U.S. labor market weakened in 1990

Employment declined and unemployment rose in the second half of 1990; job losses were particularly acute in construction and manufacturing

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Labor market conditions deteriorated markedly during 1990, reflecting increasing weakness in the U.S. economy. Employment growth, which had begun to slow early in 1989, came to a standstill around mid-1990; employment then declined in the second half. The manufacturing and construction industries were hardest hit. Manufacturing employment fell throughout 1990, while large job losses in construction began around midyear. By the fourth quarter, the weakening demand for labor had spread to the service-producing sector, where employment in the trade and finance, insurance, and real estate industries turned downwards, and job growth in most other service-producing industries either came to a halt or slowed considerably.

Reflecting these developments, unemployment rose in the second half of 1990, following nearly 2 years of relative stability. The number of unemployed persons, at 7.4 million in the fourth quarter, was up by about 760,000 from a year earlier, and the unemployment rate, at 5.9 percent, rose by 0.6 percentage point. These increases might have been even greater had it not been for the extraordinarily slow labor force growth throughout the entire year, which served to reduce competition for jobs. The rise in unemployment occurred across all major labor force groups. The number of persons working part time even though they would have preferred full-time employment, sometimes used as a measure of underemployment, also increased in 1990, particularly in the second half of the year.

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The economic climate

The economy weakened considerably in 1990, continuing and intensifying the prior year's slowdown in economic activity. In 1989, economic growth had slackened during the course of the year, as domestic consumption softened and export growth moderated from the vigorous pace set during 1987–88. In addition, there had been a decline in new home construction. By the final quarter of 1989, the annual rate of growth in real gross national product (GNP)—the Nation's output of goods and services—had slowed to just 0.3 percent. (See table 1.)

Early in 1990, as the economy entered its eighth year of expansion, there were some indications of renewed economic strength. Consumption expenditures rebounded from relatively weak levels at the end of 1989, driven by a substantial improvement in auto sales. In addition, unusually warm weather spawned a resurgence of building activity, especially new housing. Export growth, while still below 1987–88 levels, appeared to remain solid.

As the year progressed, however, an underlying weakness in the economy became increasingly apparent. Americans became more cautious about major purchases, and export growth moderated further. In addition, construction activity resumed its downward trend. The Iraqi invasion of Kuwait in August and the resulting rise in energy prices sent consumer confidence plummeting further, and real GNP declined sharply in the fourth quarter. The economy entered a recession some-

Table 1. **Percent change in real GNP and its major components, seasonally adjusted at annual rates, 1989–90**

Item	1989				1990			
	I	II	III	IV	I	II	III	IV[1]
Real GNP	3.6	1.6	1.7	0.3	1.7	0.4	1.4	–2.1
Personal consumption expenditures	–.3	1.3	4.6	–.8	1.1	.2	2.7	–3.1
Nonresidential fixed investment	8.9	6.9	6.3	–3.8	5.0	–4.7	8.9	–4.6
Residential fixed investment	–3.6	–11.3	–7.6	–5.5	15.1	–11.2	–19.8	–15.4
Exports of goods and services	15.8	12.4	–.5	13.5	11.2	–5.0	6.9	7.8
Imports of goods and services	–2.3	12.8	6.4	1.7	2.5	.7	7.6	–6.3
Government purchases of goods and services	–3.3	4.0	–2.4	3.0	2.9	6.2	1.2	4.9

1 Data represent the "advance" estimates for the fourth quarter and are subject to two subsequent revisions.

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis.

time in the second half, although, as this article went to press, the National Bureau of Economic Research, Inc.— the official arbiter of business cycle peaks and troughs—had not determined the exact month in which the recession began.

Second-half employment decline

The rapid decay in employment growth in 1990 provided clear evidence of weakening economic conditions. During the first half of the year, employment growth continued, albeit at a sluggish pace. After midyear, however, job growth quickly came to a halt, and the employment level began to fall. The downturn in employment, after roughly 7½ years of continuous job gains, was evidenced by data from the Current Employment Statistics program (the survey of business establishments) and from the Current Population Survey (the survey of households), although there were differences between the two surveys in the timing and magnitude of the declines.

Total nonagricultural job growth, as measured by the establishment or "payroll" survey, appeared to be more robust in the first half of 1990 than could be supported by underlying economic conditions. (See table 2.) This was due partly to unusually mild winter weather and, more significantly, to the recruitment in the spring of a large number of temporary workers to assist in conducting the 1990 census. An examination of 1990 payroll employment trends, adjusted for the hiring and eventual dismissal of these temporary workers (after the census was completed), provides a much clearer picture of employment developments. (See chart 1.) After subtracting census workers from the employment total, job growth for the first quarter of 1990 amounted to 655,000, followed by increases of 375,000 and 325,000 in the second and third quarters, respectively, and a decline of 340,000 in the fourth quarter. Over the year, total payroll employment was up just 1 million, less than half the 1989 increase.[1]

Estimates of total civilian employment, based on the household survey, confirm the decline in the second half of 1990. (See table 3.) The employment weakness was manifested by a drop in the proportion of the population that is employed, as expressed by the employment-population ratio. After hovering around a very high 63.0 percent from late 1989 through mid-1990, the ratio fell in the second half, averaging 62.3 percent in the fourth quarter.

Construction and manufacturing

Although nearly all industries were adversely affected by the economic slowdown in 1990, the weakness was particularly evident in the goods-producing sector, where the construction and manufacturing industries registered large job losses. (See chart 2.) The slowdown in *construction*, which had begun in 1989, became much more severe during 1990, particularly in residential construction. Following a weather-related spurt in the first few months of the year, the number of new housing starts fell sharply, and by the fourth quarter, new home construction had declined to a seasonally adjusted annual rate of just 1.0 million, the lowest since the second quarter of 1982. (See chart 3.) Nonresidential construction also slowed considerably during the year, as high office vacancy rates throughout much of the country discouraged office building, and other commercial construction, also plagued by oversupply problems, remained sluggish. In contrast, public construction, including schools, hospitals, and other public buildings, grew considerably in 1990.

The decline in housing starts in 1990 occurred among both single-family homes and multifamily

structures, such as apartment buildings and condominiums. The dropoff in single-family homebuilding reflected a decrease in home sales, as mortgage interest rates remained mostly intractable until late in the year, and potential homebuyers became increasingly cautious as the economy weakened and uncertainty grew over developments in the Persian Gulf. The steep cutback in multifamily construction was due in part to an oversupply of rental properties. Another factor constraining construction activity in general was the increasingly stringent loan requirements set up by banks in the wake of the savings and loan crisis.

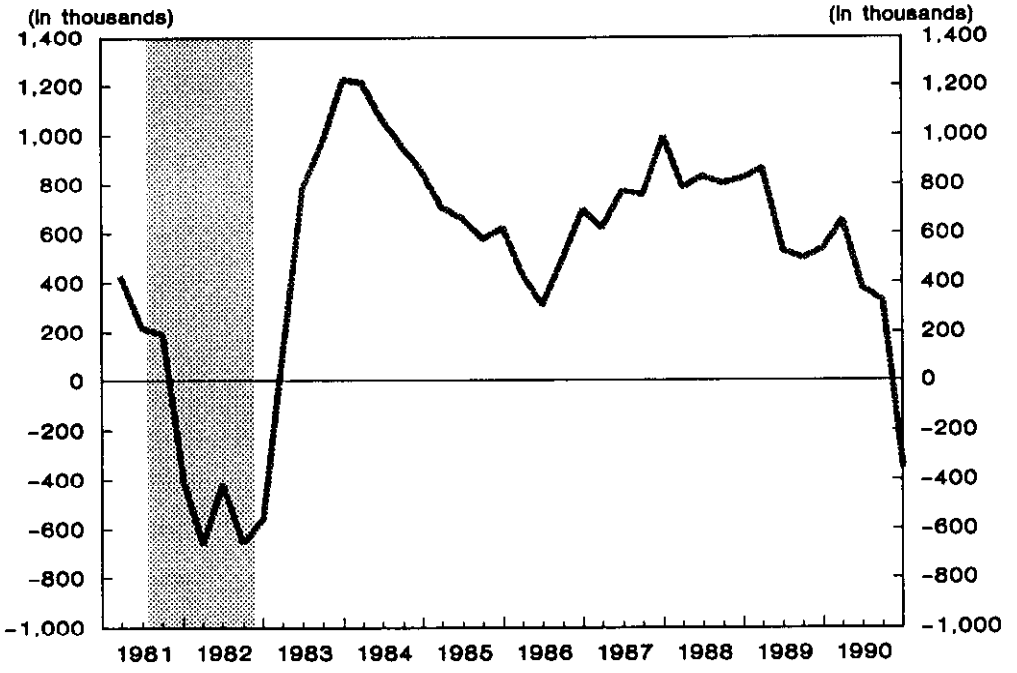
The marked decline in the demand for new construction in 1990 prompted job cutbacks throughout the industry. In the fourth quarter, the number of construction jobs totaled 5.0 million, down about 200,000 over the year. This was the first over-the-year decline in construction employment since 1982. General building contractors suffered the sharpest cutbacks in percentage terms, but the large group of special trades contractors, which had been the fastest growing component of the construction industry, lost the most jobs. The job total in heavy construction (highways, dams, power lines, and the like) fell only slightly over the year.

In addition to those on payrolls of construction firms, many construction workers are in business for themselves. In 1990, about 1.5 million construction workers were self-employed (as measured by the household survey), approximately the same number as in 1989. The number of such workers is not as sensitive to downturns in new construction activity as is payroll employment, perhaps reflecting a tendency on the part of self-employed construction workers to specialize in remodeling work, which is less susceptible to the usual cycles in the industry.[2]

Manufacturing output expanded somewhat during the first three quarters of 1990 but then fell sharply in the fourth quarter, as manufacturers responded to dwindling domestic sales and more moderate export growth. Much of the slowdown in domestic retail sales stemmed from declines in the sale of durable goods, as Americans became more reluctant to purchase big-ticket items.

While sales of American-manufactured products outside the United States continued to expand in 1990, the *rate* of growth in exports continued the pattern of moderation that began in 1989. This moderation followed 2 years of robust growth, spurred by a decline in the value of the dollar.[3] With the dollar stabilizing in 1988 and showing a modest uptrend for most of 1989, ex-

Chart 1. Quarterly changes in nonfarm employment, seasonally adjusted, 1981-90



NOTE: Data for 1990 exclude temporary workers employed for the decennial census. Shaded area represents the 1981-82 recession, as designated by the National Bureau of Economic Research.

Table 2. **Employees on nonfarm payrolls by industry, seasonally adjusted quarterly averages, 1982–90**

[In thousands]

Industry	1982	1986	1988	1989	1990			
	IV				I	II	III	IV[p]
Total	88,717	100,369	106,766	109,203	109,911	110,541	110,655	110,234
Total private	72,893	83,513	89,215	91,299	91,845	92,108	92,309	91,901
Goods-producing	22,980	24,446	25,295	25,260	25,262	25,178	25,016	24,578
Mining	1,029	715	696	715	726	739	739	737
Oil and gas extraction	651	397	386	393	401	409	411	412
Construction	3,837	4,850	5,144	5,238	5,325	5,271	5,200	5,037
General building contractors	959	1,304	1,344	1,337	1,360	1,335	1,311	1,257
Manufacturing	18,115	18,880	19,455	19,308	19,211	19,168	19,078	18,804
Durable goods	10,460	11,106	11,469	11,316	11,244	11,216	11,125	10,914
Lumber and wood products	610	737	771	753	752	747	739	720
Furniture and fixtures	425	501	530	520	518	516	511	500
Stone, clay, and glass products	529	551	572	566	567	558	550	541
Primary metal industries	824	728	778	761	755	755	755	746
Blast furnaces and basic steel products	344	255	280	273	271	271	271	271
Fabricated metal products	1,347	1,404	1,448	1,429	1,416	1,417	1,416	1,391
Industrial machinery and equipment	2,070	2,024	2,120	2,128	2,126	2,111	2,094	2,069
Electronic and other electrical equipment	1,653	1,777	1,779	1,730	1,720	1,709	1,685	1,655
Transportation equipment	1,648	2,016	2,058	2,026	1,993	2,015	1,998	1,925
Motor vehicles and equipment	659	869	871	829	796	821	815	773
Instruments and related products	988	1,009	1,028	1,017	1,009	1,002	992	985
Miscellaneous manufacturing industries	367	360	384	385	389	385	385	383
Nondurable goods	7,656	7,774	7,986	7,992	7,967	7,953	7,953	7,890
Food and kindred products	1,628	1,615	1,635	1,651	1,650	1,648	1,649	1,653
Tobacco products	68	57	54	48	47	46	47	46
Textile mill products	729	708	725	718	712	704	700	686
Apparel and other textile products	1,139	1,094	1,077	1,064	1,045	1,032	1,027	1,011
Paper and allied products	647	670	695	697	698	699	701	696
Printing and publishing	1,271	1,475	1,554	1,570	1,577	1,581	1,582	1,574
Chemical and allied products	1,055	1,017	1,065	1,078	1,082	1,085	1,087	1,087
Petroleum and coal products	200	164	158	158	159	159	161	161
Rubber and miscellaneous plastics products	710	830	882	875	867	869	874	857
Leather and leather products	209	144	140	133	131	129	125	121
Service-producing	65,737	75,924	81,471	83,942	84,649	85,363	85,639	85,656
Transportation and public utilities	5,023	5,286	5,575	5,713	5,801	5,829	5,852	5,870
Transportation	2,733	3,093	3,359	3,524	3,580	3,609	3,636	3,655
Communications and public utilities	2,290	2,194	2,216	2,190	2,221	2,220	2,216	2,215
Wholesale trade	5,230	5,786	6,139	6,331	6,358	6,372	6,373	6,342
Durable goods	3,051	3,404	3,631	3,757	3,774	3,773	3,769	3,742
Nondurable goods	2,179	2,383	2,508	2,574	2,584	2,598	2,604	2,600
Retail trade	15,179	18,146	19,259	19,696	19,776	19,798	19,847	19,743
General merchandise stores	2,141	2,386	2,486	2,529	2,510	2,492	2,491	2,435
Food stores	2,510	2,946	3,122	3,239	3,268	3,295	3,303	3,313
Automotive dealers and service stations	1,634	1,966	2,100	2,115	2,118	2,120	2,135	2,125
Eating and drinking places	4,872	6,006	6,348	6,508	6,552	6,585	6,618	6,639
Finance, insurance, and real estate	5,356	6,400	6,667	6,772	6,811	6,835	6,848	6,836
Finance	2,666	3,210	3,284	3,325	3,333	3,339	3,346	3,342
Insurance	1,725	1,984	2,089	2,114	2,129	2,139	2,150	2,152
Real estate	966	1,206	1,293	1,332	1,348	1,357	1,352	1,343
Services	19,125	23,448	26,280	27,526	27,838	28,096	28,371	28,532
Business services	2,727	4,077	4,813	4,982	5,008	5,045	5,058	5,046
Health services	5,892	6,632	7,264	7,741	7,887	8,040	8,187	8,339
Government	15,824	16,857	17,550	17,904	18,066	18,433	18,346	18,333
Federal	2,745	2,897	2,985	2,982	3,031	3,278	3,069	2,966
State	3,641	3,927	4,114	4,207	4,238	4,270	4,304	4,325
Local	9,438	10,032	10,451	10,716	10,797	10,885	10,973	11,043

[p] = preliminary.

Table 3. **Employment status by sex, age, race, and Hispanic origin, seasonally adjusted quarterly averages, 1982–90**

[Numbers in thousands]

Characteristic	1982	1986	1988	1989	1990			
	IV				I	II	III	IV
Total								
Civilian labor force	110,959	118,587	122,464	124,432	124,647	124,839	124,795	124,924
Percent of population	64.1	65.4	66.1	66.5	66.5	66.5	66.3	66.2
Employed	99,120	110,492	115,972	117,832	118,085	118,201	117,818	117,564
Agriculture	3,471	3,165	3,221	3,182	3,154	3,235	3,151	3,204
Nonagriculture	95,649	107,327	112,750	114,650	114,931	114,966	114,667	114,360
Employment-population ratio	57.3	60.9	62.6	63.0	63.0	62.9	62.6	62.3
Unemployed	11,839	8,095	6,493	6,600	6,562	6,638	6,976	7,360
Unemployment rate	10.7	6.8	5.3	5.3	5.3	5.3	5.6	5.9
Men, 20 years and over								
Civilian labor force	58,375	61,699	63,016	63,983	64,099	64,281	64,441	64,693
Percent of population	78.8	78.2	77.9	78.1	77.9	77.8	77.8	77.8
Employed	52,553	57,929	60,087	61,066	61,140	61,241	61,195	61,217
Employment-population ratio	70.9	73.4	74.3	74.5	74.3	74.2	73.8	73.7
Unemployed	5,822	3,770	2,928	2,917	2,958	3,040	3,246	3,476
Unemployment rate	10.0	6.1	4.6	4.6	4.6	4.7	5.0	5.4
Women, 20 years and over								
Civilian labor force	44,112	49,009	51,506	52,523	52,787	53,042	53,180	53,042
Percent of population	52.9	55.7	57.3	57.7	57.9	58.0	58.0	57.7
Employed	40,127	46,083	49,089	50,030	50,324	50,571	50,597	50,336
Employment-population ratio	48.1	52.4	54.6	55.0	55.2	55.3	55.2	54.7
Unemployed	3,985	2,926	2,417	2,493	2,463	2,471	2,583	2,706
Unemployment rate	9.0	6.0	4.7	4.7	4.7	4.7	4.9	5.1
Both sexes, 16 to 19 years								
Civilian labor force	8,472	7,879	7,943	7,926	7,761	7,516	7,174	7,189
Percent of population	54.3	54.2	55.0	56.3	55.5	54.3	52.3	52.7
Employed	6,440	6,481	6,795	6,736	6,620	6,390	6,027	6,012
Employment-population ratio	41.3	44.5	47.0	47.8	47.3	46.2	43.9	44.1
Unemployed	2,032	1,398	1,148	1,190	1,141	1,126	1,147	1,178
Unemployment rate	24.0	17.7	14.4	15.0	14.7	15.0	16.0	16.4
White								
Civilian labor force	96,623	102,463	105,386	106,841	107,048	107,166	107,251	107,281
Percent of population	64.4	65.7	66.4	66.9	66.9	66.9	66.8	66.7
Employed	87,452	96,407	100,555	102,007	102,155	102,238	102,126	101,836
Employment-population ratio	58.3	61.8	63.4	63.9	63.8	63.8	63.6	63.3
Unemployed	9,171	6,056	4,831	4,835	4,893	4,928	5,125	5,445
Unemployment rate	9.5	5.9	4.6	4.5	4.6	4.6	4.8	5.1
Black								
Civilian labor force	11,503	12,708	13,338	13,522	13,507	13,531	13,428	13,510
Percent of population	61.5	63.2	64.1	64.0	63.8	63.6	62.9	63.1
Employed	9,155	10,904	11,861	11,960	12,033	12,090	11,864	11,882
Employment-population ratio	48.9	54.2	57.0	56.6	56.8	56.9	55.6	55.5
Unemployed	2,348	1,804	1,477	1,562	1,474	1,441	1,564	1,628
Unemployment rate	20.4	14.2	11.1	11.5	10.9	10.6	11.6	12.0
Hispanic origin								
Civilian labor force	6,826	8,256	9,140	9,436	9,498	9,615	9,645	9,550
Percent of population	63.5	66.0	67.7	67.5	67.3	67.5	67.2	66.0
Employed	5,783	7,426	8,437	8,682	8,769	8,882	8,863	8,717
Employment-population ratio	53.8	59.4	62.5	62.1	62.1	62.4	61.7	60.2
Unemployed	1,043	829	704	753	729	733	782	832
Unemployment rate	15.3	10.0	7.7	8.0	7.7	7.6	8.1	8.7

NOTE: Detail for 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.

port performance slowed. Despite a subsequent drop in the dollar's value in the second half of 1990, there was little immediate resurgence in export growth, but the development did augur well for future sales abroad.

Although manufacturing output expanded well into the second half of 1990, employment in the industry fell throughout the year, continuing a pattern that had begun in early 1989. Job declines were quite large toward the end of the year, and in the fourth quarter of 1990 the job total in manufacturing averaged 18.8 million, down 505,000 from a year earlier and more than three times the decrease in 1989. The deepest and most pervasive job cuts continued to be among the *durable goods* industries, where especially large employment losses occurred in transportation equipment, electronic and other electrical equipment, and industrial machinery.

Generally sluggish auto sales in 1990 led to concomitant reductions in vehicle production and employment over the year, continuing the employment downtrend that began early in 1989. Job losses were more pronounced toward the end of 1990, as slumping consumer confidence and the prospect of a marked dropoff in sales prompted the major automakers to idle dozens of plants temporarily. Between the fourth quarters of 1989 and 1990, employment in the auto industry fell 55,000, while the total for the transportation equipment industry declined by 100,000.

Employment in the electronic equipment industry fell by 75,000 in 1990. This decline lowered the job total for the industry to about the same level as it was at the depths of the 1981–82 recession. Even with declining employment over the past several years, output in this industry has risen substantially, as increased international competition in the electronic products market has spurred advances in productivity among American manufacturers.

Table 4. **Percent change in employment by occupational group, fourth quarter 1988–90**

Occupational group	1988–89	1989–90
All occupations	1.6	–0.2
Executive, administrative, and managerial	3.4	–.5
Professional specialty	4.1	.5
Technicians and related support	2.6	4.0
Sales occupations	2.0	–1.5
Administrative support, including clerical	1.7	–.2
Service occupations	–.9	2.7
Precision production, craft, and repair	1.8	–3.0
Operators, fabricators, and laborers	0	–1.1
Farming, forestry, and fishing	–2.8	–.2

The industrial machinery industry lost about 60,000 jobs in 1990, in line with the overall weakness in the domestic demand for manufactured goods. Elsewhere in durable goods, substantial job losses occurred in both the lumber and the stone, clay, and glass products industries, reflecting the weakness in construction and the associated dwindling in the demand for building materials. These developments were also reflected in a slowdown in furniture sales, which led to job declines among furniture workers. Employment also continued to recede in the primary and fabricated metals industries and in instruments and related products.

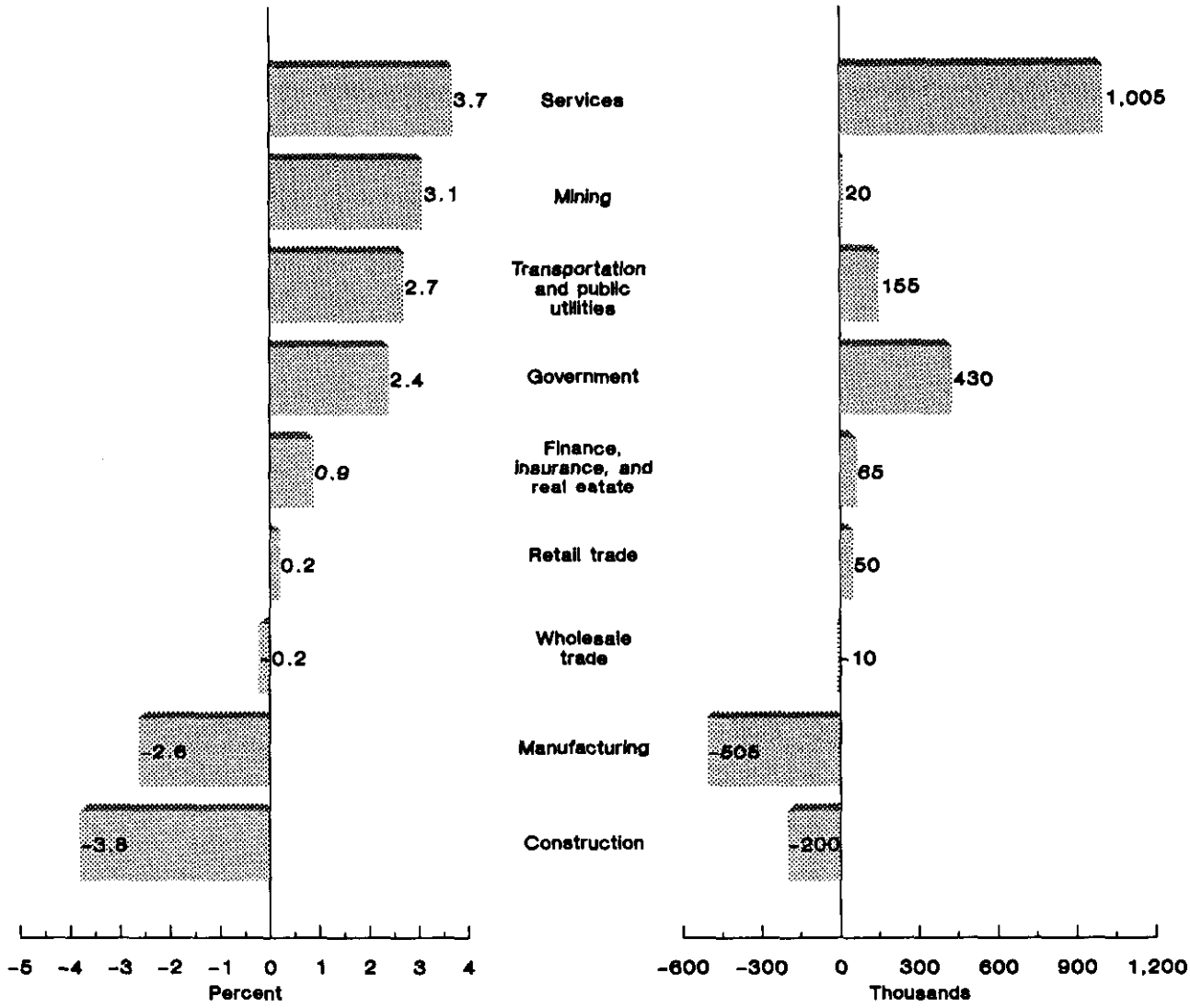
Employment in *nondurable goods* manufacturing also declined in 1990, although job losses were not as widespread as in durable goods manufacturing. The textile and apparel industries, in which employment has been declining throughout the 1980's, suffered large cuts over the year, losing 30,000 and 55,000 jobs, respectively. Both industries have been affected by intense foreign competition.[4] Employment in leather and leather products also declined, as it did in the rubber industry.

Most other nondurable goods industries showed either slower job growth or little change in employment in 1990. As in 1989, job gains in the chemicals industry slowed in 1990. Employment advances in the printing and publishing and food products industries also slowed over the year, with printing and publishing experiencing an employment decline in the fourth quarter. There was a small improvement in petroleum and coal products employment in 1990.

While manufacturing employment declined, the *workweek* for factory workers held up relatively well for most of 1990. Following an abrupt decline during the last quarter of 1989, there was an actual upturn during the first three quarters of 1990, with the workweek returning to the 41-hour level that had prevailed over most of the 1987–89 period. Hours dropped again in the fourth quarter of 1990, however, so that there was little change over the year. Overtime hours stayed close to 1989 levels. The index of aggregate weekly hours in manufacturing, which combines the effects of changes in both employment and the workweek, fell in the second half of 1990, reflecting the coincident declines in employment and hours worked. Over the year, the index dropped 3.3 percent.

It is useful to compare the present downturn in manufacturing employment with the last sustained period of job loss in the industry, which occurred in 1985–86, several years into the economic recovery from the 1981–82 recession. From the third quarter

Chart 2. **Employment changes by major industry division, fourth quarter, 1989–90**



of 1984 to the fourth quarter of 1986, 615,000 jobs were lost in manufacturing, compared to roughly 710,000 jobs lost thus far during the present contraction in the industry. During both periods, the durable goods industries bore the brunt of the job losses. The 1985–86 weakness in manufacturing reflected a slump in U.S. exports. By contrast, the current decline is more closely related to slackening domestic demand.

The two remaining goods-producing industries, mining and agriculture, were not as adversely affected by the slowdown in economic activity during 1990. *Mining* employment expanded by about 20,000 over the year, although job growth slowed early in the second half. The increase was concentrated in oil and gas extraction, as has been the case since mining employment began turning upward about mid-1989. This uptrend in employment was precipitated by a sustained increase in world oil prices: rising energy prices often induce increased drilling activity by making U.S. oil production more profitable. For

this reason, many observers expected that the sharp increase in oil prices in the aftermath of Iraq's August 1990 invasion of Kuwait would eventually provide an additional boost for the U.S. oil industry and, hence, oil and gas extraction employment. However, such an employment boost had not materialized by the end of the year.

Employment in *agriculture* (as measured by the household survey) hovered around 3.2 million in 1990. Agricultural employment has stayed at about this level since 1985. Over the long run, employment in agriculture has declined from about 40 percent of total U.S. employment at the beginning of this century to less than 3 percent today.

Table 5. **Percent unemployed by reason for unemployment, selected quarters, 1989–90, seasonally adjusted**

Reason	1989	1990	
	IV	II	IV
Total	100.0	100.0	100.0
Job losers	46.1	47.6	50.3
Job leavers	15.6	15.9	13.6
Reentrants	28.0	27.3	27.0
New entrants	10.3	9.3	9.1

NOTE: Because of rounding, sums of individual items may not equal totals.

Ripples in the service sector

Most service-producing industries were weaker in 1990 than in 1989, although a few were resilient. Sizable fourth-quarter job losses occurred in the wholesale and retail trade industries, and there was a small decline in finance, insurance, and real estate. Job growth for most other industry divisions either came to a standstill or slowed markedly by year's end. Economic weakness was widespread among the more detailed industry components. Three notable exceptions to this pattern were the health services industry and State and local governments, all expanding their employment rolls at a solid pace. Altogether, 1.7 million jobs were added in the service-producing sector between the fourth quarters of 1989 and 1990, but this figure was down sharply from about 2.5 million in 1989 and was well below the 2.9 million jobs added in 1988.

In *retail trade*, employment fell sharply in the fourth quarter of 1990, after continuing to expand slowly earlier in the year. As a result, the job total in the industry, at 19.7 million in the fourth quarter of 1990, was up only slightly over the year. The weakness in the industry was fairly widespread. Employment in general merchandise stores, which had started declining around mid-1989, continued to fall during 1990, with about 95,000 jobs lost over the year. Employment in automotive dealers and service stations registered modest growth for most of the year but then declined toward year's end. Job gains in food stores and eating and drinking places tapered off somewhat in the second half of the year.

In line with the slowdown in retail trade, the *wholesale trade* industry, which serves as a conduit between manufacturers and domestic retail outlets, as well as a distributor of goods to foreign buyers, also weakened considerably during 1990. Job declines in the second half left employment in the industry at the end of the year at 6.3 million, about the same as a year earlier. Job losses were concentrated in durable goods distribution, reflecting a reduction in purchases of consumer durables.

Employment growth continued in *finance, insurance, and real estate* for most of 1990, but the pace slowed markedly in the second half, with employment even falling slightly late in the year. About 65,000 jobs were added in 1990, compared with 105,000 in 1989. The weakness was mostly confined to the real estate and finance industries. Employment in real estate fell in the second half, reflecting the marked slowdown in the sales of both new and existing homes. Job cuts in finance emanated from the turmoil in the industry generated by the insolvency of a number of savings and loan institutions and other banks; also, the generally languid stock market led to continued employment declines among security brokers and dealers. By way of contrast, employment growth in the insurance industry was robust for most of 1990. About 40,000 jobs were added over the year, well above the 25,000 added in 1989.

In the *transportation and public utilities* industry, employment appeared to have improved somewhat in 1990; however, much of this improvement is because the job level for the fourth quarter of 1989, the base for comparison with 1990, was reduced by a strike in telephone communications. Taking the strike into account, employment growth in transportation and public utilities actually slowed a bit during 1990, mostly because of smaller job gains in transportation.

Employment in the *services* industry continued to expand at a solid rate in 1990, although growth was down a bit from 1989. Over the year, employment in services grew about 1.0 million, down from 1.2 million in 1989. More significantly, the composition of job growth within the industry changed dramatically from previous years. The rate of job growth in the business services component was off markedly in 1990, intensifying the slowdown that

began about mid-1989. This component includes establishments providing advertising, data processing, recruiting, and other types of support for businesses. As the economy weakened in 1990, the demand for such services softened, leading to a job decline in the fourth quarter. As a result, only 65,000 jobs were added over the year, about two-fifths of the 1989 increase. Within business services, notable over-the-year employment declines occurred in services to buildings and personnel supply services.

In marked contrast, job growth in health services continued strong in 1990. By the fourth quarter, employment totaled 8.3 million, up 600,000 from a year earlier, a figure representing more than half of the net job growth in the economy in 1990. Employment in this industry grew particularly fast in home health care facilities, medical and dental laboratories, and doctors' offices. Robust job growth in health services in recent years is attributable to a number of factors, such as the aging of the population, as well as advancements in medical technology, which have greatly increased the number of health problems that can be treated.[5]

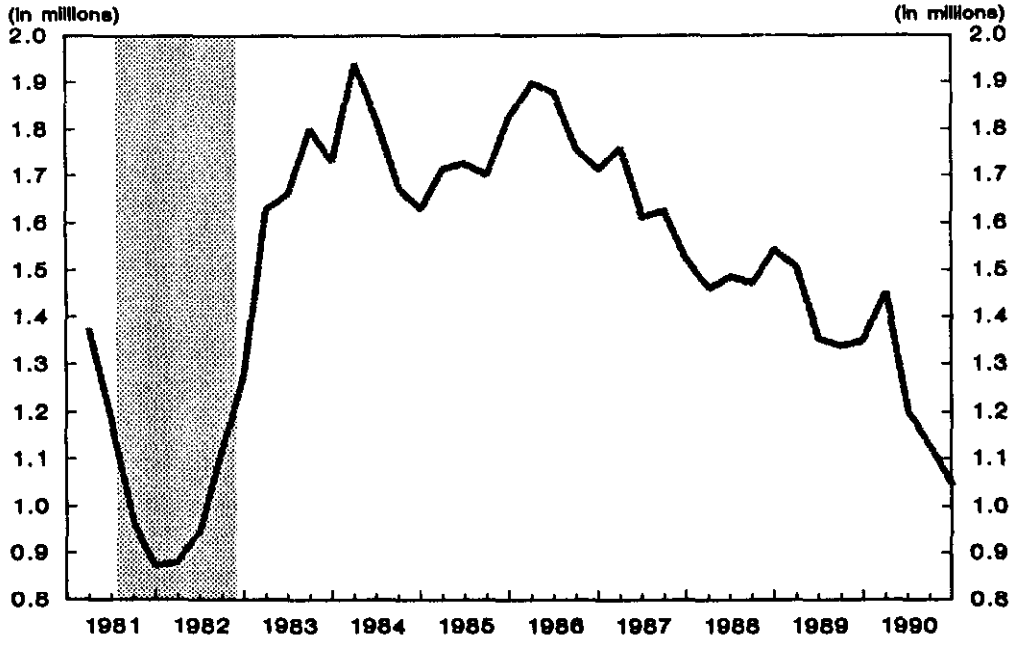
State and local governments also exhibited strong job growth in 1990. At the State government level, 120,000 jobs were added, up from 95,000 in 1989, while local government employment expanded by 325,000, compared to 265,000 a year earlier. In the Federal Government, the hiring of temporary employees to assist in conducting the 1990 census added roughly 380,000 workers during the first half of 1990. However, these jobs quickly ended as census-related operations wound down in the second half. There was little job growth elsewhere in the Federal Government, and in the fourth quarter, the 3.0 million job total was about unchanged from a year earlier.

Job developments by occupation

Occupational employment trends in 1990 mirrored industry developments. Employment declined among precision production, craft, and repair workers and operators, fabricators, and laborers—sometimes called "blue-collar" occupations. These workers are heavily concentrated in the hard-hit manufacturing and construction sectors. Consistent with the sluggishness in the trade, finance, and real estate industries, the number of sales workers also fell over the year. Employment edged down in executive, administrative, and managerial occupations, which had exhibited very rapid job growth during the 1980's.

A few occupational groups showed growth in 1990. The fastest job growth occurred among

Chart 3. New privately owned housing units started, quarterly averages at seasonally adjusted annual rates, 1981-90



NOTE: Shaded area represents the 1981-82 recession, as designated by the National Bureau of Economic Research.

SOURCE: Data points are quarterly averages of monthly figures published by the U.S. Bureau of the Census. The data point for the fourth quarter of 1990 is preliminary.

technicians and related support workers, many of whom are employed in health-related positions. Employment also grew in service occupations, which include food preparation positions and certain health service jobs such as nursing aides. Among professional specialty occupations, employment grew only slightly.

Table 4 presents the percent changes in employment in 1989 and 1990 for each major occupational group.

Age, sex, and race

Much of the slowdown in employment growth and subsequent employment decline in 1990 was reflected in a sharp drop in the number of working teenagers. The number of employed teens has been falling slowly since late 1988, mostly due to an ebb in their population. However, the rate of decline became much more pronounced in 1990, with their job total falling by 720,000 over the year. Only about three-fifths of this most recent decrease reflected their declining population. The rest of the decrease was due to a drop in the proportion of teenagers who were working, from 47.8 percent in the fourth quarter of 1989 to 44.1 percent in the fourth quarter of 1990.

The recent decline in teen employment largely reflects softening demand for labor. Because younger workers in general, and teenagers in particular, have less experience and are generally less skilled than older workers, they are often among the first to see their job opportunities deteriorate when employers trim payrolls. For example, three-fifths of the decline in teen employment in 1990 occurred in retail trade, where business conditions slowed markedly during the year. At the same time, there is some indication that teenagers are increasingly choosing to stay completely out of the job market, perhaps opting for school activities or leisure, or, in the case of older teens, enrolling in college.

After a decline in the second half of 1990, the number of employed adult men (age 20 and over) was up by only 150,000 over the year. The employment ratio for men fell by almost a full percentage point, to 73.7 percent. Adult women registered an employment increase of 310,000 in 1990, although their employment level also turned down late in the year. The employment-population ratio for adult women reached an all-time high of 55.3 percent in the second quarter but then declined, returning to late-1988 levels by the end of the year.

Among the racial and ethnic groups, blacks, Hispanics, and whites all showed a similar pattern of declining employment in the second half of 1990, offsetting small increases in the first half. In the fourth quarter of 1990, there were 11.9 million employed blacks, little different from a year earlier, and their employment-population ratio, at 55.5 percent, was 1.1 percentage points lower than in the fourth quarter of 1989. Among Hispanics, employment was unchanged in 1990, following an increase of 250,000 in 1989. Employment growth among Hispanics had been robust in recent years, partly because of very rapid increases in their working-age population. Although the Hispanic population continued to grow rapidly in 1990, deteriorating labor market conditions resulted in a falling proportion of Hispanics with jobs (60.2 percent in the fourth quarter of 1990 versus 62.1 percent in the fourth quarter of 1989). The number of employed whites also was little changed over the year, and their

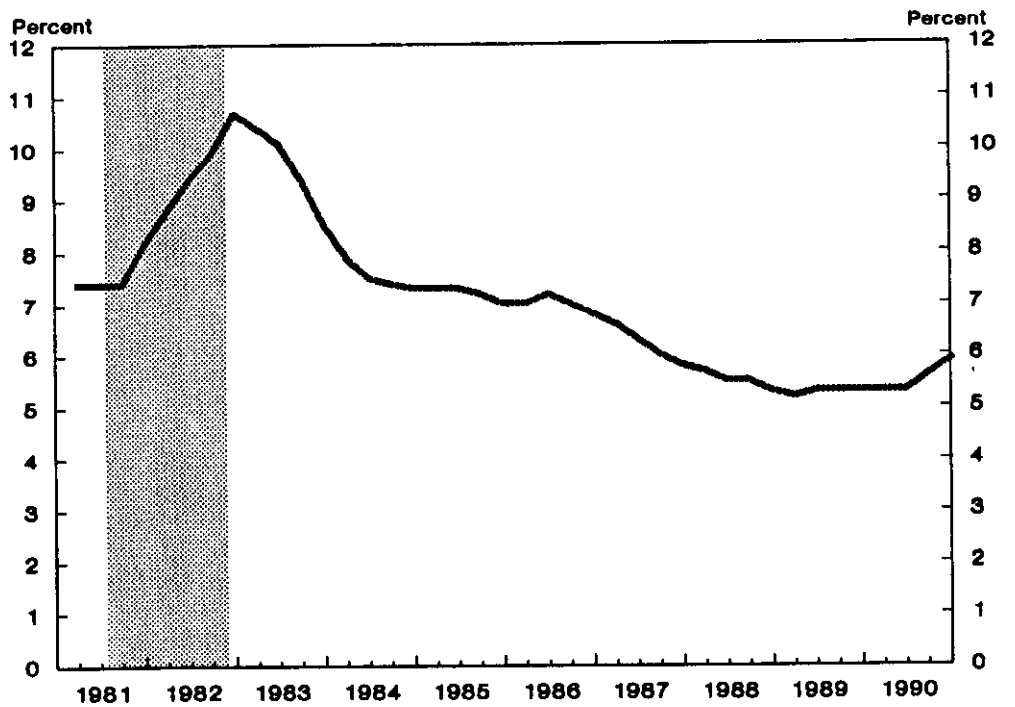
Table 6. **Percent distribution of unemployed persons by number of weeks unemployed, selected quarters, 1989-90, seasonally adjusted**

Weeks unemployed	1989	1990	
	IV	II	IV
Total	100.0	100.0	100.0
Fewer than 5	48.8	46.7	44.1
5 to 14	30.3	32.1	32.9
15 or more	20.9	21.2	23.0
15 to 26	11.1	11.4	12.6
27 or more	9.7	9.8	10.4
Median duration, weeks	4.9	5.2	5.9
Mean duration, weeks	11.6	11.9	12.3

Table 7. **Unemployment rates by occupational group, fourth quarters 1989 and 1990, not seasonally adjusted**

Occupational group	Fourth-quarter—	
	1989	1990
Executive, administrative, and managerial	2.3	2.4
Professional specialty	1.5	1.8
Technicians and related support	2.5	2.7
Sales occupations	4.3	5.0
Administrative support, including clerical	3.7	4.2
Service occupations	6.5	6.8
Precision production, craft, and repair	4.9	6.4
Operators, fabricators, and laborers	7.9	9.1
Farming, forestry, and fishing	7.3	6.7

Chart 4. **Unemployment rate for all civilian workers, seasonally adjusted quarterly averages, 1981–90**



NOTE: Shaded area represents the 1981–82 recession, as designated by the National Bureau of Economic Research.

employment-population ratio fell 0.6 percentage point to 63.3 percent.

Unemployment

Despite the slowdown in employment growth from early 1989 to mid-1990, unemployment did not begin to rise until the second half of 1990. Both the number of unemployed persons and the civilian unemployment rate remained remarkably stable through the second quarter of 1990, hovering around 6.6 million and 5.3 percent, respectively. (See table 3.) This stability was due primarily to extraordinarily slow labor force growth, which served to reduce competition for jobs. As the economy began to deteriorate further in the second half of 1990, however, unemployment began to increase, and, by the fourth quarter, there were 7.4 million unemployed persons and the unemployment rate was up to 5.9 percent. (See chart 4.)

Age, sex, and race. The second-half increase in unemployment occurred among most major worker groups. The unemployment rate for teenagers rose 1.4 percentage points, reaching 16.4 percent in the fourth quarter. The rate for adult women also rose, from 4.7 percent in the second quarter to 5.1 percent by the end of the year. By way of contrast, unemployment among adult men began inching up earlier in the year: at 5.4 percent in the fourth quarter of 1990, their rate was up 0.8 percentage point from a year earlier.

Jobless rates for whites, blacks, and Hispanics all rose in the second half. The unemployment rate for whites was up 0.6 percentage point over the year, reaching 5.1 percent in the fourth quarter. The increases in the rates for blacks and Hispanics followed a short-lived decline in the first half of the year. Thus, the unemployment rate for blacks, at 12.0 percent in the fourth quarter, was up from 10.6 percent in the second quarter but little different from late 1989. The rate for Hispanics increased to 8.7 percent in the fourth quarter, up 0.7 percentage point from a year earlier.

Reasons for unemployment. The increase in the number of unemployed in the second half of 1990 was due largely to a rising number of unemployed persons who had lost their most recent job. There were 530,000 more unemployed *job losers* in the final quarter than in the second quarter. Job losers include persons on layoff who expect to be called back to work, as

Table 8. **Percent change in civilian employment by census region and division, 1989–90[1]**

Region and division	I	II	III	IV
United States	1.1	0.9	0.3	–0.2
Northeast	–.2	0	–.1	–1.1
New England	–1.0	–.8	–1.3	–1.7
Middle Atlantic	.2	.3	.4	–.9
Midwest	–.2	0	–.3	.2
East North Central	–.4	–.8	–.7	–.2
West North Central	.4	1.8	.5	1.1
South	2.1	1.2	.3	–.1
South Atlantic	2.1	.9	.5	.2
East South Central	2.7	2.4	–.2	–.9
West South Central	1.9	1.1	.2	–.2
West	2.0	2.1	1.3	–.2
Mountain	3.2	2.0	2.1	1.2
Pacific	1.6	2.2	1.0	–.7

[1] Percent changes are based on over-the-year comparisons of quarterly averages that are not seasonally adjusted.

NOTE: The States (including the District of Columbia) that compose the various census divisions are:

New England: Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont

Middle Atlantic: New Jersey, New York, and Pennsylvania

East North Central: Illinois, Indiana, Michigan, Ohio, and Wisconsin

West North Central: Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, and South Dakota

South Atlantic: Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, and West Virginia

East South Central: Alabama, Kentucky, Mississippi, and Tennessee

West South Central: Arkansas, Louisiana, Oklahoma, and Texas

Mountain: Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming

Pacific: Alaska, California, Hawaii, Oregon, and Washington

well as those who have permanently lost their jobs. The number of *reentrants*, or persons who were looking for work after a period of absence from the labor force, also rose somewhat (by 170,000) in the second half. The number of unemployed persons who had left their jobs voluntarily—*job leavers*—and those entering the labor force for the first time—*new entrants*—remained essentially unchanged over the year. As a result of these developments, job losers comprised a larger proportion of the unemployed at the end of 1990 than they did a year earlier, while job leavers, reentrants, and new entrants comprised slightly smaller proportions. Table 5 shows the distribution of unemployed persons by the reasons they were jobless.

Duration of unemployment. The duration of unemployment increased slightly in 1990. The median duration rose gradually throughout the year and, by year's end, was up a week, to 5.9 weeks. The mean (average) duration also increased, although the gain was smaller and was concentrated in the second half of the year.[6] Table 6 shows the distribution of unemployed persons by the number of weeks they were looking for work.

Industry and occupation. The unemployment rates for workers in the construction and manufacturing industries increased substantially during the year, particularly in the second half, while rates for most other industries edged up only slightly. The unemployment rate for private wage and salary workers in construction rose to 13.4 percent by the fourth quarter of 1990, up from 9.4 percent a year earlier. In manufacturing, the rate increased 0.9 percentage point over the year, to 6.3 percent; the increase was confined largely to workers in durable goods.

Consistent with these developments, the unemployment rates for workers in occupations heavily concentrated in construction and manufacturing—precision production, craft, and repair and operators, fabricators, and laborers—increased sharply over the year. The rate for workers in service occupations edged up only slightly over the year but was still relatively high.

The unemployment rate for managers, at 2.4 percent (not seasonally adjusted) in the fourth quarter of 1990, was little changed from a year earlier, while the rate for workers in professional specialty occupations, 1.8 percent, was up slightly over the year. The rates for both occupational groups are quite low compared to those of other groups.[7] In fact, the rate for professional specialty workers is still the lowest of any group. Unemployment rose among sales workers and those in administrative support positions, including clerical workers, although it was little changed among technicians. Table 7 shows the unemployment rates for each occupational group in the fourth quarters of 1989 and 1990.

Other labor market problems

In addition to the rise in unemployment, the number of persons working *part time for economic reasons*—sometimes called the "underemployed" or "partially unemployed"— increased by 700,000 over the year, to 5.5 million. Half of that increase occurred between the third and fourth quarters. The underemployed are persons who work part time (fewer than 35 hours per week), even though they would prefer a full-time job. More than two-thirds of the increase in their number in 1990 was among those who had been working full time but, because of declining business activity, had their schedules reduced. The remainder of the increase was comprised of persons who could only find part-time jobs.

Although unemployment and underemployment rose, the number of *discouraged workers*—persons who want a job but are not actively seeking employment because they feel their job search would be in vain—fluctuated little throughout 1989 and most of 1990, before rising somewhat at the end of the year. In the fourth quarter of 1990, there were 940,000 discouraged workers, 140,000 more than a year earlier.

The number of discouraged workers tends to move in the same direction as the unemployment rate but with some lag.[8] Thus, even though unemployment rose in the second half of 1990, the job market would likely have to deteriorate further before additional large numbers of jobseekers become discouraged enough to give up their job search.

Slowing of labor force growth

The civilian labor force, at 124.9 million at the end of 1990, was only 490,000 larger than a year earlier—a growth rate of only 0.4 percent. By comparison, the labor force grew by 1.6 percent in 1989. Labor force growth has been much slower in recent years than during the 1970's, when the large population of baby boomers was reaching working age and labor force participation among women was rising very rapidly. These two factors enabled the labor force to grow by an average of 2.7 percent per year during the 1970's. By the early 1980's, the last of the baby boomers had reached working age, and growth in the working-age population slowed, resulting in slower labor force growth.

Labor force growth was especially slow in 1990 because, in addition to slow population growth, the proportion of the population that participated in the labor force declined somewhat. The overall participation rate, which had been at an all-time high of 66.5 percent in the second half of 1989 and the first half of 1990, edged down in the second half, to 66.2 percent in the fourth quarter. The decline was especially sharp among teenagers. The number of teenagers in the labor force fell by 740,000 over the year, as their population continued to decrease, and their participation rate fell nearly 4 percentage points, to 52.7 percent. The worsening job market situation undoubtedly deterred some teens from seeking work.

Deteriorating labor market conditions also seem to have at least temporarily halted the long-term increase in labor force participation among adult women. Their labor force participation rate, which had been rising since the early 1950's, reached an all-time high of 58.0 percent in the second quarter of 1990. By the end of the year, however, the rate had slipped back to 57.7 percent. Reductions were particularly noteworthy among 25–44 year olds, who had historically accounted for much of the participation rate increase among women. The number of adult women in the labor force rose by 520,000 in 1990, about half the 1989 increase. The number of adult men in the labor force rose by 710,000 in 1990, compared with 970,000 in 1989. Their participation rate fell 0.3 percentage point in 1990, to 77.8 percent.

Table 9. **Unemployment rates by census region and division, quarterly averages, 1989–90, not seasonally adjusted**

Region and division	I		II		III		IV	
	1989	1990	1989	1990	1989	1990	1989	1990
United States	5.6	5.7	5.2	5.2	5.2	5.5	5.1	5.7
Northeast	4.5	5.6	4.3	5.0	4.4	5.2	4.7	5.6
New England	3.7	5.7	3.6	5.3	4.0	5.7	4.2	5.9
Middle Atlantic	4.8	5.5	4.6	4.9	4.6	5.0	4.8	5.5
Midwest	5.8	6.3	5.1	5.2	5.1	5.4	5.4	5.4
East North Central	6.2	6.7	5.5	5.8	5.4	5.7	5.9	5.7
West North Central	5.0	5.1	4.4	4.0	4.4	4.7	4.2	4.6
South	6.1	5.5	5.7	5.4	5.6	5.7	5.2	5.9
South Atlantic	4.8	4.8	4.9	4.8	4.8	5.4	4.7	5.7
East South Central	7.0	6.3	6.4	6.1	6.2	6.0	5.7	6.1
West South Central	7.7	6.2	6.9	6.0	6.7	6.2	6.0	6.3
West	5.8	5.4	5.2	5.1	5.2	5.3	4.9	5.7
Mountain	6.4	5.5	5.4	5.2	5.4	5.0	4.8	5.1
Pacific	5.6	5.4	5.2	5.1	5.2	5.4	4.9	5.9

NOTE: The States (including the District of Columbia) that compose the various census divisions are:

New England: Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont

Middle Atlantic: New Jersey, New York, and Pennsylvania

East North Central: Illinois, Indiana, Michigan, Ohio, and Wisconsin

West North Central: Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, and South Dakota

South Atlantic: Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, and West Virginia

East South Central: Alabama, Kentucky, Mississippi, and Tennessee

West South Central: Arkansas, Louisiana, Oklahoma, and Texas

Mountain: Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming

Pacific: Alaska, California, Hawaii, Oregon, and Washington

Regional developments

While the downturn in economic activity by late 1990 cut across all regions of the country, some areas were more seriously affected than others. The hardest hit region was the Northeast, which had actually started to weaken in 1989. The Midwest followed in the first half of 1990. As economic conditions worsened in the second half of the year, the weakness spread to the South and West.

Employment. Employment in the Northeast declined in 1990, while the Midwest showed virtually no growth.[9] The New England States

were hit particularly hard, as employment fell by about 1½ percent between the fourth quarters of 1989 and 1990. (See table 8.) In the Middle Atlantic States, employment had remained flat until late in the year, but, by the fourth quarter, was down about 1 percent from a year earlier. In the Midwest, employment in the heavily industrialized East North Central States declined over the year, while the farm-belt States of the West North Central division maintained moderate employment growth. By mid-1990, the weakness in the economy had spread to the South, where employment growth came to a standstill in the second half, after showing strong gains earlier. Even the West, where employment growth was vigorous during most of 1990, showed weakness late in the year.

Unemployment. Consistent with the erosion in employment, the Northeast region suffered the largest unemployment rate increase in the Nation in 1990. (See table 9.) Actually, unemployment rates have been rising in the Northeast, particularly New England, since the second quarter of 1989. During most of the expansion from the 1981–82 recession, jobless rates for the Northeast were much lower than those in other parts of the country, but the recent increases tended to equalize the region's rates with those of the rest of the Nation. In the Midwest, the jobless rate also rose early in 1990 but then leveled off.

Unemployment did not rise in the South and West until the latter part of 1990. The increase among the South Atlantic States in the second half followed little change earlier in the year. The jobless rate in the Pacific division rose sharply in the fourth quarter, after remaining rather stable in the first three quarters of the year.

JOB MARKET CONDITIONS weakened considerably during 1990, as the economy entered a recession sometime during the second half of the year. Manufacturing employment declined throughout the year, marking the second straight year of job losses. Employment in the construction industry began declining around midyear, reflecting sharp cutbacks in both residential and commercial building activity. By the fourth quarter, job market weakness had spread to the service-producing sector, where several industry divisions, most notably retail trade, experienced sizable job losses. The deteriorating job market in the second half of 1990 was also evidenced by a rise in the unemployment rate, the first marked increase since the 1981–82 recession. □

Footnotes

For further information, the authors may be contacted at (202) 523-1944.

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[1] Unless otherwise noted, estimates of change in this article refer to differences in seasonally adjusted quarterly averages. Over-the-year changes are based on fourth-quarter comparisons.

[2] For a discussion of trends in remodeling construction, see National Association of Home Builders, *Housing Economics*, October 1990, pp. 10–12. It should be noted that the absence of a substantial decline in the number of self-employed builders during construction slowdowns does not necessarily indicate that they are completely immune to weaker business conditions: it may be that many of these workers are devoting more time to lining up projects and less time to working on them.

[3] For more information on the export boom of 1987–88 and its effects on manufacturing employment, see Christopher J. Singleton, "The 1987–88 surge in exports and the rise in factory jobs," *Monthly Labor Review*, May 1990, pp. 42–48.

[4] See Lois M. Plunkert, "The 1980's: a decade of job growth and industry shifts," *Monthly Labor Review*, September 1990, pp. 3–16, especially p. 11.

[5] Plunkert, "Job growth and industry shifts," p. 14.

[6] It is important to note that the duration of unemployment, as measured by the Current Population Survey, refers to the length of time persons have been unemployed *as of the survey reference period.* Thus, it is *not* a measure of the length of *completed spells* of unemployment. That is, it does not reflect how long persons are unemployed before they find new jobs.

[7] It was widely reported by the media shortly after the unemployment rate began to rise in the second half of the year that the increase fell disproportionately on managers and professionals. (See, for example, "This Time, the Downturn Is Dressed in Pinstripes," *Business Week*, Oct. 1, 1990, pp. 130–31; "White-Collar Blues," *The Wall Street Journal*, Oct. 4, 1990, p. A1; and "This Time, a Different Kind of Downturn," *The Washington Post*, Nov. 4, 1990, p. H1.) These news stories suggested that such an occurrence contrasted sharply with previous periods of rising unemployment, in which precision production, craft, and repair workers and operators, fabricators, and laborers were more severely affected. While the monthly data for August and September appeared to lend some credence to this notion of a "white-collar downturn," data for the fourth quarter indicated that the phenomenon was relatively short lived.

[8] For example, the unemployment rate rose throughout 1980 and 1981, but large increases in the number of discouraged workers did not begin to occur until the first quarter of 1982. The number of discouraged workers reached an all-time high of 1.8 million in the first quarter of 1983 and did not show sizable declines until several quarters after the unemployment rate began to fall.

[9] Data are from the Current Population Survey. Data by census region and division are not available on a seasonally adjusted basis. Thus, comparisons in this section are based on unadjusted estimates for the same quarter across different years.