

Job growth slows during crises overseas

Foreign economic crises ate into the demand for U.S. goods and reduced U.S. manufacturing jobs, but hiring increased in construction, finance, and government; unemployment was low throughout the year

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Contrasts characterized the job market in 1998. In some industries employment expanded at an increased rate, while in others employment ceased to expand. Furthermore, several industries laid off substantial numbers of workers. Low interest rates and the associated high demand for housing contributed to large gains in employment in construction and some related industries, including finance. At the same time, severe economic problems in Asia reduced foreign demand for U.S. goods, contributing to a loss of almost 170,000 jobs in U.S. manufacturing. The devaluation of several Asian currencies made some imported goods more attractive in price, reducing domestic employment in apparel and other industries. In addition, U.S. job growth decreased in temporary help agencies and in health care. Overall, the 2.3-percent U.S. job gain in 1998 was slightly lower than the average gain of 2.6 percent during the previous 5 years of expansion in employment. (Chart 1 shows that the overall rate of job growth from 1993 through 1997 was relatively consistent and similar to that of the extended expansion of the 1980s.)

In 1998, the unemployment rate reached its lowest level in nearly three decades. It edged down early in the year to 4.3 percent and remained near that level for the rest of the year. Long-term joblessness, however, continued to account for a relatively large portion of the unemployed.

This article describes changes in the labor market in 1998, in comparison to trends during the earlier years of the current expansion. The data used are from two Bureau of Labor Statistics (BLS) monthly surveys: the Current Employment Statistics (CES) survey of work sites and the Current Population Survey (CPS) of households.¹ (See box on p. 4.)

General economic forces

A variety of both favorable and unfavorable influences affected the job market in 1998. (See table 1.) The broadest national economic movements were generally favorable. Inflation in 1998 was extremely low, 1.5 percent, as estimated by the CPI-U, after 5 years of somewhat faster, but still historically low, inflation. Interest rates became more favorable: the prime rate declined by 0.6 percentage point to 7.9 percent, and the average 30-year fixed mortgage rate fell 0.4 percentage point to 6.8 percent, the lowest rate in any quarter since continuous records have been kept.² The gross domestic product continued an expansion that started in early 1991, increasing at the fairly rapid rate of 4.3 percent in 1998.

Total U.S. exports, however, which had increased for 5 straight years at an average annual rate of 9.0 percent, fell through the third quarter in 1998 and increased in the fourth quarter by only 1.2 percent from the level that prevailed a year

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earlier. Imports into the Nation continued to increase in 1998. (See table 1.) Both developments cut demand for U.S. manufactured products.

Employment by industry³

The economic performance of industries varied from poor to excellent in 1998, relative to the previous 5 years of expansion. This section examines, in turn, those industries that posted reduced, increasing, and stable employment trends during the past year.

Manufacturing. In 1998, the manufacturing division clearly fared worst among the nine major divisions into which industries are classified. (See charts 2 and 3.) Manufacturing lost 169,000 jobs (-0.9 percent) over the year; the previous 5 years had produced average annual *gains* of about the same magnitude. Of the 20 major industry groups in manufacturing, 15 showed a deterioration in their job trend. About 75 percent of the deterioration occurred in the durable-goods industries, among which the change in trend was most severe in *fabricated metal products, industrial machinery and equipment, and electronic and other electrical equipment.* (See table 2.) In each of these three industry groups, job losses in 1998 fol-

lowed 5 straight years of gains that were cumulatively large, as shown in the following tabulation:

Major industry group	Gain in jobs, 1992 to 1997		Change in jobs, 1998
	Total	Annual average	
Fabricated metal products	160,000	32,000	-6,000
Industrial machinery and equipment	265,000	53,000	-29,000
Electronic and other electrical equipment	187,000	37,000	-35,000

Of the 29 more specific components making up the three industry groups, 8 were responsible for most of the groups' collective downturn in 1998. Seven of the 8 components are classified as sensitive to exports, on the basis that foreign sales accounted for at least 20 percent of their domestic output in 1993.⁴ (See table 3.)

Among the eight industries, *electronic components and accessories* (including such electronic parts as printed circuit boards and semiconductors) underwent the sharpest reversal of trend. From 1992 to 1997, the industry gained jobs at the rate of 5 percent per year, an average of 29,000 jobs annually. In 1998, the industry lost 21,000 jobs. Of *all* U.S. manufac-

Conceptual differences between employment estimates from the Current Population Survey (household survey) and the Current Employment Statistics survey (establishment survey)

The Bureau of Labor Statistics maintains two monthly data series of employment that are independently obtained: the estimate of total nonfarm jobs, derived from the Current Employment Statistics (CES) survey, and the estimate of total employment, derived from the Current Population Survey (CPS). (The CPS also provides information on unemployment, whereas the CES survey does not.) The CES survey is an employer-based survey that provides data on the number of jobs within industries, while the CPS is a survey of households that provides data by demographic characteristics, occupation, and industry. The surveys are largely complementary.

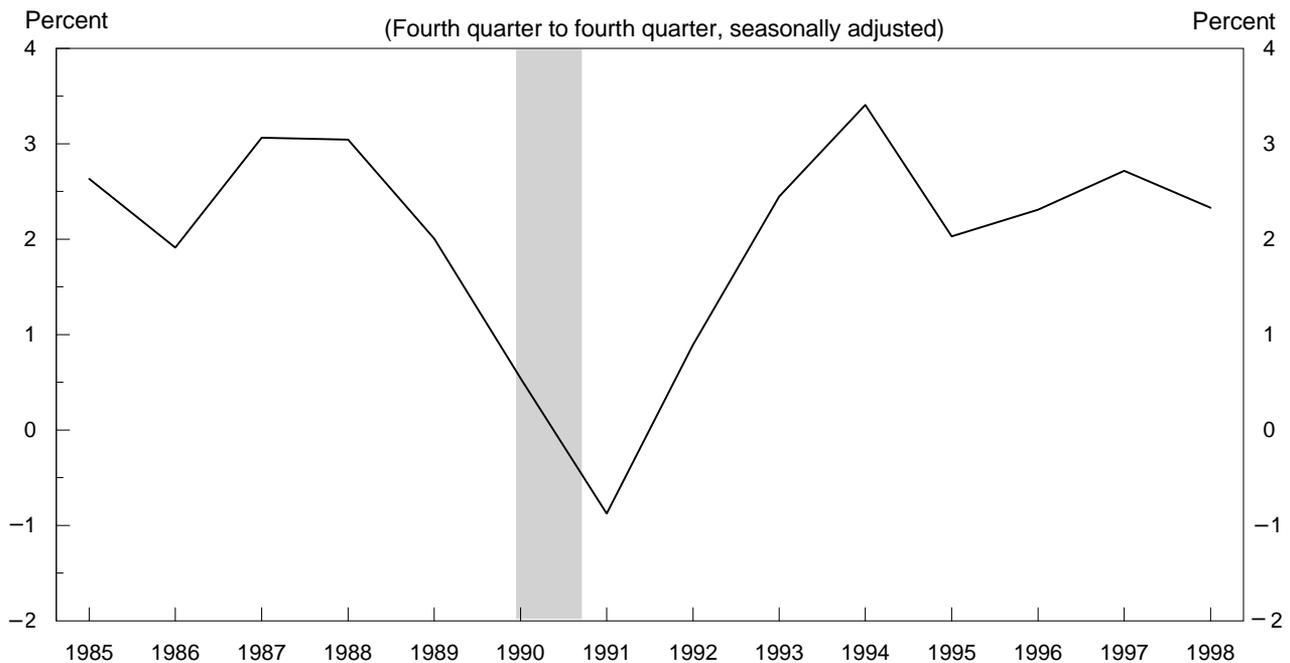
Employment estimates from the CPS pertain to persons in any type of work arrangement, including the self-employed and unpaid workers in family businesses, whereas estimates from the CES survey refer only to persons on nonfarm payrolls. As a result, the count of employment from the CPS is larger than that from the CES survey. Partially offsetting the higher estimate from the CPS is the fact that it is a count of persons and, as such, includes individuals only once, regardless of the number of jobs they hold. In contrast, the CES survey is a count of jobs and includes each job for persons

who work in more than one establishment.

Other differences in the surveys' methodology and coverage also are important. For example, the reference period for the CPS is the *week* that includes the 12th day of the month, while, for the CES survey, it is the *pay period* that includes the 12th of the month. Obviously, pay periods vary in length and can be longer than 1 week. It is therefore possible for the CES survey estimate of employment to reflect a longer reference period than that used for the CPS.

Finally, coverage in the CPS includes household members who are part of the civilian noninstitutional population. Persons who are inmates of institutions, such as those confined in penal or mental facilities, residents of homes for the aged, and those who are on active duty in the Armed Forces, are excluded from the CPS. Also, only households that are in the United States are eligible to be sampled in the CPS. In this regard, the coverage of the CES survey is broader: uniformed military personnel who hold civilian jobs are within its purview because of their civilian employment, and persons who commute into the United States from Mexico or Canada and are employed by companies within the United States are counted as employed in the CES survey estimates.

Chart 1. Percent change in nonfarm payroll employment, 1985–98



NOTE: Shaded area indicates recession, as designated by the National Bureau of Economic Research.

turing groups, the electronic components and accessories industry is the most dependent on exports; approximately half of its output is sold to foreign countries.

Apparel and other textile products, classified as a nondurable-goods-manufacturing industry, also contributed to the weakness. The apparel industry has consistently lost jobs to foreign competition, shrinking in 5 of the last 6 years (employment was unchanged in 1994), but the 1998 loss of 74,000 jobs was nearly twice the average of the five preceding declines. Devaluation of the currencies of most Asian nations made that continent's textile products cheaper in the United States; price-slashing by some factories in economically distressed Far Eastern countries added to the effect. As prices of foreign textile products fell, imports of textile products increased more than in most recent years.⁵

Services. Employment in the services division (the largest single part of the service-producing sector, which also includes retail trade, government, and other service-producing divisions) grew in 1998 at the rate of 3.8 percent, after increasing by an average of 4.5 percent per year in the previous 5 years. The division gained about 50,000 fewer jobs than in the average year of the 5-year period. Unlike the internationally influenced weaknesses in manufacturing, the decelerations in the components of services have no apparent common cause. Within services, the major groups showing the most severe

decelerations in employment growth were *health care* and *business services* (which includes *help supply*). (See chart 4.)

The health care industries' gain of 145,000 jobs in 1998, though still large, was less than two-thirds of the average of the preceding 5 years. Nearly all of the slowdown in health care jobs occurred in *home health care and nursing* and *personal care facilities*. In both cases, important changes in medicare reimbursement policies were made in 1998. Federal rates

Table 1. Year-to-year percent change in selected broad economic indicators,¹ fourth-quarter averages, 1993–98

Indicator	1995–96	1996–97	1993–97 average	1997–98
Nonfarm payroll employment	2.3	2.7	2.6	2.3
Real gross domestic product	3.9	3.8	3.1	4.3
Real gross private domestic investment	11.0	11.3	8.9	10.1
Consumer Price Index (CPI-U)	3.3	1.9	2.7	1.5
Prime lending rate ²	-5.4	3.0	8.1	-6.8
Home-mortgage 30-year fixed interest rate ²	4.9	-6.6	-1.2	-6.0
Real imports	11.8	14.0	10.8	9.9
Real exports	10.3	9.6	9.0	1.2

¹ Seasonally adjusted, unless otherwise indicated.

² Not seasonally adjusted.

Table 2. Employees on nonfarm payrolls, by industry, seasonally adjusted quarterly averages, 1992–98

[Numbers in thousands]

Industry	Fourth quarter, 1992	Fourth quarter, 1997	Fourth quarter, 1998	Change, fourth quarter to fourth quarter					
				1996–97		Average, 1993–97		1997–98	
				Number	Percent	Number	Percent	Number	Percent
Total nonfarm	109,109	123,934	126,820	3,279	2.7	2,965	2.6	2,886	2.3
Total private	90,405	104,271	106,834	3,048	3.0	2,773	2.9	2,563	2.5
Goods producing	23,190	25,108	25,222	460	1.9	384	1.6	114	.5
Mining ¹	622	592	560	9	1.5	-6	-1.0	-32	-5.4
Metal mining	52	53	50	-1	-1.9	0	.4	-3	-5.7
Oil and gas extraction	344	337	313	12	3.7	-1	-4	-24	-7.1
Nonmetallic minerals, except fuels	102	107	108	0	.0	1	1.0	1	.9
Construction	4,504	5,761	6,075	222	4.0	251	5.0	314	5.5
General building contractors	1,078	1,337	1,422	56	4.4	52	4.4	85	6.4
Heavy construction, except building	708	794	842	5	.6	17	2.3	48	6.0
Special-trade contractors	2,718	3,629	3,811	160	4.6	182	6.0	182	5.0
Manufacturing	18,064	18,756	18,587	230	1.2	138	.8	-169	-.9
Durable goods	10,232	11,091	11,022	251	2.3	172	1.6	-69	-.6
Lumber and wood products	691	796	808	11	1.4	21	2.9	12	1.5
Furniture and fixtures	479	513	525	7	1.4	7	1.4	12	2.3
Stone, clay, and glass products	514	554	567	5	.9	8	1.5	13	2.3
Primary metal industries	688	715	700	7	1.0	5	.8	-15	-2.1
Fabricated metal products	1,328	1,488	1,482	29	2.0	32	2.3	-6	-.4
Industrial machinery and equipment	1,926	2,191	2,162	70	3.3	53	2.6	-29	-1.3
Computer and office equipment	382	380	368	17	4.7	0	-1	-12	-3.2
Electronic and other electrical equipment	1,520	1,707	1,672	39	2.3	37	2.3	-35	-2.1
Electronic components and accessories	526	672	651	49	7.9	29	5.0	-21	-3.1
Transportation equipment	1,800	1,872	1,879	74	4.1	14	.8	7	.4
Motor vehicles and equipment	819	999	996	30	3.1	36	4.1	-3	-.3
Aircraft and parts	585	516	521	45	9.6	-14	-2.5	5	1.0
Instruments and related products	916	867	847	8	.9	-10	-1.1	-20	-2.3
Miscellaneous manufacturing industries	371	387	379	-1	-.3	3	.8	-8	-2.1
Nondurable goods	7,832	7,665	7,565	-20	-.3	-33	-.4	-100	-1.3
Food and kindred products	1,667	1,696	1,710	9	.5	6	.3	14	.8
Tobacco products	45	41	40	-1	-2.4	-1	-1.8	-1	-2.4
Textile mill products	676	611	584	-11	-1.8	-13	-2.0	-27	-4.4
Apparel and other textile products	999	811	737	-41	-4.8	-38	-4.1	-74	-9.1
Paper and allied products	693	686	675	2	.3	-1	-.2	-11	-1.6
Printing and publishing	1,507	1,560	1,566	18	1.2	11	.7	6	.4
Chemicals and allied products	1,084	1,035	1,034	3	.3	-10	-.9	-1	-.1
Petroleum and coal products	154	139	135	-2	-1.4	-3	-2.0	-4	-2.9
Rubber and miscellaneous plastics products	887	1,000	1,006	10	1.0	23	2.4	6	.6
Leather and leather products	119	87	78	-6	-6.5	-6	-6.1	-9	-10.3
Service producing	85,919	98,826	101,599	2,818	2.9	2,581	2.8	2,773	2.8
Transportation and public utilities	5,734	6,453	6,615	165	2.6	144	2.4	162	2.5
Transportation	3,518	4,144	4,259	106	2.6	125	3.3	115	2.8
Railroad transportation	253	228	234	-1	-.4	-5	-2.1	6	2.6
Local and interurban passenger transit	368	453	468	9	2.0	17	4.2	15	3.3
Trucking and warehousing	1,400	1,678	1,723	39	2.4	56	3.7	45	2.7
Water transportation	170	180	193	4	2.3	2	1.1	13	7.2
Transportation by air	964	1,148	1,172	38	3.4	37	3.6	24	2.1
Pipelines, except natural gas	19	14	14	0	.0	-1	-5.9	0	.0
Transportation services	343	443	455	17	4.0	20	5.2	12	2.7
Communications and public utilities	2,216	2,310	2,356	60	2.7	19	.8	46	2.0
Communications	1,267	1,450	1,503	76	5.5	37	2.7	53	3.7
Electric, gas, and sanitary services	949	860	853	-16	-1.8	-18	-2.0	-7	-.8
Wholesale trade	5,959	6,713	6,874	165	2.5	151	2.4	161	2.4
Durable goods	3,416	3,989	4,101	139	3.6	115	3.2	112	2.8
Nondurable goods	2,543	2,724	2,772	26	1.0	36	1.4	48	1.8
Retail trade	19,452	22,185	22,650	386	1.8	547	2.7	465	2.1
Building materials and garden supplies	761	943	992	28	3.1	36	4.4	49	5.2
General merchandise stores	2,462	2,757	2,831	42	1.5	59	2.3	74	2.7
Department stores	2,097	2,425	2,497	48	2.0	66	2.9	72	3.0

Table 2. Continued—Employees on nonfarm payrolls, by industry, seasonally adjusted quarterly averages, 1992–98

[Numbers in thousands]

Industry	Fourth quarter, 1992	Fourth quarter, 1997	Fourth quarter, 1998	Change, fourth quarter to fourth quarter					
				1996–97		Average, 1993–97		1997–98	
				Number	Percent	Number	Percent	Number	Percent
Food stores	3,181	3,515	3,557	51	1.5	67	2.0	42	1.2
Automotive dealers and service stations	1,973	2,327	2,370	34	1.5	71	3.4	43	1.8
New and used-car dealers	883	1,056	1,070	15	1.4	35	3.6	14	1.3
Apparel and accessory stores	1,132	1,104	1,102	5	.5	-6	-5	-2	-2
Furniture and home furnishings stores	801	1,029	1,082	40	4.0	46	5.1	53	5.2
Eating and drinking places	6,695	7,659	7,806	80	1.1	193	2.7	147	1.9
Miscellaneous retail establishments	2,448	2,852	2,909	108	3.9	81	3.1	57	2.0
Finance, insurance, and real estate	6,634	7,172	7,441	195	2.8	108	1.6	269	3.8
Finance	3,176	3,464	3,608	122	3.7	58	1.8	144	4.2
Depository institutions	2,085	2,036	2,044	17	.8	-10	-5	8	.4
Commercial banks	1,485	1,464	1,457	7	.5	-4	-3	-7	-.5
Savings institutions	337	262	265	-1	-.4	-15	-4.9	3	1.1
Nondepository institutions	422	583	648	40	7.4	32	6.7	65	11.1
Mortgage bankers and brokers	196	261	310	19	7.9	13	5.9	49	18.8
Security and commodity brokers	449	616	665	48	8.5	33	6.5	49	8.0
Holding and other investment offices	220	230	251	18	8.5	2	.9	21	9.1
Insurance	2,161	2,282	2,357	45	2.0	24	1.1	75	3.3
Insurance carriers	1,504	1,551	1,605	29	1.9	9	.6	54	3.5
Insurance agents, brokers, and service	657	731	751	16	2.2	15	2.2	20	2.7
Real estate	1,297	1,426	1,476	28	2.0	26	1.9	50	3.5
Services ¹	29,436	36,639	38,033	1,675	4.8	1,441	4.5	1,394	3.8
Agricultural services	492	693	736	50	7.8	40	7.1	43	6.2
Hotels and other lodging places	1,578	1,754	1,781	25	1.4	35	2.1	27	1.5
Personal services	1,122	1,181	1,181	-3	-.3	12	1.0	0	.0
Business services ¹	5,463	8,222	8,719	726	9.7	552	8.5	497	6.0
Services to buildings	808	950	990	32	3.5	28	3.3	40	4.2
Personnel supply services	1,716	3,072	3,184	335	12.2	271	12.4	112	3.6
Help supply services	1,494	2,739	2,846	303	12.4	249	12.9	107	3.9
Computer and data-processing services	856	1,477	1,677	188	14.6	124	11.5	200	13.5
Auto repair, services, and parking	893	1,138	1,173	38	3.5	49	5.0	35	3.1
Miscellaneous repair services	351	379	391	6	1.6	6	1.5	12	3.2
Motion pictures	407	559	564	26	4.9	30	6.6	5	.9
Amusement and recreation services	1,210	1,611	1,732	108	7.2	80	5.9	121	7.5
Health services ¹	8,594	9,808	9,953	242	2.5	243	2.7	145	1.5
Offices and clinics of medical doctors	1,483	1,772	1,846	74	4.4	58	3.6	74	4.2
Nursing and personal care facilities	1,546	1,760	1,753	19	1.1	43	2.6	-7	-.4
Hospitals	3,773	3,901	3,979	72	1.9	26	.7	78	2.0
Home health care services	419	714	662	23	3.3	59	11.2	-52	-7.3
Legal services	915	959	995	26	2.8	9	.9	36	3.8
Private schools and other educational services	1,669	2,154	2,245	95	4.6	97	5.2	91	4.2
Social services ¹	1,998	2,553	2,673	108	4.4	111	5.0	120	4.7
Child day-care services	460	572	586	6	1.1	22	4.5	14	2.4
Residential care	544	731	764	40	5.8	37	6.1	33	4.5
Museums and botanical and zoological gardens	73	91	93	3	3.4	4	4.5	2	2.2
Membership organizations	2,000	2,251	2,281	25	1.1	50	2.4	30	1.3
Engineering and management services ¹	2,492	3,090	3,317	201	7.0	120	4.4	227	7.3
Engineering and architectural services	745	886	931	41	4.9	28	3.5	45	5.1
Management and public relations	669	978	1,087	84	9.4	62	7.9	109	11.1
Government	18,704	19,663	19,986	231	1.2	192	1.0	323	1.6
Federal	2,946	2,689	2,705	-41	-1.5	-51	-1.8	16	.6
Federal, except Postal Service	2,169	1,825	1,829	-50	-2.7	-69	-3.4	4	.2
State government	4,438	4,611	4,683	27	.6	35	.8	72	1.6
State government education	1,806	1,923	1,956	24	1.3	23	1.3	33	1.7
Other State government	2,632	2,688	2,727	3	.1	11	.4	39	1.5
Local government	11,320	12,363	12,598	245	2.0	209	1.8	235	1.9
Local government education	6,270	6,957	7,114	158	2.3	137	2.1	157	2.3
Local government, except education	5,050	5,406	5,484	87	1.6	71	1.4	78	1.4

¹Includes other industries not shown separately.

of payment to *home health care agencies* under the medicare program were reduced from earlier rates; the system of reimbursements in place during most of 1998 represented an intermediate stage between the former cost-based reimbursements and future prospective payments, in which reimbursements are to be standardized for each diagnostic category instead of being based on actual costs in each individual case. Furthermore, *medicaid* payments to home health care agencies were restricted, in aggregate, to rates similar to those of medicare. Medicare payments to *skilled nursing facilities* also were changed in 1998, to a prospective payment system. Medicare claims were increasingly scrutinized for fraud in the last few years, and in the new climate entrepreneurial activity appears to have declined.⁶ *Home health care* had been one of the fastest-growing industries in the early years of the current expansion, but the industry's rate of growth declined from 16.7 percent in 1994 to 3.3 percent in 1997. In 1998, the industry lost 7 percent of its employment. *Nursing and personal care facilities* showed a similar, though less pronounced, pattern. The industry gained about 50,000 jobs per year early in the expansion, slowed in growth in 1997, and lost 7,000 jobs in 1998.

Despite the overall slowdown in health care employment, two of its components showed continuing substantial growth in 1998. *Offices and clinics of medical doctors* added 74,000 jobs, a gain that was about 20,000 more than the average gain in the previous 5 years. *Hospitals* accelerated greatly in growth from 1994, when the industry cut jobs in view of the uncertainty of future health care policy, to 1998, when the industry gained 78,000 jobs. The following tabulation shows the change in employment in these two industries from 1992 to 1998:

Year	Change in employment	
	Number	Percent
Offices and clinics of physicians:		
1992-93	34,000	2.3
1993-94	51,000	3.4
1994-95	69,000	4.4
1995-96	61,000	3.7
1996-97	74,000	4.4
1997-98	74,000	4.2
Hospitals:		
1992-93	-1,000	.0
1993-94	-12,000	-.3
1994-95	24,000	.6
1995-96	45,000	1.2
1996-97	72,000	1.9
1997-98	78,000	2.0

Among the main components of the services division, health care decelerated by the largest number of jobs, and *business services* decelerated by the second-largest number. Business services as a whole, while gaining almost half a million jobs, was 55,000 short of its 5-year average expansion, as relative weakness in the *help supply* component was only partially offset by strength in *computer services and data processing*. Help supply services provide temporary workers to client companies; by definition, then, the industry is affected by the demand for employees in other industries, as well as the supply of available workers. Anecdotal evidence suggests that a shortage of qualified applicants existed in 1998.⁷ While help supply firms added 100,000 workers last year, the increase was less than half of the industry's 5-year average. The year 1998 followed 2 years of great acceleration.

Despite the large decelerations in the services division, certain other industries within services increased their growth in 1998. Those accelerating services industries are described later, along with other industries showing acceleration in employment.

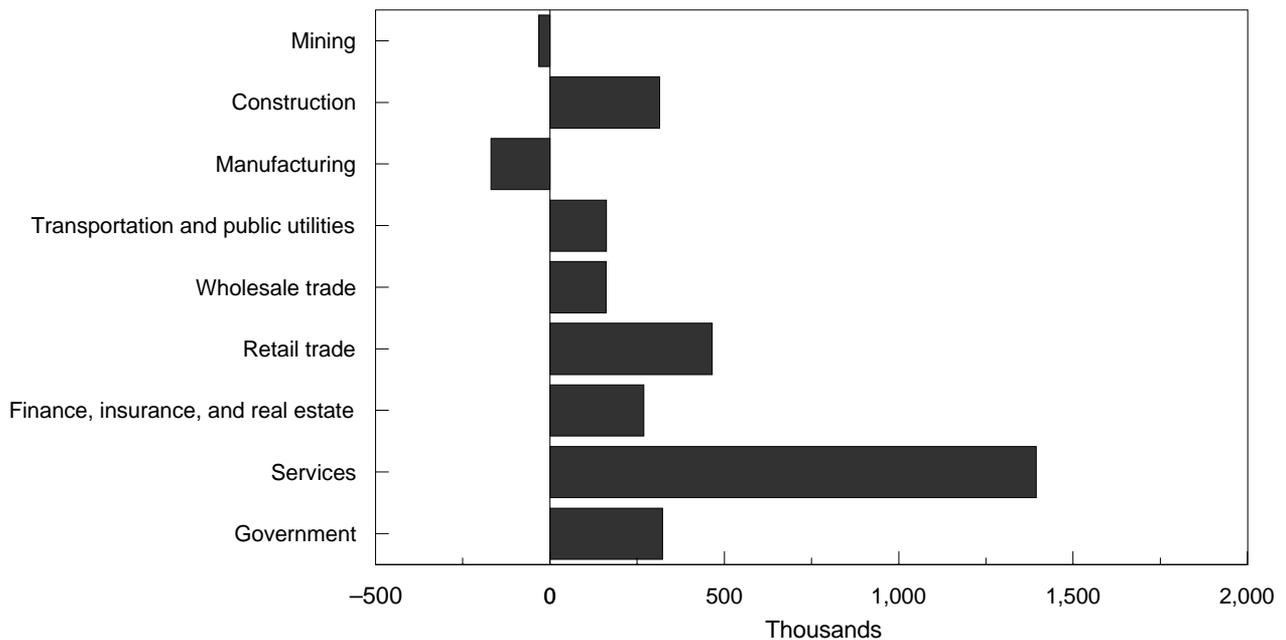
Mining. The economic performance of the mining division also was markedly different in 1998 from that of previous years. The division lost about 30,000 jobs (5.4 percent), following gains in 1996 and 1997 that totaled 18,000. (See table 4.) Nearly all of the change in trend was in *oil and gas extraction*, which lost 24,000 jobs. A decline of more than 40 percent in the

Table 3. Changes in the trend of job growth in selected manufacturing industry groups, 1992-98

Industry group	Average annual change in employment, 1993-97		Change in employment, 1997-98		Percent of employment dependent on exports
	Number	Percent	Number	Percent	
Fabricated structural metal products	13,000	3.0	4,000	0.9	<20
Miscellaneous fabricated metal products	7,000	3.1	-3,000	-1.1	21
Metalworking machinery	9,000	2.9	-7,000	-2.0	21
Special industry machinery ...	7,000	4.5	-7,000	-3.8	23
Computer and office equipment	0	-.1	-12,000	-3.2	46
Miscellaneous industrial and commercial machinery	15,000	4.7	3,000	.8	31
Communications equipment ..	8,000	3.1	-5,000	-1.8	20
Electronic components and accessories	29,000	5.0	-21,000	-3.1	47

NOTE: Changes shown are from the fourth quarter to the fourth quarter.

Chart 2. Growth in jobs in 1998, by industry division



NOTE: Changes are from the fourth quarter of 1997 to the fourth quarter of 1998. Data are preliminary. The transportation and public utilities division includes the communications industry.

price of domestic crude petroleum over the year reduced the incentive for production.⁸ Oil production in Oklahoma reportedly has fallen to its lowest level since 1919.⁹

Employment in mining has actually been declining for many years. Since peaking in 1981, mining has lost about 600,000 jobs. The two increases in 1996 and 1997, then, rather than the loss in 1998, were exceptional, although the latest year's decline was unusually large within the context of the postrecession nineties.

Construction and related industries. Historically low interest rates and their effects benefited a variety of industries. Largely because of more affordable mortgages, construction and related industries added far more jobs than in the years 1993 to 1997. (See table 2 and chart 3.) A decline of 0.4 percentage point brought the 30-year fixed mortgage rate to a lower level than that of any year since 1970. The value of construction put in place¹⁰ increased much more than in 4 of the 5 previous years. The strength in construction activity was primarily in new single-family houses: the value of single-family home construction increased in 1998 by \$21 billion (15 percent) in constant 1992 dollars. In contrast, the construction of private nonresidential buildings increased by only 3.6 percent, and public construction actually declined. Single-family home building, then, was one of the most positive forces in the economy. Construction as a whole gained

314,000 jobs, an increase of 5.5 percent.

Construction-related industries in the finance, insurance, real estate, and retail trade divisions also exceeded their average gains of 1993 to 1997. Mortgage bankers and brokers more than tripled their average 5-year job gain, achieving a robust 18.8-percent increase in 1998. Home-related segments of the insurance division also sharply increased their rate of job growth. Fire, marine, and casualty insurance added 11,000 jobs after a 5-year period during which the number of jobs declined. Title insurance gained 13,000 jobs (17.6 percent) in 1998 after adding a total of only 5,000 in the previous 5 years. Job growth in the real estate industry was about double the average growth during the previous 5-year period. Two home-related segments of retail trade—building material and garden supply stores, and furniture and home furnishings stores—also exceeded their 5-year average job growth. Furthermore, among the 10 major industry groups in durable manufacturing, only the construction-related groups of *furniture and fixtures* and *stone, clay, and glass products* exceeded their average hiring in the previous 5 years.

Finance, insurance, and real estate. Aside from reaping the benefits of increased home building, the *finance, insurance, and real estate* division profited from other effects of lower interest rates. (See chart 3.) For example, low returns on interest-bearing securities make stocks relatively attractive and

therefore can increase demand for the services of security brokers. Furthermore, some of the same component industries that benefited from increased home building were also aided by other effects of low rates. As a case in point, mortgage bankers and brokers profited from rising existing home sales and refinancings, both attributable at least in part to low interest rates.

Most of the major subdivisions of finance, including nondepository institutions, security and commodity brokers, and holding and other investment offices, added unusually large numbers of jobs. Security and commodity brokers increased their employment by 49,000 (8.0 percent), almost 1½ times the average gain of the previous 5 years (33,000).

In contrast, employment in depository institutions was little changed in 1998. Following declines earlier in the postrecession period, the industry had made a small comeback in 1997, but barely built on that gain in 1998.

The *real estate* industry benefited from lower interest rates, not only as they affected construction activity, but also because lower rates encouraged the purchase of existing homes. Sales of existing homes increased over the year by an unusual 9.9 percent. Real estate added 50,000 new jobs in 1998, nearly doubling its average increase during the previous 5 years.

The *insurance* industry added 75,000 jobs in 1998, 51,000 more than it had averaged during the previous 5 years. Strength in hiring was not only in the construction-related types of insurance mentioned earlier, but also in life insurance. While whole-life insurance became less popular, variable annuities, which combine insurance protection with stock mutual funds, became more attractive to baby boomers as they increased their preparations for retirement.¹¹ Life insurance carriers added 9,000 jobs in 1998 after averaging an annual *loss* of 7,000 jobs in the previous 5 years.

Government. All levels of government combined added 323,000 jobs in 1998, an increase of about 70 percent from the 5-year average gain of 1992 to 1997. Federal, State, and local government all contributed to the increased net hiring. (See table 2.)

After 5 years of reductions that averaged 51,000 per year, Federal employment showed a small gain in 1998. Much of the change in trend was due to a smaller reduction in the Department of Defense (-29,000, as opposed to an average of -44,000 during the previous 5 years) and the hiring of about 30,000 employees to work on the 2000 census (although such jobs are not permanent). The Postal Service gained 12,000 workers, about the same

number as in the preceding year. Other agencies showed slight overall net hiring after 5 years of reductions.

Growth in State government employment was strong. The 1998 increase (72,000 jobs, or 1.6 percent) was about double the previous 5-year average growth. Job growth in State general administration accelerated, and State hospitals had nearly stable employment after losing jobs in 1995 and 1996. State education, consisting mainly of higher education, gained 33,000 jobs, exceeding its 5-year average by 10,000. Fall 1998 enrollment was projected to grow by 177,000, the largest increase since 1991.¹²

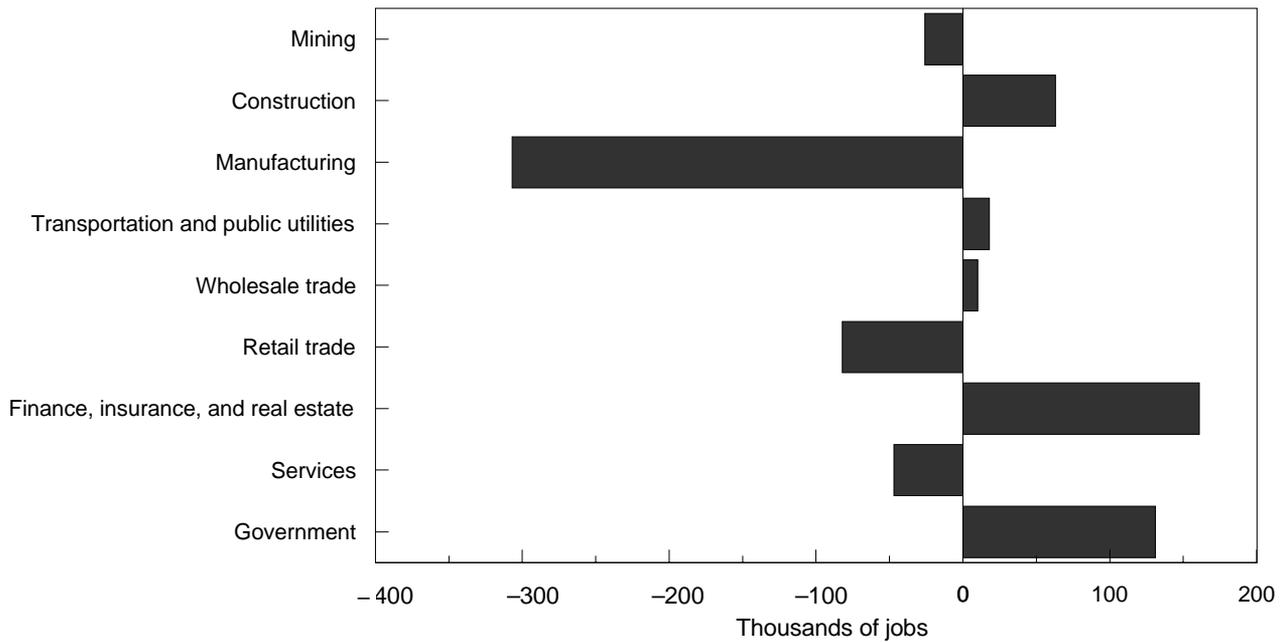
Local public education gained a large number of jobs in 1998 (157,000), exceeding its 5-year average by 20,000. While the Department of Education projects relatively small gains in public enrollment in kindergarten through 12th grade in 1997 and 1998,¹³ the improvement of education was of great interest to the public and was an important issue in the fall 1998 elections.¹⁴ State governments have been responding to public demands for better schools by increasing aid to school districts.¹⁵ Spending per pupil (including funds from all sources) in 1997 and 1998 was projected by the Department of Education to increase much more than in previous postrecession years.¹⁶ Local government hospitals had an unusual increase of 15,000 jobs after losing an average of 5,000 per year in the previous 5 years. Local government as a whole gained 235,000 jobs in 1998, 26,000 more than the previous 5-year average.

Strong services industries. Despite the slowing of job growth in the services division as a whole in 1998, certain categories within services exceeded earlier growth substan-

Table 4. Change in nonfarm payroll employment, by industry, fourth-quarter averages, 1993-98

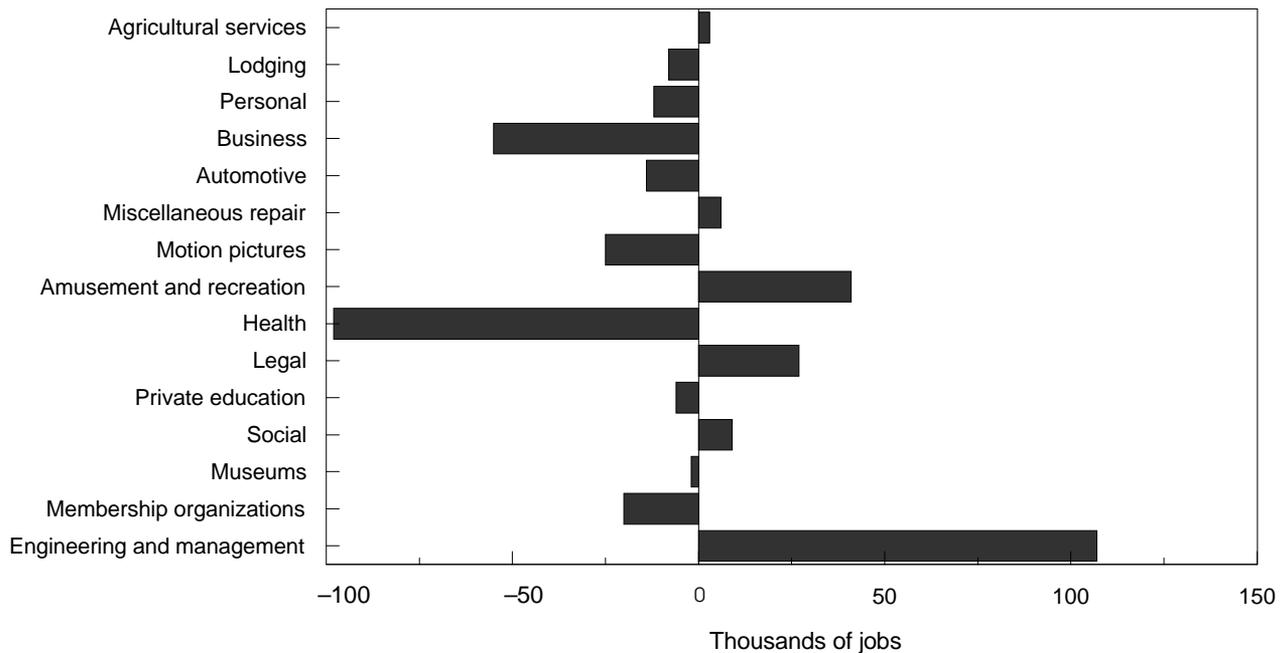
[Numbers in thousands]							
Industry	Change, fourth quarter to fourth quarter						Number of jobs, fourth quarter 1998
	1996-97		Average, 1993-97		1997-98		
	Number	Percent	Number	Percent	Number	Percent	
Total nonfarm	3,279	2.7	2,965	2.6	2,886	2.3	126,820
Mining	9	1.5	-6	-1.0	-32	-5.4	560
Construction	222	4.0	251	5.0	314	5.5	6,075
Manufacturing	230	1.2	138	.8	-169	-9	18,587
Transportation	106	2.6	125	3.3	115	2.8	4,259
Communications	76	5.5	37	2.7	53	3.7	1,503
Public utilities	-16	-1.8	-18	-2.0	-7	-.8	853
Wholesale trade	165	2.5	151	2.4	161	2.4	6,874
Retail trade	386	1.8	547	2.7	465	2.1	22,650
Finance	122	3.7	58	1.8	144	4.2	3,608
Insurance	45	2.0	24	1.1	75	3.3	2,357
Real estate	28	2.0	26	1.9	50	3.5	1,476
Services	1,675	4.8	1,441	4.5	1,394	3.8	38,033
Federal Government ...	-41	-1.5	-51	-1.8	16	.6	2,705
State government	27	.6	35	.8	72	1.6	4,683
Local government	245	2.0	209	1.8	235	1.9	12,598

Chart 3. Difference between 1998 job growth and average job growth from 1992 to 1997, by industry division



NOTE: Changes are from the fourth quarter of 1997 to the fourth quarter of 1998. Data are preliminary. The transportation and public utilities division includes the communications industry.

Chart 4. Difference between 1998 job growth and average job growth from 1992 to 1997, services industries



NOTE: Changes are from the fourth quarter to the fourth quarter. Fourth-quarter 1998 data are preliminary.

tially. In 1998, the *computer and data-processing services* group was strong, with a gain of 200,000 jobs, about 1½ times its 5-year average. The industry was among the fastest-growing ones for the second straight year, increasing its employment by 13.5 percent in 1998, following a 14.6-percent rise in the previous year. The *amusement and recreation* group gained 120,000 jobs (an increase of 7.5 percent), exceeding its 5-year average by 40,000. *Engineering and management services* grew by 7.3 percent, or 227,000 jobs, about twice the industry's average gain during the previous 5 years. Each of the industry group's main components (engineering and architectural services; accounting, auditing, and book-keeping; research and testing; and management and public relations) registered a substantial increase in job growth. Management and public relations payrolls expanded by 11.1 percent, after increasing by an average of 7.9 percent in the previous 5 years. The management and public relations component includes *management consulting*, an industry now frequently utilized to help clients adapt to more technologically advanced communications, data storage and retrieval, and billing functions, among others.

Steady industry trends. Other industry divisions continued to produce or lose jobs in numbers similar to those of previous years. *Retailing* expanded by almost half a million jobs (2.1 percent) in 1998, more than the number gained by any other division except services. While the 1998 gain in *retail trade* was less than the average of the previous 5 years, the increase was typical of those since 1995. The retail components *eating and drinking places*, *general merchandise stores*, and *miscellaneous retailing*, which includes mail-order companies and sellers marketing their wares over the Internet, contributed most to the expansion (147,000, 74,000, and 57,000

Table 5. Employment status of the civilian noninstitutional population 16 years and older, by sex, age, race, and Hispanic origin, quarterly averages, seasonally adjusted, 1997–98

[Numbers in thousands]

Characteristic	Fourth quarter, 1997	1998				Change, fourth quarter, 1997, to fourth quarter, 1998 ¹
		First quarter	Second quarter	Third quarter	Fourth quarter	
Total						
Civilian labor force	136,807	137,337	137,366	137,656	138,285	1,737
Participation rate	67.1	67.2	67.0	67.0	67.1	.1
Employed	130,413	130,957	131,288	131,419	132,166	2,038
Employment-population ratio ..	63.9	64.1	64.1	64.0	64.1	.3
Unemployed	6,394	6,380	6,079	6,237	6,120	-300
Unemployment rate	4.7	4.6	4.4	4.5	4.4	-.3
Men, 20 years and older						
Civilian labor force	69,388	69,517	69,605	69,708	70,002	714
Participation rate	76.9	76.9	76.8	76.7	76.8	.0
Employed	66,599	66,863	67,084	67,086	67,496	1,003
Employment-population ratio ..	73.8	73.9	74.0	73.8	74.0	.3
Unemployed	2,789	2,655	2,521	2,622	2,506	-290
Unemployment rate	4.0	3.8	3.6	3.8	3.6	-.4
Women, 20 years and older						
Civilian labor force	59,450	59,625	59,578	59,659	59,933	565
Participation rate	60.5	60.5	60.4	60.3	60.5	.1
Employed	57,021	57,095	57,181	57,266	57,562	636
Employment-population ratio ..	58.1	58.0	58.0	57.9	58.1	.1
Unemployed	2,429	2,530	2,398	2,393	2,372	-67
Unemployment rate	4.1	4.2	4.0	4.0	4.0	-.1
Both sexes, 16 to 19 years						
Civilian labor force	7,968	8,195	8,183	8,289	8,350	444
Participation rate	51.5	53.0	52.4	52.8	52.8	1.8
Employed	6,793	7,000	7,023	7,067	7,108	387
Employment-population ratio ..	43.9	45.3	45.0	45.0	45.0	1.6
Unemployed	1,176	1,195	1,160	1,222	1,242	59
Unemployment rate	14.8	14.6	14.2	14.7	14.9	.1
White						
Civilian labor force	114,999	115,227	115,214	115,402	115,799	1,016
Participation rate	67.4	67.4	67.3	67.2	67.3	.0
Employed	110,449	110,649	110,818	110,915	111,342	1,123
Employment-population ratio ..	64.8	64.7	64.7	64.6	64.7	.0
Unemployed	4,549	4,578	4,395	4,487	4,457	-108
Unemployment rate	4.0	4.0	3.8	3.9	3.8	-.2
Black						
Civilian labor force	15,641	15,845	15,895	16,003	16,174	578
Participation rate	64.8	65.4	65.4	65.5	65.9	1.3
Employed	14,122	14,364	14,497	14,537	14,821	749
Employment-population ratio ..	58.5	59.3	59.6	59.5	60.4	2.1
Unemployed	1,519	1,481	1,399	1,466	1,352	-173
Unemployment rate	9.7	9.3	8.8	9.2	8.4	-1.4
Hispanic origin						
Civilian labor force	13,961	14,140	14,347	14,347	14,438	477
Participation rate	67.9	68.0	68.4	67.8	67.6	-.3
Employed	12,929	13,155	13,340	13,299	13,370	441
Employment-population ratio ..	62.8	63.3	63.6	62.8	62.6	-.2
Unemployed	1,032	984	1,007	1,048	1,068	32
Unemployment rate	7.4	7.0	7.0	7.3	7.4	.0

¹ Data for 1998 are not strictly comparable to data shown for 1997 because of the introduction of new composite estimation procedures and revised population controls in January 1998. (See footnote 17 in text.) Estimates of over-the-year changes have been adjusted to correct for this break in the series. In some labor force series, the impact of the new procedures was negligible and required no adjustment.

NOTE: Details for race and Hispanic-origin groups do 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.

Chart 5. Unemployment rates, seasonally adjusted, from business cycle trough to 92 or 94 months later

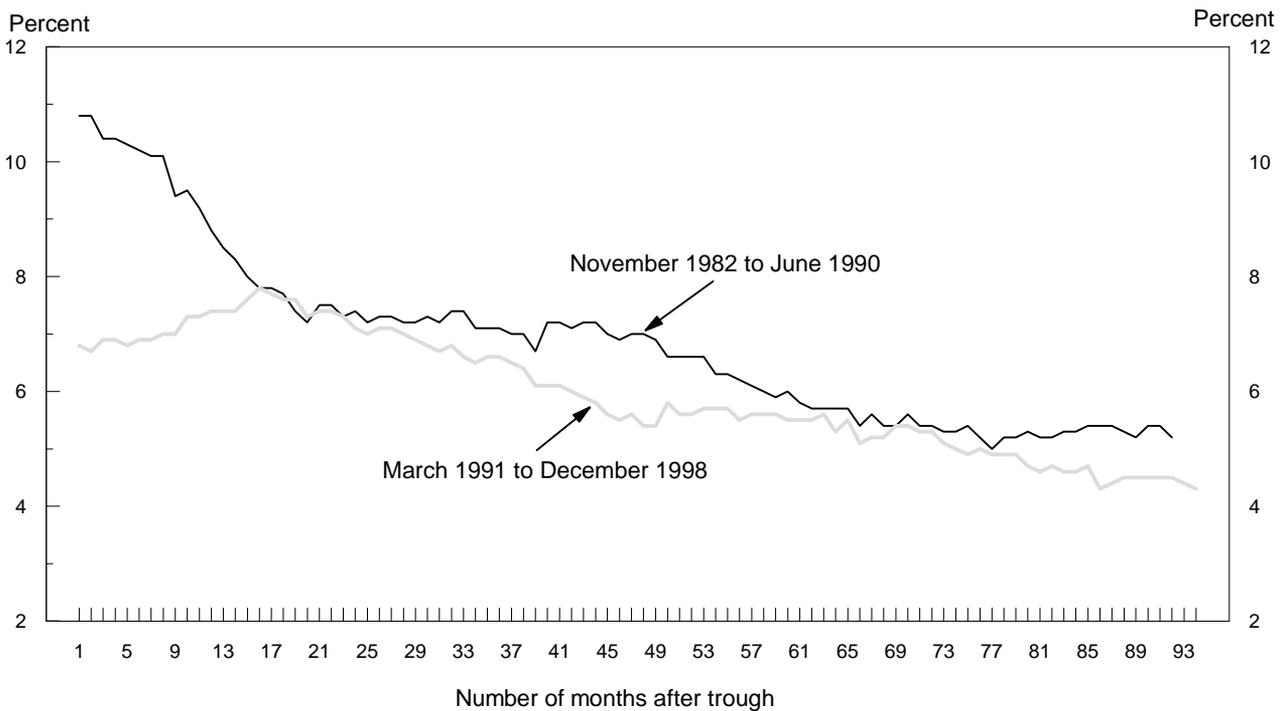
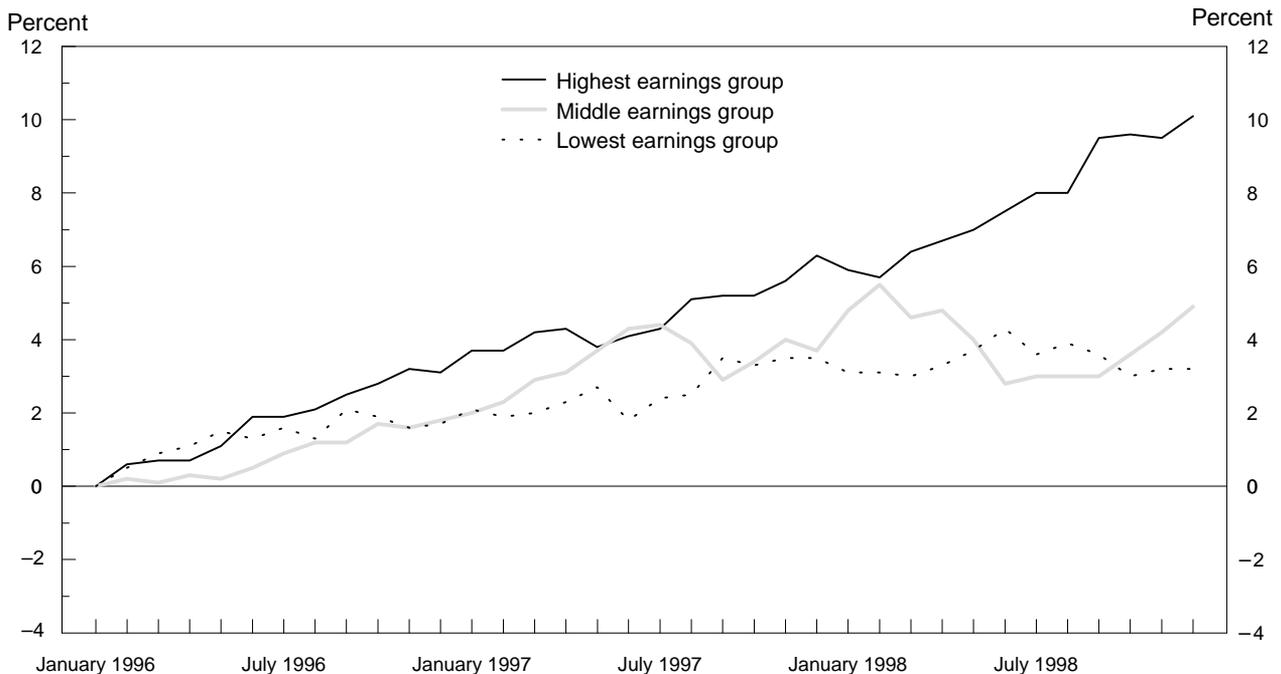


Chart 6. Employment growth, by earnings group, January 1996 to December 1998, seasonally adjusted



NOTE: The percent change shown represents the cumulative percent growth from January 1996 to December 1998.

jobs, respectively). The job growth in eating and drinking places in 1998, while greater than in 1997 and about the same as in 1996, was far less than earlier in the nineties (1993 through 1995), when the industry added about a quarter of a million jobs per year. Various other forms of retailing, including general merchandise stores and the previously mentioned construction-related components, were relatively strong in 1998, allowing the overall growth of retailing jobs to be similar to growth in the industry in other recent years.

Transportation added 115,000 jobs (2.8 percent); trucking, the component that gained the largest number, contributed 45,000. *Public utilities* lost 7,000 jobs (-0.8 percent); utilities have been cutting costs in order to prepare for a deregulated, more competitive environment. The 0.8-percent loss in 1998, however, was mild in comparison to an average

2.0-percent loss in the previous 5 years. *Communications* added 53,000 jobs (3.7 percent), and *wholesale trade* added 161,000 (2.4 percent); both divisions were slightly stronger than in the previous 5 years. (See table 4.)

The workers: demographic differences

Total employment growth slowed in 1998, increasing by only 1.6 percent, as measured by the household survey, compared with a 2.1-percent rate of growth in both 1996 and 1997.¹⁷

Despite the slowdown in employment growth, the economy maintained a very low unemployment rate in 1998. The monthly rate, which ranged within a narrow band from 4.3 percent to 4.7 percent during 1998, has remained at or below 5.0 percent since April of 1997. (See chart 5.) The last period

Table 6. Changes in employment, 1996-97 and 1997-98, and 1996 median usual weekly earnings for selected occupations and industries

[Numbers in thousands]

Occupation	Industry	Change in employment				1996 median weekly earnings ²
		1996-97 ¹		1997-98 ¹		
		Number	Percent	Number	Percent	
Highest earnings group						
Total .....	...	1,203	2.9	1,315	3.0	(³)
Professional specialty	Manufacturing	56	3.0	68	3.5	\$884
Executive, administrative, and managerial	Manufacturing	42	1.5	126	4.4	854
Executive, administrative, and managerial	Transportation and public utilities	71	6.1	76	6.2	776
Executive, administrative, and managerial	Construction	53	4.3	105	8.3	745
Precision production, craft, and repair	Transportation and public utilities	72	6.1	28	2.2	682
Executive, administrative, and managerial	Finance, insurance, and real estate	153	6.7	61	2.5	653
Executive, administrative, and managerial	Services	295	4.6	152	2.3	624
Professional specialty	Services	365	2.5	413	2.8	619
Middle earnings group						
Total .....	...	1,088	2.6	261	.6	(³)
Precision production, craft, and repair	Manufacturing	73	1.9	69	1.8	549
Precision production, craft, and repair	Construction	288	6.5	158	3.3	499
Operators, fabricators, and laborers	Transportation and public utilities	147	5.4	7	2	482
Executive, administrative, and managerial	Retail trade	75	4.1	23	1.2	475
Technicians and related support	Services	178	7.7	51	2.1	474
Precision production, craft, and repair	Services	60	2.9	39	1.9	443
Operators, fabricators, and laborers	Manufacturing	75	.9	-258	-3.1	381
Lowest earnings group						
Total .....	...	556	1.3	332	.8	(³)
Administrative support, including clerical ..	Services	208	3.0	6	.1	313
Administrative support, including clerical ..	Retail trade	-97	-6.2	-42	-2.8	289
Sales occupations	Services	90	8.1	-14	-1.1	268
Sales occupations	Retail trade	248	2.7	-3	.0	244
Service occupations	Services	170	1.8	114	1.2	233
Service occupations	Retail trade	66	1.3	76	1.5	187

¹Change (number and percent) was calculated from unrounded estimates.

²Data refer to all wage and salary workers aged 16 years and older.

³Not available.

NOTE: Details do not sum to totals because only those specific occupation-industry groups that supplied a large proportion of the employment growth

or decline are presented. Employment change was calculated using annual averages for 1996, 1997, and 1998. Beginning in January 1997, data reflect revised population controls used in the household survey. Beginning in January 1998, data reflect new composite estimation procedures and updated population controls used in the household survey. The employment changes do not reflect these revisions in the survey.

in which the unemployment rate remained so low for so long was during the late 1960s. Among the unemployed, however, long-term unemployment remained relatively high.

Total employed. Total employment, as estimated from the survey of households, rose by 2.0 million over the year to a seasonally adjusted level of 132.2 million in the fourth quarter. (See table 5.) The proportion of the civilian noninstitutional population aged 16 and older who were employed—the employment-to-population ratio—increased over the year to 64.1 percent. This measure reached a historical high of 64.2 percent late in 1998.

Over the year, the employment-to-population ratio of adult men increased 0.3 percentage point to 74.0 percent, while the corresponding ratio for women was about unchanged at 58.1 percent. The ratio for teenagers increased by 1.6 percentage points in 1998 after showing little movement during 1996 and 1997. Among the major racial and ethnic groups, the employment-to-population ratio for blacks climbed 2.1 percentage points to 60.4 percent in 1998, while the rates for whites and Hispanics were little changed.

Employment among full-time workers (those who usually work 35 or more hours per week at all jobs combined) increased over the year by 2.0 million. The proportion of workers employed full time has risen steadily with few interruptions since the beginning of 1994, while part-time employment has declined in the same manner.¹⁸ This pattern is typical during economic expansions. In 1998, self-employment as a percentage of total employment edged down to 7.7 percent, after also declining slightly in 1997.

Multiple jobholders. On average in 1998, 7.9 million workers were multiple jobholders—that is, they held more than one job at a time. These workers accounted for 6.0 percent of the total employed. Adjusted for changes in the composite estimation procedure, but not seasonally adjusted, both the

level and the percentage of multiple jobholders declined slightly over the year. (See footnote 17.) As shown in the following tabulation, more than half of all moonlighters in 1998 combined a full-time job with a part-time one, while about 1 in 5 combined two part-time jobs.¹⁹

Table 7. Employment status of the civilian noninstitutional population 25 years and older, by educational attainment, seasonally adjusted quarterly averages, 1997–98

[Numbers in thousands]

Category	Fourth quarter, 1997	1998				Change, fourth quarter, 1997, to fourth quarter, 1998 ¹
		First quarter	Second quarter	Third quarter	Fourth quarter	
Less than a high school diploma						
Civilian noninstitutional population ²	29,372	29,487	29,878	29,174	28,964	-408
Civilian labor force	12,540	12,569	12,679	12,540	12,457	38
Percent of population	42.7	42.6	42.4	43.0	43.0	.7
Employed	11,596	11,669	11,788	11,656	11,585	102
Employment-population ratio ..	39.5	39.6	39.5	40.0	40.0	.9
Unemployed	943	900	891	884	872	-71
Unemployment rate	7.5	7.2	7.0	7.0	7.0	-5
High school graduate, no college³						
Civilian noninstitutional population ²	57,467	57,636	57,545	57,564	57,351	-116
Civilian labor force	37,698	37,775	37,357	37,315	37,415	-283
Percent of population	65.6	65.5	64.9	64.8	65.2	-.4
Employed	36,181	36,245	35,896	35,815	35,959	-222
Employment-population ratio ..	63.0	62.9	62.4	62.2	62.7	-.3
Unemployed	1,517	1,530	1,461	1,500	1,456	-73
Unemployment rate	4.0	4.0	3.9	4.0	3.9	-.1
Less than a bachelor's degree⁴						
Civilian noninstitutional population ²	42,372	42,186	42,069	41,968	42,819	447
Civilian labor force	31,401	31,421	31,376	31,203	31,625	331
Percent of population	74.1	74.5	74.6	74.3	73.9	.0
Employed	30,431	30,426	30,463	30,283	30,720	393
Employment-population ratio ..	71.8	72.1	72.4	72.2	71.7	.1
Unemployed	970	994	913	920	906	-64
Unemployment rate	3.1	3.2	2.9	2.9	2.9	-.2
College graduate						
Civilian noninstitutional population ²	41,752	42,099	42,250	43,470	43,471	1,719
Civilian labor force	33,546	33,758	34,116	34,763	34,724	1,225
Percent of population	80.3	80.2	80.7	80.0	79.9	-.3
Employed	32,945	33,130	33,529	34,172	34,078	1,189
Employment-population ratio ..	78.9	78.7	79.4	78.6	78.4	-.4
Unemployed	602	627	587	592	645	35
Unemployment rate	1.8	1.9	1.7	1.7	1.9	.1

¹Data for 1998 are not strictly comparable to data shown for 1997 because of the introduction of new composite estimation procedures and revised population controls in January 1998. (See footnote 17 in text.) Estimates of over-the-year changes have been adjusted to correct for this break in the series. In some labor force series, the impact of the new procedures was negligible and required no adjustment.

²The population figures are not adjusted for seasonal variation.

³Includes those with a high school diploma or equivalent.

⁴Includes those with some college and no degree and those with an associate's degree.

NOTE: Details for race and Hispanic-origin groups do 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.

	Percent distribution		
	Total	Men	Women
Total	100.0	100.0	100.0
Full-time job and part-time job	56.5	62.4	49.9
Two full-time jobs	3.4	4.5	2.1
All part-time jobs	20.6	12.3	30.0
Hours vary on one or more jobs	19.0	20.3	17.5

Women were slightly more likely than men to hold more than one job in 1998, with 6.2 percent of women being multiple jobholders, compared with 5.9 percent of men. Women also were 2½ times as likely as men to hold two or more part-time jobs.

Occupational employment. Employment within managerial and professional specialty occupations grew by about 1.6 million workers in 1998, nearly twice the 1997 gain. (The data were seasonally adjusted quarterly data; see footnote 17.) Throughout much of the 1980s and 1990s, managerial and professional specialty occupations accounted for a disproportionately large share of the employment growth. Employment of operators, fabricators, and laborers showed a moderate decline of 122,000 workers in 1998, reflecting the losses within the manufacturing industry. (See footnote 17.) Employment remained essentially unchanged in the other major occupational groups in 1998.

Job quality

With earnings used as a relative measure of job quality, a detailed look at a group of 90 major occupations and industries helps pinpoint the nature of the slowdown in employment growth.²⁰

Monthly employment growth among major occupation-industry pairs (such as professionals in manufacturing), divided into three earnings groups, are presented in chart 6.²¹ The data show the percent change in employment for the highest, middle, and lowest earning groups, using the January 1996 level as the base.²² From January 1996 to December 1998, total employment increased by 7.3 million to 132.5 million (seasonally adjusted monthly data). Over this period, job growth surged by 10.1 percent in the group with the highest earnings, 2 times the increase recorded for the

middle earnings group and 3 times that of the lowest earnings group. After declining during the early 1990s, employment in the middle earnings group finally rose above prerecession levels by mid-1997. Since then, no clear trend has been evident.

A more complete understanding of employment developments that transpired between 1996 and 1998 can be obtained by looking more closely at the over-the-year changes in annual average employment for specific occupation-industry groups within the three earnings categories, as presented in table 6.²³ Employment in the highest earnings group, comprising primarily managers and professionals in most industries, grew at nearly the same rate during 1997 and 1998. The rate of growth in 1998, however, was much higher than in either of the other two earnings groups. While job growth in the highest earnings group throughout the 1990s has been concentrated among managers and professionals in the services industry, recent increases in the number of managers in manufacturing, in construction, and in transportation and public utilities also have contributed to the expansion of this group. (See table 6 and chart 6.)

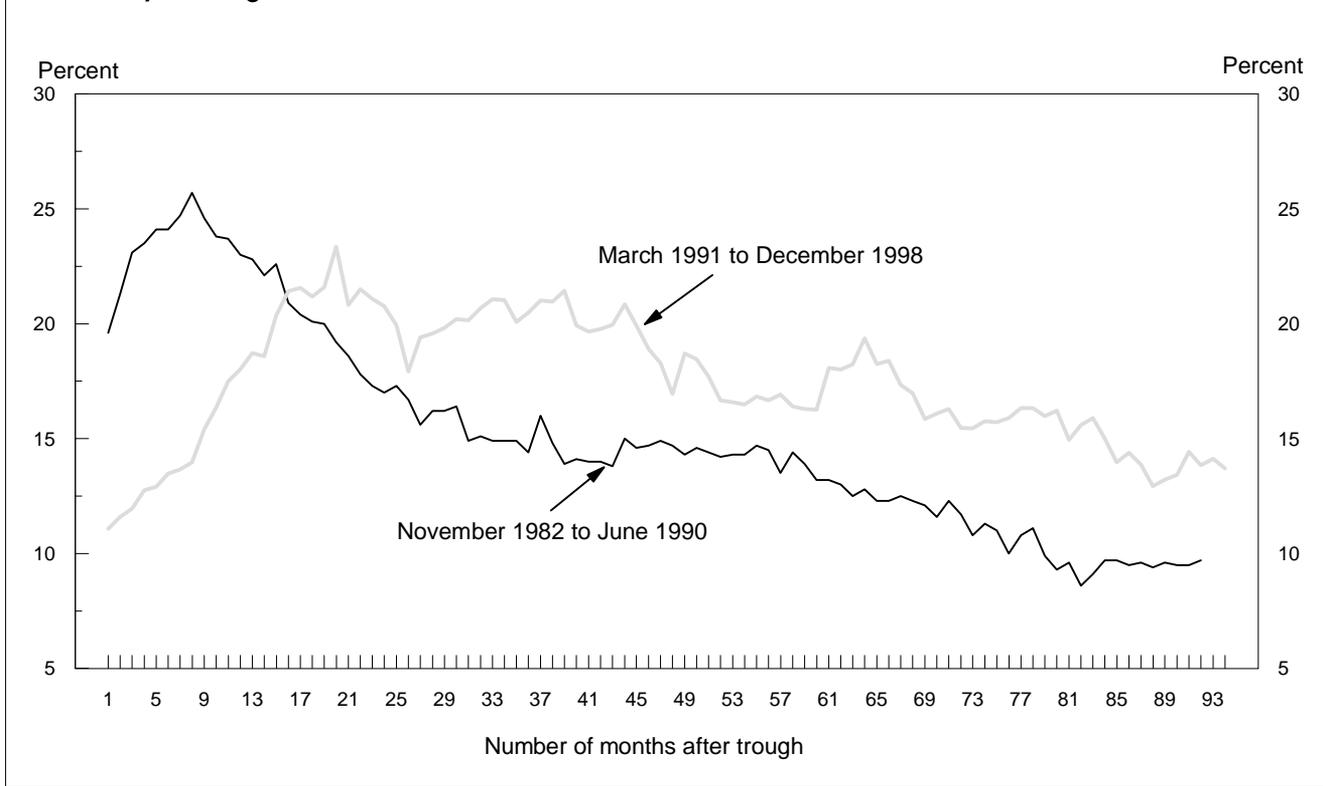
The rate of growth in the middle earnings group was comparable to that of the highest earnings group in 1997, but began to subside by the summer of 1998. As the turmoil created by the troubled Asian financial markets escalated and the relative value of the U.S. dollar rose, exports to Asia declined.

Table 8. Unemployed persons, by reasons for, and duration of, unemployment, quarterly averages, seasonally adjusted, 1997-98

Reason and duration	Fourth quarter, 1997	1998				Change, fourth quarter, 1997, to fourth quarter, 1998 ¹
		First quarter	Second quarter	Third quarter	Fourth quarter	
Total 16 years and older.....	6,394	6,380	6,079	6,237	6,120	-300
Reason for unemployment						
Job losers and persons who completed temporary jobs ...	2,916	2,868	2,787	2,855	2,775	-129
On temporary layoff	916	888	797	926	849	-55
Not on temporary layoff	2,000	1,980	1,990	1,929	1,926	-61
Job leavers	711	770	715	744	705	-17
Reentrants	2,214	2,203	2,103	2,119	2,101	-139
New Entrants	548	535	513	494	538	-10
Duration of unemployment						
Less than 5 weeks	2,518	2,637	2,596	2,639	2,638	12
5 to 14 weeks	1,977	1,959	1,973	1,966	1,906	-42
15 or more weeks	1,914	1,781	1,537	1,629	1,596	-270
15 to 26 weeks	917	827	703	775	746	-136
27 or more weeks	997	954	834	854	850	-134
Median duration, in weeks	7.6	7.1	6.5	6.7	6.4	-0.9
Average (mean) duration, in weeks	15.9	15.2	14.4	14.1	14.2	-1.7

¹Data for 1998 are not strictly comparable to data shown for 1997 because of the introduction of new composite estimation procedures and revised population controls in January 1998. (See footnote 17 in text.) Estimates of over-the-year changes have been adjusted to correct for this break in the series. In some labor force series, the impact of the new procedures was negligible and required no adjustment.

Chart 7. Long-term unemployment as a proportion of total unemployment, seasonally adjusted, from business cycle trough to 92 or 94 months later



Subsequently, the U.S. trade gap, bolstered by strong domestic demand for relatively cheaper import goods, widened. It is reasonable to suspect that these conditions contributed to the associated decline in the employment of operators, fabricators, and laborers in the domestic manufacturing sector. (See table 6 and chart 6.)

Job growth in the lowest earnings group also slowed in 1998. From 1990 to 1997, employment in this group grew at an annual rate of about 1.2 percent; however, in 1998, the rate of growth slowed to less than 1.0 percent. Those occupation-industry cells for which an employment slowdown or decline was most notable include clerical occupations in the services industry and sales occupations in retail trade.

Labor force

In 1998, the labor force grew by 1.7 million, to reach 138.3 million, following sizable increases of 2.3 million and 1.9 million in 1996 and 1997, respectively. (The 1998 change has been adjusted to account for the composite estimation procedure cited in footnote 17.) The labor force participation rate—the proportion of the civilian noninstitutional population that is either employed or unemployed—remained essentially unchanged in 1998. (See table 5.) For the year, the labor force

participation rate averaged 67.1 percent, equaling the previous year's record high.

With respect to the major demographic groups, the labor force participation rate for teenagers increased by 1.8 percentage points to 52.8 percent, interrupting a 2-year decline. The labor force participation rate for blacks increased over the year by 1.3 percentage points, while the measure for Hispanics declined slightly, to 67.6 percent, for the year. The participation rate for blacks has increased in the fourth quarter each of the last 5 years.

Unemployment and underutilization

The unemployment rate for most of the major worker groups was about unchanged over the year, as were the unemployment rates for persons in nearly all of the major educational categories. Adult men's rate fell 0.4 percentage point to 3.6 percent in 1998, and the rate for blacks fell by 1.4 percentage points to 8.4 percent. (See table 5.) The jobless rate for those with less than a high school diploma declined over the year, from 7.5 percent to 7.0 percent. (See table 7.) The rate for this group has fallen by 2.2 percentage points since 1995, as a tightening labor market benefited even lower skilled workers.

Reasons and duration. The reasons that the unemployed cited for their unemployment were essentially the same in 1998 as in 1997. The number of unemployed job losers and persons who completed temporary jobs remained essentially unchanged in 1998 at 2.8 million, after falling by 294,000 in 1997. (See table 8.) The levels of reentrants and new entrants to the labor force were 2.1 million and 538,000, respectively, in 1998, little different from the previous year's figures. Re-entrant unemployment had declined significantly in 1997 as a share of total unemployment.

Duration of unemployment. The number of persons unemployed for 27 or more weeks decreased by 134,000 in 1998, to 850,000. (See table 8 and footnote 17.) As mentioned earlier, however, long-term unemployment as a proportion of total unemployment remains unusually high relative to pre-recession levels. (See chart 7.) The proportion of persons unemployed for 27 or more weeks trended down over the year, but remains substantially higher than during a similar period of the last business cycle.²⁴

Underutilization. The Bureau of Labor Statistics has developed a range of indicators, called *alternative measures of labor underutilization*, that can be used to supplement the jobless rate as a measure of the underutilization of labor resources. Table 9 shows alternative measures U-1 through U-6 over the past year.²⁵

Alternative measures U-4 through U-6 augment the pool of underutilized resources beyond what is measured in the official unemployment rate (U-3). U-4 adds persons classified as "discouraged" to the number of unemployed persons. Discouraged workers are those persons who say that they want a job, were available to work, and had searched for a job some time in the previous 12 months, but had stopped looking for work because they believed that there were no jobs available for them. The total number of discouraged workers was little changed over the year, as was U-4. (See tables 9 and 10.)

Alternative indicator U-5 includes all "marginally attached" workers. This broader group encompasses the discouraged workers included in U-4, as well as those who are not currently

looking for work for reasons other than discouragement, such as transportation or child-care problems. In 1998, there were about 1.3 million of these marginally attached workers, down approximately 100,000 from the previous year. (See table 10.) However, U-5, like U-4, was down only slightly over the year.

The broadest of the alternative indicators, U-6, adds a group of the "underemployed" to the calculation. U-6 represents the number of unemployed persons, plus all marginally attached workers (including discouraged workers), plus all persons employed part time for economic reasons, as a percent of the labor force plus all marginally attached workers. People are employed part time—that is, 1 to 34 hours per week—for various reasons. Some would prefer to work full time, but, because of poor business conditions, are unable to do so. This group, often called "persons employed part time for economic reasons," totaled about 3.2 million in 1998 (data not seasonally adjusted). By including these workers, U-6 treats some part-time workers on an equal basis with the unemployed. In 1998, U-6 fell 0.7 percentage point to 7.3 per-

Table 9. Range of alternative measures of labor underutilization, quarterly averages, not seasonally adjusted, 1997-98

Measure	1998					Change, fourth quarter, 1997, to fourth quarter, 1998 ¹
	Fourth quarter, 1997	First quarter	Second quarter	Third quarter	Fourth quarter	
	[In percent]					
U-1 Persons unemployed 15 or more weeks, as a percent of the civilian labor force	1.3	1.4	1.2	1.1	1.1	-0.2
U-2 Job losers and persons who completed temporary jobs, as a percent of the civilian labor force ..	2.0	2.5	1.9	1.9	1.9	-.1
U-3 Total unemployed, as a percent of the civilian labor force (official unemployment rate)	4.4	5.1	4.4	4.5	4.1	-.3
U-4 Total unemployed plus discouraged workers, as a percent of the civilian labor force plus discouraged workers	4.6	5.3	4.6	4.7	4.4	-.2
U-5 Total unemployed, plus discouraged workers, plus all other marginally attached workers, as a percent of the civilian labor force plus all marginally attached workers	5.3	6.1	5.2	5.4	5.0	-.3
U-6 Total unemployed, plus all marginally attached workers, plus total employed part time for economic reasons, as a percent of the civilian labor force plus all marginally attached workers	8.0	9.0	7.9	8.0	7.3	-.7

¹Data for 1998 are not strictly comparable to data shown for 1997 because of the introduction of new composite estimation procedures and revised population controls in January 1998. (See footnote 17 in text.) Estimates of over-the-year changes have been adjusted to correct for this break in the series. In some labor force series, the impact of the new procedures was negligible and required no adjustment.

Table 10. Persons not in labor force, by desire and availability for work, age, and sex, annual averages, 1997–98

[Numbers in thousands]

Category	Total		Age						Sex			
			16 to 24 years		25 to 54 years		55 years and older		Men		Women	
	1997	1998	1997	1998	1997	1998	1997	1998	1997	1998	1997	1998
Total not in labor force	66,837	67,547	11,343	11,343	18,552	18,732	36,942	37,472	24,454	24,799	42,382	42,748
Want a job now ¹	4,941	4,812	1,909	1,852	2,241	2,152	791	807	2,034	2,008	2,907	2,803
Searched for work in previous year ²	2,084	1,953	875	841	997	912	212	200	917	875	1,168	1,078
Not available to work	669	643	346	332	289	275	34	36	257	250	412	392
Available to work	1,416	1,310	529	509	708	637	178	164	659	624	756	686
Reason not currently looking: Discouragement over job prospects ³	343	331	107	108	184	170	52	53	200	198	143	133
Reasons other than discouragement	1,073	979	423	401	524	467	126	111	460	427	613	552
Did not search for work in previous year	2,857	2,859	1,034	1,011	1,245	1,240	579	608	1,118	1,134	1,739	1,725
Do not want a job now ¹	61,895	62,735	9,434	9,491	16,311	16,580	36,151	36,664	22,420	22,790	39,475	39,945

¹ Includes some persons who are not asked if they want a job.² Persons who had a job in the previous 12 months must have searched since being separated from that job.³ Includes persons who believed that no work was available, those who could not find work, those who lacked necessary schooling or training, and

those who believed that potential employers would think that they were too young or too old, or who believed that they were being discriminated against for other reasons.

NOTE: Beginning in January 1998, data reflect new composite estimation procedures and revised population controls used in the household survey.

cent, in part because the level of those employed part time for economic reasons declined over the year by about 479,000.

Another indicator that provides insight into tightening labor market conditions over the year is the broad measurement of persons who are not in the labor force, but who have said they would like a job. These persons who “want a job now”

include not only discouraged workers and other marginally attached workers—persons who have shown some labor market attachment by a previous job search—but anybody who simply expresses a desire for employment. The number of such persons edged down in 1998 by 129,000, to 4.8 million, after a larger decline in 1997. (See table 10.)

Table 11. Unemployment rates by census region and division, seasonally adjusted quarterly averages, 1997–98

[In percent]

Region and division	Fourth quarter, 1997	1998				Change, fourth quarter, 1997, to fourth quarter, 1998
		First quarter	Second quarter	Third quarter	Fourth quarter	
Northeast	5.1	5.0	4.7	4.6	4.5	-0.6
New England	4.2	3.8	3.6	3.4	3.4	-0.8
Middle Atlantic	5.5	5.4	5.1	5.0	5.0	-0.5
South	4.6	4.4	4.3	4.4	4.3	-0.3
South Atlantic	4.3	4.2	4.1	4.0	3.9	-0.4
East South Central	5.0	4.5	4.3	4.2	4.3	-0.7
West South Central	5.0	4.6	4.7	5.0	4.8	-0.2
Midwest	3.9	3.7	3.5	3.6	3.6	-0.3
East North Central	4.2	4.0	3.7	3.9	3.8	-0.4
West North Central	3.2	3.1	3.1	3.0	2.9	-0.3
West	5.3	5.2	5.2	5.3	5.2	-0.1
Mountain	4.1	4.0	4.2	4.2	4.1	.0
Pacific	5.8	5.7	5.6	5.7	5.7	-0.1

NOTE: Data for regions and divisions are based on the sum of model-based State labor force estimates.

Regional differences

Employment. Nonfarm payroll employment increased by at least 1.5 percent in all four census regions in 1998; the most notable increase occurred in the West (2.8 percent).²⁶ Among the nine geographic divisions, job growth ranged from 1.3 percent in the East North Central to 3.2 percent in the Mountain States. The South Atlantic and Pacific divisions also had solid rates of expansion, 2.7 percent and 2.6 percent, respectively. Considerable variation was seen within the South, where the East South Central division’s growth rate was only slightly more than half that of the other two divisions. The following tabulation shows nonfarm payroll employment growth (in thousands) in 1998:

Region	Number	Percent
West	730.5	2.8
South	1,027.7	2.4
Midwest	456.7	1.5
Northeast	348.9	1.5

As in most recent years, services accounted for the greatest number of new jobs in each region (at least 43 percent) and geographic division (at least 33 percent). Trade ranked second in all regions and eight divisions. On the other hand, construction had the highest growth rate in all regions and eight divisions. The national weakness in manufacturing was most severe in the Northeast and South, while the declines in mining were spread across all regions.

Unemployment. Three regions had moderately lower unemployment rates in 1998 than a year earlier, with the Northeast registering the largest decline, 0.6 percentage point.²⁷ For the 7th consecutive year, the West had the highest jobless rate, little changed from the 5.3-percent figure posted a year earlier. The Midwest had the lowest rate, 3.6 percent, as it has had for the past 9 years. Three regions recorded jobless rates at or near their lowest levels in 20 years. The exception was the Northeast, where the lowest rates occurred in 1988 to 1989. (See table 11.)

Seven geographic divisions (all but the Pacific and Mountain divisions) experienced unemployment rate declines of at least 0.2 percentage point in 1998; all nine divisions had recorded declines in 1997. The largest decreases were seen in the New England (-0.8 percentage point) and East South Central (-0.7 point) divisions. The West North Central division registered the lowest jobless rate (2.9 percent) among all divisions for the 9th straight year, while the Pacific division reported the highest rate (5.7 percent) for the 7th year in a row. At some point during 1998, six divisions recorded unemployment rates at or near their lowest in 20 years, and more than half of the States achieved new lows.

Hours of work

After increasing in 4 of the previous 5 years, the average work-week of production or nonsupervisory employees in the private sector declined slightly, by a tenth of an hour, in 1998. Because of the increase in employment, however, aggregate (or total) hours worked per week rose 2.0 percent, to 3.02 billion. This increase was the smallest since 1995, because of the decline in average weekly hours and the moderation in the growth of jobs. The following tabulation compares the 1998 increase with those of the previous 5 years:

Year	Annual percent change in aggregate weekly hours
1993	3.6
1994	4.4
1995	1.7
1996	3.1
1997	3.4
Average, 1993 to 1997	3.2
1998	2.0

Pay

Survey of establishments. Average hourly earnings of production or nonsupervisory workers on private payrolls excluding agriculture, adjusted for inflation,²⁸ increased 2.4 percent in 1998, a gain comparable to the 1997 increase. All other years in the current expansion produced gains of less than 1 percent.

Real average weekly earnings also increased by a relatively large amount, 2.1 percent, as opposed to an average of 0.8 percent in the previous 5 years. The inflation-adjusted 1998 increase amounted to \$8.81 per week in fourth-quarter 1998 dollars. Table 12 shows the sharp differences between 1998 changes and those of the earlier years.

Household survey. Median weekly earnings of full-time wage and salary workers rose 4.0 percent (in current dollars, with data not seasonally adjusted) after a 2.7-percent increase the previous year. The female-to-male earnings ratio also rose over the year, to 76.3 percent. Blacks and Hispanics increased their earnings 6.5 and 5.4 percent, respectively, over the year. (see table 13.)

Median weekly earnings rose for all educational attainment groups over the year. Median earnings for both high school graduates and college graduates aged 25 years and older who worked full time increased over the year by 3.9 percent and 5.4 percent, respectively. Since 1994, median weekly earnings for high school graduates have risen 11.9 percent, outpacing earnings for college graduates, which increased by 10.3 percent.

Table 12. Changes in hours of work, inflation, and pay, 1993-98

Year	Annual percent change, fourth quarter to fourth quarter			
	Average weekly hours	CPI-W	Average hourly earnings in constant 1982 dollars	Average weekly earnings in constant 1982 dollars
1993	0.6	2.6	0.0	0.5
1994 .....	.3	2.7	.0	.3
1995	-.9	2.6	.4	-.5
1996 .....	.3	3.2	.4	.9
1997 .....	.6	1.7	2.3	2.6
1993 to 1997 ...	-.2	2.6	.6	.8
1998	-.3	1.4	2.4	2.1

SOURCES: Hours and earnings, CES program, Bureau of Labor Statistics; CPI-W, Office of Prices, Bureau of Labor Statistics.

Table 13. Quartiles and selected deciles of usual weekly earnings of full-time wage and salary workers, by selected characteristics, annual averages, 1997–98

Characteristic	Upper limit of—									
	First decile		First quartile		Second quartile (median) ¹		Third quartile		Ninth decile	
	1997	1998	1997	1998	1997	1998 ²	1997	1998	1997	1998
Sex, race, and Hispanic origin										
Total, 16 years and older	\$242	\$256	\$329	\$347	\$503	\$523	\$760	\$789	\$1,109	\$1,155
Men	265	279	372	388	579	598	858	895	1,228	1,289
Women	225	236	299	312	431	456	636	662	907	943
White	249	262	342	359	519	545	783	818	1,139	1,180
Men	273	284	386	401	595	615	884	921	1,256	1,338
Women	229	240	305	318	444	468	652	675	926	959
Black	214	231	284	301	400	426	595	626	824	886
Men	228	245	300	317	432	468	635	681	892	950
Women	204	222	269	288	375	400	537	589	761	808
Hispanic	201	216	258	272	351	370	528	563	798	818
Men	209	228	270	284	371	390	571	594	851	887
Women	190	199	238	253	318	337	483	507	698	717
Educational attainment										
Total, 25 years and older	260	275	360	379	540	572	801	836	1,149	1,198
Less than a high school diploma	195	204	246	257	321	337	463	486	640	679
High school graduate, no college	245	259	322	338	461	479	646	667	876	899
Some college or associate's degree ...	280	291	378	391	535	558	754	774	1,008	1,040
College graduate	388	410	556	586	779	821	1,136	1,173	1,565	1,657
Bachelor's degree only	364	388	508	541	725	753	1,026	1,097	1,430	1,521
Advanced degree	470	493	655	675	927	956	1,321	1,368	1,880	1,906
Men, 25 years and older	288	299	408	425	615	639	904	940	1,273	1,353
Less than a high school diploma	210	225	272	283	365	383	511	535	705	740
High school graduate, no college	284	293	383	394	535	559	739	761	974	1,000
Some college or associate's degree ...	309	324	435	457	621	643	861	888	1,140	1,162
College graduate	427	452	618	643	896	939	1,274	1,353	1,800	1,895
Bachelor's degree only	403	425	586	604	827	871	1,167	1,244	1,589	1,750
Advanced degree	502	526	733	752	1,047	1,107	1,464	1,539	2,029	2,155
Women, 25 years and older	235	249	315	331	462	485	666	695	938	974
Less than a high school diploma	180	184	215	228	275	283	352	370	466	493
High school graduate, no college	218	232	284	297	378	396	512	532	681	698
Some college or associate's degree ...	255	271	333	345	459	476	622	642	820	857
College graduate	355	383	493	522	672	707	934	967	1,246	1,322
Bachelor's degree only	330	360	459	488	620	653	857	891	1,153	1,198
Advanced degree	438	464	600	618	800	837	1,073	1,133	1,469	1,521

¹The median (or upper limit of the second quartile) is the amount that divides a given earnings distribution into two equal groups, one having earnings above the median and the other having earnings equal to or below the median.

Ten percent of the population of a given distribution have earnings below the upper limit of the first decile (90 percent have higher earnings); 25 percent have earnings below the upper limit of the first quartile (75 percent have higher earnings);

75 percent have earnings below the upper limit of the third quartile (25 percent have higher earnings); and 90 percent have earnings below the upper limit of the ninth decile (10 percent have higher earnings).

²Beginning in January 1998, data reflect new composite estimation procedures and revised population controls used in the household survey.

THE YEAR 1998 WAS CHARACTERIZED by contrasts in the labor market. The overall pace of growth in payroll employment slowed slightly, in part because of the negative influences on employment brought about by the Asian economic crises. The manufacturing division lost jobs after 5 years of at least slight gains. Certain health care industries lost jobs as medicare policies were changed. Help supply firms added far fewer jobs than in the recent past, and low oil prices reduced the number of jobs in petroleum extraction. The length of the average workweek also diminished slightly.

Many positive developments can be attributed in part to favorable interest rates, as employment increased strongly in financial industries, insurance, construction, and real estate. Other positive developments included strength in hiring in public-sector education, a slight net rise in hiring in the Federal Government instead of a net reduction, and, for the second straight year, a relatively large increase in average pay, adjusted for inflation. The strengths and weaknesses combined to produce a total rate of growth in payroll jobs slightly below the average rate of the previous 5 years of expansion.

As measured by the household survey, employment grew in 1998, but not by as much as in 1997. Most of the 1998 growth occurred within managerial and professional specialty occupations. The unemployment rate remained unusually low by historical standards, reaching 4.3 percent in April and December. The labor force participation rate matched 1997's record high, while the employment-to-population ratio exceeded its previous high set that same year. With respect to the major

demographic groups, the employment-to-population ratio for blacks rose in 1998, as their labor force participation rate continued to increase over the year.

Because of the tightening labor market, the unemployment rate for those with less than a high school education declined and the earnings of this group, although lower than the earnings of those with more education, rose 5 percent over the year. □

Footnotes

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¹ Unless otherwise noted, the data presented are seasonally adjusted quarterly averages. The changes representing movements in 1998 generally are from the fourth quarter of 1997 to the fourth quarter of 1998. CES data for the fourth quarter of 1998 are preliminary.

² Freddie Mac's records begin in 1971. Comparable earlier records are not available.

³ Data representing employment by industry, hours of work, and average pay of production or nonsupervisory workers are from the Bureau's Current Employment Statistics program, which conducts a monthly survey of nearly 400,000 offices, stores, factories, construction sites, and all other types of workplaces except farms, households, and forestry, fishing, hunting, or trapping sites. The sample includes more than a third (36 percent) of the corresponding universe of employment.

⁴ Based on data for 1993, a year with moderate export activity.

⁵ See Jim Ostroff, "Textile/Apparel Imports Continue to Pour in from Asia," *Daily News Record*, Aug. 19, 1998; Paula L. Green, "Textile, apparel imports continue to increase," *Journal of Commerce*, Sept. 23, 1998; and Jim Ostroff, "Yet Again, Textiles Imports Soar," *HFN: The Weekly Newspaper for the Home Furnishing Network*, Aug. 3, 1998.

⁶ The information that follows is compiled from the website of the Health Care Finance Administration, U.S. Department of Health and Human Services (<http://www.HCFA.gov>).

⁷ "Surveys Find More Employers Relying on Staffing Firms," *SI Review*, September/October 1998, p. 42. See also, for example, Chris Olson, "Firms Peg Labor Shortage as Top Woe," *Omaha World-Herald*, Nov. 13, 1998. The latter article typifies newspaper accounts on the subject.

⁸ The producer price index for domestic crude petroleum is from the Office of Prices and Living Conditions of the Bureau of Labor Statistics.

⁹ Lois Romano, "World's Oil Glut Is Fueling Perilous Times in Oklahoma," *The Washington Post*, Jan. 19, 1999, p. A3.

¹⁰ The value of construction put in place, estimated by the Bureau of the Census, "is a measure of the value of construction installed or erected at . . . [a] site during a given period," including the cost of materials installed or erected, the cost of labor, profit, and other costs. (See *Value of Construction Put in Place* (Bureau of the Census, May 1998), Appendix A; quote from p. A1.)

¹¹ Joseph B. Treaster, "Life insurance sales fall as U.S. society changes," *Denver Post*, Sept. 10, 1998. See also Michael Nol, "Variable-annuity boom spurred AIG bid // Retirement: The investments are the fastest-growing segment of the life insurance business," *The Orange County Register*, Aug. 21, 1998.

¹² *Digest of Education Statistics 1997* (U.S. Department of Education, 1998), table 2.

¹³ *Projections of Education Statistics to 2008* (National Center for Education Statistics, 1998), table 2. Enrollments for 1997 and 1998 are projected.

¹⁴ Robert C. Johnston, "Will the Real Education Candidate Please Stand Up?" *Education Week*, Oct. 21, 1998, pp. 26–31.

¹⁵ See William Booth, "Californians' Favorite Subject: A School's Overhaul," *The Washington Post*, Nov. 24, 1998, pp. A1, A4; and Johnston, "Real Education Candidate," p. 31.

¹⁶ *Projections of Education Statistics*, table 34.

¹⁷ The Current Population Survey (CPS), a nationwide sample survey conducted for the Bureau of Labor Statistics by the Bureau of the Census, provides information about the demographic characteristics and employment status of the noninstitutional population aged 16 and older. The estimates of employment and over-the-year employment growth from the CPS differ from those obtained from the CES survey because of conceptual and methodological differences between the two surveys. (For an overview of these differences, see box on p. 4.)

Unless otherwise noted, "over-the-year change" refers to the change from the fourth quarter of 1997 to the fourth quarter of 1998.

Beginning in January 1998, data are not strictly comparable with data for 1997 and earlier years because of the introduction of new composite estimation procedures and the revision of the population controls used in the household survey. Where applicable, estimates of over-the-year change have been adjusted to account for the break in the series. For additional information, see "Revisions in the Current Population Survey Effective January 1998" in the February 1998 issue of *Employment and Earnings*.

¹⁸ Direct comparisons prior to January 1994 are not recommended, because changes to the questionnaire resulted in an increase in the estimated number of people working part time.

¹⁹ Percentages will not sum to 100, because of the exclusion of persons who work part time on their primary job and full time on their secondary job(s), whose percentages are not shown separately.

²⁰ Individual cells of a matrix depicting major occupation by major industry were ranked in descending order by median weekly earnings of all wage and salary workers in 1996. These cells were then grouped into three categories—highest, middle, and lowest earnings—that each accounted for approximately one-third of total employment in 1996. An employment time series for each occupation-industry cell from January 1996 to December 1998 was developed, and data for each cell were sorted into the appropriate earnings group. For a more detailed explanation of the nature of job growth and a complete discussion of the methodology used in the analysis, see Randy E. Ilg, "The nature of employment growth, 1989–95," *Monthly Labor Review*, June 1996, pp. 29–36.

²¹ Beginning in January 1997, data reflect revised population controls used in the household survey; beginning in January 1998, data reflect the new composite estimation procedure. Data were not adjusted, because the magnitudes of these changes were nearly offsetting and there were no adjustments available for the separate series.

²² The monthly time-series data that were used were independently seasonally adjusted and do not sum to the total-employment figures.

²³ Only those specific occupation-industry groups that supplied a large proportion of the employment growth or decline are presented. For a complete list of the occupation-industry cells, see Ilg, "Nature of employment growth." Data used in the analysis presented in the current article are annual

averages that have been ranked according to earnings of all wage and salary workers in 1996 and divided into equal employment groups on the basis of 1996 total employment. Therefore, because of the new ranking order, a certain number of specific occupation-industry cells may now be included in earnings groups other than those in which they originally appeared in the 1996 published research. The source of both the annual average employment data and the earnings data used in this analysis is the Current Population Survey.

²⁴ As of October 1998, the current business expansion reached 92 months of uninterrupted growth, equaling the previous longest peacetime expansion that began in November 1982 and ended in June 1990, according to the Bureau of Economic Research.

²⁵ For additional information, see John E. Bregger and Steven E. Haugen, "BLS introduces new range of alternative unemployment measures," *Monthly Labor Review*, October 1995, pp. 19–26. Two of the alternative measures, U–1 and U–2, are excluded from our analysis because they focus on the duration of unemployment and reasons for unemployment, which have just been discussed.

²⁶ Both the nonfarm employment estimates and the labor force estimates are the sum of State estimates and are not intended to add up to national totals.

²⁷ Labor force estimates for census regions and divisions were converted to sums of State model-based estimates beginning with January 1998 data.

²⁸ The CPI-W is used for the adjustment.

Bureau of Labor Statistics Internet

The Bureau of Labor Statistics World Wide Web site on the Internet contains a range of data on consumer and producer prices, employment and unemployment, occupational compensation, employee benefits, workplace injuries and illnesses, and productivity. The homepage, at

<http://stats.bls.gov>

can be accessed using any Web browser. Also, some data can be accessed through anonymous FTP or Gopher at

stats.bls.gov
