Job market slid in early 1991, then struggled to find footing

The year began with deepening layoffs and rapidly rising unemployment; deterioration ceased in the spring, but little improvement followed, and further signs of weakness appeared late in the year

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The recession that officially began in July 1990 continued into 1991. Real gross domestic product (GDP), the output of goods and services produced within the United States, declined in the first quarter at a seasonally adjusted annual rate of 2.5 percent after falling at a 3.9-percent rate in the fourth quarter of 1990. Following the first-quarter drop, GDP grew slowly during the rest [illegible]. (See table 1.) Meanwhile, the unemployment rate rose nine-tenths of a percentage point over the year, reaching 6.9 percent in the fourth quarter. [illegible] f[illegible] 900,000 jobs in the first [illegible] grew very little through October, and fell further late in the year.

This report addresses seven important developments or issues related to the U.S. economy and labor market in 1991. The two primary sources of data for this analysis are the Current Employment Statistics (CES) survey of approximately 370,000 nonfarm employers and the Current Population Survey (CPS) of about 60,000 households. Both of these surveys are conducted monthly. Except where noted, however, quarterly averages are used in the analysis.

The recession began in July 1990. Job market deterioration intensified in the first quarter of 1991, and continued into the second quarter.[1] The erosion had largely ceased in the summer and early fall, but signs of weakness reemerged late in the year.

Although the recession officially began in July 1990, economic growth had begun to moderate as early as 1989. In that year, U.S. export growth slackened and spending by U.S. consumers slowed, particularly for such durable goods as autos. Indeed, durable goods manufacturing employment declined throughout virtually all of 1989 and into 1990. This weakness was exacerbated by Iraq's August 1990 invasion of Kuwait, as the subsequent runup in world oil prices increased the operating costs of many firms. At the same time, consumers, uneasy about events in the Persian Gulf and their possible effect on the U.S. economy, cut back further on major purchases. While oil prices soon receded as other countries stepped up their petroleum output to offset the reduction in supplies from Iraq and Kuwait, the confidence of U.S. consumers continued to sag. Not until the conclusion of the Persian Gulf war in February 1991 did consumer confidence show signs of improvement. A postwar spending boom failed to materialize, however, as other economic problems became more evident, further depressing consumer confidence.

Many of these problems had surfaced some time before the invasion of Kuwait. For example, by early 1990, real (adjusted for infla-

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tion) i[redacted]ened monetary policy amid fears of inflation. This contributed to a large reduction in homebuying and, in turn, homebuilding. At a seasonally adjusted annual rate, 1.4 million new, privately owned housing units were started in the first quarter of 1990, but the number fell sharply in each of the four ensuing quarters, reaching a low of 915,000 in the first quarter of 1991. Although homebuilding activity turned up slightly during the remainder of 1991, housing starts were still well below the levels seen before the downturn. (See chart 1.)

Weakness also emerged in the commercial real estate market, particularly with regard to office buildings. Following the 1981–82 recession, construction of office buildings had proceeded at a very rapid rate and, while slowing somewhat in the late 1980's, remained [redacted]bust through the end of the decade. By 1990, the stock of office space was so large that it greatly exceeded demand, and vacancy rates had risen sharply. This oversupply curtailed construction activity of new buildings in 1990 and 1991 and drove down the market value of existing structures.

The declining value of commercial real estate was a major source of the recent financial troubles of banks and savings and loan institutions. In part, this was because the value of these institutions' real estate portfolios fell. More importantly, however, the number of loan defaults rose among borrowers who had developed or who owned commercial properties. As a result, [redacted] savings and loan institutions declared bankruptcy or merged with other institutions in the past 2 years. At [redacted] stronger ones tightened their [redacted] to reduce their risk of loss. This made it more difficult for many businesses to obtain loans for expansion and for consumers to finance such major purchases as homes, cars, and appliances.

Weak consumer spending, tight credit, and the threat of war all contributed to the onset of recession in mid-1990. The resultant layoffs—especially in the construction, auto, and related industries and in retail trade—pushed the unemployment rate from 5.3 percent in the second quarter of 1990 to 6.0 percent in the fourth quarter. As unemployment rose, consumer incomes and spending fell even further, and the pace of layoffs intensified in the first quarter of 1991. These job declines continued at a somewhat slower rate in the second quarter. The job losses abated in the third quarter as output and spending recovered somewhat, but employment fell further in the fourth quarter, and the unemployment rate reached 6.9 percent.

Overall employment declines were not unusually severe compared with previous recessions, but job losses were more broadly based than in other economic downturns. [redacted] large employment declines in 1991, especially in the first half. Job creation in the services industries was weak, even by recessionary standards, although health services remained strong.

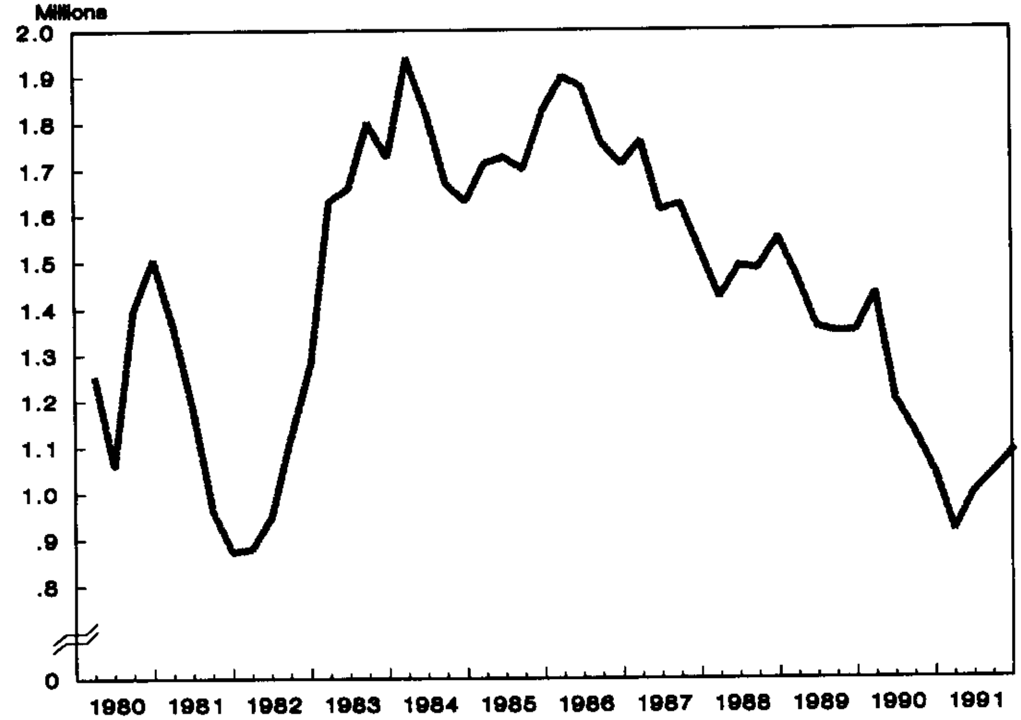
With the onset of the recession in July 1990, nonfarm employment—as measured by the Bureau of Labor Statistics monthly survey of private and government employers—began falling. Although employment had dropped by 320,000 jobs between June and September 1990, this decline had resulted primarily from layoffs of

Table 1. **Percent change from the previous quarter in real gross domestic product (GDP) and its principal components, seasonally adjusted at annual rates, 1989–91**

Category	1989		1990				1991			
	III	IV	I	II	III	IV	I	II	III	IV
Real GDP	1.1	1.2	1.7	1.6	0.2	−3.9	−2.5	1.4	1.8	0.3
Personal consumption expenditures	4.1	.1	2.1	.0	2.8	−3.5	−1.3	1.4	2.3	−1.1
Nonresidential fixed investment	.8	−2.5	7.1	−4.6	8.5	−7.7	−17.4	−3.3	−3.7	−2.4
Residential fixed investment	−5.6	−7.3	.6	−15.7	−16.2	−15.0	−24.8	3.1	10.9	10.6
Exports of goods and services	.9	13.7	8.8	4.8	−.4	17.7	−7.4	19.4	7.3	15.4
Imports of goods and services	6.8	4.0	−2.5	1.7	9.6	−9.3	−15.4	13.3	22.3	−2.0
Government purchases of goods and services	4.1	.7	6.4	2.2	−.3	4.6	2.8	−.1	−3.4	−5.9
Federal	5.1	−7.2	5.9	4.3	−5.0	4.5	9.9	1.0	−8.1	−14.1
State and local	3.3	6.6	6.7	.8	3.2	4.6	−1.9	−.7	−.1	.1

NOTE: Data for the fourth quarter of 1991 are subject to two subsequent revisions.
SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis.

Chart 1. New privately owned housing units started, quarterly averages at seasonally adjusted annual rates, 1980–91



SOURCE: Data are quarterly averages of monthly figures published by the U.S. Bureau of the Census. Data for the fourth quarter of 1991 are preliminary.

temporary workers hired to conduct the 1990 census.[2] Another 490,000 jobs were lost by December, and only about 20,000 of them were related to the census.

Job cuts became even deeper and more widespread across industries during the first 3 months of 1991, averaging 240,000 per month for a total of 720,000. Employment fell another 165,000 in April, but this decline—though substantial—was smaller than those of previous months. A gain of 150,000 jobs in May seemed to indicate that the deterioration had ended and employment growth was on the horizon, but job gains totaled only 185,000 from June through October. Employment then fell by 265,000 in November, as retail trade declined sharply and unusually harsh weather contributed to large cutbacks in construction. Nonfarm employment changed little in December, and ended the year 780,000 lower than the December 1990 level and 1.6 million lower than the prerecession peak in June 1990. (See box, p. 6.)

As is typical during recessions, the construction and manufacturing industries were hit particularly hard. Construction employment had begun to fall in the second quarter of 1990, just before the official start of the recession. By the fourth quarter of that year, there were 320,000 fewer construction jobs than in the first quarter. The pace of job loss accelerated in the first quarter of 1991, as employment fell by 195,000, and then eased in the second quarter, when job losses totaled 65,000. The pace of the declines slowed even further in the third quarter but intensified again in the fourth quarter, as residential and commercial building activity remained weak and many State and local governments delayed improvement projects for streets and highways because of budget problems. (See table 2 and chart 2.)

Manufacturing employment continued to fall sharply in the first half of 1991. As indicated earlier, factory job losses had actually begun in early 1989, and declines totaled 300,000 by the second quarter of 1990. The cutbacks that followed were even deeper; 380,000 jobs were lost in the second half of 1990 and another 440,000 in the first half of 1991. While a small gain of 20,000 jobs in the third quarter seemed encouraging, the improvement was short-lived, as manufacturing employment fell by 80,000 in the fourth quarter. (See chart 3.)

Factory layoffs were concentrated in the durable goods sector, particularly in those industries most closely related to construction activity. The lumber and wood products industry suffered accelerating job losses from 1989 through early 1991. While the declines essentially stopped in the second quarter, there was no appreciable increase in employment over the rest of the year. The furniture and fixtures industry and the stone, clay, and glass products industry—which produces such building materials as block, bricks, concrete, plasterboard, and windows—followed essentially the same employment path.

The fabricated metal products industry also followed this pattern, while industrial machinery and equipment continued to lose jobs throughout 1991. These industries, although not as closely linked to construction as the three discussed above, sell a significant portion of their output to builders. For example, the fabricated metal products industry produces such items as hammers, saw blades, gas heaters and stoves, metal doors, door locks, and faucets. The industrial machinery and equipment industry manufactures such heavy equipment as bulldozers, graders, and cement mixers, as well as power tools and compressors.

In addition to the construction-related industries, virtually all of the other major components of the durable goods sector began losing jobs in 1989, and these declines increased in severity at the end of 1990 and the beginning of 1991. The biggest cutbacks occurred in the transportation equipment industry, particularly among manufacturers of autos. Carmakers responded to sagging auto sales in 1989 by paring 50,000 workers from their payrolls during the last three quarters of that year. With the onset of the recession, car sales fell further, and 55,000 jobs were lost in 1990, as well as another 30,000 in the first quarter of 1991. While the addition of 45,000 jobs during the second and third quarters combined indicated some improvement, car sales remained sluggish and industry employment changed little in the fourth quarter.

Just as the level of building activity affects the health of construction-related manufacturing industries, auto production levels affect the fortunes of other industries as well. For example, the fabricated metal products industry, in addition to being a supplier to construction, produces automotive stampings. The industrial machinery and equipment industry also produces automotive components as well as the machines used to make them. The primary metals industry provides the steel and aluminum used to make all of these items. The output of rubber and plastics products, a nondurable goods industry, includes tires, hoses, belts, gaskets, and a variety of plastic automotive components. With the softening demand for new cars, all of these industries remained weak during 1991.

Aircraft and parts, another major component of the transportation equipment industry, experienced job declines in 1990 and even larger cutbacks in 1991. Displacement in the aircraft industry has resulted largely from a reduction in orders for military equipment. In addition, domestic orders for civilian aircraft have been weak because several airlines have experienced financial difficulties, or even ceased operations, in recent years. The guided missiles, space vehicles, and parts industry, like the aircraft in-

A note on 1990–91 industry employment data

The industry employment estimates used in this article are based on a sample survey, called the Current Employment Statistics (CES) survey. Another source of industry employment data is the Bureau's ES-202 program, which provides a virtually complete count of employment based on administrative records from the State unemployment insurance programs. The ES-202 data take much longer to produce than the CES estimates, and for this reason, the sample survey is needed for current analysis. The ES-202 data are used to provide an annual check on the accuracy of the CES estimates. The CES data undergo an annual benchmark revision, in which the estimates from March of the previous year are compared with the ES-202 figures from the same period. The CES estimates are then adjusted as needed, and the revised data are usually published in June.

While it is not uncommon for the sample survey estimates and the complete count to differ slightly, preliminary ES-202 data from March 1991 indicate that the difference was larger than it had been in recent years. Preliminary ES-202 figures show a March 1991 nonfarm employment level that is approximately 650,000 lower than the sample survey estimate. The gap between the CES and ES-202 employment levels will be officially corrected with the benchmark revision scheduled for June 1992; the correction will *not* materially affect month-to-month changes for the period after March 1991.

Table 2. **Employees on nonfarm payrolls by industry, seasonally adjusted quarterly averages, 1989–91**

[In thousands]

Industry	1989	1990				1991			
	IV	I	II	III	IV	I	II	III	IV p
Total	109,018	109,714	110,224	110,181	109,788	109,160	108,836	108,965	108,907
Total private	91,099	91,605	91,752	91,821	91,437	90,773	90,396	90,546	90,419
Goods-producing industries	25,255	25,261	25,133	24,935	24,520	24,032	23,811	23,807	23,631
Mining	699	705	713	714	712	714	707	693	674
Oil and gas extraction	385	388	394	396	398	401	399	390	378
Construction	5,216	5,285	5,196	5,115	4,965	4,770	4,704	4,695	4,617
General building contractors	1,336	1,356	1,326	1,300	1,253	1,209	1,178	1,165	1,144
Manufacturing	19,340	19,271	19,224	19,107	18,843	18,549	18,400	18,419	18,340
Durable goods	11,311	11,248	11,210	11,107	10,898	10,669	10,556	10,543	10,459
Lumber and wood products	754	755	750	739	721	698	695	698	698
Furniture and fixtures	520	518	515	510	498	484	482	481	479
Stone, clay, and glass products	568	569	562	554	544	526	519	522	519
Primary metal industries	763	758	759	758	747	730	721	721	710
Blast furnaces and basic steel products	276	276	276	276	274	266	261	260	257
Fabricated metal products	1,438	1,429	1,432	1,427	1,404	1,370	1,355	1,359	1,351
Industrial machinery and equipment	2,125	2,121	2,104	2,089	2,064	2,036	2,000	1,981	1,957
Electronic and other electrical equipment	1,720	1,703	1,688	1,666	1,637	1,610	1,597	1,585	1,572
Transportation equipment	2,023	1,999	2,014	1,987	1,919	1,864	1,851	1863	1,846
Motor vehicles and equipment	834	810	832	818	778	749	768	794	793
Instruments and related products	1,022	1,017	1,009	1,000	992	982	973	967	960
Miscellaneous manufacturing industries	380	380	377	377	373	368	363	366	367
Nondurable goods	8,028	8,023	8,014	8,000	7,945	7,880	7,844	7,876	7,881
Food and kindred products	1,663	1,666	1,667	1,668	1,671	1,677	1,676	1,674	1,671
Tobacco products	49	49	49	49	49	49	48	49	48
Textile mill products	712	704	695	689	675	663	663	670	674
Apparel and other textile products	1,074	1,060	1,049	1,040	1,024	1,010	1,012	1,032	1,042
Paper and allied products	698	699	700	701	697	694	689	691	691
Printing and publishing	1,567	1,573	1,576	1,576	1,569	1,554	1,538	1,531	1,525
Chemicals and allied products	1,083	1,090	1,093	1,095	1,095	1,093	1,087	1,087	1,091
Petroleum and coal products	156	157	157	158	159	158	159	159	158
Rubber and miscellaneous plastics products	889	888	893	894	880	860	852	860	862
Leather and leather products	137	137	135	131	126	122	120	122	119
Service-producing industries	83,762	84,452	85,091	85,245	85,268	85,128	85,025	85,158	85,275
Transportation and public utilities	5,703	5,787	5,816	5,842	5,858	5,841	5,814	5,819	5,814
Transportation	3,476	3,516	3,542	3,569	3,586	3,567	3,549	3,561	3,563
Communications and other public utilities	2,227	2,270	2,274	2,272	2,272	2,274	2,265	2,258	2,251
Wholesale trade	6,221	6,217	6,213	6,210	6,179	6,121	6,080	6,054	6,032
Durable goods	3,664	3,651	3,637	3,630	3,604	3,563	3,527	3,501	3,481
Nondurable goods	2,557	2,566	2,576	2,580	2,574	2,558	2,553	2,553	2,551
Retail trade	19,631	19,704	19,701	19,707	19,623	19,461	19,336	19,343	19,221
General merchandise stores	2,548	2,550	2,532	2,519	2,468	2,414	2,362	2,346	2,297
Food stores	3,195	3,211	3,227	3,236	3,241	3,242	3,227	3,228	3,213
Automotive dealers and service stations	2,090	2,086	2,084	2,084	2,071	2,044	2,032	2,037	2,037
Eating and drinking places	6,481	6,548	6,548	6,571	6,594	6,584	6,567	6,570	6,555
Finance, insurance, and real estate	6,711	6,726	6,739	6,748	6,740	6,734	6,711	6,689	6,695
Finance	3,298	3,298	3,301	3,305	3,301	3,296	3,287	3,278	3,280
Insurance	2,099	2,106	2,114	2,123	2,128	2,138	2,132	2,122	2,120
Real estate	1,315	1,322	1,324	1,320	1,311	1,301	1,292	1,289	1,295
Services	27,578	27,910	28,150	28,378	28,517	28,583	28,644	28,834	29,025
Business services	5,090	5,167	5,233	5,273	5,286	5,260	5,272	5,312	5,351
Health services	7,599	7,690	7,792	7,896	7,998	8,088	8,173	8,286	8,402
Government	17,919	18,108	18,472	18,360	18,351	18,387	18,440	18,419	18,488
Federal	2,984	3,034	3,279	3,065	2,964	2,951	2,959	2,970	2,981
State	4,219	4,259	4,291	4,319	4,344	4,355	4,353	4,334	4,341
Local	10,716	10,815	10,902	10,976	11,043	11,081	11,128	11,115	11,166

p = preliminary

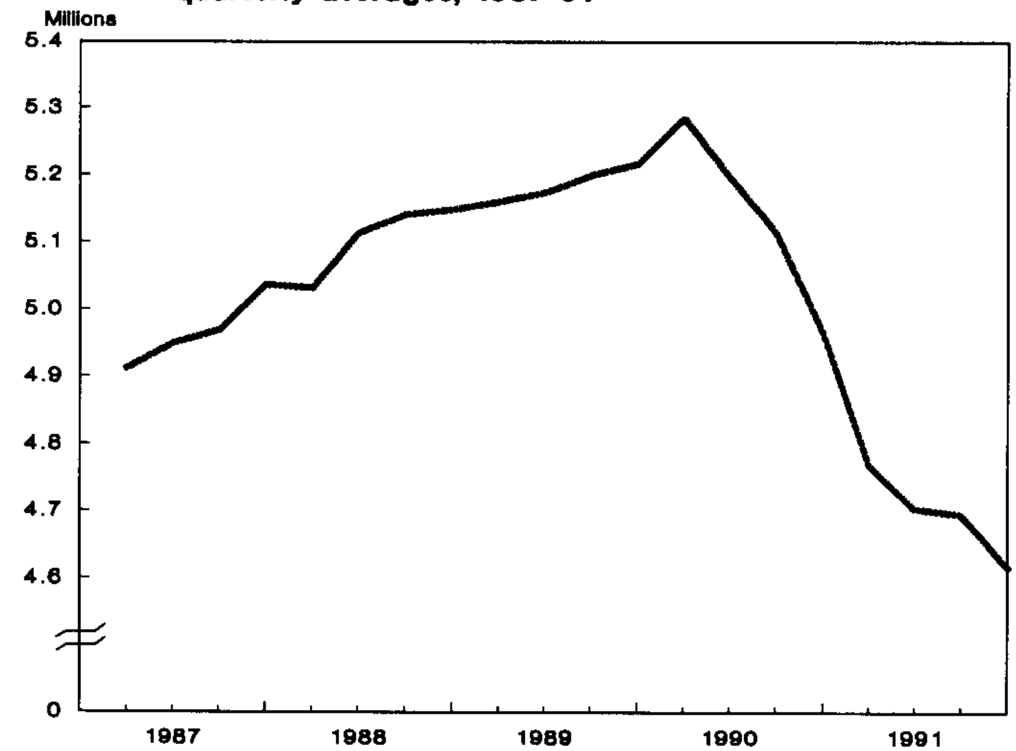
dustry, also lost jobs in 1991 because of declining military orders.

In nondurable goods manufacturing, the textiles and apparel industries had been losing jobs during most of 1989, 1990, and the first quarter of 1991. Weak retail sales of clothing before and during the recession contributed to these job losses, but both industries actually had been losing jobs throughout much of the 1980's. These industries have faced intense international competition and, in response, have improved their productivity through greater automation. Thus, the job losses in textiles and apparel reflect both a long-term trend and the effects of the recession. In the second quarter of 1991, both of these industries stopped losing jobs and, in fact, experienced modest growth in the second half of the year, perhaps in anticipation of stronger clothing sales.

The mining industry lost 40,000 jobs during the final three quarters of 1991, largely as a result of cutbacks in energy consumption that normally occur when the economy is weak. Employment in mining and its largest component, oil and gas extraction, had remained essentially unchanged from the third quarter of 1990 to the first quarter of 1991, despite the economic weakness. During that period, there were concerns that events in the Middle East might cause a major disruption of oil supplies from the region. Such a disruption probably would have raised world oil prices, spurring an increase in U.S. oil production and mining employment. However, following a brief increase in oil prices immediately after Iraq's August 1990 invasion of Kuwait, the supply situation quickly stabilized as other countries raised their petroleum output. When the Persian Gulf war ended in February 1991, the likelihood of additional supply disruptions diminished, and employment in the U.S. mining industry soon began to fall.

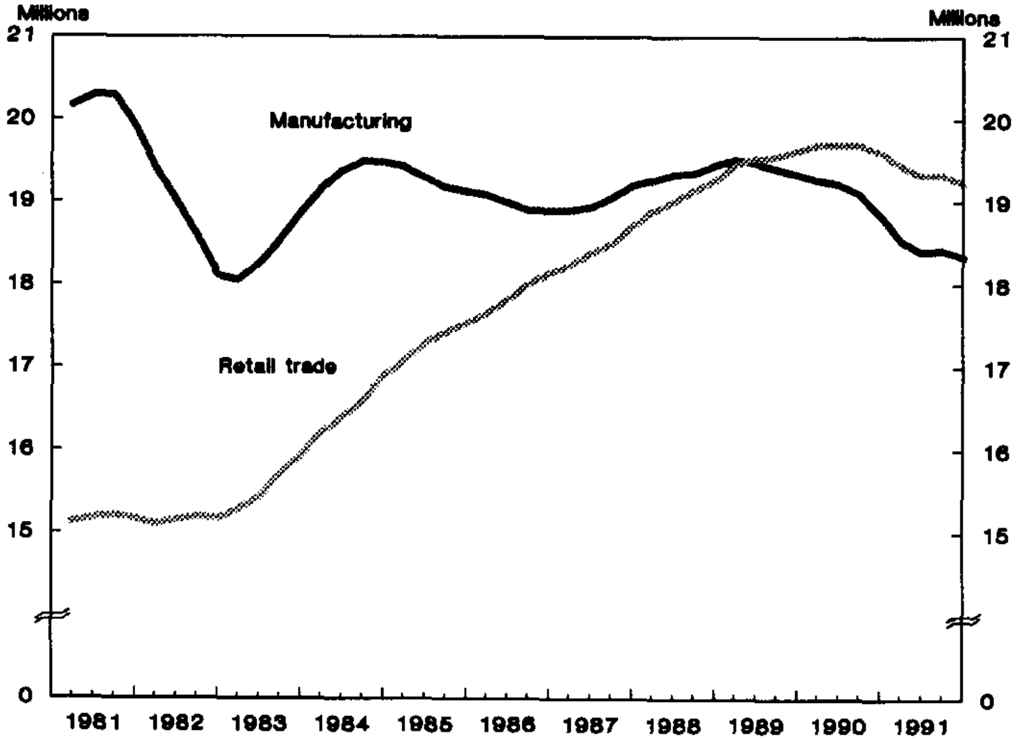
In addition to the sizable job losses in the goods-producing industries, several service-producing industries also showed employment declines in 1991. Retail trade was hit particularly hard. During the 1981–82 recession, employment in retail trade held steady, and then expanded rapidly through 1988. In 1989, growth in consumer spending began to slow and, correspondingly, so did growth in retail employment. No job growth occurred in the second and third quarters of 1990, and employment fell by 85,000 in the final quarter. The declines were even steeper in the first half of 1991, totaling 285,000. The deterioration appeared to have ended in the third quarter, but fourth-quarter hiring for the holiday shopping season fell far short of seasonal expectations, resulting in a

Chart 2. **Construction employment, seasonally adjusted quarterly averages, 1987–91**



NOTE: Data for the fourth quarter of 1991 are preliminary.

Chart 3. Employment in manufacturing and retail trade, seasonally adjusted quarterly averages, 1981–91



NOTE: Data for the fourth quarter of 1991 are preliminary.

loss of 120,000 jobs on a seasonally adjusted basis. (See chart 3.)

Within retail trade, general merchandise stores experienced the largest dropoff in employment. In fact, these stores started showing small job losses as early as the second half of 1989. Larger declines ensued in the fourth quarter of 1990, and employment plummeted throughout 1991, registering a loss of 170,000 jobs over the year. Employment in automotive dealerships also began to fall around the middle of 1989, as car sales weakened. These declines became more severe in late 1990 and the first half of 1991, before leveling off in the second half.

Wholesale trade serves, among other things, as an intermediary between manufacturers and such businesses as retailers, other manufacturers, and construction contractors. Small employment decreases in the industry had begun around mid-1989, as spending growth slowed at the retail level and the manufacturing and construction industries weakened. With the economy deteriorating further in late 1990, the cutbacks in wholesale trade deepened, and they continued to be severe throughout 1991. These employment declines were concentrated primarily in the distribution of durable goods.

Another link in the goods-distribution chain, the transportation industry, experienced employment growth throughout 1990, followed by declines totaling 35,000 in the first half of 1991. Transportation employment then grew moderately in the second half of the year. The first-half reductions were small and short-lived relative to those of previous recessions and, interestingly, trucking and railroads—the industries most closely related to goods distribution—did not experience large cutbacks. The bulk of the employment declines was in air transportation, an industry that typically experiences large job losses during recessions because of cutbacks in business and vacation travel. Besides the normal recessionary influences, travel—particularly on overseas flights—was curtailed further in early 1991 as a precaution against terrorist attacks during the Persian Gulf war. This exacerbated the difficulties that several domestic air carriers had been experiencing before the recession.

Like air transportation, the finance industry lost jobs during most of 1991 for reasons only partly related to the recession. Employment in finance began falling in the fourth quarter of 1990 and, by the third quarter of 1991, the cutbacks totaled 25,000. Employment remained essentially unchanged in the fourth quarter.

During the 1981–82 recession, this industry had gained jobs, and growth was very robust from 1983 through the first half of 1987. However, growth slowed markedly in the third quarter of 1987 and ceased altogether in the final quarter, as securities brokerages began laying off workers a few months after the sharp decline in stock prices in October 1987. Employment in finance remained flat through the third quarter of 1990. The financial problems affecting a number of banks and savings and loan institutions were then exacerbated by the recession, and employment in finance declined in late 1990 and most of 1991.

Real estate employment began falling during the third quarter of 1990, and by the third quarter of 1991, this industry had lost 35,000 jobs. These employment declines resulted, in part, from the troubles of financial institutions, which tightened their lending standards for home mortgages and other loans in order to improve the value of their loan portfolios. With the recessionary declines in incomes, many borrowers were unable to meet these standards, and even those who could meet them found it difficult to afford credit because interest rates on home mortgages had become rather high by early 1990. While rates had fallen markedly by late 1991, even prospective homebuyers who had not lost their jobs or seen their incomes decline during the recession may have feared that they might do so in the future. Thus, despite lower interest rates, home sales remained sluggish, and the real estate industry lost jobs through the third quarter of 1991 before showing modest growth in the final quarter.

The services industry was the only major industry to have gained jobs throughout 1991. Although services employment grew by a half million, this was much less than the 940,000 jobs added in 1990 or the 1.3 million added in 1989.

Within the services industry, employment in business services had grown dramatically from the end of the 1981–82 recession until the first half of 1990. Business services include establishments providing advertising, data processing, recruiting, temporary help, and other types of support for businesses. Growth slowed markedly in the second half of 1990, and employment actually declined by 25,000 in the first quarter of 1991 before returning to a pattern of slow growth for the rest of the year. The economic weakness in 1991 also resulted in employment declines among engineering and management services, hotels and other lodging places, and motion pictures.

Health services, in contrast, continued to grow robustly, gaining 400,000 jobs during 1991. Employment in this industry has risen tremendously in recent years due, in part, to technological advancements that have increased life expectancy by broadening the treatment options for a wide range of health problems. This, coupled with demographic trends, has increased the number of Americans in the older age categories, bolstering demand for medical products and services. Thus, the health services industry has remained largely immune to recessionary job losses.

Social services also gained jobs in 1991. Within this industry, employment in child day care services continued to grow as a result of rising birth rates in recent years. Residential care facilities also continued their pattern of increasing employment, due to the growth in the elderly population. Individual and family services gained jobs in 1991, perhaps reflecting increased demand for such services as a result of economic problems.

The recession had an austere impact on State and local government employment, which had grown rapidly during the economic expansion of the 1980's. As the economy faltered in 1990, State and local tax revenues fell sharply, and the resulting budget deficits led to hiring cutbacks and even layoffs. Job growth slowed markedly in the first half of 1991 and stopped altogether in the second half. Federal Government employment changed little during 1991.

Compared with the experience of past downturns, overall employment declines were not particularly severe following the onset of the recession in mid-1990. Unlike the case in past recessions, however, few service-producing industries provided any offset against the traditional declines in the goods-producing industries. In fact, workers in retail and wholesale trade, finance, real estate, services, and government all experienced far worse job markets than they had in most past recessions. For several of these industries, recessionary pressures aggravated structural problems that predated the recession.

Total employment—as measured by the Current Population Survey—was 1 million lower at the end of 1991 than it was when the recession began in the third quarter of 1990. Teenagers accounted for more than half of this decline, and there was a drop of 430,000 among young adults (aged 20 to 24). Men aged 25 and over showed a decline of 240,000, while employment among their female counterparts actually grew by 200,000.

Employment levels of these various groups are influenced by their very different patterns of population growth, however. For example, while the population of men aged 25 and over grew by 1.3 million from the third quarter of 1990 to the end of 1991, the teenage population fell by 490,000. It is helpful, then, to examine employment developments in light of the proportion of each group's population that is employed—the employment-population ratio.

Overall, 61.3 percent of the working-age population was employed at the end of 1991, compared with 62.6 percent in the third quarter of 1990. The employment-population ratios for teenagers, young adults, and men and women aged 25 and over all fell during this period. The ratio for teens was 41.6 percent at the end of 1991, 2.8 percentage points lower than at the start of the recession. Because nearly half of all employed teens work in retail trade, the weakness in this industry affected them severely. The drop in the employment-population ratio of young adults also was 2.8 percentage points. The ratio for men aged 25 and over fell 1.7 percentage points, and the ratio for their female peers fell 0.5 percentage point, despite the small increase in their employment level.

The increase in unemployment during the 1990–91 recession, while spread across all the major demographic groups, was small relative to other downturns. Slower labor force growth may have alleviated upward pressure on the unemployment rate by reducing competition for jobs. Also, far fewer workers were unemployed because they had lost a job than in past downturns.

Unemployment rose rapidly during the first quarter of 1991 and increased slightly in each of the three remaining quarters. At 6.9 percent in the fourth quarter, the unemployment rate was 0.9 percentage point higher than at the end of 1990. There were 8.7 million jobless workers at the end of 1991, 1.3 million more than a year earlier. (See table 3.)

The rise in the unemployment rate since the beginning of the recession, 1.3 percentage point, was less than half the average rise during the eight prior downturns. It was only about two-fifths as large as the 3.3-percentage-point increase during the 1981–82 recession. (See table 4 and chart 4.) A moderate decline in employment and slow growth of the labor force contributed to this smaller-than-usual increase in the unemployment rate.

The labor force had grown at an average annual rate of 1.8 percent during the eight prior recessions but, from the third quarter of 1990 to the fourth quarter of 1991, it grew at only a 0.4-percent pace. The labor force has expanded more slowly in recent years due, in part, to slower growth in the working-age (16 years and older) population. This population has increased more slowly because of the marked decline in birth rates from the late 1960's to the mid-1970's.

The labor force grew even more slowly after the start of the current recession because the proportion of the working-age population that is working or seeking work—the labor force participation rate—fell by four-tenths of a percentage point. Teenagers and adult men and women (aged 20 and over) all experienced declining rates of participation. Teenagers, whose participation rate typically falls during recessions, experienced the largest drop—1.4 percentage points. The participation rate for adult men declined 0.6 percentage point, and a tiny reduction in the rate for adult women was the first such recessionary decrease since the late 1940's.

Unemployment rose in 1991 for most major worker groups. The jobless rate for teens climbed 2.4 percentage points, reaching 19.0 percent in the third and fourth quarters. The number of unemployed teens, 1.3 million at the end of 1991, was 100,000 higher than a year earlier. The unemployment rate for adult men also rose, from 5.5 percent at the end of 1990 to 6.5 percent in the third and fourth quarters of 1991. Over the year, the number of unemployed adult men increased by nearly 700,000. The jobless rate for adult women rose from 5.1 percent to 6.0 percent over the year, and their jobless level increased by nearly 500,000.

Among the race-ethnic groups, jobless rates for Hispanics, whites, and blacks all increased during 1991. The rate for Hispanics increased by 1.4 percentage points to 10.1 percent, and the rate for whites rose 1.1 percentage point to 6.2 percent. The unemployment rate for blacks, 12.6 percent in the fourth quarter of 1991, was 0.5 percentage point higher than a year earlier.

The increase in unemployment in 1991 was due primarily to the rising number of unemployed job losers (as opposed to job leavers, and new entrants and reentrants to the labor force). Job losers include workers who were laid off and expect to be called back to work, as well as those who have permanently lost their jobs. There were a million more unemployed job losers in the fourth quarter of 1991 than in the fourth quarter of 1990. The 43-percent rise in the number of job losers from the beginning of the recession to the fourth quarter of 1991 was, nevertheless, considerably smaller than the nearly 100-percent average increase during the prior four recessions for which data on reasons for unemployment are available. (See table 5.)

As with unemployment, increases in the numbers of people working part time for economic reasons and discouraged workers were small compared with previous recessions.

The number of people working part time for economic reasons (sometimes called the "un-

Table 3. **Employment status of the civilian noninstitutional population age 16 and over by gender, age, race, and Hispanic origin, seasonally adjusted quarterly averages, 1990–91**

[Numbers in thousands]

Characteristic	1990 I	1990 II	1990 III	1990 IV	1991 I	1991 II	1991 III	1991 IV
Total								
Civilian labor force	124,668	124,826	124,818	124,913	125,019	125,476	125,266	125,500
Percent of population	66.5	66.5	66.3	66.2	66.1	66.2	65.9	65.9
Employed	118,131	118,244	117,832	117,460	116,916	117,009	116,767	116,789
Agriculture	3,173	3,236	3,137	3,208	3,185	3,243	3,260	3,220
Nonagricultural industries	114,958	115,008	114,695	114,252	113,731	113,766	113,507	113,569
Employment-population ratio	63.0	63.0	62.6	62.2	61.8	61.7	61.5	61.3
Unemployed	6,537	6,583	6,986	7,453	8,103	8,467	8,499	8,711
Unemployment rate	5.2	5.3	5.6	6.0	6.5	6.7	6.8	6.9
Men, 20 years and over								
Civilian labor force	64,136	64,304	64,420	64,660	64,567	64,890	64,933	64,946
Percent of population	78.0	77.9	77.7	77.8	77.4	77.6	77.4	77.1
Employed	61,190	61,286	61,185	61,122	60,646	60,759	60,706	60,727
Employment-population ratio	74.4	74.2	73.8	73.5	72.7	72.6	72.3	72.1
Unemployed	2,947	3,018	3,235	3,538	3,921	4,131	4,226	4,218
Unemployment rate	4.6	4.7	5.0	5.5	6.1	6.4	6.5	6.5
Women, 20 years and over								
Civilian labor force	52,808	53,014	53,156	53,072	53,284	53,617	53,617	53,753
Percent of population	57.9	58.0	58.0	57.7	57.8	58.0	57.8	57.8
Employed	50,351	50,569	50,553	50,350	50,391	50,584	50,621	50,550
Employment-population ratio	55.2	55.3	55.1	54.8	54.7	54.7	54.6	54.4
Unemployed	2,457	2,446	2,603	2,722	2,893	3,033	2,996	3,203
Unemployment rate	4.7	4.6	4.9	5.1	5.4	5.7	5.6	6.0
Both sexes, 16 to 19 years								
Civilian labor force	7,724	7,508	7,243	7,181	7,168	6,969	6,717	6,801
Percent of population	55.2	54.3	52.8	52.7	53.0	51.9	50.5	51.4
Employed	6,590	6,389	6,094	5,988	5,879	5,666	5,440	5,511
Employment-population ratio	47.1	46.2	44.4	43.9	43.4	42.2	40.9	41.6
Unemployed	1,134	1,119	1,149	1,193	1,289	1,303	1,276	1,290
Unemployment rate	14.7	14.9	15.9	16.6	18.0	18.7	19.0	19.0
White								
Civilian labor force	107,096	107,173	107,268	107,208	107,345	107,634	107,398	107,626
Percent of population	66.9	66.9	66.8	66.7	66.6	66.7	66.4	66.5
Employed	102,229	102,276	102,132	101,699	101,138	101,196	100,854	100,957
Employment-population ratio	63.9	63.8	63.6	63.2	62.8	62.7	62.4	62.3
Unemployed	4,867	4,897	5,136	5,509	6,207	6,439	6,545	6,668
Unemployment rate	4.5	4.6	4.8	5.1	5.8	6.0	6.1	6.2
Black								
Civilian labor force	13,507	13,522	13,434	13,518	13,510	13,563	13,578	13,518
Percent of population	63.8	63.6	63.0	63.1	62.9	62.9	62.7	62.2
Employed	12,030	12,101	11,859	11,880	11,874	11,846	11,920	11,818
Employment-population ratio	56.8	56.9	55.6	55.5	55.2	54.9	55.0	54.4
Unemployed	1,478	1,421	1,575	1,638	1,636	1,717	1,658	1,700
Unemployment rate	10.9	10.5	11.7	12.1	12.1	12.7	12.2	12.6
Hispanic origin								
Civilian labor force	9,500	9,614	9,640	9,554	9,651	9,720	9,811	9,874
Percent of population	67.3	67.5	67.2	66.0	66.1	66.1	66.2	66.1
Employed	8,774	8,876	8,861	8,721	8,720	8,789	8,817	8,875
Employment-population ratio	62.1	62.3	61.7	60.3	59.8	59.7	59.5	59.4
Unemployed	726	738	779	833	930	932	994	1,000
Unemployment rate	7.6	7.7	8.1	8.7	9.6	9.6	10.1	10.1

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

deremployed" or "partially unemployed") increased by 870,000 over the year, to 6.3 million. These are workers who would prefer full-time jobs but who work part time (fewer than 35 hours per week) because their hours were cut back due to slack work or because they could only find part-time jobs. Nearly half of the increase occurred in the first quarter. As with unemployment, the percentage rise in the number of underemployed workers was unusually small for a recessionary period. However, the proportion of total employment composed of involuntary part-time workers during the 1980's was high by historical standards.

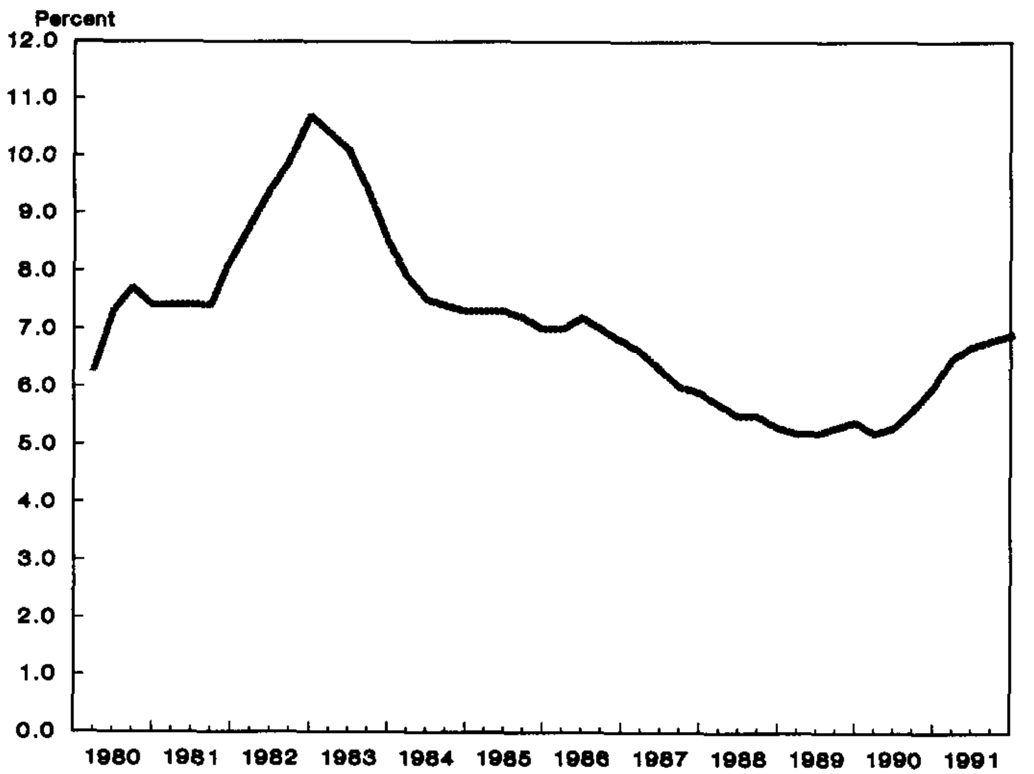
The number of discouraged workers—those who want jobs but are not looking for work because they feel their search would be in vain—rose by 140,000 during 1991, reaching 1.1 million in the fourth quarter. Much of this increase occurred in the third quarter. This rise also was small relative to those noted in other downturns. During the three previous recessions, the incidence of discouragement had risen 9.0 percent per quarter. By comparison, the number of discouraged workers rose 6.5 percent per quarter from the third quarter of 1990 through the end of 1991.

In addition to the "official" unemployment rate, BLS publishes a broader rate encompassing discouraged workers and those working part time for economic reasons, as well as the unemployed.[3] This rate was 8.9 percent in the fourth quarter of 1990 and reached 10.4 percent during the fourth quarter of 1991. Like the "official" unemployment rate, the broader rate was still much lower than in previous recessions. It had reached 15.4 percent in 1982 and 12.2 percent in 1975; the "official" rate had reached highs of 10.7 and 8.2 percent in those recessions.

All occupational groups experienced a rise in joblessness, but increases were more evenly shared between white- and blue-collar workers than in past downturns.[4]

As the Nation's economy becomes more service oriented, the "white-collar" share of total employment, as well as unemployment, has continued to grow, and the "blue-collar" share has declined. The proportion of total employment composed of white-collar workers increased from 43 percent in 1960 to 57 percent in 1991.[5] Over the same period, the blue-collar share of total employment declined from 37 to 26 percent. Service workers accounted for a nearly

Chart 4. Quarterly, seasonally adjusted unemployment rates, 1980–91



constant share (12 percent in 1960 and 14 percent in 1991), while both the share and number of farmworkers declined. Because of the long-term growth in white-collar employment, one would expect, other things being equal, that downturns in the economy would increasingly affect those in white-collar jobs. The recent problems in the finance, real estate, and retail trade industries have heightened interest in job loss among white-collar workers in these industries.[6]

Unemployment rates for blue-collar workers typically are higher than rates for white-collar workers, regardless of conditions in the economy. During all six recessions since the early 1960's, the *absolute* increase in jobless rates was at least twice as large for blue-collar workers as for white-collar workers. There was, however, variation in the *proportional* increase. In three of the recessions (1973–75, 1980, and 1981–82), the proportional increase in the jobless rate from the beginning to the end of the downturn was at least twice as great for blue-collar workers. In the other three recessions (1960–61, 1969–70, and 1990–91), the increase for blue-collar workers was only 1.0 to 1.5 times the increase for white-collar workers. Throughout the 1990–91 recession, the blue-collar unemployment rate remained more than twice the rate for white-collar workers.

As table 6 shows, the 1990–91 downturn was markedly different from previous ones, in that white-collar *employment* remained virtually unchanged from the third quarter of 1990 to the end of 1991. During previous recessions, white-collar employment continued to rise even as overall employment declined. Blue-collar employment fell during all six of these recessions, with the declines ranging from 740,000 to 2.6 million.

Another distinguishing characteristic of the 1990–91 downturn is that, at the close of 1991, the increase in the number of unemployed white-collar workers was about as great as the rise in the number of jobless blue-collar workers. In previous recessions, the increase in the blue-collar unemployment level was anywhere from 2 to 4 times the white-collar rise.

A look at the seasonally adjusted quarterly unemployment rates for major occupational groups (available under the current classification system since 1983) shows that managers and professionals have had the lowest jobless rates, ranging from 3.6 percent to 1.9 percent over the 1983–91 period. Their rate was 2.9 percent at the end of 1991. By comparison, the rate for operators, fabricators, and laborers ranged from 17.9 percent in early 1983 to 7.7 percent in early 1989. In the fourth quarter of 1991, their rate was 10.3 percent. Over the entire 9-year period, neither of the major blue-collar groups had an unemployment rate as low as the highest rate for managers and professionals (3.6 percent in early 1983).

To summarize, blue-collar workers continue to have much higher unemployment rates than white-collar workers. The 1990–91 downturn was the first one for which occupational data are available in which white-collar employment did not rise. It is also the first recession in which the increase in the number of unemployed white-collar workers was about equal to the increase for blue-collar workers. This means that white-collar workers have been hit harder in this recession than in previous ones, though still not as hard as blue-collar workers.

Table 4. **Quarterly, seasonally adjusted unemployment rates at the beginning and end of recessions since 1948**

Beginning and ending quarter	Rate at beginning quarter	Rate at ending quarter	Percentage-point increase
IV 1948 – IV 1949	3.8	7.0	3.2
III 1953 – II 1954	2.7	5.8	3.1
III 1957 – II 1958	4.2	7.4	3.2
II 1960 – I 1961	5.2	6.8	1.6
IV 1969 – IV 1970	3.6	5.8	2.2
IV 1973 – I 1975	4.8	8.2	3.4
I 1980 – III 1980	6.3	7.7	1.4
III 1981 – IV 1982	7.4	10.7	3.3
Average of eight recessions, 1948–82	....	....	2.7
III 1990 – IV 1991	5.6	6.9	1.3

NOTE: The end of the recession that began in July 1990 has not yet been identified by the National Bureau of Economic Research, Inc., the official arbiter of business cycle peaks and troughs.

As the economy turned downward and total employment fell, the number of workers reported as self-employed grew by 100,000 during 1991, little different than the average annual increase during the past decade.

The effect of business conditions on the number of self-employed workers is difficult to predict. Unemployment and discouragement have always risen over the course of a downturn, and employment has always fallen. Self-employment, though, has risen in some recessions and fallen in others.

There has been some mention in the popular press that many recent job losers had gone into business for themselves—as contractors or con-

Table 5. **Unemployed workers by reason for unemployment, seasonally adjusted quarterly averages, 1990-91**

[In thousands]

Reason	1990				1991			
	I	II	III	IV	I	II	III	IV
Job losers	3,074	3,121	3,373	3,789	4,380	4,592	4,718	4,823
Job leavers	1,014	1,052	992	1,004	987	1,031	942	962
New entrants	665	617	663	668	679	749	785	799
Reentrants	1,812	1,807	1,929	1,989	2,041	2,113	2,069	2,124

sultants, for example—and are thus being counted as employed, even if they are earning little or no money.[7] That is, in fact, how they would be counted under the described circumstances. But several factors tend to influence levels of self-employment during a recession, some related directly to economic events, others to how employment activity is classified in the Current Population Survey. For example:

- During a period of sustained economic weakness, the number of business failures rises, resulting in a downward pull on the level of self-employment.
- A worker who holds two jobs, one a wage or salary job and the other self-employment, is classified in the CPS according to the job in which he or she spent the most hours. If the self-employment is only a "side business," the person would typically be classified as a wage and salary employee. If the person then loses the wage and salary job, as happens more frequently in recessions, he or she would still be counted as employed, but in his or her own private business. To that extent, the self-employment count would increase even though total employment would not be affected.
- As mentioned at the outset, some workers whose sole employment was in a wage and salary job might become self-employed after losing that job. A carpenter, for example, might take odd jobs, or an engineer might do consulting work. Again, this would cause a rise in self-employment, but no net change in total employment.

The hypothesis that increasing numbers of laid-off workers are going into business for themselves arose when an estimated increase of 320,000 self-employed workers (seasonally adjusted) was originally reported in the April 1991 employment figures. The numbers for May, however, showed a decline of 510,000, followed by a 250,000 rise in June. By July, the number of self-employed was little different from the March figure, suggesting that the large changes in the second quarter were anomalies in the data.

By year's end (fourth quarter), the number of self-employed workers, 10.3 million, was only 100,000 above that reported for the fourth quarter of 1990. Over the 1980–90 period, self-employment had risen an average of 150,000 per year, and the increase from the fourth quarter of 1989 to the fourth quarter of 1990 was 260,000. Hence, the data for 1991 do not definitively support the hypothesis that large numbers of workers who previously held wage and salary jobs entered self-employment during the year. The number of self-employed workers did not fall, however, despite the decline in total employment. This suggests that the number of workers entering self-employment balanced the losses stemming from business failures.

Usual weekly earnings grew at about the same pace as in the preceding 2 years. The ratio of women's earnings to men's rose substantially in 1991, as the earnings increase for women outpaced inflation while that for men did not.

During 1991, the median usual weekly earnings of full-time wage and salary workers rose slightly faster than the cost of living, as measured by the Consumer Price Index for All Urban Consumers (CPI-U). In the fourth quarter of 1991, the median was $436, up from $422 a year earlier, a gain of 3.3 percent. Over the same period, the CPI-U rose 3.0 percent. In 1990, median earnings rose 3.4 percent, but the CPI-U rose by 6.1 percent.

The most salient feature of the 1991 earnings data is the large increase in the ratio of women's to men's earnings. The ratio had been rising gradually since 1979, when BLS first obtained weekly earnings data on a quarterly basis. In the fourth quarter of that year, the ratio was 63.0 percent. It was up to 72.4 percent at the close of 1990 and, by the fourth quarter of 1991, it had jumped to 74.2 percent.

Although the increased ratio signals greater earnings equality between women and men, with the median earnings increase for women outpacing the CPI-U, the downside to the story is

Table 6. **Quarterly, seasonally adjusted changes in white- and blue-collar employment and unemployment from the beginning to end of recessions since 1960**

[In thousands]

Beginning and ending quarter	Employment		Unemployment	
	White-collar	Blue-collar	White-collar	Blue-collar
II 1960 – I 1961	764	−1,142	210	592
IV 1969 – IV 1970	695	−737	516	971
IV 1973 – I 1975	871	−2,004	765	1,903
I 1980 – III 1980	721	−1,557	253	1,013
III 1981 – IV 1982	827	−2,583	826	2,124
III 1990 – IV 1991	57	−1,247	640	627

NOTE: The end of the recession that began in July 1990 has not yet been identified by the National Bureau of Econonic Research, Inc., the official arbiter of business cycle peaks and troughs.

that men's earnings did not rise as quickly as the cost of living. Men's earnings were up only 2.7 percent over the year, from $490 at the end of 1990 to $503 in the fourth quarter of 1991. The median for women rose 5.1 percent, from $355 to $373, over this period. A glance at developments over the 12 years since the fourth quarter of 1979 shows that women's median weekly earnings rose 97.4 percent—outpacing the 81.3-percent rise in the CPI-U. Men's earnings rose 67.7 percent over the corresponding period.

Earnings of blacks continued to lag behind those of whites, with black men having a median 72.5 percent of that for white men, and black women earning a median 86.3 percent of that of white women. Contrasting movements for black men and women were most striking. Earnings for black men edged up 1.4 percent over the year, while those for black women rose 4.5 percent. Earnings of white men were 3.0 percent higher than at the end of 1990, while median earnings of white women were up 4.4 percent. The earnings of Hispanic workers continued to be lower than those of both whites and blacks.

Earnings data also are available from the Current Employment Statistics (CES) program, which provides payroll and hours data for production and nonsupervisory workers in the private sector. The survey's large sample provides considerable industrial and geographic detail but lacks any information on workers' demographic characteristics or full- and part-time status. Also, CES earnings averages are presented as means, whereas the CPS data cited above are computed as medians—the earnings level at which half the workers earn more and half earn less.

The CES data show that mean weekly earnings rose from $351.88 in December 1990 to $362.25 in December 1991, an increase of 2.9 percent. This compares with a 4.2-percent rise during 1990 and a 3.1-percent advance in 1989. After adjusting for the change in the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W), weekly earnings were little changed in 1991 (a rise of 0.2 percent), compared with a decline of 1.9 percent in 1990. The small 1991 increase resulted from a 0.1-hour drop in the average length of the workweek, a 33-cent increase in mean hourly earnings, and a 2.8-percent rise in the CPI-W.

THE EARLY PART OF 1991 was characterized by sharp labor-market deterioration, as unemployment rose rapidly, and job losses were extensive and broadly based. By spring, signs of improvement appeared, as a number of industries experienced small job gains and the unemployment rate began to stabilize. Over the subsequent months, economists, policymakers, and journalists debated which month the National Bureau of Economic Research would designate as the official end to the recession.

In the fall, improvement seemed less certain, as renewed weakness appeared in the goods-producing sector. Discussion then shifted to whether, in fact, the recession had ended at all. The economy continued to lack a clear direction through the end of the year, with economic reports alternating between the mildly encouraging and slightly distressing. For example, increasing housing starts would raise hopes, and sluggish retail sales would dash them.

By the end of 1991, then, the employment situation had been in a 6- to 8-month holding pattern. Few industries showed noteworthy job growth, but unemployment remained well below the levels of the early 1980's. □

Footnotes

For further information, the authors may be contacted at (202) 523–1944 or (202) 523–1371.

[1] For analytical purposes, the period from July (or the third quarter) of 1990 to the end of 1991 is compared with past recessions. At this writing, no end to the recession has been officially identified by the National Bureau of Economic Research, Inc., the official arbiter of business cycle peaks and troughs.

[2] Throughout most of this article, labor market developments are analyzed by examining changes in *quarterly averages* of monthly figures. In general, this methodology leads to the same conclusions that would have been reached if *monthly*, rather than quarterly, data had been used. The discussion of the overall pattern of nonfarm employment is based on monthly data, however, because the quarterly averages sometimes distort the timing and magnitude of actual changes. For instance, average employment in the third quarter of 1990 was only 44,000 lower than the average for the second quarter. The use of monthly data

shows a considerably different pattern; employment was 320,000 lower in September 1990, the final month of the third quarter, than in June, the final month of the second quarter. Similarly, average employment in the second quarter of 1991 was 325,000 lower than in the first quarter, whereas June employment was only 17,000 lower than in March.

[3] This rate is computed as follows: total full-time jobseekers plus half the part-time jobseekers plus half the number of workers on part-time schedules for economic reasons plus discouraged workers, as a percentage of the civilian labor force plus discouraged workers minus half the part-time labor force. The rationale behind this method is that involuntary part-time workers should be counted as "partially" unemployed, and their loss of working time should be reflected in the overall measure. Similarly, unemployed workers seeking part-time work are given only half weight because the average workweek of their employed counterparts—voluntarily part-time workers—is only half the average full-time workweek. Discouraged workers are treated as if they were unemployed.

[4] Shortly after the jobless rate began to rise in the second half of 1990, the news media reported that the increase affected managers and professionals disproportionately. (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 stories suggested that developments in white-collar unemployment contrasted sharply with those during previous periods of rising unemployment, in which the blue-collar occupations were more severely affected. Media emphasis on white-collar hardship continued into 1991. See "White-Collar America Is Still in a Lot of Pain," *Business Week*, Sept. 30, 1991, p. 22.

[5] Even though the terms "white-collar" and "blue-collar" are no longer used in the CPS occupational classification system, they are used here because, despite a blurring of the distinction between the two groups, they are still widely used by the general public. In addition, they are perhaps the best basis for making occupational comparisons between the recession that started in July 1990 and earlier downturns.

The analysis here combines the current "managerial and professional specialty" and "technical, sales, and administrative support" categories to approximate the former white-collar group. The current "precision production, craft, and repair" and "operators, fabricators, and laborers" categories approximate the former blue-collar group.

Problems with historical comparisons result mainly from major changes to the CPS occupational classification system that were introduced in January 1983. The composition of categories more detailed than the former white- and blue-collar groups is dramatically different under the current system. For example, the makeup of the current "executive, administrative, and managerial" group is different from the former "managers and administrators" group. Even where a job title has not changed, its components may be quite different. For a summary of the changes in the occupational classification system, as well as other changes to the CPS that were introduced in January 1983, see Gloria Peterson Green, Khoan tan Dinh, John A. Priebe, and Ronald R. Tucker, "Revisions in the Current Population Survey Beginning in January 1983," *Employment and Earnings*, February 1983.

[6] No matter how detailed an analysis may be done with the CPS data, the survey cannot be used to assess the actual amount of job loss for any occupational group. The CPS records as job losers only those workers who had lost jobs and were unemployed *during the survey reference week*. If a CPS sample member had lost his or her job but had dropped out of the labor force or found a new job by the survey reference week, he or she would not appear in the survey's unemployment estimate. Likewise, if a sample member had held two jobs, lost one, and continued to work at the other, the unemployment figure would not reflect the loss of the first job.

[7] See, for example, "A Tightening Grip on Jobs," *The Washington Post*, Nov. 3, 1991, p. H1.