, would enable policymakers to design more effective programs for assisting those who are disadvantaged in the labor market.

It is also essential that Department of Labor research focus on the study of private sector labor market innovations by collecting information on which innovations work, which do not, and the conditions under which some work while others do not. The dissemination of this information will allow many organizations to learn from the successes and failures of a few. In some cases the Department of Labor may be able to encourage private initiatives that facilitate measurement of the results of specific innovations (e.g., controlled experiments). In general, the most important factors to be measured are bottom-line effects on productivity, employees' incomes, and employers' profits.

***44. Research should be viewed as a major component of the missions of both the Departments of Labor and Education and should be funded accordingly. The research agenda should emphasize experimental evaluations of human resource programs, analysis of determinants of the labor market status of the economically disadvantaged, and collection and dissemination of information on best employment practices.***

# APPENDICES

# APPENDIX 1: COMMISSION CALENDAR

<i>July 11, 1988</i>	Establishment of Commission on Workforce Quality and Labor Market Efficiency by the Secretary of Labor, The Honorable Ann McLaughlin
<i>September 19, 1988</i>	White House Reception for Commissioners with President Ronald Reagan
<i>September 19, 1988</i>	First Commission Meeting, U.S. Department of Labor, Washington, DC
<i>December 6, 1988</i>	Second Commission Meeting, U.S. Department of Labor, Washington, DC
<i>April 4, 1989</i>	Third Commission Meeting, U.S. Department of Labor, Washington, DC
<i>May 2, 1989</i>	Public Hearing, Northlake Community College, Irving, Texas
<i>May 4, 1989</i>	Public Hearing, Indiana World War Memorial, Indianapolis, Indiana
<i>May 9, 1989</i>	Public Hearing, School District of Philadelphia, Philadelphia, Pennsylvania
<i>May 11, 1989</i>	Public Hearing, Best Western Grosvenor, San Francisco, California
<i>May 12-13, 1989</i>	Commission Conference, "International Lessons for U.S. Employment Policy," Institute of Industrial Relations, University of California at Berkeley
<i>June 3-4, 1989</i>	Commission Subcommittee Meetings, Annapolis, Maryland
<i>June 20, 1989</i>	Fourth Commission Meeting, American Red Cross Headquarters, Washington, DC
<i>August 1, 1989</i>	Final Commission Meeting, National Alliance of Business, Washington, DC
<i>Labor Day 1989</i>	Release of Commission Report to the Secretary of Labor, The Honorable Elizabeth Dole

## APPENDIX 2: COMMISSION CHARTER

**Structure:** The commission shall consist of not more than 21 members appointed by the Secretary of Labor and shall include public officials, leading business and union representatives, educators, and other members of the public knowledgeable about human resources. The commission shall be chaired by a person chosen by the Secretary of Labor. If the commission chooses to operate through subcommittees such subcommittees shall present to the commission their findings and recommendations for action by the full commission.

**Mission:** The commission is charged with making specific recommendations for the Department of Labor and the nation to increase the excellence of the American workforce. To carry out its mission the commission shall have the following direct responsibilities:

1. Examine the roles and effectiveness of privately and publicly provided job training and education.
2. Determine the best mechanisms to keep the education system and training providers continuously informed of the changing skill needs of employers and workers.
3. Consider the problem of financing private investments in human capital and determine the best ways to access financial capital markets for that purpose.
4. Assess the appropriate roles of employers, unions, and government in retraining and relocating dislocated workers.
5. Examine ways in which private and public job placement agencies can enhance the efficiency of the changing labor market of the future.
6. Assess the need for greater flexibility of employers' policies to facilitate labor force entry.
7. Evaluate the opportunities to enhance productivity through alterations of the employment arrangement such as innovative pay systems and benefit structures, employment security provisions, and worker involvement.

The commission shall have such other responsibilities in the field of human resources as the Secretary may deem necessary to fulfill its mission.

**Meetings:** The commission shall meet at least four times a year at the call of the commission chairperson. Any subcommittees of the commission shall meet at the call of their chairperson with the concurrence of the commission chairperson. Hearings on behalf of the commission may be held by one or more members of the commission with the authorization of the commission chairperson.

**Management:** The commission shall have an executive director who shall be an academic in the field of human resources. The staff of the commission shall be composed principally of employees of the Department of Labor. The commission is authorized, within the limits of its budget, to contract out such of its work as the commission chairperson deems necessary in order to carry out its mission.

**Reports:** The commission shall issue a brief report of its work on December 15, 1988. A final report making specific recommendations shall be made at the termination date.

**Termination Date:** It is anticipated that the commission shall require 12 months to complete its work. The commission shall terminate, in any event, not later than 15 months from the date of this charter.

## APPENDIX 3: BACKGROUND PAPERS

The background papers listed below were solicited to assure that the process of developing policy recommendations would be informed by a comprehensive review of literature relevant to the diverse issues the Commission would address. The papers reflect the thoughtful work of leading experts from academic and private research institutions as well as Commission staff. These researchers became our colleagues while transforming disparate sources of information into a base of knowledge for our deliberations on policy. The Commission gratefully acknowledges their effort.

The papers are available in a companion volume to this report titled, *Investing in People: A Strategy to Address America's Workforce Crisis, Background Papers*.

Paper	Author(s)
1. "Incentives for Learning: Why American High-School Students Compare So Poorly to Their Counterparts Overseas"	John Bishop Cornell University
2. "Schooling for the Modern Workplace"	Russell W. Rumberger University of California at Santa Barbara Henry M. Levin Stanford University
3. "Trends in Science and Engineering Education and the U.S. Labor Market"	Michael G. Finn National Research Council
4. "Empowering Schools and Teachers: A New Link to Jobs for the Non-College Bound"	James E. Rosenbaum Northwestern University
5. "Second Chance Basic Skills Education"	Larry Mikulecky Indiana University at Bloomington
6. "The Firm's Decision to Train"	Donald O. Parsons Ohio State University
7a. "Empirical Evidence on Private Training"	Charles Brown University of Michigan
7b. "Evidence on Private Sector Training"	Stephen L. Mangum Ohio State University
7c. "Evidence on Private Sector Training"	William M. Ouweneel IBM Corporation
8a. "Introducing New Technology into the Workplace: The Dynamics of Technological and Organizational Change"	Patricia M. Flynn Bentley College
8b. "Introducing New Technology into the Workplace: Retraining Issues and Strategies"	Greg Kearsley Park Row, Inc.

9. "Survey of Government-Provided Training Programs"
 

Burt S. Barnow  
Lewin/ICF

Laudan Y. Aron  
Lewin/ICF
10. "The Effectiveness of Government Training Programs"
 

Margaret C. Simms  
Joint Center for Political Studies
11. "Black Male Youth: Their Employment Problems and Training Programs"
 

Robinson G. Hollister  
Swarthmore College
12. "Facilitating the Flow of Information Between the Business and Education Communities"
 

Jorie W. Philippi  
Performance Plus Literacy Consultants
13. "Issues in Financing Post-Secondary Education and Training"
 

Arthur M. Hauptman  
Consultant

Jamie P. Merisotis  
Consultant
14. "The Tax Treatment of Training and Educational Expenses"
 

John M. Quigley  
University of California at Berkeley

Eugene Smolensky  
University of California at Berkeley
15. "The Unemployment Experience of the Workforce"
 

Jonathan S. Leonard  
University of California at Berkeley

Michael W. Horrigan  
Bureau of Labor Statistics
16. "Unemployment Insurance: The Worker's Perspective"
 

James C. Cox  
University of Arizona

Ronald L. Oaxaca  
University of Arizona
17. "Unemployment Insurance Financing, Short-Time Compensation, and Labor Demand"
 

Daniel S. Hamermesh  
Michigan State University and National Bureau of Economic Research
18. "Utilization of Public and Private Job Search Mechanisms: The Experiences of Employers and Employees"
 

Harry J. Holzer  
Michigan State University
19. "The Role of the Employment Service"
 

Malcolm S. Cohen  
University of Michigan

David W. Stevens  
University of Missouri at Columbia
20. "Labor Force Participation of Older Workers"
 

Richard V. Burkhauser  
Vanderbilt University

Joseph F. Quinn  
Boston College

- |   |   |
|---|---|
| 21. "Labor Force Participation and Employment Among Young Men: Trends, Causes, and Policy Implications" | Harry J. Holzer<br>Michigan State University  |
| 22. "Labor Force Participation Among the Economically Disadvantaged"                                    | Robert Moffitt<br>Brown University  |
| 23. "Labor Force Participation Among Disabled Persons"  | Monroe Berkowitz<br>Rutgers University<br><br>Edward Berkowitz<br>George Washington University                        |
| 24. "Labor Force Participation of Dual-Earner Couples and Single Parents"                               | Ellen Galinsky<br>Families and Work Institute   |
| 25. "Cultural Issues Affecting Labor Force Participation"   | Harriet Pipes McAdoo<br>Howard University   |
| 26. "Facilitating Women's Occupational Integration"   | Deborah M. Figart<br>American University<br><br>Barbara R. Bergmann<br>American University                            |
| 27. "Impact of Child Care on the Bottom Line"   | Dana E. Friedman<br>The Conference Board  |
| 28. "Addressing the Supply Problem: The Family Day Care Approach"                                       | Dana E. Friedman<br>The Conference Board  |
| 29a. "Part-Time and Temporary Work"   | Rebecca M. Blank<br>Princeton University  |
| 29b. "Temporary Work"   | Heidi Hartmann<br>Institute for Women's Policy Research<br><br>June Lapidus<br>University of Massachusetts at Amherst |
| 30. "Working Hours Flexibility"   | Graham L. Staines<br>Bank Street College of Education   |
| 31. "Mixing Careers and Child Rearing"  | Charles S. Rodgers<br>Work/Family Directions, Inc.<br><br>Francene S. Rodgers<br>Work/Family Directions, Inc.         |
| 32. "The Effects of Mandating Benefits Packages"  | Olivia S. Mitchell<br>Cornell University and National<br>Bureau of Economic Research.                                 |
| 33. "Innovative Compensation Systems: Implications for Employers, Unions, and Government"               | Michael Schuster<br>Syracuse University   |
| 34. "Employee Ownership Plans"  | Robert N. Stern<br>Cornell University   |

- 35a. "Employee Participation, Work Redesign, and New Technology: Implications for Public Policy in the 1990s"  
 Thomas Kochan  
 Massachusetts Institute of Technology  
 Joel Cutcher-Gershenfeld  
 Michigan State University  
 John Paul MacDuffie  
 Massachusetts Institute of Technology
- 35b. "Employee Participation and Involvement"  
 David I. Levine  
 University of California at Berkeley  
 George Strauss  
 University of California at Berkeley
36. "Efforts to Solve Quality Problems"  
 Michael J. Smith  
 University of Wisconsin at Madison  
 Francois C. Sainfort  
 University of Wisconsin at Madison  
 Pascale C. Sainfort  
 University of Wisconsin at Madison  
 Conrad Fung  
 University of Wisconsin at Madison
37. "Impediments to Innovative Employee Relations Arrangements"  
 Richard N. Block  
 Michigan State University  
 Benjamin W. Wolkinson  
 Michigan State University
38. "Cooperative Efforts to Solve Employment Problems"  
 William N. Cooke  
 University of Michigan
39. "Current Economic Issues in Employee Benefits"  
 Stephen A. Woodbury  
 W.E. Upjohn Institute for Employment Research and  
 Michigan State University
40. "Pre-Employment Testing and Employee Productivity"  
 Lawrence M. Rudner  
 LMP Associates and American Institutes for Research
41. "Functional Context Education: Policy and Training Methods from the Military Experience"  
 Thomas G. Sticht  
 Applied Behavioral & Cognitive Sciences, Inc.
42. "The Role of Unions in Improving Workforce Quality, Labor Market Efficiency, and Effective Employee Management"  
 H. Peter Cappelli  
 Commission Staff and University of California at Berkeley
43. "Employer Training of Work-Bound Youth: An Historical Review and New Results"  
 Nevzer Stacey  
 Commission Staff and U.S. Department of Education  
 Nabeel Alsalam  
 U.S. Department of Education
44. "Data Needs for Labor Market Analysis"  
 Michael W. Horrigan  
 Commission Staff and Bureau of Labor Statistics

# APPENDIX 4: PUBLIC HEARINGS

The Commission held public hearings in order to offer a wide spectrum of individuals and organizations the opportunity to provide their views and recommendations on improving the workforce. Hearings were held in Irving, Texas, May 2, 1989; Indianapolis, Indiana, May 4, 1989; Philadelphia, Pennsylvania, May 9, 1989; and San Francisco, California, May 11, 1989. These locations were selected to encourage broad-based participation both with respect to regions of the country and diversity of perspective.

The public was asked to address a number of topics related to workforce quality and labor market efficiency. Among these topics were education and training and their financing and tax treatment, matching workers and jobs, enhancing labor force participation through workplace flexibility, and industrial relations and productivity.

One hundred-sixteen (116) witnesses presented testimony at the hearings. Written statements were submitted by an additional 105 individuals and organizations. The hearings were a rich source of information, providing many new perspectives on the issues in our charter. The Commission expresses its appreciation to the members of the public who shared their thoughts with us.

## WITNESSES PRESENTING TESTIMONY

Mark Ahearn  
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United States Senate  
State of Indiana  
Indianapolis, Indiana

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Philadelphia, Pennsylvania

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Assistant Superintendent of Public Instruction, and  
State Director, Career-Vocational Education  
California State Department of Education  
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President, Career Resources  
North Central Indiana Private Industry Council, Inc.  
Peru, Indiana

Deborah Arrindell  
Public Policy Director  
Wider Opportunities for Women, Inc.  
Washington, DC

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Executive Vice President  
Bank of America  
San Francisco, California

Marvin E. Berger  
Chairman, Pennsylvania State Job Training  
Coordinating Council and  
President, Rayco Auto Services, Inc.  
Media, Pennsylvania

Sally Boofer  
Manager of Field Operations, Indiana Program  
Green Thumb, Inc.  
Seymore, Indiana

Glen Bounds  
Provost  
Dallas Community College District  
Dallas, Texas

John C. Brooks  
Commissioner, State of North Carolina  
Department of Labor  
Raleigh, North Carolina

Judith Brown  
Member, Board of Directors  
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Chairman  
Richmond Private Industry Council, Western Job  
Training Partnership Association and  
Human Resources Director  
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Richmond, California

Dennis L. Bybee  
Chief, Management Information Systems Division  
Department of Defense Dependents Schools  
Arlington, Virginia

Dale Campbell  
Assistant Commissioner for Community Colleges and  
Technical Institutes  
Texas Higher Education Coordinating Board  
Austin, Texas

Ralph G. Cantrell  
Commissioner  
Virginia Employment Commission  
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Simpson Paper Company  
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Indiana and  
Member, Indianapolis Private Industry Council  
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The Honorable Ronald R. Cowell  
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The Honorable Kay A. Orr  
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The Honorable Nancy Pelosi  
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The Honorable Rudy Perpich  
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# APPENDIX 5: OUTREACH PROGRAM

The outreach program was an important component of the Commission's fact-finding process. The program involved meetings between senior staff of the Commission and representatives of major labor, business, education, employment and training, advocacy, research, and community-based organizations to discuss the Commission's charge and to become aware of the multitude of perspectives on the issues before us. The meetings were scheduled as an early event on the Commission's calendar to assure that our recommendations benefited from the extensive knowledge and experience of these organizations.

The organizations with whom we met generously shared data, research results, insights, and ideas. The Commission gratefully acknowledges the contributions of these organizations and their representatives.

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Laurie J. Bassi     Deputy Director  
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