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Work arrangements in the new economy

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Work arrangements in the new economy

Departments

The March *Review*

Even after the collapse of the dot-com bubble, it is clear that new technologies and new organizational paradigms have contributed to the increasing adoption of new working arrangements. This issue of the *Review* explores the growing incidence and impact of strategies ranging from contingent work to flextime.

Steven Hipple reports on the persistence of contingent employment even as general labor market conditions improved. The unemployment rate, for example, dropped nearly a full percentage point between February 1997 and February 1999, but the contingency rate—the proportion of total employment that are contingent workers—was virtually unchanged at about 4.3 percent. Contingent work is conceptually an arrangement that is transitory and conditional and has often been used to denote a new, less loyal, less secure, "just-in-time" approach to staffing the new economy.

An analytical issue related to contingent work is the use of independent contractors, on-call workers, temps, and other alternative work arrangements. Marisa DiNatale finds that such workers account for less than one-tenth of total employment in 1999, a share that is not growing. In fact, the share accounted for by independent contractors, the largest of these groups, declines slightly between 1997 and 1999.

The final two articles discuss various aspects of flexible scheduling or flextime, another growing characteristic of today's labor market. Lonnie Golden finds that flexibilty in daily scheduling has grown to the point that it reaches more than one worker in four. Golden also finds, however that this often comes at a cost, either in terms of an extended workweek or stretching out of the work day, or in terms of accepting part-time work or irregular shifts.

Bonnie Sue Gariety and Sherrill Shaffer look at the relationship between wages and flextime and find that flexible schedules are associated with higher wages. This, they state, "compares the relative strengths of two opposing efects: a negative compensating wage differential resulting from workers' preferences for flexitime and a positive wage differential associated with higher productivity of workers on flextime attributed to what economists call the 'efficiency wage hypothesis'."

Strong productivity growth in 2000

Productivity in the nonfarm business sector, as measured by output per hour, rose 4.3 percent in 2000. The increase was the biggest since a 4.5-percent rise in 1983. The increase in productivity during 2000 was due to a 5.7-percent growth in output and a 1.3-percent rise in hours. During 1999, productivity increased 2.6 percent, as output grew 4.8 percent and hours of all persons increased 2.2 percent. Additional information is available in "Productivity and Costs, Fourth-Quarter and Annual Averages for 2000 (Revised)," news release USDL 01–56.

More mass layoffs in 2000

In 2000, there were 15,738 layoff events and 1,835,592 initial claimants for unemployment insurance in the 50 States and the District of Columbia. Both the number of events and the number of initial claimants were higher than in 1999, when layoff events totaled 14,909 and the total number of initial claimants was 1,572,399.

In 2000, manufacturing accounted for 35 percent of all mass layoff events and 42 percent of initial claims filed. Initial claim filings were most numerous in transportation equipment (192,047), food and kindred products (88,942) and industrial machinery and equipment (73,215). A mass layoff event involves at least 50 workers from a single establishment. Read more about recent mass layoffs in "Mass Layoffs in December 2000," news release USDL 01–33.

More work stoppages in 2000

There were 39 major work stoppages in 2000, up from only 17 in 1999. Of the major work stoppages beginning in 2000, 31 were in the private sector; the remainder occurred in State and local government. In the private sector, 14 stoppages occurred in goods-producing industries and 17 occurred in service-producing industries. In the public sector, 4 of the 8 stoppages were in education. (Major work stoppages are defined as strikes or lockouts that idle 1,000 or more workers and last at least one shift.) Learn more about work stoppages in "Major Work Stoppages, 2000," news release USDL 01–41.

Unemployment down in most States

Compared with 1999, annual average unemployment rates in 2000 were lower in 33 States and the District of Columbia, higher in 16 States, and unchanged in 1 State. The U.S. jobless rate decreased from 4.2 percent to 4.0 percent over the year.

The States posting the largest declines were Hawaii (–1.3 percentage points), West Virginia (–1.1 points), and Wyoming (–1.0 point). Twelve additional States plus the District of Columbia recorded decreases of at least 0.5 percentage point. See more about last year's developments in "State and Regional Unemployment, 2000 Annual Averages," news release USDL 01–50. □

News releases discussed above are available at:
http://stats.bls.gov/newsrel.htm

Contingent work in the late-1990s

Despite the strong labor market, the incidence of contingent work changed little between 1997 and 1999; characteristics of contingent workers are similar to those of earlier surveys

Steven Hipple

In February 1999, 5.6 million workers held contingent jobs, that is, jobs that are structured to be short term or temporary. The contingency rate—the proportion of total employment composed of contingent workers—was 4.3 percent.[1] Both the number of contingent workers and the contingency rate were virtually the same as those in the 1997 survey. The fact that both the number of individuals with contingent jobs and the contingency rate were little different is interesting, because the period covered by the two surveys was one of strong labor market conditions. For example, total employment grew by 4.8 million over the two periods, and the unemployment rate—at 5.3 percent in February 1997—had fallen to 4.4 percent in February 1999.[2] (See chart 1.)

This article discusses the results of the February 1999 Contingent and Alternative Work Arrangements Supplement to the Current Population Survey (CPS), including an examination of the characteristics of contingent workers and the jobs they hold, and their earnings and employee benefits.[3] Information on contingent work was first collected by the Bureau of Labor Statistics in February 1995, and when the results of that survey were published, three alternative measures of contingent work were introduced.[4] (See the appendix.) The analysis in this article focuses on the broadest measure of contingent work—estimate 3. Noncontingent workers, employed individuals who do not fall under any of the estimates of contingent work, are used as a point of comparison.

Prior analyses have shown that the characteristics of workers in contingent and noncontingent employment arrangements differ substantially. The incidence of contingent work is higher among certain demographic groups, for instance, and in certain industries and occupations. Moreover, the groups differ by other characteristics including employee tenure and work schedules. Disentangling the impact of these differences on earnings or employee benefits, for example, can be very complicated. Using descriptive statistics, this article provides an overview of contingent workers in 1999.

Why are contingent jobs temporary?

The phrase "contingent work" was first proposed by Audrey Freedman in 1985 to refer specifically to "conditional and transitory employment arrangements as initiated by a need for labor—usually because a company has an increased demand for a particular service or a product or technology, at a particular place, at a specific time."[5] The term, however, took on a

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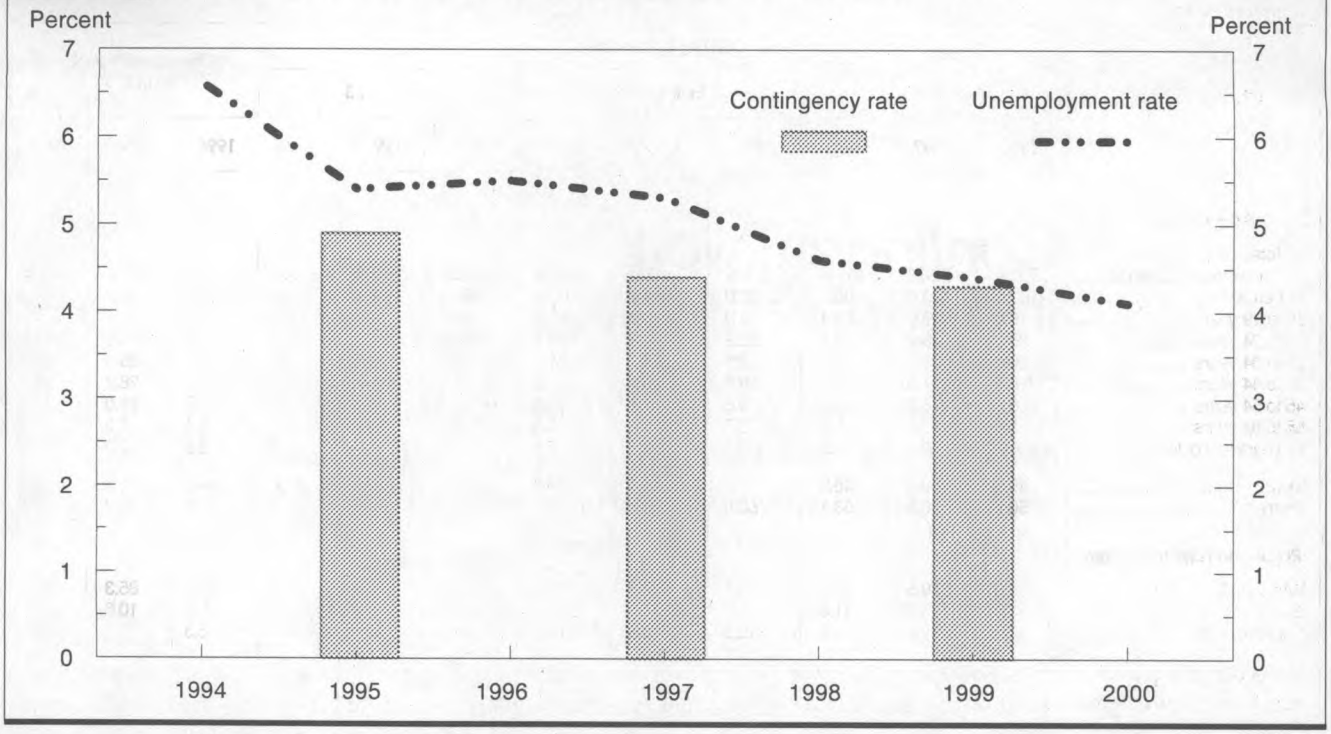
Chart 1. Unemployment rates and contingency rates, February 1994–2000



negative connotation, implying less job security, and soon became used to describe a wide variety of employment arrangements including part-time work, self-employment, temporary help agency employment, contracting out, employee leasing, and employment in the business services industry. In fact, to some analysts, any work arrangement that differed from the commonly perceived norm of a permanent, full-time wage and salary job would be considered "contingent." For many people, nonstandard or contingent work has come to represent a just-in-time work force, the human equivalent of just-in-time inventories. Although studying "nonstandard" arrangements is of interest to a number of analysts, combining these very diverse arrangements into a single category and labeling them contingent may cause workers to be classified incorrectly and may cause confusion among analysts studying this topic.[6]

In order to turn the focus on the attachment between the worker and the employer and to identify a common underlying trait that could be used to classify workers, the Bureau of Labor Statistics proposed the following definition of contingent work in 1989: "Any job in which an individual does not have an explicit or implicit contract for long-term employment."[7] Essentially, contingent workers are individuals who hold jobs that are temporary or not expected to continue.

In the survey, the key factor used to determine if a job fits the conceptual definition of a contingent work arrangement is whether the job was temporary or not expected to last. (For a detailed explanation of the criteria used to determine if a job is contingent, see the appendix.) Jobs are considered to be temporary if a person is working only until the completion of a specific project, temporarily replacing another worker, being hired for a fixed time period, filling a seasonal job, or if business conditions dictated that the job was temporary. Workers who are temporarily holding jobs for *personal* reasons are excluded from the count of contingent workers.

In 1999, the majority of contingent workers—53 percent—reported that their jobs were temporary because they were working only until a specific project was completed.[8] Another 18 percent said that they were hired for a fixed time period, 9 percent were hired to temporarily replace another worker, 8 percent were holding a seasonal job, and 12 percent gave another economic-related reason. These proportions were similar to those measured in the 1995 and 1997 surveys.

A study conducted by Susan N. Houseman used data from a nationwide survey of employers on their use of flexible staffing arrangements. The author found that the most common reasons that *employers* use temporary workers were to fill seasonal needs, to help with special projects, to help during unexpected increases in business, to fill in for an absent employee, and to fill in until a regular worker is hired.[9]

Text continues on page 8.

Table 1. Contingent and noncontingent workers by selected characteristics, February 1995–99

[Percent distribution]

Characteristic	Contingent workers[1]									Noncontingent workers[2]		
	Estimate 1			Estimate 2			Estimate 3					
	1995	1997	1999	1995	1997	1999	1995	1997	1999	1995	1997	1999
Age and sex												
Total, 16 years and older (thousands)	2,739	2,385	2,444	3,422	3,096	3,038	6,034	5,574	5,641	117,174	121,168	125,853
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
16 to 19 years	16.6	19.2	20.9	15.2	16.0	17.8	10.7	12.4	13.2	4.3	4.4	4.7
20 to 24 years	25.0	23.9	23.5	22.2	21.0	22.1	19.8	17.9	19.8	9.6	9.0	9.0
25 to 34 years	26.0	23.7	23.1	27.5	24.4	24.7	26.3	24.8	24.4	26.1	25.0	23.5
35 to 44 years	18.5	17.5	15.6	19.8	20.6	17.5	21.0	20.9	18.8	28.0	28.2	28.1
45 to 54 years	8.2	8.3	11.0	9.5	10.8	11.8	12.6	13.6	13.2	19.8	21.0	21.8
55 to 64 years	3.8	5.3	3.9	3.7	5.4	3.9	5.9	7.3	6.4	9.4	9.6	10.1
65 years and older	1.8	2.1	1.9	2.1	1.9	2.1	3.7	3.1	4.1	2.8	2.9	2.8
Men	49.3	49.5	46.9	49.4	48.4	46.6	49.6	49.3	48.7	54.0	53.8	53.5
Women	50.7	50.5	53.1	50.6	51.6	53.4	50.4	50.7	51.3	46.0	46.2	46.5
Race and Hispanic origin												
White	80.0	79.5	80.9	80.1	80.6	80.5	80.9	81.9	80.2	85.6	85.3	84.5
Black	13.9	13.3	11.8	13.6	13.0	12.7	13.3	11.1	12.2	10.5	10.6	11.1
Hispanic origin	13.6	12.2	13.8	12.9	12.8	13.6	11.3	12.4	13.2	8.3	9.4	10.0
Country of birth and U.S. citizenship status												
U.S. born	87.5	87.6	85.2	87.3	87.1	85.3	86.8	85.3	84.0	91.0	89.4	89.0
Foreign born	12.5	12.4	14.8	12.7	13.0	14.7	13.2	14.7	16.0	9.0	10.6	11.0
U.S. citizen	1.6	3.2	3.0	1.7	3.7	3.1	2.2	3.9	3.9	3.2	4.2	4.4
Not a U.S. citizen	10.9	9.1	11.8	11.0	9.2	11.7	11.0	10.7	12.1	5.8	6.4	6.6
Full- or part-time status												
Full-time workers	52.9	53.5	48.4	53.6	54.8	52.0	57.1	57.5	55.9	81.8	82.2	83.0
Part-time workers	47.1	46.6	51.6	46.4	45.2	48.0	42.9	42.5	44.1	18.2	17.8	17.0
School enrollment												
Total, 16 to 24 years (thousands)	1,142	1,029	1,086	1,279	1,143	1,212	1,841	1,690	1,863	16,215	16,299	17,261
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Enrolled	55.3	61.4	63.8	53.7	57.7	62.1	58.1	63.7	65.9	38.4	40.0	41.4
Not enrolled	44.7	38.6	36.2	46.3	42.3	37.9	41.9	36.3	34.1	61.6	60.0	58.6
Educational attainment												
Total, 25 to 64 years (thousands)	1,547	1,308	1,311	2,070	1,893	1,762	3,968	3,710	3,546	97,633	101,397	105,043
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than a high school diploma	14.0	10.0	12.7	13.6	11.0	12.6	12.0	10.4	11.9	9.6	9.6	9.1
High school graduates, no college	27.9	27.9	27.8	27.5	28.5	28.5	27.3	26.8	25.8	32.4	32.8	31.4
Some college, no degree	22.8	21.9	19.1	23.3	20.2	18.5	19.6	18.8	17.0	19.9	18.9	19.3
Associate degree	8.4	10.7	7.7	8.0	10.1	8.0	7.9	8.2	6.9	9.1	9.1	9.2
College graduates	27.0	29.4	32.6	27.7	30.1	32.4	33.2	35.8	38.5	28.9	29.5	31.0
Advanced degree	9.4	10.5	11.6	10.0	9.3	11.4	14.9	14.7	16.0	9.9	10.0	10.3

[1] Contingent workers are defined as individuals who do not perceive themselves as having an explicit or implicit contract with their employers for ongoing employment. Estimate 1 is calculated using the narrowest definition of contingent work; estimate 3 uses the broadest definition. For the specific criteria used for each definition, see the appendix, p. 25.

[2] Noncontingent workers are those who do not meet the criteria for any of the three definitions of contingent work.

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

Table 2. Contingency rates by selected characteristics, February 1995–99

[In percent]

Characteristic	Contingency rates[1]								
	Estimate 1			Estimate 2			Estimate 3		
	1995	1997	1999	1995	1997	1999	1995	1997	1999
Age and sex									
Total, 16 years and older	2.2	1.9	1.9	2.8	2.4	2.3	4.9	4.4	4.3
16 to 19 years	8.1	7.6	7.7	9.2	8.2	8.1	11.4	11.5	11.2
20 to 24 years	5.5	4.8	4.6	6.1	5.4	5.4	9.6	8.4	9.0
25 to 34 years	2.2	1.8	1.8	2.9	2.4	2.4	4.9	4.4	4.5
35 to 44 years	1.5	1.2	1.0	2.0	1.8	1.5	3.7	3.3	2.9
45 to 54 years	.9	.8	1.0	1.4	1.3	1.3	3.2	2.9	2.6
55 to 64 years	.9	1.1	.7	1.1	1.4	.9	3.1	3.4	2.8
65 years and older	1.4	1.3	1.2	2.1	1.6	1.7	6.3	4.8	6.1
Men	2.0	1.7	1.6	2.5	2.2	2.0	4.5	4.0	3.9
Women	2.4	2.0	2.1	3.0	2.7	2.6	5.3	4.8	4.7
Race and Hispanic origin									
White	2.1	1.8	1.8	2.6	2.3	2.2	4.6	4.2	4.1
Black	2.9	2.4	2.0	3.5	3.0	2.6	6.1	4.6	4.7
Hispanic origin	3.6	2.4	2.5	4.2	3.3	3.1	6.5	5.7	5.6
Country of birth and U.S. citizenship status									
U.S. born	2.1	1.8	1.8	2.7	2.4	2.2	4.7	4.2	4.1
Foreign born	3.0	2.2	2.5	3.8	2.9	3.0	7.0	6.0	6.1
U.S. citizen	1.1	1.4	1.3	1.5	2.2	1.6	3.5	4.1	3.8
Not a U.S. citizen	4.0	2.6	3.2	5.0	3.4	3.9	8.9	7.2	7.6
Full- or part-time status									
Full-time workers	1.5	1.2	1.1	1.8	1.7	1.5	3.5	3.1	2.9
Part-time workers	5.4	4.6	5.3	6.6	5.8	6.1	10.8	9.9	10.4
School enrollment									
Total, 16 to 24 years	6.3	5.7	5.7	7.1	6.4	6.3	10.2	9.4	9.7
Enrolled	8.7	8.3	8.3	9.4	8.7	9.0	14.7	14.2	14.7
Not enrolled	4.7	3.8	3.7	5.5	4.7	4.3	7.2	5.9	5.9
Educational attainment									
Total, 25 to 64 years	1.5	1.2	1.2	2.0	1.8	1.6	3.9	3.5	3.3
Less than a high school diploma	2.2	1.3	1.7	2.9	2.1	2.2	4.8	3.8	4.2
High school graduates, no college	1.3	1.1	1.1	1.7	1.6	1.5	3.3	2.9	2.7
Some college, no degree	1.7	1.4	1.2	2.4	1.9	1.6	3.8	3.5	2.9
Associate degree	1.4	1.5	1.0	1.8	2.0	1.4	3.4	3.2	2.4
College graduates	1.4	1.2	1.3	1.9	1.8	1.7	4.5	4.3	4.0
Advanced degree	1.4	1.3	1.3	2.0	1.6	1.8	5.8	5.1	5.0

[1] Contingency rates are calculated by dividing the number of contingent workers in a specified worker group by total employment for the same worker group. Estimate 1 above is calculated using the narrowest definition of contingent work; estimate 3 uses the broadest definition. For the specific criteria used for each definition, see the appendix, p. 25.

Table 3. Contingency rates by occupation and industry, February 1995–99

[In percent]

Occupation and industry	Contingency rates[1]								
	Estimate 1			Estimate 2			Estimate 3		
	1995	1997	1999	1995	1997	1999	1995	1997	1999
Occupation									
Total, 16 years and older	2.2	1.9	1.9	2.8	2.4	2.3	4.9	4.4	4.3
Managerial and professional specialty	1.7	1.4	1.5	2.1	1.7	1.8	4.8	4.2	4.4
Executive, administrative, and managerial	.8	.7	.5	1.1	1.0	.8	2.7	2.2	2.0
Professional specialty	2.6	2.0	2.4	3.1	2.4	2.7	6.8	6.0	6.7
Technical, sales, and administrative support	2.1	2.1	2.1	2.5	2.6	2.6	4.4	4.3	4.3
Technicians and related support	1.3	1.8	2.0	1.9	2.7	2.5	4.2	4.7	4.4
Sales occupations	1.2	1.1	1.2	1.6	1.5	1.7	2.6	2.1	2.4
Administrative support, including clerical	3.1	3.0	2.9	3.4	3.5	3.3	5.8	6.0	5.8
Service occupations	3.0	2.3	2.3	4.1	3.2	3.1	5.8	5.0	4.7
Precision, production, craft, and repair	2.3	1.8	1.4	2.9	2.3	1.8	4.6	4.1	3.3
Operators, fabricators, and laborers	2.7	2.2	2.0	3.1	3.0	2.4	5.4	4.4	4.0
Farming, forestry, and fishing	2.2	2.0	2.9	3.2	3.0	3.3	5.6	5.9	7.3
Industry									
Total, 16 years and older	2.2	1.9	1.9	2.8	2.4	2.3	4.9	4.4	4.3
Agriculture	2.4	1.6	2.6	3.3	2.6	3.2	5.0	5.2	6.1
Mining	1.0	1.1	.7	1.0	1.8	.7	2.6	4.0	2.6
Construction	4.5	3.7	2.3	5.7	4.7	2.9	8.4	7.2	5.2
Manufacturing	1.3	.8	.8	1.6	1.1	1.0	3.1	2.1	2.2
Durable goods	1.3	.7	.9	1.6	1.0	1.1	3.4	2.0	2.4
Nondurable goods	1.3	1.0	.6	1.5	1.1	.9	2.8	2.3	2.0
Transportation	1.1	.7	.6	1.1	1.4	1.0	2.3	2.7	1.7
Communications and public utilities	1.4	.6	1.6	1.6	1.0	1.6	4.0	2.3	2.7
Wholesale trade	.7	.8	1.1	1.0	1.3	1.5	2.3	2.1	2.8
Retail trade	1.6	1.5	1.6	2.0	1.7	1.8	3.0	2.6	2.7
Finance, insurance, and real estate	.7	1.1	.6	.8	1.3	1.0	2.0	2.1	1.9
Services	3.4	2.8	2.9	4.3	3.7	3.6	7.5	6.7	6.9
Private household	8.2	6.1	8.8	11.9	9.8	11.8	17.9	15.7	16.8
Business, auto, and repair services	5.3	3.8	3.2	7.3	5.8	4.7	9.6	8.0	7.5
Personal services	3.6	2.5	3.6	3.9	3.3	4.3	5.6	5.7	6.2
Entertainment and recreation services	4.3	3.6	3.9	5.3	4.0	4.3	8.2	6.8	5.7
Professional services	2.7	2.4	2.6	3.3	3.0	3.1	6.7	6.3	6.6
Hospitals	.8	1.1	1.0	.8	1.2	1.0	2.2	3.8	3.7
Health services, excluding hospitals	1.2	1.0	.7	1.5	1.3	.9	2.7	2.4	1.7
Educational services	5.3	4.6	5.0	5.5	4.8	5.1	12.3	11.4	11.6
Social services	2.3	1.6	2.1	5.6	4.5	5.2	7.8	6.2	7.3
Other professional services	1.1	1.7	1.5	2.1	2.4	2.0	4.2	3.6	4.1
Public administration	1.2	1.2	1.2	1.2	1.2	1.4	3.6	4.2	3.1

[1] Contingency rates are calculated by dividing the number of contingent workers in a specified worker group by total employment for the same worker group. Estimate 1 above is calculated using the narrowest definition of contingent work; estimate 3 uses the broadest definition. For the specific criteria used for each definition, see the appendix, p. 25.

Table 4. Contingent and noncontingent workers by full- and part-time status, reason for part-time work, usual hours at work on primary job, and multiple job holding, February 1999

Characteristic	Contingent workers[1]			Noncontingent workers[2]
	Estimate 1	Estimate 2	Estimate 3	
Full- or part-time status[3]				
Total employed, 16 years and older (thousands)	2,444	3,038	5,641	125,853
Percent	100.0	100.0	100.0	100.0
Full-time workers	48.4	52.0	55.9	83.0
Part-time workers	51.6	48.0	44.1	17.0
At work part time for economic reasons	9.1	9.0	7.2	2.5
At work part time for noneconomic reasons	40.3	37.7	35.8	14.0
Hours of work				
Average hours, total at work	27.3	28.4	30.0	38.8
Average hours, usually work full time	38.7	39.3	40.8	42.7
Average hours, usually work part time	16.8	16.8	16.9	20.6
Multiple jobholding				
Total, 16 years and older (thousands)	143	196	457	8,109
Percent[4]	100.0	100.0	100.0	100.0
Primary job full time, secondary job part time	28.0	34.7	36.8	55.3
Primary and secondary job both part time	51.7	46.4	40.9	21.3
Hours vary on primary or secondary jobs	20.3	18.9	20.1	19.1
Proportion of full-time workers who combined part-time jobs	6.3	5.8	5.9	1.7
Multiple jobholding rate[5]	5.9	6.5	8.1	6.4

[1] Contingent workers are defined as individuals who do not perceive themselves as having an explicit or implicit contract with their employers for ongoing employment. Estimate 1 above is calculated using the narrowest definition of contingent work; estimate 3 uses the broadest definition. For the specific criteria used for each definition, see the appendix, p. 25.

[2] Noncontingent workers are those who do not meet the criteria for any of the three definitions of contingent work.

[3] Part-time is defined as 1 to 34 hours per week; full time is 35 hours or more. The classification of full- or part-time is based on the number of hours usually worked. The sum of the at-work part time categories would not equal the estimate for part-time workers as the latter includes those who had a job but were not at work in the reference week. Persons who are at work part time for an economic or noneconomic reason are limited to those who usually work part time.

[4] A small number of individuals who worked full time on both their primary and secondary jobs or worked part time on their primary jobs and full time on their secondary jobs are not shown separately.

[5] Multiple jobholding rates are calculated by dividing the number of multiple jobholders in a specified worker group by total employment for the same worker group.

NOTE: Detail may not sum to totals due to rounding.

Demographics

Both the number of contingent workers and the contingency rate were about unchanged between 1997 and 1999 for most of the major demographic groups. (See tables 1 and 2, pp. 5–6.) As in prior surveys, the contingency rate was highest for younger workers. In 1999, roughly 10 percent of both teenagers (aged 16 to 19 years) and 20- to 24-year-olds held contingent jobs.

Among workers aged 16 to 24, the likelihood of holding a contingent job was much greater for those enrolled in school; the contingency rate for students was 2.5 times higher than that for their counterparts not enrolled in school. The greater tendency of students to hold contingent jobs suggests that flexibility and lack of a long-term commitment to an employer is compatible with attending school. In fact, among those enrolled in college, a large proportion work in colleges and universities, that is, on their campuses. Many of these jobs, by nature, are designed to be temporary. For example, of the 715,000 college students employed at their schools in 1999, about three-fifths reported that they were holding contingent jobs.

Although the contingency rates for men and women changed little between 1997 and 1999, women continued to be more likely than men to hold contingent jobs. Working women are more likely than their male counterparts to be employed in industries—services, for example—that have a large proportion of contingent workers Moreover, compared to men, a much higher proportion of women are employed part time, and part-time workers have a higher probability of being contingent than full-time workers.

Blacks and Hispanics continued to be somewhat more likely than whites to hold temporary jobs. In 1999, contingency rates for blacks and Hispanics were 4.7 percent and 5.6 percent, respectively, while the rate for whites was 4.1 percent.

As was the case in 1995 and 1997, contingent workers were found at both ends of the educational spectrum. Among

Table 5. Union affiliation of contingent and noncontingent wage and salary workers by industry, February 1999

Industry	Contingent workers (estimate 3)[1]			Noncontingent workers[2]		
		Unionization rate[3]			Unionization rate[3]	
	Total (in thousands)	Members of unions	Represented by unions	Total (in thousands)	Members of unions	Represented by unions
Total, 16 years and older	5,301	5.9	7.4	112,720	14.8	16.3
Agriculture	159	.0	.0	1,283	2.9	2.9
Mining	14	([4])	([4])	399	6.4	9.8
Construction	389	22.6	23.1	5,627	18.8	19.2
Manufacturing	444	6.5	7.4	18,646	16.5	17.6
Transportation and public utilities	175	18.3	19.4	9,025	32.2	34.4
Wholesale trade	121	.8	3.3	4,173	4.2	5.1
Retail trade	578	3.1	5.4	20,115	5.3	5.7
Finance, insurance, and real estate	154	([5])	([5])	7,535	2.9	3.5
Services	3,079	4.0	5.2	39,737	15.1	17.0
Public administration	188	10.6	18.1	6,180	34.3	39.7

[1] Contingent workers are defined as individuals who do not perceive themselves as having an explicit or implicit contract with their employers for ongoing employment. For the specific criteria used, see the appendix, p. 25.

[2] Noncontingent workers are those who do not meet the criteria for any of the three definitions of contingent work.

[3] Unionization rates are calculated by dividing the number of persons who are members of a labor union or are covered by a union contract in a specified worker group by total employment for the same worker group.

[4] Data not shown where base employment is less than 75,000.

[5] Less than 0.05 percent.

NOTE: Data refer to members of a labor union or employee association similar to a union as well as workers who report no union affiliation but whose jobs are covered by a union or employee association contract.

25- to 64-year-olds, workers with advanced degrees and those with less than a high school diploma had relatively high contingency rates—5.0 and 4.2 percent, respectively. (The overall contingency rate for workers aged 25 to 64 was 3.3 percent.) The probability of holding a contingent job was lower for workers with an associate degree, high school graduates with no college, and workers with some college but no degree. (See table 2, p. 6.)

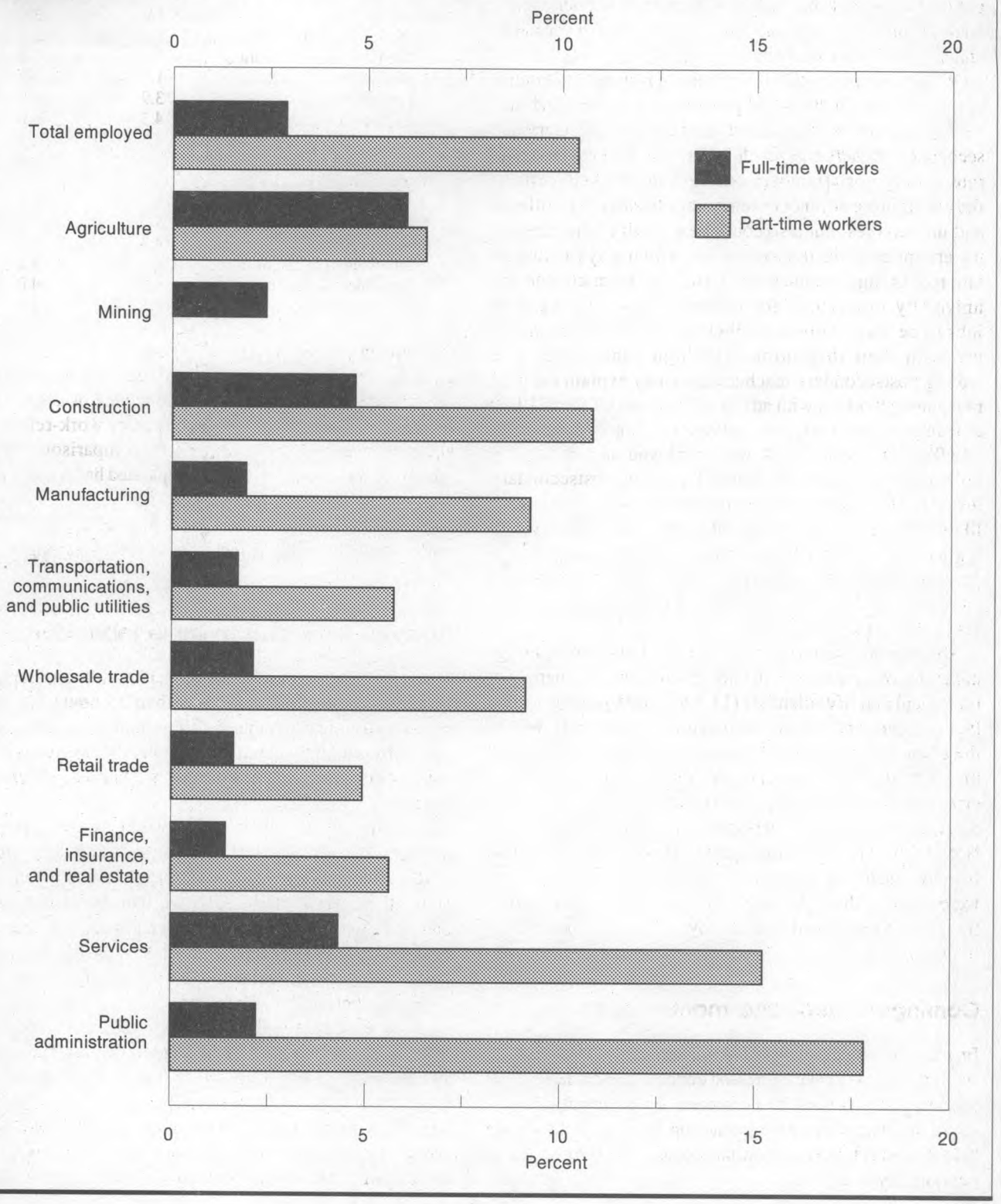
Workers who were natives of the United States were much less likely than the foreign-born to hold contingent jobs. The contingency rate for U.S. natives was 4.1 percent, in contrast to 6.1 percent for the foreign-born.[10] The above-average rate among the foreign-born is due entirely to the high rate of contingency among noncitizens; the rate for this group—7.6 percent—was twice as high as that for naturalized citizens—3.8 percent. (See table 2, p. 6.) Employment among noncitizens tends to be concentrated in many of the industries and occupations in which contingent employment arrangements are most common. For example, compared with U.S. natives and naturalized citizens, noncitizens were twice as likely to work in agriculture and 5 times as likely to work in private household services, two industries that have above-average contingency rates. But, even *within* agriculture, the rate for noncitizens is much higher than that for U.S. natives and naturalized citizens. The contingency rate in agriculture for noncitizens was 24.5 percent, in contrast to 3.2 percent for U.S. natives and only 1.2 percent for naturalized citizens. The high rate for noncitizens in this industry is largely due to their concentration in farm laborer occupations, which have very high contingency rates. Conversely, the low rate of contingency among U.S. natives working in agriculture is due, in part, to the fact that a large proportion (more than two-fifths) of these workers were employed as farm operators and managers, occupations that have extremely low rates of contingency—less than 1 percent.

Industry and occupation

Industry. As in 1997, the probability of holding a contingent job was highest for workers in the agriculture, construction, and services industries. Between 1997 and 1999, the contingency rate for construction declined, while the rates for agriculture and services were little different.[11] (See table 3, p. 7.) Within services, specific industries that had relatively high contingency rates in 1999 included private household services (16.8 percent); educational services (11.6 percent); business, auto, and repair services (7.5 percent); social services (7.3 percent); and personal services (6.2 percent).

Major industry groups that had very low contingency rates—less than 3 percent—included transportation; communications and public utilities; finance, insurance, and real estate; manufacturing; and mining.

Chart 2. Contingency rates of full- and part-time workers by industry, February 1999



Occupation. As in the prior survey, contingent workers were found in a wide range of occupations. (See table 3, p. 7.) Occupational categories that had the highest rates of contingency were farming, forestry, and fishing; professional specialty; and administrative support.

Within the professional specialty category, the contingency rate was highest—29 percent—for college and university instructors. In contrast, the rate for elementary and secondary teachers was much lower (7.6 percent). The high rate among postsecondary teachers most likely reflects the use of more adjunct or temporary teachers by colleges and universities, but also could be a result of the inherent uncertainties of the tenure process, which plays an important role in higher education.[12] Many younger college and university instructors, for instance, may perceive their jobs to be insecure because they have not yet earned tenure with their institution. The high contingency rate among postsecondary teachers also may explain the high rate among workers with advanced degrees. Of the 621,000 contingent workers with advanced degrees in 1999, 156,000, or 1 in every 4, was employed as a college or university instructor. Interestingly, among postsecondary teachers, individuals with contingent jobs were much more likely than their noncontingent counterparts to be working part time; nearly three-fifths of postsecondary teachers employed in contingent jobs were working part time, in contrast to only about one-tenth of noncontingent workers in the same occupation.

Other professional specialty occupations with relatively high rates of contingency include physicians (12.3 percent); biological and life scientists (11.8 percent); photographers (9.1 percent); and actors and directors (7.8 percent). Within the administrative support category, occupations that had high contingency rates include library clerks (24.1 percent); interviewers (19.2 percent); general office clerks (14.0 percent); receptionists (8.9 percent); and typists (8.9 percent). Not surprisingly, of the contingent workers employed in these five administrative support occupations, a large proportion were working through a temporary help agency, an alternative work arrangement that employs a large number of contingent workers.[13]

Contingent work and marital status

In addition to the impact of contingent work on individuals, some researchers have expressed concern that the lack of job security characterized by contingent employment arrangements has had a negative impact on families.[14] As shown below, however, married men and women have below-average contingency rates.

	Aged 16 years and older	*Aged 25 years and older*
Men	3.9	3.0
Married, spouse present	2.5	2.4
Married, spouse absent	7.7	8.2
Widowed	1.9	1.9
Divorced	3.9	4.0
Separated	4.3	4.0
Never married	7.2	4.8
Women	4.7	3.7
Married, spouse present	3.5	3.4
Married, spouse absent	5.0	5.2
Widowed	4.2	4.2
Divorced	3.2	3.2
Separated	4.0	4.0
Never married	8.1	5.4

Contingency rates tend to be higher for individuals who have never been married and for those who were married, but whose spouse was absent. (An absence of a spouse, in this context, could be due to a temporary work-related assignment overseas, for example.) By comparison, workers who were widowed, divorced, or separated had a lower probability of holding a temporary job. The fact that contingent work has somewhat more appeal to younger individuals undoubtedly has some affect on the rates of contingency by marital status.

Hours of work and multiple jobholding

Hours of work. As in prior surveys, part-time workers, that is, those who usually work less than 35 hours per week, were much more likely than full-time workers to hold contingent jobs. In 1999, about 10 percent of part-time workers were contingent, in contrast to only 3 percent of full-time workers.

Contingency rates for part-time workers were higher than the overall rate for all the major industry groups. (See chart 2, p. 10.) Among full-time workers, the rate of contingency was above the overall rate in only two industries—agriculture and construction. Although contingent work is a characteristic of part-time work regardless of the industry, this implies that it also is closely related to certain kinds of work (farm work and construction, for example).

As was the case in the 1995 and 1997 surveys, part-time contingent and noncontingent workers were about equally likely to choose part-time work, that is, they worked part time voluntarily and not for economic reasons; about four-fifths of workers in each group chose to work part time. Of those working part time for an economic reason, only about 1 in every 10 was holding a job that was structured

Table 6. Contingency rates by census region and division, February 1995–99

[In percent]

Census region and division	Contingency rates[1]								
	Estimate 1			Estimate 2			Estimate 3		
	1995	1997	1999	1995	1997	1999	1995	1997	1999
Total, United States	2.2	1.9	1.9	2.8	2.4	2.3	4.9	4.4	4.3
Northeast	2.0	1.6	1.8	2.5	2.1	2.1	5.1	4.3	4.1
New England	2.3	2.1	2.1	2.8	2.5	2.4	5.4	4.6	4.3
Middle Atlantic	1.9	1.4	1.6	2.4	1.9	2.0	5.0	4.1	4.0
Midwest	2.1	1.7	1.6	2.6	2.2	2.0	4.6	3.9	3.6
East North Central	2.1	1.5	1.4	2.6	1.9	1.8	4.4	3.5	3.4
West North Central	2.0	2.1	2.1	2.7	2.6	2.4	5.1	4.6	4.2
South	2.1	1.7	1.7	2.7	2.3	2.1	4.5	3.9	3.9
South Atlantic	2.1	1.7	1.5	2.6	2.3	2.0	4.4	4.0	3.9
East South Central	1.8	1.5	1.9	2.3	1.8	2.1	4.1	3.4	3.9
West South Central	2.5	1.9	1.9	3.2	2.5	2.3	4.9	4.0	3.9
West	2.7	2.6	2.4	3.3	3.3	3.1	5.7	5.9	5.8
Mountain	2.6	2.6	2.7	3.2	3.3	3.3	5.5	5.4	5.8
Pacific	2.7	2.7	2.4	3.3	3.3	3.0	5.8	6.1	5.7

[1] Contingency rates are calculated by dividing the number of contingent workers in a specified worker group by total employment for the same worker group. Estimate 1 above is calculated using the narrowest definition of contingent work; estimate 3 uses the broadest definition. For the specific criteria used for each definition, see the appendix, p. 25.

to be temporary.

Compared with their noncontingent counterparts, workers holding contingent jobs put in slightly fewer hours per week. For persons who usually worked full time, contingent workers averaged 40.8 hours per week, compared with 42.7 hours per week for noncontingent workers. Among workers who usually worked part time, average weekly hours for contingent workers were 16.9, compared with 20.6 for noncontingent workers. (See table 4, p. 8.)

Multiple jobholding. Because contingent workers are much more likely than noncontingent workers to be employed part time, one way to obtain more hours of work is to work at more than one job. In 1999, the multiple jobholding rate—the proportion of workers who hold more than one job—for contingent workers was higher than that for noncontingent workers. (For respondents who hold more than one job, questions concerning contingency refer to their main job, that is, the job at which they worked the most hours during the survey reference week.) Compared with noncontingent workers, contingent workers who were multiple jobholders were much more likely to hold two or more part-time jobs; in contrast, noncontingent workers were more likely to have one full-time and one part-time job. The high multiple jobholding rate among contingent workers may be due to the fact that they tend to work fewer hours and earn less, regardless of whether they are employed full or part time, and, therefore, may need an additional job to supplement their income. (See table 4, p. 8.)

Union affiliation

As in 1995 and 1997, contingent workers were much less likely than noncontingent workers to be members of unions. In 1999, the unionization rate for contingent workers was 5.9 percent, in contrast to 14.8 percent for noncontingent workers. (See table 5, p. 9.) The proportion of contingent workers who were covered by a union contract, regardless of whether the worker was a union member, also was much lower than that for noncontingent workers.[15]

Although *overall* rates of union membership and union representation were much lower for contingent workers, there is a great deal of variation among the different industries. For instance, unionization rates among contingent workers were highest for individuals employed in construction and lowest for workers in agriculture and finance, insurance, and real estate. In fact, in construction, the proportion of contingent workers who were members of unions or covered by a union contract was actually *higher* than that for noncontingent workers. The higher rate of unionization in the construction industry may be due to the nature of employment for at least some of the workers in the industry, but also may

Table 7. Contingent workers by reason for contingency and preference for contingent and noncontingent work, February 1999

[Percent distribution]

Reason and preference	Contingent workers[1]		
	Estimate 1	Estimate 2	Estimate 3
Total			
Total, 16 years and older (thousands)	2,444	2,657	5,259
Percent	100.0	100.0	100.0
Economic reasons	30.3	31.5	25.6
Only type of work could find	19.2	20.3	15.3
Hope job leads to permanent employment	5.9	5.6	5.2
Other economic reason	5.2	5.7	5.1
Personal reasons	57.8	56.5	52.3
Flexibility of schedule and only wanted to work a short period of time	12.7	13.5	12.5
Family or personal obligations and child-care problems	5.2	4.8	3.6
In school or training	22.8	21.1	19.0
Money is better	1.1	1.3	1.1
Other personal reason	16.0	15.7	16.1
Reason not available	11.9	12.0	22.1
Prefer contingent employment			
Total, 16 years and older (thousands)	959	1,210	2,197
Percent	100.0	100.0	100.0
Economic reasons	7.5	6.4	5.6
Only type of work could find	2.2	2.0	1.3
Hope job leads to permanent employment	.8	.7	.6
Other economic reason	4.5	3.8	3.6
Personal reasons	83.1	69.1	70.6
Flexibility of schedule and only wanted to work a short period of time	18.8	16.7	17.4
Family or personal obligations and child-care problems	6.9	5.5	4.6
In school or training	40.5	32.6	31.1
Money is better	.4	.3	.4
Other personal reason	16.4	14.0	17.3
Reason not available	9.3	24.4	23.8
Prefer noncontingent employment			
Total, 16 years and older (thousands)	1,320	1,622	2,997
Percent	100.0	100.0	100.0
Economic reasons	49.5	46.7	40.5
Only type of work could find	33.6	31.7	25.8
Hope job leads to permanent employment	9.7	8.4	8.4
Other economic reason	6.2	6.2	6.3
Personal reasons	37.1	34.6	33.4
Flexibility of schedule and only wanted to work a short period of time	7.7	8.0	7.3
Family or personal obligations and child-care problems	4.1	3.4	2.6
In school or training	9.5	8.4	8.6
Money is better	1.7	1.8	1.6
Other personal reason	13.9	12.9	13.3
Reason not available	13.3	18.7	26.0

[1] Contingent workers are defined as individuals who do not perceive themselves as having an explicit or implicit contract with their employers for ongoing employment. Estimate 1 above is calculated using the narrowest definition of contingent work; estimate 3 uses the broadest definition. For the specific criteria used for each definition, see the appendix, p. 25.

NOTE: Detail may not sum to totals due to rounding.

be due to the historic role unions have played in construction. In this industry, much of the work involves projects that are designed to last a limited period of time. Once a project is completed, the workers move on to new ones. One function of unions has been to provide job stability, and thus, it may be that some contingent workers in construction have consistently turned to unions, which traditionally have played a significant role in helping construction workers transition between jobs through the use of hiring halls, for example.

Regions

As in prior surveys, the likelihood of holding a contingent job was greatest in the western region. In 1999, the contingency rate in the West was 5.8 percent, compared with 4.1

Table 8. Contingent and noncontingent workers who actively searched for a new job in the prior 3 months, by selected characteristics, February 1999

Characteristic	Contingent workers[1]			Noncontingent workers[2]
	Estimate 1	Estimate 2	Estimate 3	
Total				
Total, 16 years and older (in thousands)	2,444	3,038	5,641	125,853
Actively searched for a new job				
Percent	100.0	100.0	100.0	100.0
"Permanent"	86.1	87.0	86.5	90.8
Temporary	6.2	5.8	5.9	4.1
Any type	7.7	7.2	7.6	5.1
Job search rate	19.3	18.7	15.4	3.6
Total, 25 years and older				
Total (in thousands)	1,358	1,827	3,778	108,592
Actively searched for a new job	100.0	100.0	100.0	100.0
Percent				
"Permanent"	90.5	90.1	88.6	93.2
Temporary	4.2	4.4	4.2	2.5
Any type	5.3	5.5	7.2	4.2
Job search rate	22.4	20.6	16.5	3.2
Total, 16 to 24 years				
Total (in thousands)	1,086	1,212	1,863	17,261
Actively searched for a new job	100.0	100.0	100.0	100.0
Percent				
"Permanent"	78.3	80.9	81.2	82.6
Temporary	9.7	8.5	10.1	9.3
Any type	12.1	10.6	8.6	8.1
Job search rate	15.5	15.9	13.1	5.9
Prefer noncontingent employment				
Total, 16 years and older (in thousands)	1,320	1,622	2,997	[3]
Actively searched for a new job				
Percent	100.0	100.0	100.0	[3]
"Permanent"	91.0	91.5	89.9	[3]
Temporary	2.7	2.3	2.8	[3]
Any type	6.3	6.3	7.4	[3]
Job search rate	32.5	31.6	25.9	[3]

[1] Contingent workers are defined as individuals who do not perceive themselves as having an explicit or implicit contract with their employers for ongoing employment. Estimate 1 above is calculated using the narrowest definition of contingent work; estimate 3 uses the broadest definition. For the specific criteria used for each definition, see the appendix, p. 25.

[2] Noncontingent workers are those who do not meet the criteria for any of the three definitions of contingent work.

[3] Not applicable.

NOTE: Detail may not sum to totals due to rounding.

percent in the Northeast, 3.9 percent in the South, and 3.6 percent in the Midwest.[16] (See table 6, p. 12.)

The higher rate in the West is due, in part, to the region's industry composition. For example, the proportion of total employment consisting of agriculture, which has an above-average contingency rate, is slightly higher in the West than in other regions. But, even in the West, workers in agriculture were much more likely than their counterparts in other regions of the United States to hold a contingent job. The contingency rate for agricultural workers in the western region was roughly 14 percent; in contrast, the rates in the other regions ranged from about 2 percent in the Midwest to nearly 4 percent in the South.

In the West, the proportion of workers employed in construction was higher than all but one of the other regions; furthermore, the contingency rate for construction in the West (6.9 percent) was higher than the rates for the other three regions. Finally, as was the case with construction, the pro-

Table 9. Median weekly earnings of full- and part-time time contingent and noncontingent wage and salary workers by selected characteristics, February 1999

Characteristic	Median weekly earnings			
	Full-time workers[1]		Part-time workers[2]	
	Contingent estimate 3[3]	Noncontingent[4]	Contingent estimate 3[3]	Noncontingent[4]
Age and sex				
Total, 16 years and older	$415	$542	$114	$160
16 to 19 years	257	278	83	104
20 to 24 years	350	362	106	143
25 years and older	471	581	159	207
25 to 34 years	444	510	171	218
35 to 44 years	504	599	175	210
45 to 54 years	494	647	164	229
55 to 64 years	540	616	144	194
65 years and older	([5])	369	111	149
Men, 16 years and older	494	614	119	150
Women, 16 years and older	340	476	112	166
Race and Hispanic origin				
White	420	564	113	161
Black	350	447	122	150
Hispanic origin	313	396	116	159
Educational attainment				
Less than a high school diploma	295	334	92	110
High school graduates, no college	353	447	133	171
Some college, no degree	438	512	93	155
Associate degree	445	590	142	218
College graduates	581	840	191	268

[1] Full-time workers are those who usually work 35 hours per week or more.

[2] Part-time workers are those who usually work 1 to 34 hours per week.

[3] Contingent workers are defined as individuals who do not perceive themselves as having an explicit or implicit contract with their employers for ongoing employment. Estimate 3 is calculated using the broadest definition of contingent work. See the appendix, p. 25.

[4] Noncontingent workers are those who do not meet the criteria for any of the three definitions of contingent work.

[5] Data not shown where base employment is less than 75,000.

portion of total employment in the West consisting of services was higher than all but one other region. The contingency rate for the services industry in the West (8.7 percent) was more than 2 percentage points higher than the rates for the other three regions.

Preferences, reasons, and job search

Preferences and reasons. In the survey, contingent workers were asked if they preferred such work to noncontingent employment, as well as the reason why they were employed in a temporary job. Although more than one-half of contingent workers reported that they would rather be employed in a noncontingent job, about two-fifths said they preferred holding a temporary job, slightly higher than the proportion in 1997. Contingent workers aged 16 to 24 were much more likely to be satisfied with their current employment arrangement than their older counterparts aged 25 years and older. More than half of the younger workers were happy with their contingent jobs, in contrast to about one-fifth of adult men and roughly one-third of adult women. (See chart 3.) As discussed earlier, a large proportion of younger workers enrolled in school held contingent jobs, and these students probably preferred the flexibility afforded by temporary work in order to balance work and school attendance. Indeed, three-fifths of younger contingent workers enrolled in school said that they were satisfied with their temporary job.

The following tabulation shows preferences of older contingent workers for their current arrangement by race and Hispanic origin.

	Contingent workers (estimate 3)		
	White	Black	Hispanic origin
Total, 25 years and older (In thousands)	3,023	459	516
Percent	100.0	100.0	100.0
Prefer noncontingent employment	54.3	65.4	73.1
Prefer contingent employment	29.8	20.2	15.5
It depends	5.3	4.6	2.7
Preference not available	10.6	9.8	8.7

Hispanics were most likely to be dissatisfied with being in a contingent job. Nearly three-fourths of Hispanics aged 25 years and older would prefer a permanent job, compared with about two-thirds of blacks and more than half of whites.

Research conducted by Susan N. Houseman and Anne E. Polivka helps shine some light on why many older contingent workers feel unhappy with their current employment arrangement.[17] Using the longitudinal capability of the CPS, the authors matched information from households in the February 1995 Contingent and Alternative Work Arrangements Survey and the February 1996 "Basic" CPS. Houseman and Polivka found that workers employed in temporary jobs in 1995 were more likely than individuals with "regular" jobs to have changed employers, to be unemployed, or to have dropped out of the labor force when surveyed again in 1996. For older workers, it appears that the lack of job stability associated with contingent employment is less desirable probably because, in general, older workers tend to be more risk-averse than their younger counterparts. Many older workers may perceive that they have more to lose in terms of benefits such as pensions, for example, which typically accrue to workers with permanent jobs, especially those employed full time.

In 1999, contingent workers were more likely to provide a personal reason for choosing to accept their contingent jobs than were their counterparts in the prior surveys. The proportion who gave a personal reason for holding a contingent job has risen steadily since the first survey on contingent work was conducted, suggesting that, since 1995, contingent work has become more of a voluntary choice, coinciding with a period of declining unemployment and strong job growth.

About 1 in every 5 contingent workers reported attending school or training as the reason they held their current job, and roughly 1 in every 10 gave either flexibility of schedule, or family or personal obligations as the reason for holding a contingent job. (See table 7, p. 13.) These reasons imply that contingent work enabled some individuals to join the workforce despite their involvement in other activities. The

Chart 3. Contingent workers by their preference for contingent or noncontingent work arrangements by age and sex, February 1999

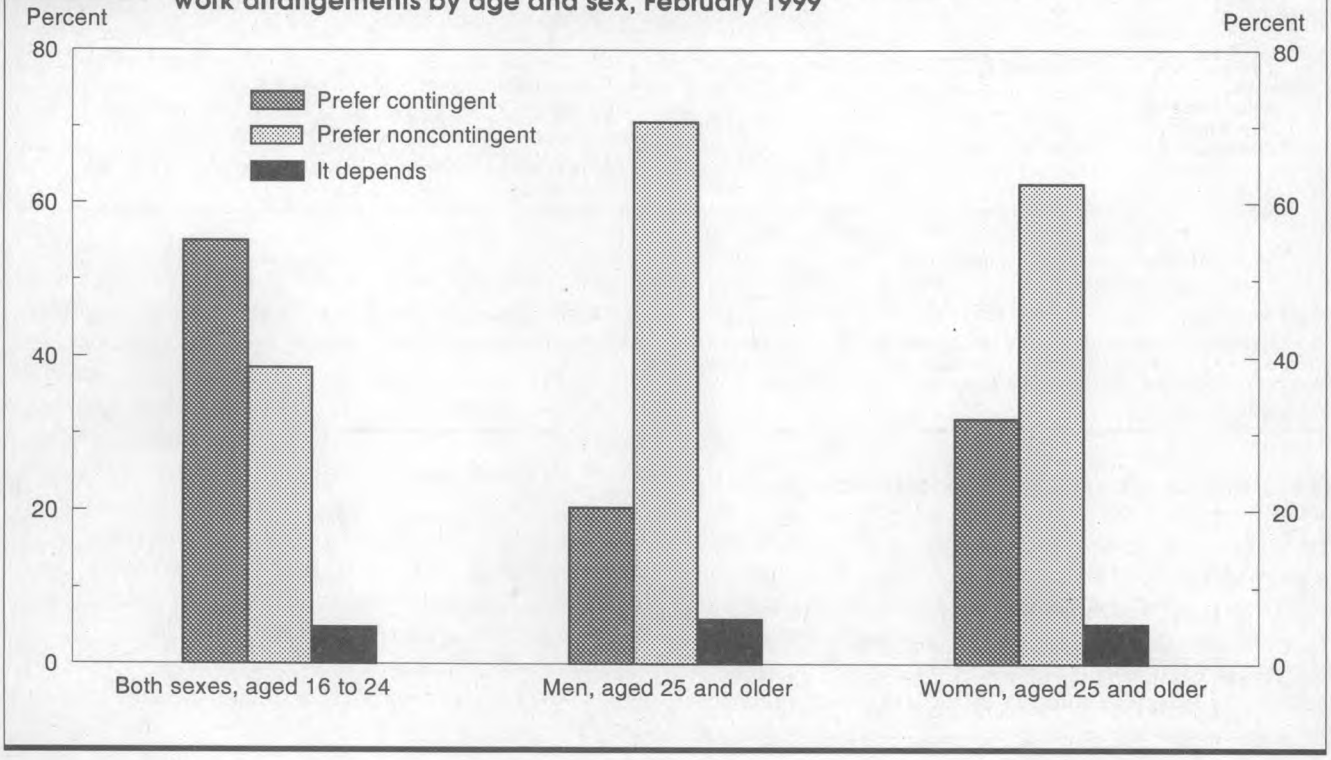


Table 10. Median weekly earnings of full- and part-time contingent and noncontingent wage and salary workers by occupation and industry, February 1999

Occupation and industry	Median weekly earnings			
	Full-time workers[1]		Part-time workers[2]	
	Contingent (estimate 3)[3]	Noncontingent[4]	Contingent (estimate 3)[3]	Noncontingent[4]
Occupation				
Managerial and professional specialty	$620	$786	$150	$268
Executive, administrative, and managerial	662	776	150	260
Professional specialty	591	792	150	271
Technical, sales, and administrative support	381	482	109	161
Technicians and related support	550	583	124	302
Sales occupations	515	521	105	133
Administrative support, including clerical	434	442	109	186
Service occupations	288	346	97	140
Private household	123	220	104	119
Other services	301	351	95	140
Precision, production, craft, and repair	583	589	132	230
Operators, fabricators, and laborers	343	417	123	148
Farming, forestry, and fishing	248	333	88	185
Industry				
Agriculture	243	318	87	166
Mining	(5)	705	(5)	(5)
Construction	641	552	143	182
Manufacturing	389	551	196	198
Durable goods	407	585	209	274
Nondurable goods	358	505	124	175
Transportation, communications, and other public utilities	504	675	174	255
Wholesale trade	405	575	(5)	156
Retail trade	316	386	110	135
Finance, insurance, and real estate	377	578	153	209
Services	417	552	110	181
Private household	131	229	107	134
Other services	421	558	110	183
Professional services	474	596	106	199
Public administration	660	663	124	180

[1] Full-time workers are those who usually work 35 hours per week or more.

[2] Part-time workers are those who usually work 1 to 34 hours per week.

[3] Contingent workers are defined as individuals who do not perceive themselves as having an explicit or implicit contract with their employers for ongoing employment. Estimate 3 is calculated using the broadest definition of contingent work. For the specific criteria used for each definition, see the appendix, p. 25.

[4] Noncontingent workers are those who do not meet the criteria for any of the three definitions of contingent work.

[5] Data not shown where base employment is less than 75,000.

most common economic reason reported by contingent workers was that it was the only type of work that could be found; 15 percent gave such a reason in 1999, somewhat lower than the proportion in the 1997 survey.

Although slightly more than half of contingent workers gave personal reasons for holding their contingent jobs, the proportion was much lower—one-third—for those who were dissatisfied with their contingent job.[18] The most common economic reason given by contingent workers who preferred a permanent job was that it was the only job they could find; about 1 in 4 contingent workers dissatisfied with their current arrangement gave such a reason. Not surprisingly, the majority of contingent workers who preferred *temporary* work gave a personal reason for holding a contingent job. A large proportion—nearly one-third—reported that they preferred temporary work because they were attending school or in training and an additional 17 percent cited the flexibility of the arrangement as the main reason for

Text continues on page 20.

Table 11. Contingent and noncontingent wage salary workers with health insurance coverage by selected characteristics, February 1999

[In percent]

Characteristic	Contingent workers (estimate 3)[1]					Noncontingent workers[2]				
	Total (in thousands)	Percent with health insurance coverage				Total (in thousands)	Percent with health insurance coverage			
		Total	Through current employer at main job	Through other job or union	Eligible for employer-provided health insurance		Total	Through current employer at main job	Through other job or union	Eligible for employer-provided health insurance
Age and sex										
Total, 16 years and older (thousands)	5,253	64.8	22.1	1.6	33.9	111,801	83.0	61.5	0.7	74.2
16 to 19 years	726	73.8	3.9	([3])	11.7	5,852	73.3	10.0	.1	23.8
20 to 24 years	1,062	60.7	14.1	.5	26.6	10,987	66.8	43.0	.3	59.4
25 years and older	3,472	64.1	28.4	2.3	40.7	94,961	85.4	66.8	.8	79.0
25 to 34 years	1,240	55.8	30.1	1.1	44.0	27,391	80.1	64.1	.6	77.3
35 to 44 years	978	63.6	28.0	1.7	37.6	31,212	85.6	68.1	.6	80.2
45 to 54 years	697	67.1	29.3	3.3	45.3	23,646	89.3	70.7	.9	82.5
55 to 64 years	341	76.2	30.2	3.5	40.5	10,260	89.4	68.1	1.4	78.7
65 years and older	215	85.6	14.9	6.0	21.9	2,452	89.2	36.9	1.9	50.9
Men	2,569	60.0	24.1	2.3	35.3	58,057	82.3	66.9	1.1	77.0
Women	2,691	69.3	20.2	.9	32.6	53,744	83.7	55.6	.3	71.2
Race and Hispanic origin										
White	4,201	66.6	22.6	1.7	34.2	93,646	84.1	61.5	.8	74.3
Black	651	50.1	15.4	1.1	30.9	13,248	76.3	61.4	.4	74.1
Hispanic origin	704	37.8	17.5	.0	26.6	11,796	63.0	49.5	.8	61.1
Full- or part-time status										
Full-time workers	2,828	59.4	33.3	2.2	46.7	92,480	84.9	70.7	.7	82.7
Part-time workers	2,414	71.0	8.7	.9	18.6	19,079	74.0	17.0	.7	32.9
Educational attainment[4]										
Less than a high school diploma	538	29.7	11.0	.9	20.8	10,752	59.8	43.9	.6	56.6
High school graduates, no college	1,108	53.3	16.5	3.2	29.3	34,631	79.6	60.0	.9	73.3
Some college, no degree	707	59.7	26.9	2.1	43.3	20,104	84.9	65.2	.9	79.0
Associate degree	267	65.9	25.8	3.4	41.2	9,367	88.1	67.6	1.0	81.7
College graduates	1,449	76.5	37.9	1.2	50.5	29,905	93.5	77.0	.5	87.5
Advanced degree	573	84.8	47.1	2.6	59.2	9,445	95.4	80.9	.5	90.5

[1] Contingent workers are defined as individuals who do not perceive themselves as having an explicit or implicit contract with their employers for ongoing employment. Estimate 3 uses the broadest definition of contingent work. See the appendix, p. 25.

[2] Noncontingent workers are those who do not meet the criteria for any of the three definitions of contingent work.

[3] Less than 0.05 percent.

[4] Excludes workers aged 16 to 24 years enrolled in school.

NOTE: Detail for the above race and Hispanic-origin groups will not sum to totals because data for the "other races" group are not presented and Hispanics are included in both the white and black population groups. Detail for other characteristics may not sum to totals due to rounding. Data exclude the incorporated self-employed and independent contractors.

Table 12. Contingent and noncontingent wage and salary workers with health insurance coverage by occupation and industry, February 1999

[In percent]

Occupation and industry	Contingent workers (estimate 3)[1]					Noncontingent workers[2]				
	Percent with health insurance coverage					Percent with health insurance coverage				
	Total (in thousands)	Total	Through current employer at main job	Through other job or union	Eligible for employer-provided health insurance	Total (in thousands)	Total	Through current employer at main job	Through other job or union	Eligible for employer-provided health insurance
Occupation										
Managerial and professional specialty	1,689	81.2	37.4	1.1	47.8	32,874	93.1	75.3	0.4	86.8
Executive, administrative, and managerial	343	80.5	47.2	1.2	56.3	15,788	92.3	75.6	.4	87.1
Professional specialty	1,345	81.5	34.9	1.1	45.7	17,086	93.9	75.0	.3	86.6
Technical, sales, and administrative support	1,556	64.8	16.5	1.0	31.7	33,794	84.5	58.2	.5	73.2
Technicians and related support	170	67.1	27.1	1.8	46.5	3,892	90.9	70.9	.5	84.1
Sales occupations	317	58.7	14.2	.9	22.7	12,795	79.5	48.4	.6	64.3
Administrative support, including clerical	1,069	66.1	15.3	.8	32.0	17,107	86.8	62.7	.4	77.3
Service occupations	715	57.8	8.3	.3	17.8	15,678	69.1	38.9	.6	52.7
Private household	102	54.9	7.8	[3]	7.8	489	44.0	4.1	[3]	5.3
Other services	613	58.2	8.3	.3	19.4	15,189	69.9	40.0	.6	54.3
Precision production, craft, and repair	432	54.4	18.8	8.6	31.3	12,030	80.2	67.1	2.4	76.5
Operators, fabricators, and laborers	676	50.0	18.5	1.6	29.9	16,044	76.7	59.9	1.1	71.9
Farming, forestry, and fishing	193	21.2	5.7	(3)	8.8	1,381	58.9	36.1	.6	48.6
Industry										
Agriculture	159	18.2	6.3	[3]	8.2	1,310	58.9	32.9	.1	44.6
Mining	14	[4]	[4]	[4]	[4]	503	87.1	83.7	[3]	88.9
Construction	382	48.7	20.2	10.5	34.0	5,669	69.8	49.4	4.4	61.0
Manufacturing	434	62.4	32.7	1.1	46.3	19,275	88.7	78.2	.3	87.6
Durable goods	284	62.3	35.6	1.1	52.8	11,849	90.0	80.1	.3	89.2
Nondurable goods	150	62.7	29.3	1.3	35.3	7,369	86.6	75.2	.3	85.3
Transportation and public utilities	175	70.3	34.9	5.1	44.6	8,628	87.6	75.6	1.0	84.3
Wholesale trade	121	66.9	27.3	[3]	33.1	4,442	85.9	68.5	.9	81.3
Retail trade	569	57.3	10.4	.8	20.4	19,406	70.7	36.4	.8	53.2
Finance, insurance, and real estate	150	66.7	38.7	[3]	46.0	7,559	89.2	68.4	.5	81.9
Services	3,062	69.4	20.9	.8	33.2	39,078	84.5	59.2	.5	73.3
Private household	109	51.4	7.3	[3]	7.3	528	44.5	4.7	[3]	5.9
Other services	2,953	70.0	21.4	.9	34.1	38,551	85.1	59.9	.5	74.2
Professional and related services	2,006	79.7	25.7	.8	36.2	27,753	89.4	64.4	.4	78.8
Public administration	187	81.3	37.4	.4	56.1	5,930	95.0	85.6	.3	92.7

[1] Contingent workers are defined as individuals who do not perceive themselves as having an explicit or implicit contract with their employers for ongoing employment. Estimate 3 uses the broadest definition of contingent work. See the appendix, p. 25.

[2] Noncontingent workers are those who do not meet the criteria for any of the three definitions of contingent work.

[3] Less than 0.05 percent.

[4] Data not shown where base employment is less than 75,000.

NOTE: Data exclude the incorporated self-employed and independent contractors.

holding a contingent job. (See table 7, p. 13.)

Job search. An additional way to gauge workers' satisfaction with their current employment arrangement is whether they are looking for another job. In the survey, employed individuals are asked whether they had searched for a job in the 3 months prior to the survey date, or since the start of their current job if they began working at the job sometime during those 3 months.[19] Additional information is obtained with respect to whether the jobseeker is looking for an additional job or a new job, and, if an individual is seeking a new job, he or she is asked whether the job sought is a permanent job, a temporary job, or simply *any* type of job that can be found. The focus in this section is on contingent and noncontingent workers who used active methods to search for a *new* job. Active job-search methods include scheduling interviews, contacting an employer directly, registering at a public or private employment agency, contacting friends or relatives about available jobs, sending out résumés or filling out applications, and placing or answering ads.

In the 3 months prior to February 1999, approximately 15 percent of contingent workers had actively looked for a new job, compared with only about 4 percent of noncontingent workers. (See table 8, p. 14.) Interestingly, the job search rate for both contingent and noncontingent workers has steadily declined since the first survey was conducted in 1995. As was the case in prior surveys, the vast majority of contingent and noncontingent workers were looking for a "permanent" job instead of a new temporary job. Among contingent workers, the proportion aged 25 years and older who had looked for work was only slightly higher than that for 16- to 24-year-olds. In contrast, the fraction of younger noncontingent workers who had actively looked for a new job in the 3 months preceding the survey was nearly twice that of their older counterparts.

Contingent workers who reported that they preferred a noncontingent job were most likely to have actively searched for a new job in the 3 months preceding the February 1999 survey. Indeed, more than 1 in every 4 had actively looked for a new job, in contrast with only 4 percent of contingent workers who were happy with their temporary job.

Compensation

Earnings. As in 1995 and 1997, contingent workers in 1999 earned less than noncontingent workers. Median weekly earnings for all contingent workers, that is, both full- and part-time workers combined, were $261, compared with $479 for their noncontingent counterparts. The large disparity in earnings between the two groups reflects differences in demographics, work schedules, occupational and industry concentrations, and employee tenure. As mentioned earlier, contingent workers were twice as likely as noncontingent workers to be employed part time.

Yet, even among individuals employed full time, median weekly earnings for contingent workers ($415) were only 77 percent of the median for noncontingent workers ($542). A similar pattern was found among part-time workers. Median weekly earnings for part-time contingent workers were $114, or only about 71 percent of what noncontingent workers earned ($160). The contingent-to-noncontingent earnings ratios among both full- and part-time workers were roughly similar for all the major demographic groups—men, women, whites, blacks, and Hispanics. (See table 9, p. 15.)

Interestingly, between 1997 and 1999, median weekly earnings for both full- and part-time contingent workers were little changed, while earnings for full- and part-time noncontingent workers rose by 6.3 percent and 9.6 percent, respectively. The stagnation in earnings growth for contingent workers between the two surveys could be due to shifts in the demographic composition of contingent workers between the two survey dates. For instance, compared with 1997, somewhat larger proportions of contingent workers in 1999 either were high school dropouts or under the age of 25, and workers in these groups, in general, tend to be on the lower end of the earnings spectrum.

As in the 1995 and 1997 surveys, contingent workers were found in both low- and high-skilled occupations, and, as a result, there is a large degree of variation in their earnings by occupation. Among occupations that had relatively high rates of contingency, full-time workers in professional specialty occupations had the highest weekly earnings ($620), followed by administrative support ($343), and farming, forestry, and fishing ($248). (See table 10, p. 17.)

Health insurance. As in prior surveys, contingent workers in 1999 were much less likely than noncontingent workers to have employer-provided health insurance; slightly more than one-fifth had health insurance from their employer, compared with more than three-fifths of noncontingent workers.[20] (See table 11, p. 18.) As was the case with earnings, the low coverage rates among contingent workers can be explained, in part, by the composition of the contingent workforce—its age, work schedules, employee tenure, and occupational and industry concentrations.

Although most contingent workers did not receive health insurance from their employers, a substantial proportion—nearly two-thirds—had health insurance from some source, including coverage from another family member or by purchasing it on their own. Although the overall health insurance coverage rate for contingent workers was lower than that for noncontingent workers, the absolute number of non-

Table 13. Contingent and noncontingent wage and salary workers with pension coverage by selected characteristics, February 1999

[In percent]

Characteristic	Contingent workers (estimate 3)[1]			Noncontingent workers[2]		
	Total (in thousands)	Percent with pension coverage	Eligible for employer-provided pension	Total (in thousands)	Percent with pension coverage	Eligible for employer-provided pension
Age and sex						
Total, 16 years and over	5,259	14.6	23.0	111,801	51.4	59.0
16 to 19 years	726	.6	8.3	5,852	4.3	14.1
20 to 24 years	1,062	4.7	14.3	10,987	22.9	37.8
25 years and older	3,472	20.7	28.8	94,961	57.6	64.2
25 to 34 years	1,240	14.9	25.1	27,391	49.7	59.6
35 to 44 years	978	20.3	26.9	31,212	59.9	66.2
45 to 54 years	697	24.2	31.1	23,646	65.0	69.5
55 to 64 years	341	36.7	43.7	10,260	60.6	64.9
65 years and older	215	18.6	27.4	2,452	31.8	37.3
Men	2,569	15.6	24.4	58,057	53.8	60.6
Women	2,691	13.6	21.7	53,744	48.8	57.3
Race and Hispanic origin						
White	4,201	15.3	23.8	93,646	52.0	59.3
Black	651	13.1	21.8	13,248	49.7	59.2
Hispanic origin	704	8.9	16.3	11,796	34.0	41.0
Full- and part-time status						
Full-time workers	2,828	21.1	31.6	92,480	58.3	66.1
Part-time workers	2,414	6.8	12.9	19,079	17.6	24.7
Educational attainment[3]						
Less than a high school diploma	538	4.8	10.4	10,752	25.6	33.3
High school graduates, no college	1,108	12.3	20.9	34,631	47.9	56.1
Some college, no degree	707	17.3	26.0	20,104	54.4	63.0
Associate degree	267	20.2	27.0	9,367	59.6	67.4
College graduates	1,449	28.4	38.7	26,905	70.7	76.5
Advanced degree	574	29.8	40.4	9,444	76.4	80.5

[1] Contingent workers are defined as individuals who do not perceive themselves as having an explicit or implicit contract with their employers for ongoing employment. Estimate 3 above is calculated using the broadest definition of contingent work. For the specific criteria used for each definition, see the appendix, p. 25.

[2] Noncontingent workers are those who do not meet the criteria for any of the three definitions of contingent work.

[3] Excludes workers aged 16 to 24 years enrolled in school.

NOTE: Detail for the above race and Hispanic-origin groups will not sum to totals because data for the "other races" group are not presented. Hispanics are included in both the white and black population groups. Detail for other characteristics may not sum to totals due to rounding. Data exclude the incorporated self-employed and indepentdent contractors.

contingent workers *lacking* health insurance (19.0 million) greatly exceeded the number of uninsured contingent workers—1.9 million.

Among contingent workers, health insurance coverage rates were highest—and nearly equal to their noncontingent counterparts—for teenagers and those aged 65 years and older. Even though these two groups were among the least likely to have coverage through their employer, teenagers often are covered under their parents' health insurance plans, and individuals in the older age group have almost universal coverage under medicare. Among workers in the central-age group (aged 25 to 54 years), however, there was a substantial disparity in coverage rates between contingent and noncontingent workers: about three-fifths of contingent workers had coverage, in contrast to more than four-fifths of those with noncontingent jobs.

As was the case in 1995 and 1997, women with contingent jobs were less likely than men to receive health insurance from their employers, although a higher proportion of women had coverage from some source. The most common source

of health insurance coverage for female contingent workers was another family member; more than one-third had coverage from another member of their family, mostly through their spouses.

Of workers in contingent arrangements, whites had much higher health insurance coverage rates than either blacks or Hispanics. Two-thirds of whites had health insurance, compared with half of blacks, and nearly two-fifths of Hispanics. Whites also were more likely than blacks or Hispanics to receive coverage from their employers.

More-educated workers were more likely than their less-educated counterparts to have health insurance. This relation holds for receipt of, and eligibility for, employer-provided coverage, and applies to both contingent and noncontingent workers. Still, at each level of educational attainment,

Table 14. Contingent and noncontingent wage and salary workers with pension coverage by occupation and industry, February 1999

[In percent]

Occupation and industry	Contingent workers (estimate 3)[1]			Noncontingent workers[2]		
	Total in thousands	Percent with pension coverage	Eligible for employer-provided pension	Total in thousands	Percent with pension coverage	Eligible for employer-provided pension
Occupation						
Managerial and professional specialty	1,689	27.5	36.3	32,874	68.5	74.4
Executive, administrative, and managerial	343	36.2	42.9	15,788	66.9	72.9
Professional specialty	1,345	25.3	34.6	17,086	70.0	75.7
Technical, sales, and administrative support	1,556	10.4	20.0	33,794	49.4	58.9
Technicians and related support	170	16.5	27.1	3,892	62.1	70.9
Sales occupations	317	6.0	15.1	12,795	38.6	48.7
Administrative support, including clerical	1,069	10.8	20.3	17,107	54.6	63.9
Service occupations	715	2.8	9.7	15,678	29.0	36.3
Private household	102	[3]	[3]	489	.8	1.8
Other services	613	3.3	11.3	15,189	29.9	37.4
Precision production, craft, and repair	432	15.3	21.3	12,030	52.2	58.1
Operators, fabricators, and laborers	676	8.3	17.8	16,044	44.5	53.5
Farming, forestry, and fishing	193	.5	4.1	1,381	18.7	24.3
Industry						
Agriculture	159	.0	4.4	1,310	17.0	19.8
Mining	14	[4]	[4]	503	62.4	69.6
Construction	382	19.4	23.3	5,669	35.1	40.2
Manufacturing	441	20.0	28.6	19,275	64.4	72.3
Durable goods	284	23.6	31.0	11,849	66.3	73.8
Nondurable goods	150	14.0	25.3	7,369	61.6	70.1
Transportation and public utilities	175	25.7	41.1	8,628	65.2	71.0
Wholesale trade	121	6.6	28.1	4,442	51.8	60.9
Retail trade	569	3.7	11.2	19,406	25.2	36.1
Finance, insurance, and real estate	150	22.7	26.7	7,559	59.5	69.0
Services	3,062	14.0	22.6	39,078	51.2	58.4
Private household	109	[3]	[3]	528	.8	1.7
Other services	2,953	14.5	23.4	38,551	51.9	59.1
Professional and related services	2,006	18.1	26.4	27,753	59.4	66.3
Public administration	187	31.6	41.7	5,930	87.1	89.4

[1] Contingent workers are defined as individuals who do not perceive themselves as having an explicit or implicit contract with their employers for ongoing employment. Estimate 3 is calculated using the broadest definition of contingent work. See the appendix, p. 25.

[2] Noncontingent workers are those who do not meet the criteria for any of the three definitions of contingent work.

[3] Less than 0.05 percent.

[4] Data not shown where base employment is less than 75,000.

NOTE: Data exclude the incorporated self-employed and independent contractors.

contingent workers were less likely than noncontingent workers to have health insurance from any source.

With the exception of private household workers, contingent workers were less likely than noncontingent workers to have health insurance coverage from any source in every occupational category; they also were much less likely to have, or be eligible for, employer-provided health insurance coverage. However, eligibility and employer-provided coverage rates vary considerably by occupation. For instance, managers and professionals in both contingent and noncontingent employment arrangements were more likely to have, or be eligible for, employer-provided health insurance than their counterparts in other occupations. At the other end of the spectrum, workers in service and farming occupations in both contingent and noncontingent jobs had the lowest employer-provided coverage and eligibility rates. (See table 12, p. 19.)

In terms of industry, there was a large degree of heterogeneity among the various industries in employer-provided coverage and eligibility rates. Among both contingent and noncontingent workers, individuals employed in public administration and durable goods manufacturing tended to have higher employer-provided coverage and eligibility rates than their counterparts in other industries. Moreover, rates for contingent workers in public administration and durable goods manufacturing exceeded the rates for noncontingent workers employed in private household services and agriculture.

As mentioned earlier, the proportion of contingent workers in the construction industry who were union members was higher than that of their noncontingent counterparts. In addition to possibly helping contingent workers transition between jobs through the use of hiring halls, unions in the construction industry also appear to be a source of health insurance coverage for many of these workers. Indeed, in construction, the proportion of contingent workers who received coverage through their union (11 percent) was more than twice that of noncontingent workers (4 percent).

Pensions. As in prior surveys, contingent workers were much less likely than those with noncontingent arrangements to participate in employer-sponsored pension plans.[21] In 1999, only 15 percent of contingent workers participated in such plans, in contrast to a bit more than half of noncontingent workers. (See table 13, p. 21.) Furthermore, the proportion of contingent workers eligible to participate in their employers' pension plan—approximately one-fourth—was much lower than that for noncontingent workers (nearly three-fifths). Although the coverage rate for contingent workers is much lower than the rate for noncontingent workers, the number of noncontingent workers who lack pensions (54.3 million) greatly exceeded the number of contingent workers without pensions—4.5 million.[22]

Contingent workers aged 16 to 24, who constitute one-third of all contingent workers, were much less likely than those aged 25 and older to participate in pension plans or to work in industries that are more likely to offer pensions to their employees. Among every major demographic group, individuals in contingent employment arrangements were less likely than their noncontingent counterparts to have, or be eligible for, employer-provided pensions. However, even though there was a great deal of variation among the different industries in coverage and eligibility rates, contingent workers were less likely than noncontingent workers to have pensions in nearly every occupation and industry group. (See table 14.)

DESPITE THE ECONOMIC EXPANSION that continued into the late-1990s, both the number of contingent workers and the proportion of total employment composed of such workers changed little between 1997 and 1999. Characteristics of workers with contingent jobs also were very similar to those identified in the prior surveys. The probability of holding a contingent job continued to be greater for women, workers under the age of 25, students, noncitizens, and those employed part time. As in earlier surveys, contingent work was more prevalent in agriculture, construction, and services. Contingent workers also continued to be found in both high- and low-skilled occupations. Individuals employed in professional specialty, administrative support, and farming occupations were about equally likely to hold a contingent job.

A majority of contingent workers would have preferred a permanent job, although many were happy with their current arrangement. Students, in particular, were most likely to be satisfied with temporary jobs, probably because many wanted the flexibility afforded by contingent work. Compared with prior surveys, individuals with contingent jobs were more likely to have cited personal, as opposed to economic, reasons for being employed in a contingent arrangement, suggesting that contingent work was more of a voluntary choice in 1999. Nevertheless, individuals employed in contingent jobs continued to be much more likely than noncontingent workers to have actively searched for a new job in the 3 months prior to the survey date, indicating that many contingent workers were not satisfied with their current employment arrangement.

Data from the most recent survey continued to show that contingent workers earned less and were less likely than those with noncontingent jobs to have been included in employer-provided health or pension plans. However, when comparing the wages and employee benefits of workers in contingent and noncontingent arrangements, there was a large degree of variation with regard to age, educational attainment, occupation, and industry. □

Notes

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[1] Contingency rates are calculated by dividing the number of contingent workers in a specified worker group by total employment for the same worker group.

[2] Data on employment and unemployment are derived from the Current Population Survey (CPS), a nationwide sample survey of about 50,000 households, conducted monthly by the Bureau of the Census for the Bureau of Labor Statistics. The CPS collects information about the demographic characteristics and employment status of the noninstitutional civilian population aged 16 years and older.

[3] Special supplements to the CPS are routinely added to obtain information on a wide range of topics including, for example, income and work experience, displaced workers, employee tenure and occupational mobility, employment status of veterans, work schedules, home-based work, and school enrollment.

[4] For more information on the concepts and definitions of contingent work, see Anne E. Polivka, "Contingent and alternative work arrangements, defined," *Monthly Labor Review,* October 1996, pp. 3–9.

[5] Testimony of Audrey Freedman before the Employment and Housing Subcommittee of the Committee on Government Operations, U.S. House of Representatives, May 19, 1988.

[6] A recent study, using data from the Contingent and Alternative Work Arrangements Survey, divided total employment into eight mutually exclusive groups: agency temporaries, on-call workers, contract company workers, direct-hire temporary workers, independent contractors, regular self-employed, regular part-time workers, and regular full-time workers. Excluding regular full-time workers, the seven "nonstandard" arrangements totaled 32.5 percent of total workers in 1995 and 31.3 percent in 1997. (Although the study focuses on data from the 1995 and 1997 surveys, 29.9 percent of the workforce was in a nonstandard employment arrangement in 1999.) The authors found that the characteristics of workers in these different arrangements varied considerably, as do the types of jobs they perform. In addition, measures of job quality such as earnings, health insurance coverage, and job satisfaction varied greatly. The authors conclude that, because of this variation, combining all of these workers into a single category is arbitrary and misleading, and that all jobs in nonstandard arrangements should not be automatically viewed as "bad jobs." See Anne E. Polivka, Sharon R. Cohany, and Steven Hipple, "Definition, Composition, and Economic Consequences of the Nonstandard Work Force," in Françoise Carré, Marianne A. Ferber, Lonnie Golden, and Stephen A. Herzenberg, eds., *Nonstandard Work: The Nature and Challenges of Changing Employment Arrangements* (Industrial Relations Research Association, 2000), pp. 41–94.

[7] See Anne E. Polivka and Thomas Nardone, "On the definition of 'contingent work'," *Monthly Labor Review,* December 1989, pp. 9–16.

[8] The large proportion of contingent workers reporting that "they were working only until a specific project was completed" may be due, in part, to an "order" effect. In the survey, a series of questions collects information on the reason a job is temporary. Once a respondent gives a "yes" answer to one of the questions in the series, he or she is skipped to questions on expected duration of employment. Because the question, "Are you working only until a specific project is completed?" is the first one in the series, respondents may have a tendency to respond affirmatively to this question, and thus, are skipped over the other questions pertaining to "reasons." In addition, because February is a month in which seasonal work is relatively uncommon, the small proportion reporting that their job was temporary because it was a "seasonal job" might be due to the timing of the survey.

[9] In the survey, conducted in 1996 by the Upjohn Institute for Employment Research, employers could provide more than one reason for employing temporary workers. The specific percentages by reason were: to fill seasonal needs (54.8 percent); to help with special projects (37.6 percent); to help during unexpected increases in business (31.0 percent); to fill in for an absent employee (30.0 percent); to fill in until a regular worker is hired (20.5 percent); to employ workers with special expertise (15.7 percent); to screen candidates for "regular" jobs (9.0 percent); to reduce the cost of wages and benefits (8.0 percent); and to provide assistance during company restructuring or merger (6.2 percent). In the study, data on reasons for using flexible employment arrangements also were reported for agency temporaries, part-time workers, and on-call workers. See Susan N. Houseman, "Why Employers Use Flexible Staffing Arrangements: Evidence from an Establishment Survey," *Industrial and Labor Relations Review,* forthcoming.

[10] Beginning in 1994, questions on nativity and U.S. citizenship status were added to the basic monthly CPS. Respondents are asked to name their country of birth. Those who said that they were born in the United States, Puerto Rico, or another U.S. territory, or that they were born abroad of an American parent, or parents, are classified as U.S. natives. Individuals who provided another response were classified as foreign-born.

[11] Although contingent workers were found in all industries, they were disproportionately concentrated in construction and services. In 1999, more than half of all contingent workers were employed in services, and an additional 8 percent were employed in construction. These proportions are similar to those found in prior surveys. As the contingency rates show, however, the vast majority (93 percent in services and 95 percent in construction) of workers in both industries were not holding contingent jobs.

[12] For more information on the use of contingent work in postsecondary education, see Kathleen Barker, "Toiling for Piece-Rates and Accumulating Deficits: Contingent Work in Higher Education," in Kathleen Barker and Kathleen Christensen, eds., *Contingent Work: American Employment Relations in Transition,* pp 195–220, (Ithaca, NY, Cornell University Press, 1998).

[13] For instance, in February 1999, more than half of the 1.2 million temporary help agency workers were contingent under estimate 3. An overview of workers in alternative employment arrangements is provided by Marisa DiNatale in "Characteristics of and preference for alternative work arrangements, 1999," this issue, pp. 28–49.

[14] See Kathleen Christensen, "Countervailing Human Resource Trends in Family-Sensitive Firms," in Barker and Christensen, eds., *Contingent Work,* pp. 103-25.

[15] The proportion of workers covered by a union contract is a broader measure of unionization and includes individuals who report no union affiliation, but whose jobs are covered by a union or employee association contract.

[16] The four census regions of the United States are Northeast, South, Midwest, and West. Within the Northeast, the New England division includes Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont; and the Middle Atlantic division includes New Jersey, New York, and Pennsylvania. Within the South, the South Atlantic division includes Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, and West Virginia; the East South Central division includes Alabama, Kentucky, Mississippi, and Tennessee; and the West South Central division includes Arkansas, Louisiana, Oklahoma, and Texas. Within the Midwest, the East North Central division includes Illinois, Indiana, Michigan, Ohio, and Wisconsin; the West North Central division

includes Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, and South Dakota. Within the West, the Mountain division includes Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming; the Pacific division includes Alaska, California, Hawaii, Oregon, and Washington.

[17] See Susan N. Houseman and Anne E. Polivka, "The Implications of Flexible Staffing Arrangements for Job Security," in David Neumark, ed., *On the Job: Is Long-Term Employment a Thing of the Past?* (New York, Russell Sage Foundation, forthcoming).

[18] In the survey, information concerning preferences for a contingent or noncontingent employment arrangement was collected separately from the reasons for holding a contingent job. Therefore, a contingent worker could prefer a noncontingent job but still give a personal reason for being in a contingent work arrangement.

[19] For further discussion of job search among the employed, see Joseph R. Meisenheimer and Randy Ilg, "Looking for a 'better' job: job-search activity of the employed, *Monthly Labor Review,* September 2000, pp. 3–14; and, also, Peter Kuhn and Mikal Skuterud, "Job search methods: Internet versus traditional," *Monthly Labor Review,* October 2000, pp. 3–11.

[20] In the survey, respondents were asked, "Do you have health insurance from any source?" If the response was "yes," they were then asked if their insurance was provided by their employer. Those who did not receive health insurance from their employer were asked for the source of their health insurance; in addition, they were asked if they were eligible for employer-provided health insurance. Respondents who said "no" to the initial question were asked, "Does (employer's name) offer a health insurance plan to any of its employees?" If the answer to that question was "yes," the respondent was then asked, "Are you included in this plan?" If the response was "no," the respondent was asked, "Why not?" The answer to this question was used to determine whether or not the respondent was eligible to receive insurance from his or her employer. For further discussion on the prevalence of health insurance (and pension) coverage among contingent workers, see *Contingent Workers: Incomes and Benefits Lag Behind Those of the Rest of the Workforce* (Washington, D.C., U.S. General Accounting Office, June 2000).

[21] In the survey, respondents were asked, "Does (employer's name) offer a pension or retirement plan to any of its employees?" If they answered "yes," they were then asked, "Are you included in this plan?" If the response was "no," respondents were then asked, "Why not?" The response to this last question was used to determine eligibility for those not in the plan.

[22] In 1999, the Advisory Council on Employee Welfare and Pension Benefit Plans of the U.S. Department of Labor's Pension and Welfare Benefits Administration studied the issue of pension coverage and contingent work. For more information, see *Report of the Working Group on the Benefit Implications of the Growth of a Contingent Workforce,* Advisory Council on Employee Welfare and Pension Benefit Plans, U.S. Department of Labor, November 1999, on the Internet at **http://www.dol.gov/dol/pwba/public/adcoun/contrpt.htm** (visited Feb. 21, 2001).

Appendix: Concepts and definitions

The data presented in this article were collected through a supplement to the February 1999 Current Population Survey (CPS), a monthly survey of about 50,000 households that provides the basic data on employment and unemployment for the Nation. This supplement obtained information from workers on whether they held contingent jobs, basically, jobs that were expected to last only a limited period of time. In addition, information was collected on several alternative employment arrangements, namely, working as independent contractors or being "on call," as well as working through temporary help agencies and contract firms. Characteristics of workers in alternative employment arrangements are discussed on pp. 28–49.

All employed persons, except unpaid family workers, were included in the supplement. For persons holding more than one job, the questions referred to the characteristics of their main job—the job in which they worked the most hours. A similar survey was conducted in February 1995 and February 1997. (The survey was conducted again in February 2001, and the results are scheduled to be released later this year.)

The contingent workforce

Contingent workers were defined as those who do not have an explicit or implicit contract for long-term employment. Several pieces of information were collected in the supplement from which the existence of a contingent employment arrangement could be discerned. These include: whether the job was temporary or not expected to continue, how long the worker expected to be able to hold the job, and how long the worker had held the job. For workers who had a job with an intermediary, such as a temporary help agency or contract company, information was collected about their employment at the place they were assigned to work by the intermediary, as well as their employment with the intermediary itself.

The key factor used to determine if a worker's job fit the conceptual definition of contingent was whether the job was temporary or not expected to continue. The first questions of the supplement were:

1. Some people are in temporary jobs that last only for a limited time or until the completion of a project. Is your job temporary?
2. Provided the economy does not change and your job performance is adequate, can you continue to work for your current employer as long as you wish?

Respondents who answered "yes" to the first question, or "no" to the second, were then asked a series of questions to distinguish persons who were in temporary jobs from

those who, for personal reasons, were temporarily holding jobs that offered the opportunity of ongoing employment. For example, students holding part-time jobs in fast-food restaurants while in school might view those jobs as temporary if they intend to leave them at the end of the school year. The jobs themselves, however, would be filled by other workers once the students leave.

Jobs were defined as being short term or temporary if the person was working only until the completion of a specific project, temporarily replacing another worker, being hired for a fixed time period, filling a seasonal job that is available only during certain times of the year, or if other business conditions dictated that the job was short term.

Workers also were asked how long they expected to stay in their current job and how long they had been with their current employer. The rationale for asking how long an individual expects to remain in his or her current job was that being able to hold a job for a year or more could be taken as evidence of at least an implicit contract for ongoing employment. In other words, the employer's need for the worker's services is not likely to evaporate tomorrow. By the same token, the information on how long a worker has been with the employer shows whether a job has been ongoing. Having remained with an employer for more than a year may be taken as evidence that, at least in the past, there was an explicit or implicit contract for continuing employment.

To assess the impact of altering some of the defining factors on the estimated size of the contingent workforce, three measures of contingent employment were developed, as follows:

Estimate 1. The narrowest definition, estimate 1, defines contingent workers as wage and salary workers who indicated that they expected to work in their current job for 1 year or less and who had worked for their current employer for 1 year or less. Self-employed workers, both incorporated and unincorporated, and independent contractors are excluded from the count of contingent workers under estimate 1; the rationale was that people who work for themselves, by definition, have ongoing employment arrangements, although they may face financial risks. Individuals who worked for temporary help agencies or contract companies are considered contingent under estimate 1 only if they expect their employment arrangement with the temporary help or contract company to last for 1 year or less and they had worked for that company for 1 year or less.

Estimate 2. This measure expands the definitions of contingent workers by including the self-employed (incorporated and the unincorporated) and independent contractors who expect to be, and had been, in such employment arrangements for 1 year or less. (The questions asked of the self-employed are different from those asked of wage and salary workers.) In addition, temporary help and contract company workers are classified as contingent under estimate 2 if they had worked and expected to work for the customers to whom they were assigned for 1 year or less. For example, a "temp" secretary who is sent to a different customer each week but has worked for the same temporary help firm for more than 1 year and expects to be able to continue with that firm indefinitely is contingent under estimate 2, but not under estimate 1. In contrast, a "temp" who is assigned to a single client for more than a year is not counted as contingent under either estimate.

Estimate 3. The third definition expands the concept of contingency by removing the 1-year requirement both on expected duration of the job and current tenure for wage and salary workers. Thus, the estimate effectively includes all the wage and salary workers who do not expect their employment to last, except for those who, for personal reasons, expect to leave jobs that they would otherwise be able to keep. Thus, a worker who had held a job for 5 years could be considered contingent if he or she now viewed the job as temporary. These conditions on expected and current tenure are not relaxed for the self-employed and independent contractors, because they were asked a different set of questions from wage and salary workers.

Alternative employment arrangements

To provide estimates of the number of workers in alternative employment arrangements, the February 1999 CPS supplement included questions about whether individuals were paid by a temporary help agency or contract company, or whether they were on-call workers or independent contractors. Definitions of each category, as well as the main questions used to identify workers in each category, follow.

Independent contractors. Workers who were identified as independent contractors, consultants, and freelance workers in the supplement, regardless of whether they were identified as wage and salary workers or self-employed in the responses to basic CPS labor force status questions. Workers identified as self-employed (incorporated and unincorporated) in the basic CPS were asked, "Are you self-employed as an independent contractor, independent consultant, or something else (such as a shop or restaurant owner)?" in order to distinguish those who consider themselves to be independent contractors, consultants, or freelance workers from those who were business operators such as shop owners or restaurateurs. Those identified as wage and salary workers in

the basic CPS were asked, "Last week, were you working as an independent contractor, an independent consultant, or a freelance worker? That is, someone who obtains customers on their own to provide a product or service." About 88 percent of independent contractors were identified as self-employed in the main questionnaire, while 12 percent were identified as wage and salary workers. Conversely, about half of the self-employed were identified as independent contractors.

On-call workers. These are persons who are called into work only when they are needed. This category includes workers who answered affirmatively to the question, "Some people are in a pool of workers who are ONLY called to work as needed, although they can be scheduled to work for several days or weeks in a row, for example, substitute teachers and construction workers supplied by a union hiring hall. These people are sometimes referred to as ON-CALL workers. Were you an ON-CALL worker last week?" Persons with regularly scheduled work which might include periods of being "on call" to perform work at unusual hours, such as medical residents, were not included in this category.

Temporary help agency workers. These are workers who were paid by a temporary help agency. To the extent that permanent staff of temporary help agencies indicate that they are paid by their agencies, the estimate of the number of workers whose employment was mediated by temporary help agencies is overstated. This category includes workers who said their job was temporary and answered affirmatively to the question, "Are you paid by a temporary help agency?" Also included are workers who said their job was not temporary and answered affirmatively to the question, "Even though you told me your job was not temporary, are you paid by a temporary help agency?"

Workers provided by contract firms. These are individuals identified as working for a contract company, and who usually work for only one customer and usually work at the customer's worksite. The last two requirements were imposed to focus on workers whose employment appeared to be very closely tied to the firm for which they are performing the work, rather than include all workers employed by firms that provide services. This category included workers who answered affirmatively to the question, "Some companies provide employees or their services to others under contract. A few examples of services that can be contracted out include security, landscaping, or computer programming. Did you work for a company that contracts out you or your services last week?" These workers also had to respond negatively to the question, "Are you usually assigned to more than one customer?" In addition, these workers had to respond affirmatively to the question, "Do you usually work at the customer's worksite?"

Characteristics of and preference for alternative work arrangements, 1999

Characteristics of individuals employed in alternative work arrangements were similar to those of the 1995 and 1997 surveys; however, the proportion of these workers who prefer these arrangements has increased since the mid-1990s

Marisa DiNatale

The proportion of the workforce consisting of independent contractors, on-call workers, temps, and contractors is small, and the shares of these workers are not growing, according to the Bureau of Labor Statistics 1999 Contingent and Alternative Work Arrangements Survey.[1] In 1999, workers in all four alternative arrangements combined accounted for 9.3 percent of total employment, compared with 9.9 percent in 1997 and 9.8 percent in 1995. Although independent contractors remained the largest group numerically, their share of total employment declined slightly between 1997 and 1999. The proportions of total employment comprised of the other three arrangements changed little over the period. (See exhibit 1 and table 1.) Alternative work arrangements are defined in exhibit 1.

Perhaps the most significant finding from the 1999 data is that more workers in alternative employment arrangements are *choosing* these arrangements. Data on preference for the arrangements show that more workers actually prefer their alternative work arrangements to traditional jobs. This was true overall for on-call workers, and for temps and independent contractors with 3 or fewer years of tenure. Furthermore, among the four groups, enormous diversity exists in terms of demographics, earnings, benefit coverage, and preference for the arrangements.

This article uses the data from the 1999 Contingent and Alternative Work Arrangements supplement to the February Current Population Survey (CPS) to address several issues relating to job quality and how or if it has changed since the prior surveys. In 1995 and 1997, the arrangements differed widely from each other in their demographics, preferences, and pay. Although it may be tempting to lump these arrangements together, a clear distinction can be drawn among them in terms of job quality and satisfaction. In particular, independent contractors and workers provided by contract companies have very different experiences from both on-call and temporary help agency workers.

Since the mid-1980s, some employment analysts have debated the issue of the size and growth of the workforce in "nonstandard" or alternative employment arrangements. Is a growing trend in nontraditional employment arrangements an indication that more American workers are being forced into "bad" jobs?[2] Some analysts stereotype workers who are in alternative arrangements as being in substandard jobs, often citing low earnings, low rates of health insurance and pension coverage, job instability, and dissatisfaction with work.[3] These concerns have ushered in a host of articles and debates on the topic. Proponents of the arrangements argue that these jobs provide much needed flexibility in a tight labor market for both employers and employees. They claim that these arrangements enable employers to more easily modify their hiring levels and cost effectiveness when demand for their goods or services fluctuates.[4] On the

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Exhibit 1. Workers in alternative arrangements as a percent of total employment, February 1995, 1997, and 1999

Alternative arrangement	February 1995	February 1997	February 1999
Independent contractors Workers identified as independent contractors, independent consultants, or freelance workers, whether they were self-employed or wage and salary workers	6.7	6.7	6.3
On-call workers Workers called to work only as needed, although they can be scheduled to work for several days or weeks in a row	1.7	1.6	1.5
Temporary help agency workers Workers paid by a temporary help agency, whether or not their job actually was temporary	1.0	1.0	.9
Contract company workers Workers employed by a company that provides them or their services to others under contract and who are usually assigned to only one customer and usually work at the customer's worksite	.5	.6	.6

supply side, these alternative arrangements allow individuals to balance work with nonlabor market activities.[5]

In response to the emerging interest about workers in alternative work arrangements, the Bureau of Labor Statistics conducted the first supplement to the Current Population Survey on this topic (and on contingent workers) in February 1995; subsequent surveys were conducted in February 1997 and February 1999.[6] This article focuses on workers in alternative arrangements; an accompanying article beginning on page 3 profiles contingent workers from the same CPS supplement and further defines alternative employment arrangements.[7]

Independent contractors

More than 8 million persons worked as independent contractors, freelancers, or independent consultants in 1999. (BLS refers to these three groups of workers collectively as independent contractors.) These workers accounted for more than 6 percent of all employed persons, slightly below their shares of total employment in 1995 and 1997. (See exhibit 1.)

Demographic characteristics. The demographic characteristics of independent contractors have not changed significantly across the three surveys. (See table 2.) Compared with traditional workers, independent contractors were more likely to be men, older, and white. (See table 3.) Independent contractors were also somewhat more highly educated than traditional workers. A little more than one-third of independent contractors aged 25–64 were college graduates, and about 12 percent held an advanced degree. These proportions were slightly lower for traditional workers—31 percent were college graduates, and 10 percent held advanced degrees. (See table 3.)

Part-time status and hours. Both male and female independent contractors older than 20 years were twice as likely as their counterparts in traditional arrangements to work part time. (See table 4.) Despite the relatively high incidence of part-time work among independent contractors, full-timers in this arrangement worked longer hours than did traditional full-time workers. The average workweek for full-time independent contractors was 46.4 hours, compared with 42.5 hours for traditional workers. In 1999, 15 percent of independent contractors worked more than 60 hours per week, compared with only 6 percent of traditional workers.

For women, the propensity to work part time may reflect a desire to balance work with child care. Female independent contractors were somewhat less likely to have children overall than women with traditional work arrangements; however, they were more likely to have pre-school children than women in traditional arrangements. Along the same lines, adult women were more likely than men in the arrangement to be working

part time by choice (35 percent and 11 percent, respectively). (See table 4.)

Occupation and industry. The occupational and industrial distribution of independent contractors did not change from the prior surveys. In 1999, independent contractors were more likely than traditional workers to hold managerial, professional specialty, sales, and production jobs, but were less likely to work in technical, administrative support, and service occupations. In terms of industry, independent contractors were more likely than traditional workers to be employed in the agriculture, construction, finance, and services industries. (See table 5.)

Paid employees. Nearly one-quarter of independent contractors had paid employees in 1999. Of this group, about two-thirds had fewer than six employees. This proportion of independent contractors with paid employees fell slightly from the previous surveys. Depending on whether the business was

Table 1. Incidence of alternative and traditional work arrangements by selected characteristics, February 1999

[Percent distribution]

Characteristic	Total employed (thousands)	Workers with alternative arrangements				Workers with traditional arrangements[1]
		Independent contractors	On-call workers	Temporary help agency workers	Contract company workers	
Age and sex						
Total, 16 years and older[2]	131,494	6.3	1.5	.9	.6	90.6
16 to 19	6,662	1.1	2.7	1.0	.6	94.0
20 to 24	12,462	2.0	1.6	2.0	.7	93.4
25 to 34	30,968	4.8	1.5	1.1	.8	91.7
35 to 44	36,415	6.8	1.4	.6	.6	90.5
45 to 54	28,144	7.7	1.1	.6	.5	90.0
55 to 64	13,062	9.3	1.6	.6	.4	88.1
65 and older	3,781	14.8	4.4	.9	.4	79.3
Men, 16 years and older	70,040	7.8	1.4	.7	.8	89.2
16 to 19	3,339	1.4	2.8	1.1	.9	93.3
20 to 24	6,489	2.4	1.8	1.8	1.1	92.5
25 to 34	16,617	5.4	1.2	.9	1.0	91.3
35 to 44	19,603	8.7	1.2	.4	.8	88.9
45 to 54	14,684	9.6	1.1	.5	.5	88.3
55 to 64	7,186	11.3	1.4	.4	.5	86.3
65 and older	2,122	20.1	4.0	.8	.6	74.2
Women, 16 years and older	61,454	4.5	1.7	1.1	.4	92.2
16 to 19	3,323	.9	2.6	.9	.2	94.8
20 to 24	5,973	1.6	1.4	2.2	.3	94.3
25 to 34	14,351	4.0	1.9	1.4	.5	92.2
35 to 44	16,812	4.7	1.6	.9	.4	92.4
45 to 54	13,459	5.7	1.1	.8	.4	91.9
55 to 64	5,876	6.8	1.8	.9	.2	90.2
65 and older	1,659	8.0	5.0	.9	.1	86.0
Race and Hispanic origin[3]						
White	110,887	6.7	1.5	.8	.5	90.2
Black	14,620	3.3	1.8	1.7	.7	92.6
Hispanic origin	13,356	3.8	1.8	1.2	.3	92.5
Full- or part-time status						
Full-time workers	107,630	5.8	.9	.9	.6	91.8
Part-time workers	23,864	8.6	4.3	1.1	.4	85.2
Educational attainment (aged 25 to 64)						
Less than a high school diploma	10,027	5.5	2.0	1.2	.4	90.6
High school graduates, no college	33,867	6.4	1.3	.8	.4	90.9
Less than a bachelor's degree	20,842	7.1	1.4	1.0	.6	89.9
College graduates	33,930	7.4	1.2	.5	.7	90.1

[1] Workers with traditional arrangements are those who do not fall into any of the "alternative arrangements" categories.

[2] Detail may not sum to total employed because a small number of workers are both "on call" and "provided by contract firms," and total employed includes day laborers, an alternative arrangement not shown separately.

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

incorporated or unincorporated, the share of workers with paid employees differed widely. Among independent contractors, more than 50 percent with incorporated businesses had paid employees, compared with only 14 percent of unincorporated business owners.

Contract company workers

In 1999, contract company workers (769,000) were the smallest of the four alternative work arrangement groups. These workers are employees of one company but carry out assignments for another company—that is, they work for only one client at the client's place of business. Workers in this arrangement made up about the same proportion of total employment across the three surveys. (See exhibit 1.)

Demographic characteristics. As was the case in prior surveys, contract company workers in 1999 were more likely than traditional workers to be men, aged 20–44, and black. (See table 3.) The proportion of contract company workers aged 25–64 that had a college degree—more than one-third—was the highest of all the work arrangements, including the traditional arrangement, and the share that had an advanced degree (10 percent) was about the same for traditional workers.

Part-time status and hours. In 1999, contract company workers were somewhat less likely than traditional workers to be employed part time. (See table 4.) In prior surveys, they had been as likely as traditional workers to work part time. The average workweek for full-time contract company workers was 44.2 hours in 1999, slightly above the average for traditional workers—42.5 hours.

Occupation and industry. Compared with traditional workers, contract company workers were more likely to hold professional specialty, service, production, and technical jobs, and were less likely to be in managerial, sales, administrative support, and operator, fabricator, and laborer positions. (See table 5.) Nearly 1 in 10 contract company workers were employed as security guards, and a little more than 1 in 10 workers were computer scientists and computer systems analysts. With regard to industry, services, manufacturing companies, transportation and public utilities companies, and the government were most likely to use contract company workers. (See table 5.)

On-call workers

Workers in on-call arrangements numbered 2 million in 1999, or 1.5 percent of total employment. (See exhibit 1.) Both the level and the proportion were similar in the prior two surveys. On-call workers do not have an established schedule for reporting to work, but work, rather, on an as-needed basis; however, they may be scheduled to work for months at a time, as a substitute teacher, for example.

Demographic characteristics. As in the prior survey, on-call workers were similar to workers in traditional arrangements, except that they were slightly more likely to be female and younger than traditional workers. (See tables 2 and 3.) Among women, the proportion of on-call workers who were mothers (61 percent) was slightly higher than their counterparts in traditional arrangements (56 percent). (See table 4.) Slightly more than half (56 percent) of 16- to 24-year-olds in the on-call arrangement were attending school, compared with 44 percent of workers of the same age range in traditional arrangements.

The educational attainment of on-call workers was lower than the education levels of traditional workers. For instance, among 25- to 64-year-olds, 13 percent of on-call workers were high school dropouts, compared with 9 percent of traditional workers. (See table 3.) The proportion of on-call workers who had college degrees (28 percent) was slightly lower than that for traditional workers (31 percent). Compared with women, male on-call workers were more likely to have dropped out of high school. Women in the arrangement were actually more likely to have graduated college than women in traditional work arrangements (35 percent and 30 percent, respectively).

Part-time status and hours. The proportion of on-call workers employed part time (51 percent) was much higher than that for traditional workers (17 percent). (See table 4.) Reflecting this, the average workweek for on-call workers was 28.1 hours, the lowest of all arrangements. Among on-call workers in 1999, adult women were nearly 2½ times more likely than men in the arrangement to work part time (67 percent versus 27 percent, respectively). The number of on-call workers who preferred to be working part time was up slightly from 1997, although there was still a substantial share (27 percent) who would have preferred to work a full-time schedule. This was nearly twice the rate for traditional workers.

Occupation and industry. There were clear distinctions between gender in the occupational distribution of on-call workers. A large proportion of men in the arrangement were operators, fabricators, and laborers, and most women were employed in professional specialty and service occupations. (See table 5.) About 1 in 5 women were teachers, presumably substitutes, and about 1 in 10 women were in health occupations such as registered nurses and therapists. For women, personal- and food-service occupations were also among the most common, and for men the most common occupations were motor vehicle operators, cleaners and helpers, and other construction trades.

On-call workers were most likely to work in services, trade, construction, and transportation industries. They were much

Table 2. Workers in alternative arrangements by selected characteristics, February 1995, 1997, and 1999

Characteristics	1995	1997	1999
Independent contractors			
Age and sex:			
Total 16 years and older	100.0	100.0	100.0
16 to 19	1.5	.8	.9
20 to 24	2.4	2.4	3.1
25 to 34	19.7	18.3	17.9
35 to 44	30.8	31.1	30.2
45 to 54	25.3	26.5	26.4
55 to 64	13.6	13.9	14.7
65 and older	6.7	7.0	6.8
Men, 16 years and older	67.3	66.6	66.2
16 to 19	.9	.3	.6
20 to 24	1.6	1.5	1.9
25 to 34	12.6	11.4	10.9
35 to 44	21.0	20.7	20.7
45 to 54	16.7	17.7	17.0
55 to 64	9.6	9.9	9.9
65 and older	4.9	5.1	5.2
Women, 16 years and older	32.7	33.4	33.8
16 to 19	.6	.5	.4
20 to 24	.8	.9	1.1
25 to 34	7.1	7.0	7.0
35 to 44	9.8	10.4	9.5
45 to 54	8.5	8.8	9.4
55 to 64	4.0	4.0	4.8
65 and older	1.8	1.9	1.6
Race and Hispanic origin:[1]			
White	92.3	90.7	90.6
Black	5.0	5.3	5.8
Hispanic origin	5.2	7.3	6.1
Educational attainment:			
Total, 25 to 64 years	100.0	100.0	100.0
Less than a high school diploma	8.7	8.7	7.5
High school graduate, no college	29.1	30.3	29.7
Some college, no degree	27.9	26.8	28.5
College graduates	34.4	34.1	34.3
Marital status:			
All marital statuses	100.0	100.0	100.0
Married, spouse present	70.7	69.2	68.8
Married, spouse absent	2.8	3.4	2.7
Divorced	10.0	11.5	11.5
Widowed	2.9	2.2	2.0
Never married	13.5	13.7	15.0
Contract company workers			
Age and sex:			
Total 16 years and older	100.0	100.0	100.0
16 to 19	2.5	1.9	4.8
20 to 24	12.7	8.1	11.3
25 to 34	39.0	34.2	30.5
35 to 44	23.3	31.1	28.1
45 to 54	11.8	14.2	17.2
55 to 64	6.7	7.7	6.1
65 and older	4.1	2.8	1.9
Men, 16 years and older	71.5	69.8	70.5
16 to 19	1.4	1.1	3.8
20 to 24	6.4	7.7	9.2
25 to 34	29.8	24.0	21.8
35 to 44	19.0	21.9	20.1
45 to 54	5.7	9.1	9.4
55 to 64	5.2	5.1	4.6
65 and older	4.1	0.9	1.6
Women, 16 years and older	28.5	30.2	29.5
16 to 19	1.1	.8	1.0
20 to 24	6.1	.4	2.0
25 to 34	9.2	10.3	8.8
35 to 44	4.3	9.2	8.0
45 to 54	6.3	5.1	7.8
55 to 64	1.5	2.6	1.6
65 and older	–	1.9	.3
Race and Hispanic origin[1]			
White	83.0	81.5	79.2
Black	11.7	12.9	12.6
Hispanic origin	8.4	6.3	6.0
Educational attainment:			
Total, 25 to 64 years	100.0	100.0	100.0
Less than a high school diploma	9.5	7.2	6.4
High school graduate, no college	29.8	36.8	22.7
Some college, no degree	30.2	23.4	31.9
College graduates	30.6	32.7	38.9
Marital status:			
All marital statuses	100.0	100.0	100.0
Married, spouse present	55.7	58.1	44.1
Married, spouse absent	2.6	3.5	6.5
Divorced	8.3	10.8	10.4
Widowed	2.1	1.4	1.3
Never married	31.3	26.2	37.6
On-call workers			
Age and sex:			
Total 16 years and older	100.0	100.0	100.0
16 to 19	7.9	9.6	8.8
20 to 24	12.6	11.9	9.9
25 to 34	24.6	22.5	23.1
35 to 44	23.7	25.4	24.9
45 to 54	15.7	14.4	14.9
55 to 64	9.2	9.7	10.1
65 and older	6.4	6.5	8.2
Men, 16 years and older	50.1	49.0	48.8
16 to 19	4.1	5.3	4.6
20 to 24	7.4	6.4	5.9
25 to 34	13.0	11.8	10.0
35 to 44	11.8	12.1	11.6
45 to 54	6.8	6.9	7.6
55 to 64	3.7	3.9	5.0
65 and older	3.4	2.6	4.2
Women, 16 years and older	49.9	51.0	51.2
16 to 19	3.8	4.3	4.2
20 to 24	5.1	5.4	4.0
25 to 34	11.6	10.6	13.1
35 to 44	11.9	13.4	13.4
45 to 54	8.9	7.5	7.3
55 to 64	5.5	5.8	5.1
65 and older	3.0	3.9	4.1
Race and Hispanic origin[1]			
White	84.0	89.3	84.2
Black	11.0	7.8	12.7
Hispanic origin	12.5	13.3	11.6
Educational attainment:			
Total, 25 to 64 years	100.0	100.0	100.0
Less than a high school diploma	13.4	13.4	13.4
High school graduate, no college	35.1	28.7	29.6
Some college, no degree	30.7	32.0	29.1
College graduates	20.8	25.9	27.9
Marital status:			
All marital statuses	100.0	100.0	100.0
Married, spouse present	54.8	51.4	52.3
Married, spouse absent	3.8	4.8	3.9
Divorced	9.2	10.2	8.2
Widowed	2.8	3.5	3.2
Never married	29.4	30.2	32.3

[1]See Footnote at end of table.

Table 2. Continued—Workers in alternative arrangements by selected characteristics, February 1995, 1997, and 1999

Characteristics	1995	1997	1999
Temporary help agency workers			
Age and sex:			
Total 16 years and older	100.0	100.0	100.0
16 to 19	5.2	6.1	5.8
20 to 24	19.7	16.5	20.9
25 to 34	34.1	30.3	29.3
35 to 44	21.3	21.5	19.4
45 to 54	12.1	16.2	15.4
55 to 64	5.8	6.7	6.5
65 and older	1.8	2.8	2.8
Men, 16 years and older	47.2	44.7	42.2
16 to 19	3.0	2.9	3.2
20 to 24	11.4	9.6	9.6
25 to 34	16.8	15.1	12.2
35 to 44	7.7	6.9	7.0
45 to 54	4.4	6.2	6.3
55 to 64	2.8	2.2	2.2
65 and older	1.1	1.7	1.6
Women, 16 years and older	52.8	55.3	57.8
16 to 19	2.3	3.2	2.5
20 to 24	8.3	6.9	11.3
25 to 34	17.4	15.1	17.1
35 to 44	13.5	14.6	12.4
45 to 54	7.7	10.0	9.0
55 to 64	2.9	4.4	4.2
65 and older	.8	1.1	1.3
Race and Hispanic origin[1]			
White	72.7	75.1	74.3
Black	21.8	21.3	21.2
Hispanic origin	11.3	12.3	13.6
Educational attainment:			
Total, 25 to 64 years	100.0	100.0	100.0
Less than a high school diploma	14.2	11.2	14.6
High school graduate, no college	33.4	30.7	30.5
Some college, no degree	32.1	36.3	33.7
College graduates	20.3	21.8	21.2
Marital status:			
All marital statuses	100.0	100.0	100.0
Married, spouse present	42.1	40.2	34.1
Married, spouse absent	5.8	6.3	4.1
Divorced	11.1	12.2	15.7
Widowed	1.4	1.5	1.3
Never married	39.7	39.8	44.9

[1] Detail for the 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.

NOTE: Dash indicates data not available.

more likely than workers in traditional arrangements to be employed in the services industry.

Temporary help agency workers

In February 1999, there were 1.2 million temporary help agency workers who accounted for 0.9 percent of total employment. (See exhibit 1.) The proportion was almost unchanged from the previous survey. Like contract company workers, temp workers are paid employees of the temp agency and work at the clients' sites.

Demographic characteristics. As with all other alternative arrangements, the characteristics of temporary help workers were similar to those found in past surveys. (See table 2.) Temp workers were disproportionately young, black or Hispanic origin, and female. The temporary help arrangement had the highest concentration of women of any arrangement—nearly three-fifths of workers in the arrangement were women. In terms of age, more than one-quarter of temp workers were under 25 years, and more than half were under 34 years. Compared with other work arrangements, temp help agency workers had the largest proportions of blacks and Hispanics. In fact, temps were nearly twice as likely as traditional workers to be black. School enrollment among young temporary agency workers was up from 16 percent in 1997 to 23 percent in 1999. This arrangement had the highest rate of high school dropouts among the four alternative arrangements—15 percent of those aged 25–64. About 21 percent of this age group were college graduates—10 percentage points lower than traditional workers. (See table 3.)

Of women in any alternative arrangement, temps were most likely to have children. (See table 4.) In February 1999, two-thirds of women in the arrangement had children, compared with a little more than half in traditional arrangements. The share of women with children in the temp arrangement increased substantially from 1997, when not quite half had children.

Part-time status and hours. Just under four-fifths of temp workers were on a full-time schedule in February 1999, which was slightly below the traditional workers' rate. (See table 4.) Of those employed part time, roughly one-half were doing so for economic reasons—that is, they would have preferred full-time work. This was a substantially higher proportion than for workers in all other arrangements.

Occupation and industry. Temporary help agency workers were most likely to work in administrative and clerical jobs and in operator, fabricator, and laborer jobs. Women in this arrangement were more likely to be in the former occupations, and men were more likely to be in the latter ones.

Temp workers were much more likely to work in the manufacturing and services industries (relative to traditional workers), and they were less likely than traditional workers to be assigned to government agencies, and trade companies. (See table 5.)

As can be seen from the above analysis, independent contractors and contract company workers are overwhelmingly male and highly educated. Temporary agency and on-call workers are more likely than traditional workers to be female, black or of Hispanic origin. Independent contractors are generally older than all other categories of workers, and are much more likely to be white. In contrast, temporary help agency workers tend to be much younger than workers in other types of arrangements. Independent contractors and contract com-

Table 3. Employed persons with alternative and traditional work arrangements by age and sex, race and Hispanic origin, and educational attainment, February 1999

[Percent distribution]

Characteristic	Independent contractors	Workers with alternative arrangements			Workers with traditional arrangements[1]
		On-call workers	Temporary help agency workers	Contract company workers	
Age and sex[2]					
Total, 16 years and older (thousands)	8,247	2,032	1,188	769	119,109
Percent	100.0	100.0	100.0	100.0	100.0
16 to 19	.9	8.8	5.8	4.8	5.3
20 to 24	3.1	9.9	20.9	11.3	9.8
25 to 34	17.9	23.1	29.3	30.5	23.9
35 to 44	30.2	24.9	19.4	28.1	27.7
45 to 54	26.4	14.9	15.4	17.2	21.3
55 to 64	14.7	10.1	6.5	6.1	9.7
65 and older	6.8	8.2	2.8	1.9	2.5
Men, 16 years and older	66.2	48.8	42.2	70.5	52.4
16 to 19	0.6	4.6	3.2	3.8	2.6
20 to 24	1.9	5.9	9.6	9.2	5.0
25 to 34	10.9	10.0	12.2	21.8	12.7
35 to 44	20.7	11.6	7.0	20.1	14.6
45 to 54	17.0	7.6	6.3	9.4	10.9
55 to 64	9.9	5.0	2.2	4.6	5.2
65 and older	5.2	4.2	1.6	1.6	1.3
Women, 16 years and older	33.8	51.2	57.8	29.5	47.6
16 to 19	0.4	4.2	2.5	1.0	2.6
20 to 24	1.1	4.0	11.3	2.0	4.7
25 to 34	7.0	13.1	17.1	8.8	11.1
35 to 44	9.5	13.4	12.4	8.0	13.0
45 to 54	9.4	7.3	9.0	7.8	10.4
55 to 64	4.8	5.1	4.2	1.6	4.5
65 years and older	1.6	4.1	1.3	0.3	1.2
Race and Hispanic origin[3]					
White	90.6	84.2	74.3	79.2	84.0
Black	5.8	12.7	21.2	12.6	11.4
Hispanic origin	6.1	11.6	13.6	6.0	10.4
Educational attainment[2]					
Total, 25 to 64 years					
Thousands	7,359	1,485	838	631	98,207
Percent	100.0	100.0	100.0	100.0	100.0
Less than a high school diploma	7.5	13.4	14.6	6.4	9.2
High school graduates, no college	29.7	29.6	30.5	22.7	31.4
Less than a bachelor's degree	28.5	29.1	33.7	31.9	28.3
College graduates	34.3	27.9	21.2	38.9	31.1
Men, 25 to 64 years					
Thousands	4,826	695	330	430	51,769
Percent	100.0	100.0	100.0	100.0	100.0
Less than a high school diploma	9.5	16.7	19.7	8.4	10.4
High school graduates, no college	30.7	38.1	33.6	23.7	30.8
Less than a bachelor's degree	26.8	25.0	25.2	31.6	26.8
College graduates	33.0	20.3	21.5	36.0	32.0
Women, 25 to 64 years					
Thousands	2,533	790	508	201	46,439
Percent	100.0	100.0	100.0	100.0	100.0
Less than a high school diploma	3.8	10.5	11.2	2.0	7.9
High school graduates, no college	27.6	22.2	28.3	20.9	32.0
Less than a bachelor's degree.	31.7	32.8	39.4	31.8	29.9
College graduates	36.9	34.7	20.9	45.3	30.1

[1] Workers with traditional arrangements are those who do not fall into any of the "alternative arrangements" categories.

[2] Detail for other characteristics may not sum to totals because of rounding.

[3] 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.

Table 4. Employed persons with alternative and traditional work arrangements by reasons for full- and part-time status and marital status, February 1999

[Percent distribution]

Characteristic	Workers with alternative arrangements					Workers with traditional arrangements[2]
	Total employed[1]	Independent contractors	On-call workers	Temporary help agency workers	Contract company workers	
Full or part-time status						
Employed, total (thousands)	131,494	8,247	2,032	1,188	769	119,109
Percent	100.0	100.0	100.0	100.0	100.0	100.0
Full-time workers	81.9	75.1	49.4	78.5	86.9	82.9
Part-time workers	18.1	24.9	50.6	21.5	13.1	17.1
Economic reasons	2.7	4.8	13.7	9.8	4.4	2.3
Noneconomic reasons	14.9	20.0	34.6	14.1	9.9	14.2
Men, 20 years and older						
Employed (thousands)	66,701	5,412	900	463	513	59,348
Percent	100.0	100.0	100.0	100.0	100.0	100.0
Full-time workers	92.0	85.1	72.7	83.2	91.6	93.0
Part-time workers	8.0	14.9	27.3	16.8	8.4	7.0
Economic reasons	2.4	5.5	12.2	9.1	5.5	1.9
Noneconomic reasons	6.1	11.3	17.8	11.0	5.8	5.4
Women, 20 years and older						
Employed (thousands)	58,131	2,759	954	657	219	53,496
Percent	100.0	100.0	100.0	100.0	100.0	100.0
Full-time workers	76.7	56.9	33.4	76.1	79.5	78.5
Part-time workers	23.3	43.1	66.5	23.9	20.5	21.5
Economic reasons	3.0	3.6	16.5	10.5	2.7	2.6
Noneconomic reasons	19.0	35.3	44.7	15.2	14.6	17.7
Both sexes, 16 to 19 years						
Employed (thousands)	6,662	76	179	68	37	6,265
Percent	100.0	100.0	100.0	100.0	100.0	100.0
Full-time workers	25.2	22.4	16.2	[4]	[4]	24.9
Part-time workers	74.8	77.6	83.2	[4]	[4]	75.1
Economic reasons	4.5	[5]	6.1	[4]	[4]	4.5
Noneconomic reasons	67.7	76.3	65.9	[4]	[4]	68.1
Marital status						
Employed women, (thousands)	61,454	2,788	1,040	687	227	56,645
Spouses/reference persons, total	40,821	2,092	686	394	130	37,489
Percent	100.0	100.0	100.0	100.0	100.0	100.0
With children under 18 years	56.1	53.1	61.4	66.0	52.3	56.1
Under 6 years	22.2	24.3	20.1	28.9	13.1	22.1
6 to 17 years	33.9	28.7	41.3	37.1	40.0	34.0
With no children under 18 years	43.9	46.9	38.6	34.0	46.9	43.9
Married, spouse present						
Employed (thousands)	33,050	1,844	590	238	89	30,261
Spouses/reference persons	32,590	1,826	577	227	89	29,843
Percent	100.0	100.0	100.0	100.0	100.0	100.0
With children under 18 years	52.7	51.7	58.4	47.6	51.7	52.7
Under 6 years	21.7	24.9	18.2	21.1	9.0	21.7
6 to 17 years	31.0	26.8	40.2	26.4	42.7	31.0
With no children under 18 years	47.3	48.4	41.6	52.4	48.3	47.3
All other marital statuses						
Employed (thousands)	28,405	944	450	449	138	26,384
Spouses/reference persons	8,231	266	109	167	41	7,646
Percent	100.0	100.0	100.0	100.0	100.0	100.0
With children under 18 years	69.4	62.4	76.1	91.0	[4]	69.1
Under 6 years	24.0	20.7	30.3	39.5	[4]	23.7
6 to 17 years	45.4	42.1	45.9	51.5	[4]	45.4
With no children under 18 years	30.6	37.2	22.9	9.0	[4]	30.9

[1]Detail may not sum to totals due to rounding, and total employed includes day laborers, an alternative arrangement not shown separately.

[2]Workers with traditional arrangements are those who do not fall into any of the "alternative arrangements" categories.

[3]Part time is defined as working 1 to 34 hours per week; full time is 35 hours and over. The classification of full- and part-time workers is based on the number of hours usually worked. The sum of the two at work part time categories do not equal the part-time worker estimate as the latter includes those not at work during the reference week. Persons at work part time for an economic reason can work either full or part time on a usual basis; persons at work part time for a noneconomic reason are limited to those who usually work part time.

[4]Less than 0.05 percent.

[5]Percentage not shown where base is less than 75,000.

Table 5. Employed persons with alternative and traditional work arrangements by occupation and industry, February 1999

[Percent distribution]

Occupation and Industry	Independent contractors	Workers with alternative arrangements			Workers with traditional arrangements[1]
		On-call workers	Temporary help agency workers	Contract company workers	
Occupation[2]					
Total, 16 years and older (thousands)	8,247	2,032	1,188	769	119,109
Percent	100.0	100.0	100.0	100.0	100.0
Executive, administrative, and managerial	20.5	5.3	4.3	12.0	14.6
Professional specialty	18.5	24.3	6.8	28.8	15.5
Technicians and related support	1.1	4.1	4.1	6.7	3.3
Sales occupations	17.3	5.7	1.8	1.5	12.0
Administrative support, including clerical	3.4	8.2	36.1	3.4	15.0
Service occupations	8.8	23.5	8.1	18.8	13.7
Precision production, craft, and repair	18.9	10.1	8.7	16.0	10.5
Operators, fabricators, and laborers	7.0	16.0	29.2	10.7	13.6
Farming, forestry, and fishing	4.4	2.9	.9	2.2	2.0
Men, 16 years and older (thousands)	5,459	993	501	542	62,464
Percent	100.0	100.0	100.0	100.0	100.0
Executive, administrative, and managerial	22.6	7.2	4.4	10.7	14.7
Professional specialty	16.0	13.1	7.0	27.3	13.5
Technicians and related support	1.2	3.1	5.4	5.7	3.0
Sales occupations	15.2	4.4	2.0	.9	11.8
Administrative support, including clerical	1.0	2.5	16.7	1.1	6.1
Service occupations	2.5	18.4	5.2	16.6	10.5
Precision production, craft, and repair	26.8	18.4	15.7	21.8	18.1
Operators, fabricators, and laborers	9.2	28.1	42.0	13.1	19.4
Farming, forestry, and fishing	5.5	4.7	1.6	2.8	2.9
Women, 16 years and older (thousands)	2,788	1,040	687	227	56,645
Percent	100.0	100.0	100.0	100.0	100.0
Executive, administrative, and managerial	16.5	3.6	4.1	15.0	14.6
Professional specialty	23.5	35.0	6.7	32.6	17.6
Technicians and related support	1.1	5.1	3.2	8.8	3.6
Sales occupations	21.2	6.8	1.6	2.6	12.2
Administrative support, including clerical	8.3	13.7	50.4	8.8	24.7
Service occupations	21.1	28.3	10.3	23.8	17.2
Precision production, craft, and repair	3.4	2.0	3.6	2.2	2.1
Operators, fabricators, and laborers	2.7	4.4	19.7	5.3	7.2
Farming, forestry, and fishing	2.3	1.1	.4	0.9	0.9
Industry[2]					
Total, 16 years and older (thousands)	8,247	2,032	1,188	769	119,109
Percent	100.0	100.0	100.0	100.0	100.0
Agriculture	4.9	2.2	.4	.4	2.0
Mining	.2	.4	.1	2.7	.4
Construction	19.9	9.6	2.5	9.0	5.1
Manufacturing	4.6	4.5	29.7	18.0	16.5
Transportation and public utilities	5.7	9.5	6.1	14.0	7.4
Wholesale and retail trade	13.7	16.4	8.1	5.4	21.6
Finance, insurance, and real estate	8.8	2.7	7.0	8.9	6.7
Services	42.1	52.0	38.7	27.1	35.2
Public administration	.2	2.6	([3])	10.7	5.1
Men, 16 years and older (thousands)	5,459	993	501	542	62,464
Percent	100.0	100.0	100.0	100.0	100.0
Agriculture	5.9	3.9	1.0	.2	2.6
Mining	.3	.9	.2	3.5	0.7
Construction	28.1	18.5	4.8	12.7	8.6
Manufacturing	4.8	5.0	31.3	21.4	21.6
Transportation and public utilities	7.2	15.0	6.4	14.2	9.8
Wholesale and retail trade	12.4	17.6	11.0	6.6	21.7
Finance, insurance, and real estate	7.8	2.3	3.8	6.6	5.2
Services	33.3	33.0	34.1	22.5	24.4
Public administration	.2	3.7	.2	9.2	5.3

See footnotes at end of table.

Table 5. Continued—Employed persons with alternative and traditional work arrangements by occupation and industry, February 1999

[Percent distribution]

Occupation and Industry	Independent contractors	Workers with alternative arrangements			Workers with traditional arrangements[1]
		On-call workers	Temporary help agency workers	Contract company workers	
Industry[2]					
Women, 16 years and older (thousands)	2,788	1,040	687	227	56,645
Percent	100.0	100.0	100.0	100.0	100.0
Agriculture	3.0	.6	–	.9	1.2
Mining	.1	–	.1	.9	.1
Construction	3.7	1.1	.7	([3])	1.3
Manufacturing	4.2	3.9	28.4	10.1	10.9
Transportation and public utilities	2.8	4.2	5.8	13.7	4.7
Wholesale and retail trade	16.1	15.1	6.0	2.6	21.5
Finance, insurance, and real estate	10.6	3.1	9.5	14.1	8.3
Services	59.3	.7	42.1	38.3	47.2
Public administration	.2	1.6	1.7	14.5	4.8

[1]Workers with traditional arrangements are those who do not fall into any of the "alternative arrangements" categories.

[2]Detail may not sum to totals due to rounding and/or to persons not reporting. For temp workers and workers provided by contract firms, the industry classification is that of the place to which they were assigned.

[3]Less than 0.05 percent.

NOTE: Dash indicates data not available.

pany workers also are more likely to have graduated from college than other groups of workers.

One common characteristic of the alternative work arrangements is that workers in every arrangement, except for contract company workers, are more likely to work part time than workers in traditional arrangements. Perhaps this phenomenon is related to the fact that female on-call and temporary help agency workers are more likely to have children than women in other arrangements. Although female independent contractors are less likely than traditional workers to have any children, they are more likely to have children under 6 years old, perhaps explaining their propensity to work part time. Full-time independent contractors and contract company workers work longer hours per week than any other type of worker. Also, temps and on-call workers have lower average weekly hours than workers in the other arrangements.

The following discussion focuses on further differences among the four groups in alternative work arrangements in terms of their preferences and reasons for being in their employment arrangements.

Tenure and contingency

One perceived aspect of job quality is stability, a trait which most analysts view as desirable. Not all workers prefer a job that continues, however. The two indicators of job stability for workers in alternative arrangements are tenure and contingency. Tenure measures the length of the relationship between the worker and the employer. Workers are contingent if they believe the nature of their jobs to be temporary, or if there is no explicit or implicit contract for ongoing employment in the positions. Being in an alternative arrangement does not automatically make a worker contingent; indeed, contingency rates vary greatly across the four arrangements, and the vast majority of contingent workers are in traditional arrangements.

BLS constructs three measures of contingency. The first measure is the narrowest. The third is the broadest, and is also the one most commonly cited. However, for temporary help agency workers and contract company workers, it is interesting to look at the rate of contingency using the BLS first estimate of contingency because it measures attachment to the arrangement, rather than to the worker's particular assignment. Specifically, a temp or a contract company worker is considered contingent under this estimate if their employment arrangement with the temporary help or contract company is expected to last for 1 year or less, and they work for that expected duration. This is an important distinction for contract company workers and temps because even if they think they cannot continue in a particular assignment indefinitely, they may believe they can continue working in the arrangement for as long as they wish. Therefore, it is misleading to consider a high rate of contingency under estimate 3 as an indication of job instability if the worker can stay indefinitely with the contract company or temp help agency.

Independent contractors had the most stable jobs by these criteria. As in 1997, only a small fraction of independent contractors in 1999 reported that their job was contingent—3 percent. (See table 6.) These workers had the lowest rate of contingency across all alternative arrangements, and they had about the same contingency rate as workers in traditional arrangements. Therefore, independent contractors perceive their jobs to be very stable.

Not suprisingly, independent contractors also had the longest median tenure across all arrangements; in fact, they had higher median tenure than did workers in traditional arrangements. (See table 7.) A substantial number of independent contractors had been in their arrangement for quite a long time: 43 percent had been in their jobs for at least 10 years, and 18 percent had been in the arrangement for more than 20 years. These rates were much higher than those for traditional workers, perhaps reflecting the older age profile of independent contractors.

Judging from these data, it appears that independent contractors generally have stable work arrangements. This probably reflects the fact that they have a stronger attachment to their arrangement than to a particular client or employer.

In 1999, 20 percent of *contract company workers* were contingent under the broadest (estimate 3) definition. By contrast, only 3 percent of traditional workers were contingent. Looking at the rate of contingency under estimate 1 (which measures attachment to the arrangement rather than to the assignment), only 6 percent were contingent. (See table 6.)

For contract company workers, the median tenure in the *arrangement* was 2.1 years, and the median tenure in the *assignment* was 1.6 years. The majority of contract workers had been in the arrangement for more than a year, but 43 percent had been in their jobs for a year or less. Only 10 percent had been contract workers for more than 10 years, and 2 percent had more than 20 years of tenure.

Contract company workers, on average, are younger than traditional workers, and this may help explain some of the tenure disparity between the two arrangements.

Under contingency estimate 3, about 28 percent of *on-call workers* felt that they could not continue in their jobs for as long as they wished. (See table 6.) Median tenure for those in the arrangement also has not changed since 1997, remaining at about 2 years. (See table 7.)

In 1999, 56 percent of *temporary help agency workers* were

Table 6. Employed persons with alternative and traditional work arrangements by contingent and noncontingent employment, February 1999

[Percent distribution]

Work arrangements	Total (thousands)	Contingent workers			Noncontingent workers[1]
		Estimate 1	Estimate 2	Estimate 3	
Total					
With alternative arrangements:					
Independent contractor	8,247	([2])	2.9	2.9	97.1
On-call workers	2,032	12.6	13.2	28.0	72.0
Temporary help agency workers	1,188	24.2	36.1	55.9	44.1
Contract company workers	769	6.0	12.7	20.2	79.8
With traditional arrangements[3]	119,109	1.4	1.5	3.2	96.8
Men					
With alternative arrangements:					
Independent contractor	5,459	([2])	2.1	2.1	97.9
On-call workers	993	14.6	15.1	29.8	70.1
Temporary help agency workers	501	25.3	36.3	57.1	42.9
Contract company workers	542	5.0	11.3	19.6	80.6
With traditional arrangements[3]	62,464	1.2	1.3	3.0	97.0
Women					
With alternative arrangements:					
Independent contractor	2,788	([2])	4.3	4.3	95.7
On-call workers	1,040	10.6	11.3	26.3	73.8
Temporary help agency workers	687	23.4	36.0	55.2	45.0
Contract company workers	227	8.4	15.9	22.0	78.0
With traditional arrangements[3]	56,645	1.6	1.8	3.5	96.5

[1]Noncontingent workers are those who do not fall into any estimate of "contingent" workers.

[2]Not applicable.

[3]Workers with traditional arrangements are those who do not fall into any of the "alternative arrangements" categories. Independent contractors, as well as the self-employed, are excluded from estimate 1.

contingent under the broadest measure (estimate 3)—the highest rate of all arrangements. This estimate of contingency measures the temps' attachment to their assignment. Under estimate 1, only 24 percent of temps were contingent. (See table 6.) These data indicate that although the majority of temps did not think they could continue indefinitely in their current assignment, about 75 percent believed that they could continue temping for as long as they wished.

The median tenure at the place assigned was about 5 months—the same as 2 years ago. About 32 percent had been in their current assignment for less than 3 months, and 20 percent had been in the assignment for more than a year.

For temps, median tenure in the arrangement was somewhat higher than the 7-month tenure in the assignment.

Table 7. Employed persons with alternative and traditional work arrangements, tenure in the arrangement, February 1999

[Percent distribution]

Tenure and sex	Workers with alternative arrangements				Workers with traditional arrangements[1]
	Independent contractors	On-call workers	Temporary help agency workers	Contract company workers	
Total, 16 years and older (thousands)	8,247	2,032	1,188	769	119,109
Percent	100.0	100.0	100.0	100.0	100.0
Total reporting specific tenure	97.4	96.1	92.4	97.4	95.3
1 year or less	14.8	49.3	68.9	42.5	26.0
Less than 6 months	5.1	26.2	39.3	16.7	10.3
6 to 12 months	9.7	23.1	29.5	25.8	15.7
More than 1 year	85.2	50.8	31.1	57.5	74.0
Less than 4 years	15.7	20.8	23.0	24.8	20.1
4 to 9 years	26.5	17.0	6.8	22.8	24.5
10 to 19 years	24.6	9.2	1.3	7.6	18.4
20 years or more	18.3	3.8	–	2.1	11.0
Specific tenure not available	2.6	3.9	7.7	2.6	4.7
Median tenure (in years)	7.7	1.9	.6	2.1	4.6
Men, 16 years and older (thousands)	5,459	993	501	542	62,464
Percent	100.0	100.0	100.0	100.0	100.0
Total reporting specific tenure	96.8	96.5	93.4	97.8	95.1
1 year or less	12.6	46.9	69.4	44.9	24.1
Less than 6 months	4.7	24.5	40.6	16.2	9.5
6 to 12 months	7.9	22.3	28.6	28.7	14.7
More than 1 year	87.4	53.1	30.3	55.1	75.9
Less than 4 years	14.5	22.1	21.4	25.8	19.8
4 to 9 years	24.7	15.0	8.1	19.4	24.2
10 to 19 years	26.4	10.8	.9	7.5	18.6
20 years or more	21.1	5.3	–	2.3	13.3
Specific tenure not available	3.2	3.4	6.8	2.4	4.9
Median tenure (in years)	9.1	2.1	.6	2.0	5.0
Women, 16 years and older (thousands)	2,788	1,040	687	227	56,645
Percent	100.0	100.0	100.0	100.0	100.0
Total reporting specific tenure	98.5	95.6	91.7	96.5	95.5
1 year or less	19.0	51.6	68.3	36.5	28.1
Less than 6 months	5.9	27.7	38.4	17.4	11.3
6 to 12 months	13.1	23.9	29.8	19.2	16.8
More than 1 year	81.0	48.4	31.7	63.5	71.9
Less than 4 years	18.1	19.5	24.1	22.4	20.5
4 to 9 years	30.1	18.8	6.0	31.1	24.9
10 to 19 years	21.2	7.6	1.6	8.2	18.1
20 years or more	11.6	2.4	–	2.2	8.1
Specific tenure not available	1.5	4.4	8.3	3.5	4.5
Median tenure (in years)	5.7	1.7	.6	2.6	4.2

[1]Workers with traditional arrangements are those who do not fall into any of the "alternative arrangements" categories. Detail may not sum to totals due to rounding. For workers with traditional arrangements, estimates reflect tenure with the current employer. Median tenure was calculated only for those who reported a specific tenure.

NOTE: Dash indicates data not available.

About 31 percent had been temping for more than 1 year. (See table 7.)

Earnings

The earnings "gap" between workers in alternative arrangements and traditional workers is one of the most oft cited criticisms of these arrangements.[8] However, when comparing the earnings of workers in those alternate arrangements, factors such as age, tenure, work experience, hours, educational attainment, and occupation must be considered.[9] For example, there are stark demographic differences between the arrangements in which workers earn more than traditional workers and those in which they earn less. Older, highly educated men who work long hours in higher paying occupations are overrepresented in independent contracting and in contract company work. The arrangements in which earnings are lower than in traditional arrangements—on-call work and temp help work—are more likely than traditional jobs to have young, minority, or female workers, groups which traditionally have lower levels of education, higher rates of school enrollment, and greater incidence of part-time work. Furthermore, workers in alternate arrangements are concentrated in lower-paying occupations such as administrative and production occupa-

Table 8. Median weekly earnings of full-time workers with alternative and traditional work arrangements by selected characteristics, February 1999

Characteristics	Workers with alternative arrangments				Workers with traditional arrangements[1]
	Independent contractors	On-call workers	Temporary help agency workers	Contract company workers	
Age and sex					
Total, 16 years and older	$640	$472	$342	$756	$540
16 to 19	300	227	[2]	[2]	275
20 to 24	424	314	321	507	362
25 years and older	652	497	356	813	580
25 to 34	624	484	348	785	509
35 to 44	689	505	370	908	599
45 to 54	662	625	326	792	647
55 to 64	651	465	557	[2]	616
65 and older	419	278	[2]	[2]	368
Men, 16 years and older	689	507	367	770	613
16 to 19	[2]	237	[2]	[2]	283
20 to 24	478	311	367	[2]	388
25 years and older	697	586	378	834	657
25 to 34	666	557	371	786	537
35 to 44	726	518	354	932	688
45 to 54	689	673	321	[2]	759
55 to 64	755	622	[2]	[2]	755
65 and older	477	447	[2]	[2]	371
Women, 16 years and older.	441	348	331	690	474
16 to 19	[2]	158	[2]	[2]	245
20 to 24	[2]	320	313	[2]	335
25 years and older	459	352	346	[2]	493
25 to 34	414	318	329	[2]	477
35 to 44	478	469	376	[2]	492
45 to 54	500	337	329	[2]	515
55 to 64	445	347	[2]	[2]	504
65 and older	[2]	204	[2]	[2]	364
Race and Hispanic origin					
White	662	478	338	734	562
Black	414	393	354	719	445
Hispanic origin	504	308	296	[2]	396
Educational attainment					
Less than a high school diploma	474	290	302	[2]	335
High school graduate, no college	520	485	311	572	445
Some college, no degree	621	451	354	717	512
Associate degree	607	677	[2]	816	588
College graduates	844	619	515	966	832

[1]Workers with traditional arrangements are those who do not fall into any of the "alternative arrangement" categories.

[2]Data not shown where base is less than 75,000.

tions. In addition, other personal characteristics exist that may influence earnings.[10] Data on earnings of workers with alternate work arrangements are in table 8.

The difference between the median weekly earnings of full-time *independent contractors* and their traditional counterparts widened further in 1999. In 1997, independent contractors' earnings were 15 percent higher than traditional workers' earnings, and in 1999, they were 19 percent higher. A disparity in earnings still existed between genders, however. Earnings of male independent contractors continued to out-pace their counterparts in traditional jobs, but women independent contractors continued to earn less. Shorter tenure in the arrangement and fewer hours worked per week help explain much of this gap between male and female independent contractors.

Contract company workers who usually worked full time continued to have the highest median weekly earnings across all arrangements—including traditional arrangements—and also experienced the largest percentage increase in wages over the three surveys. The median weekly earnings for full-time contract workers in February 1999 were $756, compared with $540 for traditional workers. Both men and women out-earned their counterparts in traditional jobs.

The median weekly earnings of full-time *on-call workers* were $472 in 1999—87 percent of the median for full-time traditional workers. Earnings by gender differed significantly in the arrangement: women earned 73 percent of the median for women in traditional jobs, and men earned 83 percent of the median for men in traditional arrangements.

Unlike the other arrangements, the majority of on-call workers worked part time. Because of this, it is interesting to note that this is the only arrangement in which part-time workers made less than part-time workers in traditional work arrangements. The median weekly earnings of part-time on-call workers in 1999 were $119, compared with $157 for part-time traditional workers. Furthermore, the median wage for part-time on-call workers stayed the same since 1997, while the median wage for traditional part-timers increased by 9 percent from its 1997 level.

Temporary help agency workers who usually worked full time had median weekly earnings of $342 in February 1999. This was the lowest earnings figure across all arrangements. Differing from other arrangements, earnings among the major demographic groups in the temporary help arrangement were very similar. Women temps earned 90 percent of the median

Table 9. Percent of independent contractors with health insurance and pension coverage by selected characteristics, February 1999

Characteristics	Number (thousands)	With health insurance coverage[1]					With pension coverage	
		Total (percent)	Through current employer at main job	Through spouse or other family member	Purchased on own	Other sources	Total (percent)	IRA or Keogh
Age and sex								
Total, 16 years and older	8,247	73.3	1.8	26.7	33.0	10.6	40.5	38.6
16 to 24 years	328	52.1	3.7	31.1	8.2	5.5	7.6	3.7
25 years and older	7,920	74.2	1.7	26.6	34.0	10.8	41.9	40.1
25 to 34 years	1,479	63.6	2.8	27.7	25.2	6.9	27.0	24.9
35 to 44 years	2,491	70.8	1.2	27.9	36.7	4.7	38.9	37.1
45 to 54 years	2,491	70.8	1.2	27.9	36.7	4.7	38.9	37.1
55 years and older	1,773	83.8	1.8	19.6	34.2	26.8	52.3	50.3
Men	5,459	71.6	1.8	20.4	37.2	11.4	40.7	38.8
Women	2,788	76.8	1.9	39.1	24.8	9.2	40.1	38.4
Race and Hispanic origin[2]								
White	7,471	74.2	1.6	27.4	33.7	10.3	42.3	40.4
Black	476	58.6	3.4	17.2	22.7	13.7	15.1	13.2
Hispanic origin	506	48.6	1.0	11.7	27.1	4.0	20.6	20.0
Full- and part-time status[3]								
Full-time workers	5,997	72.3	2.1	23.0	38.4	7.8	41.3	39.2
Part-time workers	2,191	76.4	.9	37.4	18.2	18.3	38.6	37.2

[1]Detail for sources of health insurance coverage will not sum to totals because information on a specific source was not always available.

[2]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.

[3] Detail for full- and part-time workers will not sum to totals because the usual status on the principal job is not identifiable for a small number of multiple jobholders.

Table 10. Percent of persons in alternative and traditional work arrangements with health insurance and pension coverage, by selected characteristics, February 1999

Characteristic	Number (thousands)	With health insurance coverage[1]				With pension coverage	
		Total	Through current employer at main job	Through other job or union	Eligible for employer-provided health insurance	Total	Eligible for employer-provided pension
On-call workers							
Age and sex:							
Total, 16 years and older	2,032	67.3	21.1	3.1	31.6	22.5	29.1
16 to 24 years	381	58.3	8.9	0.3	16.3	4.5	12.1
25 years and older	1,652	69.3	23.8	3.7	35.2	26.7	33.0
25 to 34 years	470	61.1	28.7	2.3	38.1	28.9	37.0
35 to 44 years	507	65.7	23.5	1.0	34.9	25.6	32.3
45 to 54 years	303	70.3	25.4	5.6	38.0	24.8	31.4
55 years and older	372	83.9	16.7	7.5	30.1	26.9	29.8
Men	993	61.8	29.7	4.9	40.6	23.3	30.5
Women	1,040	72.4	12.8	1.3	23.1	21.7	27.8
Race and Hispanic origin:[2]							
White	1,711	70.0	20.9	3.3	32.0	23.2	29.5
Black	258	46.9	22.5	1.2	30.6	19.4	28.7
Hispanic origin	237	37.6	15.6	0.8	23.2	11.0	16.0
Full- and part-time status:[3]							
Full-time workers	919	64.7	35.9	4.2	46.1	29.5	37.8
Part-time workers	1,080	69.9	7.8	2.1	19.0	16.1	21.2
Temporary help agency workers							
Age and sex:							
Total, 16 years and older	1,188	41.0	8.5	1.0	31.4	5.8	12.6
16 to 24 years	317	38.5	8.2	-	31.5	4.4	14.2
25 years and older	871	41.9	8.7	1.4	31.5	6.4	12.2
25 to 34 years	348	35.6	10.3	-	36.5	5.7	12.1
35 to 44 years	231	39.8	7.8	(4)	27.7	4.8	10.4
45 to 54 years	182	38.5	7.7	3.8	28.6	5.5	11.5
55 years and older	110	72.7	7.3	4.5	28.2	12.7	17.3
Men	501	36.1	7.8	1.6	29.7	9.6	16.0
Women	687	44.4	9.2	0.6	32.6	3.2	10.2
Race and Hispanic origin:[2]							
White	883	42.9	10.2	1.4	33.2	5.9	12.3
Black	252	30.6	2.8	-	27.0	3.6	11.9
Hispanic origin	161	30.4	6.2	-	19.9	6.8	13.7
Full-and part-time status:[3]							
Full-time workers	916	38.3	10.5	0.8	34.0	6.3	14.1
Part-time workers	270	49.3	1.1	1.9	22.2	3.3	7.4
Contract company workers							
Age and sex:							
Total 16 years and older	769	80.0	56.2	2.0	71.1	40.2	55.0
16 to 24 years	124	66.9	46.8	1.6	65.3	21.8	46.0
25 years and older	645	82.3	58.1	2.2	72.2	43.7	56.7
25 to 34 years	235	85.1	67.2	2.1	76.2	44.3	65.0
35 to 44 years	216	78.7	57.9	3.2	70.8	50.5	58.8
45 to 54 years.	132	81.1	50.8	1.5	72.7	34.1	43.2
55 years and older	61	(4)	(4)	(4)	(4)	37.7	47.5
Men	542	79.0	60.5	2.4	73.4	43.9	57.6
Women	227	82.4	45.8	1.3	65.6	31.3	48.9
Race and Hispanic-origin:[2]							
White	609	81.4	58.1	2.3	72.1	41.7	56.5
Black	97	56.7	33.0	2.1	59.8	35.1	48.5
Hispanic origin	46	(5)	(5)	(5)	(5)	(5)	(5)
Full- and part-time status:[3]							
Full-time workers	663	83.1	64.0	2.3	79.9	45.2	61.8
Part-time workers	106	60.4	7.5	(4)	16.0	8.5	13.2

See footnotes at end of table.

Table 10. Continued—Percent of persons in alternative and traditional work arrangements with health insurance and pension coverage, by selected characteristics, February 1999

Characteristic	Number (thousands)	With health insurance coverage[1]				With pension coverage	
		Total	Through current employer at main job	Through other job or union	Eligible for employer-provided health insurance	Total	Eligible for employer-provided pension
Workers with traditional arrangements[6]							
Age and sex:							
Total, 16 years and older	112,829	82.9	61.1	.7	73.7	50.9	58.5
16 to 24 years	17,720	69.5	30.2	.2	45.3	15.5	28.3
25 years and older	95,109	85.4	66.8	.8	79.0	57.4	64.1
25 to 34 years	27,534	80.0	63.9	.6	77.0	49.1	59.1
35 to 44 years	31,213	85.7	68.2	.6	80.1	59.8	66.1
45 to 54 years	23,677	89.4	70.8	.9	82.6	65.1	69.5
55 years and older	12,685	89.4	62.5	1.4	73.5	55.4	60.1
Men	58,483	82.2	66.3	1.1	76.3	53.2	60.0
Women	54,346	83.7	55.4	.3	70.8	48.3	56.8
Race and Hispanic origin:[2]							
White	94,415	84.0	61.2	.7	73.8	51.5	58.9
Black	13,283	76.6	61.4	.4	73.4	49.5	59.0
Hispanic origin	11,977	62.7	49.2	.8	60.7	33.6	40.6
Full- and part-time status:[3]							
Full-time workers	92,711	84.8	70.6	.7	82.6	58.2	65.9
Part-time workers	19,894	74.3	16.9	.7	32.3	16.8	23.9

[1]Detail for sources of health insurance coverage will not sum to totals because information on a specific source was not always available.

[2]Detail 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.

[3]Detail will not sum to totals because usual status on the principal job is not identifiable for a small number of multiple jobholders.

[4]Less than 0.05 percent.

[5]Data not shown where base is less than 75,000.

[6]Workers with traditional arrangements are those who do not fall into any of the "alternative arrangements" categories.

NOTE: Dash indicates data not available.

for men. Earnings for blacks and whites in the arrangement were nearly the same. Temps who worked part time in 1999 out-earned part-time traditional workers.

Benefits

Employer-provided benefits such as health insurance and pension coverage also are a measure of job quality. For this reason, analysts have been concerned that workers in alternative arrangements do not enjoy the same rates of benefit and pension coverage as do workers in traditional jobs. Like earnings, benefit coverage of workers in alternative arrangements varies widely by arrangement—generally following the same pattern as earnings. Demographics, hours, and occupations play a large role in the extent to which employees in a particular arrangement received health insurance and pension coverage.

In 1999, as in past survey years, the incidence of health insurance coverage and pension coverage was lower for workers in alternative arrangements than for workers in traditional jobs. Coverage levels differ between independent contractors and contract company workers on one hand, and on-call workers and temps on the other. The alternative arrangements showed some improvement in coverage in the benefits area since the last survey: pension coverage rates increased for all the arrangements, although the rates were still below that of traditional workers. The proportion of contract company workers and temps who had healthcare coverage also increased from 1997, while the rate for traditional workers stayed the same. Tables 9 and 10 present the incidence of health insurance and pension coverage for workers in alternate arrangements.

Because *independent contractors* do not have employers that can provide them with health insurance or pension benefits, they must purchase them on their own. About 73 percent of independent contractors had health insurance from some source, compared with 83 percent of workers in traditional arrangements. In both arrangements women were somewhat more likely than men to have some source of healthcare coverage. This is most likely due to the fact that more women are covered under the plan of a relative. Nearly twice the percentage of men with health insurance purchased their plans (52 percent) as were covered under another family member's plan (29 percent). For women with insurance, the percentages were nearly reversed—51 percent were covered under another family member's plan, while only 32 percent purchased it on their own.

Perhaps because the vast majority of female independent

contractors were working part time, part-timers in the arrangement were more likely to have health insurance than were full-time independent contractors. The reverse was true for traditional workers. As would be expected, coverage rates rose, with rising levels of educational attainment. While the same was true for traditional workers, they were still more likely to have coverage than independent contractors at all levels of educational attainment.

In 1999, 41 percent of independent contractors had some type of pension plan, compared with 37 percent in 1997. The corresponding rates for traditional workers were 51 percent in 1999 and 50 percent in 1997. Nearly all covered independent contractors had either an IRA or a Keogh plan.

In 1999, 80 percent of *contract company workers* had health insurance from some source. This rate was the highest among the alternative work arrangements, and was very close to the coverage rate for workers in traditional jobs. The percentage of contract company workers with employer-provided insurance rose to 56 percent in 1999 from 50 percent in 1997. This also was about the same rate as workers in traditional arrangements.

With regards to pension coverage, contract company workers had similar rates of coverage as independent contractors, and higher rates than the other three alternative arrangements. The percentage of contract company workers who were eligible for employer-provided pensions rose to 55 percent in 1999 from 46 percent in 1997. This was the same rate as workers in traditional arrangements. About 40 percent of workers in the arrangement actually participated in their employer's pension plan, compared with 48 percent of traditional workers. The rates for both arrangements rose since 1997.

Despite the fact that independent contractors, and to a lesser degree, contract workers, had insurance and pension coverage rates that were below those of traditional workers, it could be that these workers are forgoing coverage by choice because these two groups substantially out-earn their traditional counterparts.

A little more than two-thirds of *on-call workers* had health insurance in 1999, but only one-fifth of them had insurance through their employer. Of those who had insurance from another source, two-thirds were covered under another family member's plan. Nearly 10 percent of on-call workers who had insurance from another source relied on medicare or medicaid for health insurance coverage, compared with only 6 percent of traditional workers. Women who worked on-call were more likely than men to have insurance, although men were more likely to have coverage through their employer. This may occur because most women who worked on-call in 1999 were part-timers, and thus may not have been eligible for employer-provided health benefits.

About 29 percent of on-call workers were eligible for their employer's pension plan, and 23 percent were included in the plan; these rates were about half those for traditional workers. Of the on-call workers who were not included in their employer's pension plan, 80 percent were not allowed to participate in the plan. Men were more likely than women to be eligible for their employer's pension plan, and also were more likely to actually participate in the plan. The reason for men's higher eligibility rate was partially due to men being more likely to work full time.

Temporary help agency workers had the lowest levels of both health insurance coverage and pension coverage among all arrangements. Only 41 percent of temps had health insurance in 1999, and only 9 percent had it through their employer, although the share of temps who had insurance through their employer rose slightly between 1997 and 1999. Women were more likely than men to have insurance. Both sexes were most likely to have it through another family member. In 1999, 31 percent of temps were eligible to participate in their employer's health insurance plan, but nearly half cited cost as their reason for not participating. Only 13 percent of temp workers were eligible to participate in their employer's pension plan, and 6 percent were included in that plan. Both rates were up by 2 percentage points from 1997.

Prior activity of recent starters

In 1996, Anne E. Polivka studied workers in alternative arrangements who had 3 or fewer years of tenure in their respective jobs.[11] Polivka analyzed the prior labor force status of recent starters in alternative arrangements, their preferences and reasons for entering into them, and the extent to which these workers were searching for traditional jobs, in an attempt to measure the degree to which workers were being forced into these arrangements by labor market conditions.

Updating portions of Polivka's analysis using the 1999 data reveals that more workers enter alternative arrangements by choice. The 1999 data also show that more workers in alternative arrangements, regardless of tenure, prefer to be in them than was in the case in 1997.

About 30 percent of *independent contractors* had 3 or fewer years of tenure in this arrangement. These short-tenured independent contractors were more likely than traditional workers with similar tenure to have been employed prior to entering the arrangement. (See table 11.) Nearly three-quarters of independent contractors were employed previously—a slightly higher proportion as Polivka reported in 1995. Among the independent contractors who were previously employed, 61 percent had quit their last job, compared with 57 percent in February 1995.

About 68 percent of *contract company workers* with 3 or fewer years of tenure were previously employed prior to en-

Table 11. Prior labor force status of previously employed persons currently in alternative and traditional work arrangements with 3 or fewer years of tenure in current job by school enrollment status, and reason for termination, February 1999

[In thousands]

Characteristic	Workers in alternative arrangements								Workers in traditional arrangements[1]	
	Independent contractors		On-call workers		Temporary help agency workers		Contract company workers			
	Total	Not in school[2]	Total	Not in school[2]	Total	Not in school[2]	Total	Not in school[2]	Total	Not in school[2]
Prior status										
Total, 16 years and older	2,432	2,321	1,375	1,165	1,039	967	510	478	52,670	45,510
Employed	1,766	1,730	610	530	634	589	346	334	34,060	31,160
Looking for work[3]	132	125	241	196	218	199	65	49	6,853	5,501
Not employed directly prior to looking	89	82	178	143	147	139	52	37	4,943	3,760
Previously employed	43	43	58	48	69	58	12	12	1,871	1,701
Not in the labor force:										
Going to school	166	98	124	61	56	47	29	23	5,706	3,007
Retired	22	22	45	45	18	18	5	5	401	393
Had personal or family obligations	275	275	133	133	74	74	5	5	3,488	3,418
Other activities	62	62	38	25	36	36	42	42	1,323	1,258
Status not reported	9	9	183	175	4	4	19	19	840	776
Reason for termination from previous job										
Total, 16 years and older (thousands)	1,809	1,773	668	577	702	647	358	346	35,931	32,861
Percent:										
Lost last job	11.4	11.4	13.3	13.8	18.3	18.9	6.5	6.7	9.9	10.6
Quit last job	60.9	60.8	51.8	52.3	49.4	48.1	66.5	65.3	69.3	68.6
Temporary job ended	8.4	8.4	15.0	13.2	20.9	20.6	18.3	18.9	9.2	8.8
Other reason	18.1	18.2	19.5	20.2	11.1	12.0	8.8	9.1	10.3	10.8

[1]Workers in traditional arrangements are those who do not fall into any of the "alternative arrangements" categories.

[2]Only individuals 16 to 24 years old are asked for their school enrollment status in February.

[3]Subcategories do not sum to total looking for work because there were a few individuals whose activity directly prior to looking for work was unknown.

NOTE: Data on tenure of 3 or fewer years exclude persons who did not report specific tenure, but did report that tenure was more than 1 year.

tering into their arrangement—about the same rate as traditional workers. There have been some dramatic shifts in the reasons for separating from the previous job. About 67 percent of contract workers reported they quit their last job in 1999, compared with 47 percent in 1995. In 1999, only 7 percent reported losing their jobs, while those individuals accounted for 17 percent in 1995. About 19 percent of contract workers in 1999 had been in a temporary job that ended, while in 1995, that percentage was 24 percent. The proportion of those in the arrangement who were looking for work prior to becoming contract workers has declined since the first supplement in 1995.

Among the *on-call workers* who were previously employed, 52 percent had quit their last job in 1999. In 1995, this proportion was 44 percent. The percentages of on-call workers who lost their jobs or had temporary jobs that ended were down from that in 1995, suggesting that more of these workers voluntarily left permanent jobs to work on-call. (See table 11.) The percentage of on-call workers with 3 or fewer years of tenure who looked for work prior to entering the arrangement—18 percent—suggests that this arrangement may provide access to the labor market for those having difficulty finding employment. The percentage of on-call workers who looked for work prior to entering the arrangement in 1995 was 23 percent.

In 1999, 61 percent of *temporary help agency workers* with 3 or fewer years of tenure were employed prior to entering their arrangements. Suprisingly, this was close to the 65-percent rate for traditional workers. By contrast, 21 percent of new temps were looking for work prior to starting in the arrangement, compared with 13 percent of traditional workers. This was the highest previous unemployment rate across all arrangements in 1999. There has been considerable change over the years: in 1995, about 27 percent of temps were previously unemployed.

It is also interesting to compare the reasons why those temps left their previous jobs to enter the arrangement. Here again, there is a considerable difference between temps and other workers. Temps with 3 or fewer years of tenure in the arrangement were most likely—of any arrangement—to have lost their previous job. About 18 percent of all temps had lost their previous job, compared with only 10 percent of workers in traditional arrangements. (See table 11.) In 1995, this figure was 25 percent for temps. Temps were also the most likely workers in any arrangement to have been in a temporary job that ended prior to becoming a temp worker.

Preference and reason for the arrangement

The overwhelming majority of *independent contractors* were very happy in their arrangement and had entered it voluntarily. About 84 percent of independent contractors reported that they preferred their arrangement to a traditional one in February 1999. (See table 12.) This was unchanged since the 1997 survey. Among independent contractors with 3 or fewer years of tenure, this rate has decreased since 1995, when it was last collected, but only by a small amount. The majority of independent contractors preferred this arrangement rather than being someone else's employee, regardless of prior labor force status. About 10 percent of independent contractors reported being in the arrangement for an economic reason. Even among those who said that they would prefer a traditional arrangement, most were in the arrangement for personal reasons rather than economic ones. (See table 13.)

Among *on-call workers*, fewer than half preferred that arrangement. About 45 percent of them preferred on-call work, compared with 37 percent in 1995. The proportion who said they would prefer a traditional employment arrangement in 1999 was slightly lower as in 1997. (See table 13.) When only those workers with 3 or fewer years in the arrangement were examined, the majority still preferred traditional work, but the

Table 12. Preference of employed persons in alternative work arrangements for a traditional or an alternative work arrangement, by prior activity, February 1999

Preference	Total	With 3 or fewer years of tenure[1]					
		Total	With prior labor force status of—				
			Employed	Looking for work	Going to school	Retired	Had personal or family obligations
Independent contractors							
Total, 16 years and older							
Thousands	8,247	2,432	1,766	132	166	22	275
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Prefer traditional arrangement[2]	8.5	14.5	14.3	42.1	12.1	[3]	6.5
Prefer alternative arrangement	83.8	77.8	77.8	50.9	79.4	[3]	88.6
It depends	5.2	5.4	6.4	2.7	3.5	[3]	2.6
Preference not available	2.5	2.3	1.6	4.3	5.1	[3]	2.3
On-call workers							
Total, 16 years and older							
Thousands	2,032	1,375	610	241	124	45	133
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Prefer traditional arrangement[2]	46.7	50.2	52.2	68.9	57.9	[3]	28.0
Prefer alternative arrangement	44.7	41.9	37.5	25.2	38.8	[3]	65.3
It depends	4.8	5.1	5.9	4.6	0.5	[3]	3.7
Preference not available	3.8	2.8	4.4	1.3	2.8	[3]	3.0
Temporary help agency workers							
Total, 16 years and older							
Thousands	1,188	1,039	634	218	56	18	74
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Prefer traditional arrangement[2]	57.0	59.3	60.7	70.9	[3]	[3]	[3]
Prefer alternative arrangement	33.1	32.7	31.6	18.9	[3]	[3]	[3]
It depends	5.3	4.8	4.1	5.1	[3]	[3]	[3]
Preference not available	4.6	3.2	3.5	5.1	[3]	[3]	[3]

[1]Data exclude persons who did not report specific tenure, but did report that tenure was more than 1 year, and include those whose prior activity was classified as "other" and a small number of persons for whom prior activity was not reported.

[2]Workers in traditional arrangements are those who do not fall into any of the alternative arrangement categories.

[3]Data not shown were base is less than 75,000.

NOTE: Data on workers provided by contract firms are not shown because these workers were not asked for their preferences. Detail may not sum to 100 percent due to rounding.

proportion has decreased since 1995. Half of on-call workers preferred a job with regularly scheduled hours, while the proportion in 1995 was 62 percent. Preferences for the arrangement varied depending upon the worker's prior labor force status in the arrangement. For example, 69 percent of workers who were unemployed prior to entering the arrangement would have preferred a traditional job. (See table 12.) For workers who were previously out of the labor force attending to personal or family obligations, only 28 percent preferred a traditional arrangement. Overall, since 1995, there seems to be increased preference for the arrangement regardless of prior status, except in the case of those who attended school prior to working on-call. For them, the proportion preferring a traditional job increased from the 1995 share.

In 1999, only 35 percent of on-call workers were in that arrangement for economic reasons,[12] compared with 47 percent in 1995, and 41 percent in 1997. This suggests that more workers chose to enter the arrangement for reasons unrelated to labor market constraints. The most common economic reason for being in the arrangement was that it was the only type of work to be found; however, in 1999, these individuals made up only 21 percent of total employment in the arrangement, compared with 27 percent in 1997. (See table 13.)

Note that data on reasons for being in the arrangement and on the preferred arrangement were not collected for contract company workers due to the difficulty of devising questions that would capture the desired information for this group.

The majority of temp workers in 1999—57 percent—would have preferred a traditional job. (See table 12.) This was down slightly from 1997. For temps who had been in the arrangement for 3 years or less, about the same proportion preferred to work in a traditional job, but interestingly, this proportion decreased substantially since 1995 when 66 percent of new temps preferred a traditional job. The decrease occurred both for temps who were previously employed prior to beginning in the temp arrangement and for those who were previously looking for work. The 1999 survey found that more temps were in the arrangement for personal reasons than in 1997, although most temps (53 percent) still cited an economic reason for being in the arrangement. About a third of temps said it was

Table 13. Employed men and women 16 years and older in alternative work arrangements, by reason for arrangement and preference for a traditional work arrangement, February 1999

[Percent distribution]

Reason and preference	Independent contractors			On-call workers			Temporary help agency workers		
	Total	Men	Women	Total	Men	Women	Total	Men	Women
Reason for arranagement									
Economic reasons	9.6	10.0	8.9	35.4	39.2	31.9	52.4	55.5	50.1
Could only find this type of employment	2.6	2.5	2.8	21.3	21.1	21.3	32.4	33.3	31.6
This job may lead to permanent one	.5	.5	.4	6.2	5.9	6.3	12.3	13.2	11.8
Other economic reasons	6.2	7.0	5.7	8.1	12.0	4.3	7.7	9.0	6.7
Personal reasons	75.6	76.0	74.7	47.0	38.3	55.4	32.0	31.1	32.6
Flexibility of work schedule	25.9	21.9	34.0	28.5	22.9	33.9	17.2	15.8	18.2
Child care problems	3.1	1.3	6.6	1.8	.6	2.9	.5	.6	.4
Other family or personal obligations	1.3	.2	3.4	3.7	1.0	6.3	3.4	1.8	4.7
In school or training	.5	.2	1.0	4.4	3.4	5.3	4.7	5.6	4.1
Other personal reasons	44.7	52.4	29.7	8.6	10.4	6.9	6.1	7.4	5.2
Reason not reported	14.8	14.0	16.4	17.5	22.6	12.8	15.7	13.4	17.5
Prefer traditional arrangement									
Economic reasons	33.4	36.0	28.6	61.2	61.7	60.8	65.0	64.7	65.1
Could only find this type of employment	19.0	18.9	19.2	40.0	37.7	42.9	43.0	43.1	42.7
This job may lead to permanent one	2.9	4.4	–	11.0	8.6	13.6	14.5	15.7	13.2
Other economic reasons	11.4	12.5	9.4	10.1	15.6	4.5	7.7	5.9	9.1
Personal reasons	51.9	51.0	53.5	25.2	20.8	29.7	23.2	23.5	22.6
Flexibility of work schedule	19.3	17.4	22.9	13.6	10.7	16.7	10.8	11.4	10.2
Child care problems	3.7	2.2	6.1	1.3	.4	2.2	.4	1.0	-
Other family or personal obligations	2.0	.2	5.7	1.5	.8	2.2	2.8	.7	4.6
In school or training	.7	1.1	–	3.9	4.1	3.9	4.4	4.6	4.3
Other personal reasons	26.1	30.1	18.4	4.8	4.9	4.8	4.7	5.9	3.8
Reason not reported	14.7	13.2	18.0	13.6	17.5	9.5	12.0	11.4	12.1

NOTE: Detail may not sum to 100 percent due to rounding. Information was not collected for contract company workers because of the difficulty of devising questions that would capture the desired information for these workers. Dash indicates data not available.

the only kind of work they could find. And 12 percent were in the arrangement because they hoped that the job would lead to a permanent position. (See table 13.)

Job search

Job search activity among workers in alternative arrangements corresponds closely with their preference for and satisfaction with their current arrangements. (See table 14.) The pattern has stayed about the same since the 1995 survey: independent contractors had job search rates similar to those of traditional workers; and contract company workers, on-call workers, and temporary help agency workers had rates higher than those of their traditional counterparts.

The job search activity of independent contractors mirrored the activity of traditional workers. Only 3 percent of all independent contractors had searched for a new job in the 3 months prior to the survey; this rate was 4 percent for traditional workers. For independent contractors with 3 or fewer years of tenure, 7 percent had searched for a new job, compared with 6 percent of traditional workers.

In 1995, the job search activities of on-call workers and contract company workers were very similar. In 1999, however, the two groups diverged somewhat—particularly for workers with 3 or fewer years of tenure in the arrangement. On-call workers had a job search rate of 17 percent, and contract workers had a 12 percent rate. In the 1995 survey, the rates for new on-call workers and contract workers were 19 percent and 20 percent, respectively.

Temp workers saw a drop of about 7 percentage points in new job searches since the first survey. Their job search rate was still nearly six times the rate for traditional workers—about the same magnitude as in 1995.

As would be expected, there was considerably more job search activity for persons who preferred to be in a traditional work arrangement. Among the relatively small number of independent contractors who preferred to be someone else's employee, 23 percent were searching for a new job. For on-call workers who preferred a job in which they would work regularly scheduled hours, 24 percent were searching for a new

Table 14. Job search of employed workers in alternative and traditional work arrangements who searched for a job in the previous 3 months, by selected characteristics, February 1999

[Percent distribution]

Characteristic	Workers in alternative arrangements				Workers in traditional arrangements[1]
	Independent contractors	On-call workers	Temporary help agency workers	Contract company workers	
Total					
Total, 16 years and older					
Thousands	8,247	2,032	1,188	769	119,110
Percent	100.0	100.0	100.0	100.0	100.0
Searched for a job	5.3	19.4	27.4	12.7	5.3
Searched for a new job	3.2	14.1	24.2	10.9	4.3
"Permanent"	2.7	12.8	22.6	9.4	3.8
Temporary	.2	.7	.8	.5	.2
Any type	.4	.6	.9	1.0	.2
With 3 or fewer years of tenure[2]					
Searched for a job	10.8	23.3	28.8	14.4	8.0
Searched for a new job	7.0	16.6	26.1	11.8	6.3
"Permanent"	5.7	15.0	24.8	11.1	5.5
Temporary	.2	1.1	.6	([3])	.4
Any type	1.1	.5	.6	.4	.4
Prefer a traditional arrangement					
Searched for a job	28.6	32.0	37.3	([4])	([5])
Searched for a new job	23.4	24.0	34.2	([4])	([5])
"Permanent"	19.3	22.3	32.5	([4])	([5])
Temporary	0.7	.5	.8	([4])	([5])
Any type	3.5	1.2	.8	([4])	([5])

[1] Workers in traditional arrangements are those who do not fall into any of the "alternative arrangements" categories.

[2] Excludes persons who did not report specific tenure, but did report that tenure was more than 1 year.

[3] Less than 0.05 percent.

[4] Workers provided by contract firms were not asked their preference.

[5] Not applicable.

NOTE: Detail may not sum to total due to rounding.

job. For temps who preferred to work in a traditional arrangement, this rate was 34 percent. All of these rates dropped from the 1995 survey. For temps, the rate fell by 10 percentage points from 44 percent in 1995. Nearly all workers (regardless of their arrangement) who preferred a traditional arrangement were looking for a permanent job rather than a temporary job.

PREFERENCE FOR AND SATISFACTION WITH THEIR JOBS has increased among workers in alternative arrangements since 1995. There is a clear dichotomy between independent contractors and contract company workers on one hand, and temporary agency workers and on-call workers on the other, in terms of arrangement preferences. The former group overwhelmingly prefers to be in their arrangements, while the latter group prefers traditional arrangements.

Because of the claim that their job was the only one they could find, a significant proportion of temps and on-call workers might very well be unemployed without these arrangements. These alternative arrangements allow a level of flexibility that most traditional jobs do not. Mothers with small children, people going to school, and people taking care of family members can balance these responsibilities with working.

While there continue to be startling disparities between some of these arrangements and traditional jobs in terms of health insurance coverage, pension coverage, and earnings, these disparities are at least partially the result of differences in demographics, education levels, the occupational makeup of these arrangements, and personal choice. □

Notes

[1] The Current Population Survey (CPS) is a monthly survey of 50,000 households in the U.S. The first supplement to the CPS on contingent and alternative work arrangements was conducted in February 1995. Subsequent surveys were done in February 1997 and February 1999.

[2] The issue of "good jobs—bad jobs" is discussed in Neal H. Rosenthal, "More than wages at issue in job quality debate," *Monthly Labor Review*, December 1989, pp. 4–8. See also Joseph R. Meisenheimer II, "Services industry in the 'good' versus 'bad' jobs debate," *Monthly Labor Review*, February 1998, pp. 22–47.

[3] See, for example, Helene J. Jorgensen, *When Good Jobs Go Bad* (Washington, DC, 2030 Center, 1999).

[4] See, for example, Katharine G. Abraham and Susan K. Taylor, "Firms' Use of Outside Contractors: Theory and Evidence," *Journal of Labor Economics*, July 1996.

[5] See, for example, Anne E. Polivka, "Into contingent and alternative employment: by choice?" *Monthly Labor Review*, October 1996, pp. 55–74.

[6] See "Contingent Workers & Alternate Work Arrangements" articles in the *Monthly Labor Review*, October 1996.

[7] It should be noted that the classification of workers in alternative employment arrangements was made separately from their contingent work status, that is, whether the job was temporary or not expected to continue. Individuals employed in alternative arrangements were classified as contingent only if they met the requisite criteria.

[8] See, for example, Arne L. Kalleberg and others, *Nonstandard Work, Substandard Jobs* (Washington, DC, Economic Policy Institute and Women's Research and Education Institute, 1997).

[9] See Anne E. Polivka, Sharon R. Cohany, and Steven Hipple, "Definition, Composition, and Economic Consequences of the Nonstandard Workforce" in *Nonstandard Work: The Nature and Challenges of Changing Employment Arrangements* (Chicago, Industrial Relations Research Association, 2000).

[10] For an example of this type of analysis, see Marianne A. Ferber and Jane Waldfogel, "The long-term consequences of nontraditional employment," *Monthly Labor Review*, May 1998, pp. 3–12; see also, Lewis M. Segal and Daniel G. Sullivan, "The Nature of Temporary Services Employment: Evidence from State UI Data," *Journal of Economic Perspectives*, 1997.

[11] This analysis for those with 3 or fewer years of tenure was not done for the 1997 Contingent and Alternative Work Supplement; however, basic data on preference and reasons for being in the arrangements were collected that year.

[12] Nearly 18 percent of workers in the on-call arrangement who were surveyed did not provide a reason for being in the arrangement.

Flexible work schedules: what are we trading off to get them?

Flexible work schedules are spreading, but workers sometimes must be willing to increase their hours markedly, work evening shifts, or switch to part-time status, self-employment, or certain occupations to get flexibility in their schedules; this may entail a sacrifice of leisure time, compensation, or a predictable workweek

Lonnie Golden

The 1990s economic expansion not only whisked away decades-long stubborn labor market problems such as unemployment and stagnant wage rates, but also hosted the spread of flexible work schedules. By 1997, in the May Current Population Survey (CPS), more than 27 percent of full-time wage and salary workers reported that they had some ability to vary either the starting or ending time of their typical workday, more than double the rate observed in 1985.[1] Workers tend to regard flexible work-scheduling practices as a valuable tool for easing the chronic pressures and conflicts imposed by attempting to execute both work and nonwork responsibilities. The growing value of such daily flexibility to workers may reflect increases in labor force participation rates of parents, dual-income households, family annual work hours, weekly overtime hours, the premium for additional hours of work, college enrollment rates, and the aging of the workforce.[2] Moreover, employers are likely to be turning to flexible scheduling as an instrument for recruiting and retaining employees (particularly those facing a labor shortage climate) and for boosting job satisfaction and labor productivity.[3] Yet, the demand for such flexible work schedules on the part of workers appears still to exceed the supply provided by employers.[4]

This article examines the association between workers' access to flexibility in their work schedules, on the one hand, and their various work and job characteristics, on the other. In particular, it focuses on the levels of work hours and the types of jobs that either enhance or diminish a worker's chances of attaining a flexible work schedule. While the direction and magnitude of the trend in average work hours has been a source of much controversy, it is clear that paid work hours are growing for many segments of the workforce.[5] The trend toward greater flexibility in hours may be inextricably linked with a polarization of work hours that has become evident among workers in which one segment of the workforce may be working longer than standard hours and another segment shorter or nonstandard hours or jobs, in part to gain access to the daily flexibility needed to better balance the competing demands on their time.

Research analyses of data from previous May CPS supplements have detected a gradual trend toward a nonstandard workday and workweek in the United States. Work is increasingly being spread out, performed on the fringes of the typical workday, extending earlier in the morning or later into the evening.[6] Consequently, in 1997, only 54.4 percent of employed nonagricultural workers over age 18 worked a traditional 5-day workweek on a fixed daytime schedule.[7] The proportion working a 35- to 40-hour "standard" workweek was 29.1 percent in 1997, compared with 31.5 percent in 1991 and is considerably lower for men (decreasing from 29.5 percent to 26.5 percent over the years cited). In 1991, nonstandard schedules were adopted by workers much more for involuntary (for example, as a job requirement) than for voluntary (for example, to care for one's family) reasons, by an almost 2-to-1 margin. Working in the evening hours is much more common among part-time than full-time workers. Neither

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Table 1. Distribution of usual starting and ending times of the workday, full-time wage and salary workers aged 16 years and older, May 1997

Interval at work	Percent of workers beginning	Percent of workers ending
12:30 A.M. to 1:29 A.M.	0.1	0.6
1:30 A.M. to 2:29 A.M.	.1	.5
2:30 A.M. to 3:29 A.M.	.2	.3
3:30 A.M. to 4:29 A.M.	.5	.2
4:30 A.M. to 5:29 A.M.	1.7	.3
5:30 A.M to 6:29 A.M.	6.9	.5
5:30 A.M. to 5:59 A.M.	.8	.1
6:00 A.M. to 6:29 A.M.	6.1	.5
6:30 A.M. to 7:29 A.M.	21.1	1.7
6:30 A.M. to 6:59 A.M.	3.4	.2
7:00 A.M. to 7:29 A.M.	17.7	1.4
7:30 A.M. to 8:29 A.M.	32.6	1.0
7:30 A.M. to 7:59 A.M.	9.0	.4
8:00 A.M. to 8:29 A.M.	23.6	.7
8:30 A.M. to 9:29 A.M.	13.3	.2
8:30 A.M. to 8:59 A.M.	6.1	.1
9:00 A.M. to 9:29 A.M.	7.2	.1
9:30 A.M. to 10:29 A.M.	2.1	.1
10:30 A.M. to 11:29 A.M.	.8	.1
11:30 A.M. to 12:29 A.M.	.5	.2
12:30 P.M. to 1:29 P.M.	.5	.5
1:30 P.M. to 2:29 P.M.	1.0	1.9
2:30 P.M. to 3:29 P.M.	2.2	7.8
2:30 P.M. to 2:59 P.M.	.4	2.0
3:00 P.M. to 3:29 P.M.	1.8	5.8
3:30 P.M. to 4:29 P.M.	1.5	17.6
3:30 P.M. to 3:59 P.M.	.5	6.8
4:00 P.M. to 4:29 P.M.	1.0	10.7
4:30 P.M. to 5:29 P.M.	.6	29.5
4:30 P.M. to 4:59 P.M.	.2	8.6
5:00 P.M. to 5:29 P.M.	.4	20.9
5:30 P.M. to 6:29 P.M.	.5	13.1
5:30 P.M. to 5:59 P.M.	.1	5.1
6:00 P.M. to 6:29 P.M.	.4	8.0
6:30 P.M. to 7:29 P.M.	.9	4.6
7:30 P.M. to 8:29 P.M.	.8	2.1
8:30 P.M. to 9:29 P.M.	.5	1.1
9:30 P.M. to 10:29 P.M.	.6	1.2
10:30 P.M. to 11:29 P.M.	1.3	2.0
11:30 P.M. to 12:29 P.M.	.5	1.7
Time varies	7.3	9.2
Actual time not available	1.9	2.0

Harriet B. Presser and Amy G. Cox nor Daniel Hamermesh finds great differences in nonstandard work hours by occupation or industry, although Presser does point to their greater prevalence in service and technical and support occupations and in personal service industries.[8] Consequently, neither attributes changes in the pattern of timing of work and destandardization of the workday to either occupational or industrial shifts. Nor are demographic factors very consequential, although women being married or having children (depending on their ages) reduces the likelihood of being employed nonstandard hours or days.

Differentiation in work hours and schedules

The pattern of workers' daily work schedules may be observed from their responses to questions regarding their daily starting and ending times by intervals. Table 1 displays the frequency distribution of workers by their daily starting and ending times. Not surprisingly, given the growing presence of flexible scheduling, the typical 9-to-5 workday is not as representative of work-time patterns in the 1990s as it might have been in previous decades. A surprisingly high proportion of workers, 40 percent, is usually still at work past 5 P.M. (although the table does not specify what time each of these workers starts his or her workday). Also, 28 percent of the workforce is at work by 7:30 A.M. (although again, it is unclear what time these individuals typically finish their shifts). Finally, approximately 10 percent of the workforce cannot specify a typical ending time of the workday, mainly because that time is variable.

Previous research has yet to take advantage of the question in the May CPS Supplement about the flexibility of the worker's daily schedule. In this supplement, employed workers are asked, "Do you have flexible work hours that allow you to vary or make changes in the time you begin and end work"?[9] Thus, the 27 percent who answered in the affirmative in 1997 represent a rather broad estimate. Among these respondents would be any worker whose job or employer permits an informal flexible arrangement, rather than just a formal flextime or "gliding" schedule of work over the course of a day. Also, the frequency with which respondents can or do take advantage of this option is unknown. Another question respondents were asked was whether they worked on nontraditional shifts, such as evening, night, rotating, or split shifts. The regular ("basic") CPS questions include those inquiring about the number of actual and usual hours worked the previous week, as well as those inquiring about a host of demographic and other work characteristics of workers in the sample. Moreover, the CPS asks individuals who usually work part time if they are employed at full-time hours and vice versa. Finally, there are sufficient observations to group the respondents into a total of 52 "detailed" Standard Industrial Classification (SIC) industries and 45 "detailed" Standard Occupational Classification (SOC) occupations, which are then collapsed into 23 "major" industries and 14 "major" occupations.[10] Thus, the May 1997 CPS provides a rich source of data that allows economists to examine the interrelationships among the different dimensions of work hours—including their level, timing, and flexibility. It also provides an opportunity to examine another facet of workers' time at work that has remained unexplored in previous research: the variability of the workweek.

Despite the impressive gains in flexible daily work schedules, the analysis performed herein finds that the distribution of flexible schedules among workers is quite uneven according to demographic and job characteristics of workers, such as gender, race, education level, occupation, employment, and usual work hours. Multivariate regression analysis identifies empirically the various factors associated with the likelihood that a worker reports possessing the ability to vary his or her

daily starting or ending times for work. Certain work and job characteristics are associated with having either significantly greater or significantly lesser access to flexibility in one's schedule. Such characteristics include not only the typical set of personal and human-capital variables, such as gender, race, education, and work-related characteristics, including occupation and self-employment, but also the work-time status of workers—that is, their usual number of hours worked and their work shift. Some workers must either work very long workweeks, part time, evening shifts, or in selected highly skilled occupations suffering a shortage of labor, become self-employed, or further their formal education to obtain a degree beyond high school. This suggests that workers may enhance their chances of gaining flexibility in the timing of their work by altering their jobs or the hours they work.

Moreover, because about 10 percent of the employed work a variable workweek,[11] a similar set of characteristics is examined with respect to the likelihood that workers have a variable number of work hours per week. This analysis not only provides a fuller picture of workers' daily or weekly work times, but also reveals whether having flexibility in one's daily schedule tends to either lessen or increase the chances that a worker faces volatile hours. A set of demographic and job characteristics that give the worker more access to flexibility in his or her schedule may, in addition, either enhance or reduce the chances that that worker will face a variable, unpredictable duration of the workweek.

Standard economic models of labor supply focus attention almost exclusively on the average duration of work hours, rather than other temporal dimensions, such as flexibility or instability. Workers work a certain number of hours per week, given their compensation rate and the constraints imposed on them, including that of an often fixed number of hours per week required by their employer. Whatever time the worker spends away from work is assumed to add to his or her well-being ("utility") by being either self-directed leisure time or time spent producing household goods and services. Yet, in addition to its sheer volume, the daily *timing* of available time for leisure or household production may have a profound impact on the worker's well-being. The daily and weekly scheduling of work, as well as the many non-work-related responsibilities a person has (for example, attending classes at school), are often outside the direct control of the individual. The scheduling of work may frequently overlap or conflict with time slots workers need to execute their non-work-related responsibilities and activities, such as caregiving, volunteering, commuting, studying, and socializing. For a given stock of work and leisure hours, having some ability to adjust one's work schedule when one's non-work-related responsibilities change is a crucial feature of both a job and a workers' well-being. While Hamermesh usefully distinguishes between hours per day and days worked in a week, and between regular day and evening or night-shift work, economists generally do not focus on the flexibility dimension.[12] Nor is *flexibility* ever sufficiently distinguished from *variability* of hours through time.[13] To a worker, *flexibility* means an immediate and fully proportional adjustment of actual hours of work to both anticipated and unanticipated deviations in the worker's desired number of hours. Indeed, this same notion applies to a worker's preference for changes in the scheduling of his or her work hours.

Conventional tests of labor supply models have found that a worker's desire for longer or overtime hours may be diminished by certain factors, such as the worker's age, or enhanced by other factors, such as the size of the firm employing the worker.[14] Broader-based models find that the worker's desired hours of labor supply may be rising because of workplace and consumer culture. Longer hours are encouraged as a way for workers to earn promotions and improve their relative positioning with respect to relevant social reference groups inside the workplace.[15] Longer hours also can improve the worker's positioning toward social groups outside the workplace as a consumer.[16] In addition, longer hours may be perceived as an "insurance policy" or hedge against the risk of future job loss or income loss.[17] Further, laws, regulations, and their changing scope of applicability have a real impact on actual hours worked.[18] Finally, by facilitating greater flexibility in the allocation of work time, technological advances, such as the diffusion of telecommunications technology and "teleworking" (working in a facility remote from one's job site through the use of technology), may be lengthening workers' time spent at work.[19]

The findings in this article suggest that the rise in flexibility is no coincidence: it may be going hand in hand with the polarization of work hours, particularly at the high end, as manifested in an increasing proportion of individuals working extended hours (50 or more per week). In other words, some workers are trading off reduced leisure, others reduced compensation, in order to attain flexibility in their time spent at work.[20] Longer hours of work may be induced in part by the greater degree of autonomy many workers are being granted at the workplace in terms of the timing of those hours. Workers wishing to work standard hours are likely to be frustrated by the inflexibility of its daily timing, which, no doubt, explains the continuing excess demand for flexible schedules, despite their recently rising supply.[21] Many workers are probably induced to switch their job status to part time, self-employment, or a different occupation in order to attain more flexibility, perhaps at stages of their life cycle when such a benefit is needed most. But they tend to suffer a reduction in earnings and benefit coverage as a result.[22]

Workers' characteristics

Chart 1 demonstrates the difference in the distribution of flexible schedules by gender and age. Women aged 24 and younger actually have a greater incidence of flexible schedules, but the pattern reverses for women aged 25 and older relative to men. Indeed, while the growth of such access was across the board,

the existing inequality in access appears to be no less than it was in 1991. There is, however, surprisingly little difference by demographic group, although the share of men (except for teens) with flexible schedules is actually greater than that of women, who nonetheless exhibit a slight increase in access to daily flexibility in the prime childbearing years.

Table 2 shows that access to flexibility ranges widely across workers' "detailed" occupations (using the CPS supplement and supplement weights). While only 1 in 9 machine operators has a flexible daily work schedule, as many as 3 of 5 natural or mathematical scientists, lawyers, and sales representatives have such schedules. Professional and sales occupations tend to have much-higher-than-average flexibility of scheduling. The table also shows that having highly variable workweeks is a characteristic of computer equipment operator jobs, a true outlier in the sample, as well as farm and forestry jobs. Having variable hours is common, too, in transportation and construction jobs, as well as certain sales and service job classifications. Most professional, administrative, supervisory, and secretarial jobs tend to have a more stable, predictable workweek.

The first column of table 3 shows that there is not quite as much variation in the incidence of flexible schedules among industries as there is among occupations. The proportions by industry are highest in agriculture, but almost half of the workforce in "other professional services," insurance, and private households has a flexible schedule. Many of the service and trade industries and public administration are above the average. The lowest incidences are 19 percent in educational services, 13 percent in local government (not shown in table), and 10 percent to 20 percent in several manufacturing industries. Within the manufacturing sector, however, there is considerable variation. Some industries have higher-than-average flexible scheduling: printing and publishing; professional, photo, and watches; petroleum and coal; aircraft; and miscellaneous manufacturing industries, in each of which about 1 in 3 workers reports having a flexible schedule. (There may be some reliability issues in several detailed production industries—"other metals," tobacco, petroleum and coal, and leather goods—for which the total sample in the CPS supplement was less than 120.) The rate in these latter industries is more than double to more than triple the rate for workers in textile, leather, and primary metals industries (10 percent, 13 percent, and 14 percent, respectively).[23] Of all workers with flexible schedules, 18 percent are in the retail trade sector, a percentage that owes mainly to the disproportionate presence of jobs in that sector.

Correlation analysis finds that having variable hours is somewhat positively correlated with usual part-time status ($\rho = 0.44$, whereas $\rho = 0$ for usual full-time status). In addition, having variable hours is somewhat negatively correlated with the number of usual hours on one's primary job ($\rho = -0.30$), reinforcing

Chart 1. Flexible work schedule, by age bracket

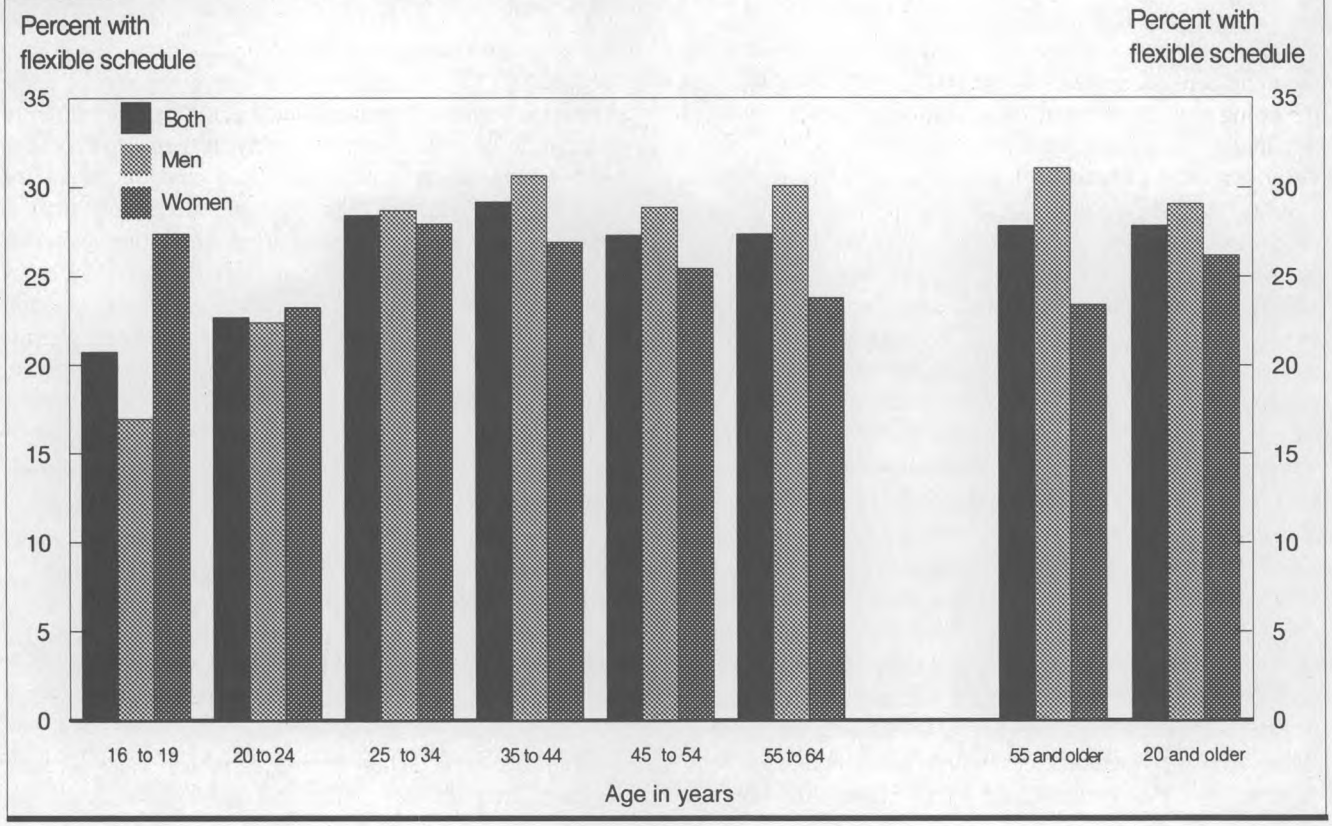

Table 2. Flexible schedules and variable weekly hours, ranked by occupation, May 1997

Rank	Detailed occupation[1]	Percent with flexible schedule	Rank	Detailed occupation[1]	Percent whose usual hours vary
1	Farm operators	77.9	1	Computer equipment operators	81.8
2	Natural scientists	60.2	2	Farm operators	30.0
3	Lawyers and judges	58.6	3	Forestry occupations	22.3
4	Sales representatives, finance and business services	58.1	4	Construction trades	19.0
5	Mathematical scientists	55.9	5	Personal service occupations	18.6
6	Teachers, college and university	54.6	6	Sales representatives, finance and business services	17.1
7	Forestry occupations	53.8	7	Farm workers	15.2
8	Other professional	50.3	8	Motor vehicle operators	14.9
9	Sales representatives and commodities, except retail	49.8	9	Other technicians	13.8
10	Engineers	47.9	10	Food service occupations	11.8
11	Managers	47.9	11	Other transportation	11.5
12	Sales supervisors and proprietors	45.7	12	Sales workers, retail and personal services	10.6
13	Sales-related occupations	44.4	13	Health service occupations	9.8
14	Other technicians	44.0	14	Freight handlers	8.8
15	Financial records, processing	43.5	15	Construction labor	8.6
16	Private household service	43.3	16	Other handlers and laborers	8.2
17	Health-diagnosing occupations	42.6	17	Other administrative support occupations	8.2
18	Management-related occupations	41.2	18	Lawyers and judges	8.0
19	Public administration	41.0	19	Health technicians	7.9
20	Farm workers	36.1	20	Cleaning and building service occupations	7.7
21	Personal service occupations	35.5	21	Health-diagnosing occupations	6.8
22	Engineering and science technicians	33.1	22	Machine operators and tenders, except precision	5.9
23	Sales, retail and personal services	30.7	23	Mechanics and repairers	5.8
24	Construction trades	30.4	24	Fabricators	5.6
25	Administrative support for supervisors	29.3	25	Other precision production occupations	5.4
26	Secretaries, stenographers, and typists	27.1	26	Financial records, processing	4.9
27	Motor vehicle operators	27.0	27	Sales representatives and commodities, except retail	4.9
28	Mechanics and repairers	24.7	28	Mail and message distributing	4.6
29	Other administrative support	24.3	29	Engineers	4.2
30	Health assessment and treating	23.3	30	Managers	4.2
31	Food service occupations	22.1	31	Engineering and science technicians	4.2
32	Cleaning and building services	21.2	32	Natural scientists	4.0
33	Health technicians	20.6	33	Sales supervisors and proprietors	4.0
34	Other precision production	19.9	34	Protective service occupations	3.1
35	Construction labor	19.5	35	Sales-related occupations	2.9
36	Health service occupations	19.4	36	Other professional	2.8
37	Computer equipment operators	19.3	37	Administrative support for supervisors	2.6
38	Freight handlers	17.8	38	Management-related occupations	2.0
39	Protective service occupations	16.2	39	Teachers, except college and university	1.7
40	Other handlers and laborers	15.1	40	Mathematical scientists	1.6
41	Mail and message distributing	14.4	41	Health assessment and treating	1.6
42	Fabricators	13.9	42	Secretaries, stenographers, and typists	.9
43	Other transportation	13.6	43	Public administration	.0
44	Teachers, except college and university	12.8	44	Teachers, college and university	—
45	Machine operators and tenders, except precision	11.1	45	Private household service	—

[1] Workers employed by the Armed Forces and unemployed persons are excluded.

NOTE: Dash indicates sample size too small to yield reliable data.

the notion that workers putting in fewer average hours face more variability in their workweeks. Thus, part-timers appear to be more prone to having variable, unpredictable workweeks, either because they have relatively less control over the length of their workweek or because they have more leeway in their arrival and departure times or in the particular days of the week that they work. Moreover, the last two rows of table 4 suggest that part-time workers whose workweeks vary have a high incidence of flexibility in their daily hours, compared with full-time workers. This in turn suggests that part-time workers are deployed by employers in part to adjust their labor input levels instantaneously in response to fluctuations in the demand for their products or services. Employers thus are likely to gain more variable workweeks by expanding their part-time job base, which has much less of a "regular" workweek.[24] Interestingly, having a flexible schedule correlates somewhat positively with having variable hours, both generally ($\rho = .24$) and a bit more so with workers whose "daily ending times vary" ($\rho = .30$). The positive correlation is highest in three particular major occupational classifications: sales, crafts, and farming. This suggests

that such workers may have the most discretion to either lengthen or truncate the end of their workday.

Table 3 shows that, by industry, the incidence of unpredictable workweeks (hours vary) ranges from less than 2 percent up to the more than 20 percent of the workforce found in agriculture and in private household services. The incidence of unpredictable workweeks also is well above average in construction, transportation, and selected manufacturing (tobacco) and service (auto repair, entertainment and recreation, and personal services) industries. The next-to-last row of table 3 displays the correlation in the industry data between flexibility of schedule, on the one hand, and length of hours, variability of hours, and nonstandard forms of employment, on the other. The somewhat positive correlation of flexibility with long hours (at least 5 hours of usual "overtime") intimates that industries using longer hours per worker do so with more flexible starting and ending times. The significantly positive correlation of flexibility with variable hours suggests that having flexible schedules makes workers' workweeks less stable or predictable than does having fixed daily schedules. For example, there is also a slight positive correlation between a flexible schedule and variable hours in sales, craft, and farming occupations (+0.28). In addition, there is a significant positive correlation of both flexible schedules and variable workweeks with the sum total of nonstandard workers used in an industry. This correlation suggests either that employers using nonstandard workers also tend to use nonstandard work scheduling practices for their regular workforce or that the prominent presence of such nonstandard workers (predominantly independent contractors and workers contracting with a temporary agency) in an industry increases the utilization of flexible starting and ending times.[25] Whichever of these alternatives is true, it suggests that nonstandard workers are deployed in part as a complementary method for employers to achieve numerical flexibility of labor, along with variable workweeks and flexible scheduling.

Table 4 reveals that the frequency distribution of flexible scheduling across ranges of usual weekly hours is U shaped. Only 22.7 percent of workers reporting that they usually worked 40 hours per week have flexibility in scheduling. This figure is distinctly lower than the 33 percent of those working 41 to 49 hours per week and the 33 percent of those in the 35-to-39-hours bracket. Also, it is far below the 52 percent with flexible schedules who report averaging 50 or more hours per week, and it falls well short of the 45 percent and 62 percent working 21–34 and 1–20 hours per week, respectively. Notwithstanding this latter correlation with fewer hours, workers' access to flexible scheduling is positively correlated with the usual length of their workweek ($\rho = 0.55$). Among major occupations, this correlation is highest in protective service jobs, with managerial and administrative jobs coming in second. The correlation is negative for administrative support workers, suggesting that clerical workers must actually reduce the length of their workweek—for example, to part time—in order to gain greater flexibility in the daily timing of their work. The following tabulation reinforces this pattern, showing that both mean usual hours and actual hours are longer for full-time workers:

Type of schedule	*Mean usual hours*		*Mean actual hours, full-time workers only*
	All workers	*Full-time workers only*	
Flexible	33.7	45.82	47.32
Inflexible	35.6	42.69	43.93
Difference (flexible minus inflexible)	–1.9	3.13	3.39

Correlation coefficient, usual and actual hours =.885

This tabulation suggests, perhaps more persuasively than the evidence provided by table 3, that full-time workers with daily flexibility tend to work 3 or more additional (usual or actual) hours per week than those with fixed schedules.

In contrast, there is surprisingly little correlation between whether a worker has a flexible schedule and the worker's personal demographic characteristics. For example, by major occupation, the highest correlation coefficient between one's marital status and flexibility is +0.23, for the managerial positions. Interestingly, the managerial occupations appear to yield slightly *less* flexibility in schedule for women and for nonwhites (with correlation coefficients of about –0.20 and –0.26, respectively). However, in the same occupation, age is somewhat positively correlated with flexible schedules, with a correlation coefficient of 0.34, the highest among all major occupational categories. Education level, by contrast, has virtually no measurable correlation with flexible schedules, although by occupation, less education is slightly associated with less flexibility in farming and in sales occupations and with more flexibility for those with college degrees in professional occupations. Finally, being usually on full-time status actually hinders the access of administrative support workers to flexible schedules (–0.51), as it does (although less so) for those in craft, laborer, farming, and machine operator jobs. All this suggests that lesser skilled workers and traditionally disadvantaged demographic groups have slightly less access to flexibility in their schedules, particularly if they are working full-time jobs.

Table 3 also shows the somewhat inverse relationship between unemployment and flexible scheduling by detailed industry ($\rho = -0.30$). The relationship suggests that labor shortages tend to give rise to more use of flexible schedules, while labor surpluses stifle flextime somewhat. By way of contrast, the unemployment rate has a negligible association with both the variability of hours and the proportion of nonstandard workers. Thus, part of the increase in the availability of flexible schedules to workers is attribut-

Table 3. Proportions of workers with flexible, variable, and long work hours, and correlations, by detailed industry, May 1997

Detailed industry	Percent on flexible schedule	Percent working more than 45 hours per week	Percent whose hours vary	Percent of nonstandard workforce[1]	Unemployment rate (percent)	Percent of all workers
Agricultural services	45.5	17.3	21.8	35.9	1.6	.8
Agriculture, other	62.3	31.5	27.3	14.1	1.3	1.5
Mining	24.1	29.2	9.6	7.3	2.7	.5
Construction	34.9	19.4	13.6	30.4	2.3	6.3
Lumber	21.8	22.4	9.9	7.9	2.8	.7
Furniture	20.8	19.6	3.4	4.9	1.3	.6
Stone and glass	21.8	23.6	5.1	5.3	2.1	.5
Primary metals	14.4	27.9	5.6	.3	4.2	.6
Fabricated metals	19.9	24.8	4.5	3.9	2.8	1.1
Machinery, nonelectric	26.3	33.8	4.2	3.7	3.1	2.0
Machinery, electric	26.4	24.7	3.7	3.8	2.1	1.5
Motor vehicles	15.8	33.4	2.9	2.7	3.1	1.0
Aircraft	30.2	26.5	7.1	3.4	7.0	.4
Other transportation equipment	29.1	21.2	3.0	2.1	1.5	.4
Professional, photo, and watches	33.0	24.9	1.4	3.2	.6	.6
Toys and sporting goods	28.6	19.4	10.6	3.2	4.8	.1
Miscellaneous manufacturing	30.7	22.0	6.3	8.1	1.1	.4
Food	17.7	24.7	6.8	2.4	2.5	1.3
Tobacco	15.4	5.0	17.5	4.1	7.7	.1
Textiles	10.0	15.7	9.8	3.3	2.9	.5
Apparel	13.7	14.1	3.6	4.3	2.9	.7
Paper	16.9	23.9	6.2	2.4	2.8	.5
Printing and publishing	34.8	22.1	6.5	7.8	2.4	1.4
Chemicals	31.7	28.8	5.4	2.4	2.2	1.0
Petroleum and coal	32.1	28.3	5.6	3.4	1.2	.1
Rubber and plastic	15.5	19.5	4.7	3.1	2.3	.7
Leather	13.3	10.2	4.6	.0	5.0	.1
Transportation	26.1	25.1	12.4	10.8	2.4	4.4
Communication	31.3	23.3	4.7	4.2	2.5	1.2
Utilities	22.2	16.4	4.6	3.8	1.5	1.1
WholesaleTrade	36.7	30.5	6.3	7.8	2.0	3.8
Eating and drinking	29.0	13.8	10.6	4.1	2.3	5.1
Other retail trade	34.1	18.6	8.8	6.3	2.4	11.4
Banking and finance	28.2	22.5	4.3	4.4	2.3	2.7
Insurance and real estate	47.5	19.9	9.1	15.1	2.1	3.4
Private household service	41.7	11.2	21.2	27.7	2.7	.7
Business services	37.3	21.2	8.7	33.0	2.3	4.9
Auto repair services	39.8	27.1	13.6	16.8	2.9	1.8
Personal services	37.5	14.6	13.5	13.5	2.0	2.6
Entertainment and recreation	35.4	17.2	12.7	14.3	2.3	1.8
Hospitals	22.8	9.7	6.3	3.7	2.5	3.9
Health services	28.2	12.8	7.2	8.5	2.7	4.9
Educational services	19.3	17.0	6.0	4.5	2.0	8.0
Social services	30.6	14.2	6.1	8.6	2.9	2.5
Other professional services	49.4	29.0	10.6	18.1	2.2	4.6
Forestry and fisheries	63.9	26.8	18.4	18.1	3.3	.1
Justice, public order, and safety	20.7	20.6	3.8	3.2	2.5	1.7
Administration of human resources	38.2	5.0	2.2	.0	2.2	.7
National security, internal	35.9	11.5	3.4	2.1	3.8	.5
Other public administration	34.4	9.6	2.7	1.6	1.8	1.4
No industry response given	...	...	...	...	2.3	1.5
Correlations with percentage of workers with a flexible schedule	...	.27	.60	.60	–.30	...
Correlations with percentage of workers whose hours vary	...	...	...	.69	.14	...

[1] Data from February 1997 Contingent Work Supplement to the CPS.

NOTE: Armed Services employment is omitted. "Other metals" industry had a very small sample size and was omitted from the table.

able to the prolonged cyclical expansion of the 1990s: employers may have been offering such flexibility to recruit and retain workers as labor markets tightened.[26]

Likely users of flexible schedules

Which factors explain the cross-sectional variation among individuals in their access to flexibility in their daily schedules? The probability that a given worker in the sample will be on a flexible schedule or will work variable hours is likely to be linked to both the worker's demographic characteristics and the characteristics of his or her job. To answer the preceding question requires econometric estimations, conducted by merging the CPS Supplement with the regular CPS questions containing information regarding the personal and work characteristics of the employed. Whether an individual reports that he or she has the flexibility to control either the starting or ending time of the workday may depend on four general sets of factors: (1) personal characteristics, such as gender, race, marital status, and age; (2) human-capital characteristics, such as one's education level and whether one attended college in conjunction with working; (3) job characteristics, such as the occupation and industry in which the worker is employed, whether the individual is self-employed, and whether he or she is a union member; and (4) one's work hours status, such as whether one usually works full time or part time, the actual average duration of one's weekly hours, whether one works on a nonstandard time schedule, and whether the length of one's workweek is variable.[27]

The likelihood that an individual in the sample has a flexible work schedule (F) is estimated. A virtually identical model is then estimated for the likelihood of having variable hours (V). In each case, the likelihood is determined by a worker's personal (X) as well as job (Y) characteristics and the vector of estimated coefficients—β and δ, respectively:

$$F_i, V_i = \alpha + X_i\beta + Y_i\delta + \varepsilon$$

The model is estimated with the use of probit analysis. The dependent variable is bivariate, taking on a value of unity if the worker answers that he or she has "flexible work hours that allow you to vary or make changes in the time you begin and end work." The estimated coefficients represent the marginal probabilities that an individual possessing a given characteristic has access to a flexible daily work schedule.[28]

Table 5 displays the regression results of the model, beginning with demographic variables only and then adding sets of explanatory variables progressively rightward by column. The inclusion of job status, occupation, and usual full- or part-time status appears to improve the overall explanatory power of the model. Neither the estimates nor the significance of the coefficients proved very sensitive to the model specified, with a few minor exceptions, such as the demographic characteristics.

Table 4. Percentage of workers with flexible schedules, by average-usual-weekly-hours bracket, May 1997

Hours	Percent with flexible schedule	Number in supplement sample with flexible schedule
1–20	62.2	2,492
21–34	45.0	1,584
35–39	33.2	1,393
40	22.7	5,585
41–49	33.3	2,053
50 or more	52.2	5,550
Hours vary:		
Full-timers	61.2	2,770
Part-timers	72.8	1,075

Table 6 contains the results when "usual full-time status" is broken out into five different work-hour classifications (with at least one omitted, to serve as a reference group). Table 7 presents the results when workers' detailed occupational and industry classifications are controlled for.

The clear pattern that emerges from the empirical results is that, while many personal characteristics either significantly improve or diminish the likelihood of having flexibility in one's work schedule, access to such flexibility is significantly affected by the workers' job status and work-hour classification. On the personal side, nonwhites are about 50 percent to 60 percent less likely than whites to be on a flexible work schedule. Women also are significantly less likely than men to have such flexibility, by roughly the same percentage. However, this lack of access appears to be attributable in large part to the occupational segregation of women: their reduced likelihood of flexibility shrinks down to less than a 10-percent greater disadvantage relative to men when major occupational controls are included in the analysis and to no more than a 4-percent disadvantage when detailed occupational controls are included. Indeed, the relatively lower access of women to daily flexibility is not significantly different from zero if their detailed industry, as well as occupation, is taken into account.

Access to flexible schedules is gained with age, although it tapers off at older ages. Controlling for the occupational distribution, as well as some other job factors, however, indicates an exponential effect of age. This effect suggests that experience, seniority, or job tenure helps workers gain more access to control over the timing of their workday.

Married workers are significantly more likely than unmarried workers to have a flexible work schedule, although the magnitude of significance is small—on the order of about 8 percent. This greater likelihood may reflect either the fact that married workers are more likely to be parents and are offered, perhaps informally, a greater degree of flexibility by employers compared with unmarried workers or the fact that married workers are more apt to utilize formal flextime systems that employers have instituted in the workplace.

Table 5. Likelihood of having flexible starting and ending times, probit estimates, marginal effect of personal and work characteristics

Variable	Coefficient	*z*-statistic	Coefficient	*z*-statistic	Coefficient	*z*-statistic	Coefficient	*z*-statistic
Age	0.0907	49.625	0.0847	44.01	–0.0079	–2.79	0.0116	3.98
Age squared	–.0010	–50.804	–.0009	–45.70	.0004	11.67	.0001	3.58
Doctoral degree	–.3750	–5.617	–.2124	–3.11	.5128	5.45	.5042	5.33
Master's degree	.3046	9.486	.4276	12.73	.6236	15.53	.6188	15.30
Bachelor's degree	.1834	7.117	.2272	8.42	.4694	15.04	.4475	14.22
Associate's degree	–.3638	–10.803	–.1872	–5.39	.1246	3.13	.1436	3.59
Some college	–.1523	–5.967	–.0619	–2.31	.1651	5.26	.1113	3.51
High school diploma	–.4030	–16.315	–.2612	–10.08	.1150	3.76	.0688	2.23
Less than high school	–.8019	–29.221	–.6604	–22.96	–.1445	–4.09	–.2693	–7.51
Nonwhite	–.4911	–32.488	–.6011	–37.97	–.4622	–25.41	–.5853	–30.91
Female	–.2787	–28.408	–.2369	–23.45	–.0357	–2.62	–.1000	–7.20
Married	.1524	13.638	.1255	10.94	.0925	6.78	.1079	7.71
College student	...	...	.1979	5.54	.5042	11.33	.2780	6.11
Self-employed	...	...	1.4975	64.96	1.0746	43.10		
Union member	...	...	.0734	1.94	.0563	1.42	.1068	2.67
Usually work part time	...	...	...	...	...	...	.9039	21.57
Usually work full time	...	...	...	...	...	...	–.4794	–28.50
Occupation:[1]								
Managerial	...	...	...		.6737	4.30	.7413	4.78
Professional	...	...	...	...	.4672	2.95	.5201	3.32
Technicians	...	...	...	...	.5920	3.59	.6149	3.76
Sales	...	...	...	...	.7076	4.53	.7019	4.54
Administrative support and clerical	...	...	...	...	.1220	.78	.0775	.50
Other service	...	...	...	...	.2191	1.39	.0669	.43
Craft	...	...	...	...	.2614	1.67	.2594	1.67
Operators	...	...	...	...	–.2784	–1.75	–.2348	–1.49
Transportation	...	...	...	...	.1599	1.01	.1901	1.21
Laborers	...	...	...	...	.0356	.22	–.0151	–.10
Farming	...	...	...	...	.8337	5.23	.7990	5.06
Constant	–2.1217	–45.199	–2.1796	–43.79	–1.3195	–7.85	–1.2122	–7.27
Pseudo R^2	.136	...	.186	...	.185	...	.208	...
n	56,982	...	88,728	...	56,982	...	56,982	...

[1] Protective service is dropped due to multicollinearity. Private household service also is omitted.

NOTES: Regression results begin with demographic variables and add sets of explanatory variables progressively rightward by column. Dependent variable = 1 if worker reports being able to vary starting or ending times of work.

Finally, workers' levels of education influence their access to flexible schedules, although not quite in a linear fashion.[29] Workers who have not finished high school are highly likely to be excluded from flexibility in their schedules. Interestingly, so are those with doctoral degrees, although this is entirely attributable to their occupational distribution. Also, a worker who is simultaneously attending college is significantly more likely to be on a flexible schedule, again indicating either that employers are more accommodating to these individuals or that those workers are more apt to request or take advantage of flextime. The results suggest that, given one's occupation, workers enhance their access to flexibility either by enrolling in or completing college, especially when they earn an advanced degree.

Perhaps the most fascinating results are the differences by workers' usual hours. Tables 5 and 6 show that being a part-time worker more than doubles a person's chances of having flexible starting and ending times for work. However, table 7 reveals that about half of this increased likelihood is traceable to the detailed occupation or industry in which the worker is employed. At the other end of the spectrum, workers who report very long hours—more than 50 hours per week—increase their likelihood of having a greater influence over the starting and ending times of their work, by 8 percent to 21 percent.[30] In contrast, working exactly 40 hours per week is associated with a less flexible schedule, on the order of about 15 to 22 percent. Somewhat surprisingly, the flexibility payoff to working longer hours is not delivered to those working in the range of 41 to 49 hours per week (or to those working 35 to 39 hours per week). Thus, only workers who average at least 10 hours a day in a traditional 5-day workweek, or workers who put in at least 1 extra day per week, have a greater likelihood of being able to alter either the starting or ending time of their typical workday.

Reporting that the usual number of hours vary too widely from week to week to be specified precisely is strongly positively associated with having more flexibility in one's schedule, significantly heightening the likelihood of having a flex-

ible starting or ending time by 0.68 to 0.78 basis point. What is more, the association is even stronger for part-time workers whose hours usually vary. The suggestion is that workers with an enhanced ability to alter their daily starting or ending time for work are trading off stability in their usual weekly number of hours. In this regard, working on a "standard" day schedule reduces the likelihood that a worker has a flexible work schedule by 0.16 to 0.50 basis point. (Working on a generally nonstandard schedule *increases* the probability, by an even greater 0.75 point.) Working on nonstandard shift time, however, does *not* guarantee having more flexible starting and ending times: Those working an evening shift do improve their access to flexibility in their schedules, but those working the night shift actually have a reduced likelihood of flexible times. Those who report working on an irregular schedule arranged by their employer, presumably some (nonrotating) mix of regular day, evening, or night shifts, do gain some flexibility by working such irregular shifts.

For many workers, their occupation may influence their access to flexibility. Among major occupational classifications, when individual characteristics of workers are controlled for in the analysis, managerial, professional, technical, sales, and farming jobs provide greater access to flexibility in the schedule. Service (other than household or protective) and craft jobs may weakly enhance workers' chances of attaining flexibility.[31] Operators appear to get reduced access to flexibility, although not necessarily significantly, because the reduction is not robust to all model specifications.

Among detailed occupations, a worker's probability of having a flexible daily schedule is increased significantly if the worker is employed in a few particular occupations: mathematics and computer science professional; freight, stock, and material handler; and farm worker. The likelihood of having access to flexibility rises somewhat for those in secretarial positions. In contrast, as many as 13 detailed occupational classifications, including health assessment and treating occupations, lawyers and judges, supervisors of clericals, financial records and processing occupations, protective service, food service, precision production, construction trades, and fabricators, assemblers, inspectors, and samplers, yield a reduced likelihood of having flexibility, all other things being equal. To a lesser degree, computer equipment operator, cleaning and building services, and construction laborer occupations also may offer less flexibility in the work schedule.[32]

A few of the detailed industry classifications shown in table 7 significantly alter the likelihood of attaining flexibility when the worker's occupation and other characteristics are taken into account. (No one *major* industry classification, however, significantly alters the likelihood of having flexibility.) Only six of the detailed industries enhance the worker's chances of attaining a flexible schedule—in order of size of the industry's positive effect, justice and public safety; manufacturing of transportation equipment; manufacturing other than motor vehicles, aircraft, and miscellaneous industries; educational services; construction (perhaps weakly); and toys and sporting goods manufacturing (again, perhaps weakly). No nonagricultural industries of note significantly reduce a worker's access to flexibility, taking into account the worker's occupation and other characteristics.

While the industry in which one's job is located may have limited bearing on the likelihood of having access to flexible scheduling, controlling for industry in the analysis does affect the likelihood of some occupations being associated with greater flexibility. For example, the greater flexibility enjoyed by both mathematical and computer scientists (and perhaps weakly by those in secretarial positions) is attributable at least in part to the industry distribution of these jobs. In addition, the reduced likelihood of access to a flexible schedule endured by workers in health assessment and treating occupations, lawyers and judges, computer equipment operators, and perhaps food service employees is attributable to their concentration in certain industries in which work schedules tend to be inflexible.

Working in either Federal or local branches of government reduces the likelihood of having a flexible schedule. This is surprising, given the efforts of the Federal Government over the last two decades to establish more flextime work schedules for Federal employees, in part as a model to be exported to the private sector. In addition, it is unexpected, given the ability of State and local governments to substitute compensatory time in lieu of pay for overtime hours if such an arrangement is formally agreed upon by individuals or collective bargaining agents. Apparently, such a policy does not translate into more flexibility for workers in their daily working hours.[33]

Being self-employed rather than a payroll employee more than doubles the likelihood that a worker has the ability to vary his or her starting and ending times of work. Indeed, having a flexible schedule is clearly a major reason to become self-employed, despite the fact that the average number of hours the self-employed spend working is relatively longer than that of payroll employees.[34] Similarly, being a union member tends to improve a worker's access to flexibility, although the effect is neither particularly strong nor always significant. (For example, the positive effect dissipates when the worker's industry is also taken into account.) The positive effect, however, is counterintuitive, running counter to a conventional assumption and a past empirical finding that union membership is associated with *less* individual control over one's work time.[35]

Finally, being paid on an hourly basis appears to diminish a worker's access to a flexible schedule, at least among the subsample of the CPS that is asked a question pertaining to that category. However, being paid on a nonhourly basis does not appear to be significantly related to the likelihood of having flexiblity, although observations on the category are available only for the outgoing rotation (quarter sample) for May 1997.

In sum, more than 1 in 4 employed individuals now have

Table 6. Likelihood of having flexible starting and ending times, probit estimates, marginal effect of work-hour characteristics

Variable	Controls added for—													
	Long hours		Standard hours		Nonstandard hours				Government		Shifts		Hours vary	
	Co-efficient	z-statistic	Co-efficient	z-statistic	Co-efficient	z-statistic	Co-efficient	z-statistic	Co-efficient	z-statistic	Co-efficient	z-statistic	Co-efficient	z-statistic
Age	−0.0006	−0.19	0.0017	0.60	0.0024	0.82	0.0017	0.60	0.0723	36.17	−0.0007	−0.25	−0.0112	−0.25
Age squared	.0003	8.61	.0003	7.59	.0002	7.44	.0002	7.50	−.0007	−35.32	.0003	8.65	.0004	11.93
Doctoral degree	.4884	5.16	.5209	5.49	.4054	4.28	.4205	4.44	−.1482	−2.10	.4659	4.94	.5548	5.81
Master's degree	.6181	15.21	.6834	16.70	.5086	12.26	.5109	12.30	.4486	12.98	.6426	16.02	.7258	17.61
Bachelor's degree	.4327	13.73	.4395	13.96	.3683	11.47	.3983	12.35	.2242	8.13	.4106	13.12	.4815	15.07
Associate's degree	.1476	3.69	.1818	4.54	.0866	2.14	.0976	2.41	−.1380	−3.86	.1368	3.42	.2278	5.61
Some college	.1374	4.34	.1558	4.92	.0580	1.79	.0728	2.24	−.0125	−.45	.1515	4.84	.1995	6.22
High school diploma	.0935	3.03	.1205	3.91	.0285	.91	.0329	1.05	−.2280	−8.55	.0485	1.59	.1267	4.04
Less than high school	−.2013	−5.63	−.1770	−4.94	−.2794	−7.68	−.2824	−7.75	−.5782	−19.32	−.2428	−6.82	−.1456	−4.01
Nonwhite	−.5493	−29.25	−.5508	−29.29	−.5677	−30.12	−.5752	−30.54	−.6324	−37.25	−.5276	−27.98	−.5962	−31.21
Female	−.0712	−5.13	−.0858	−6.15	−.0668	−4.80	−.0586	−4.20	−.2057	−19.43	−.1093	−7.84	−.0418	−2.97
Married	.0773	5.56	.0749	5.37	.0818	5.86	.0935	6.67	.0851	7.19	−.1062	7.61	.0787	5.64
College student	.3824	8.49	.0452	.00	.3695	8.20	.3570	7.91	.2488	6.65	.3540	7.78	.3932	8.71
Federal Government	...	...	...	...	...	...	...	...	−.3411	−5.05	...	...	...	...
State government	...	...	...	...	...	...	...	...	−.0301	−.25	...	...	...	...
Local government	...	...	...	...	...	...	...	...	−.6343	−8.98	...	...	...	...
Self-employed	1.0091	39.47	1.0130	39.65	.9894	38.53	1.0120	39.45	1.4499	61.58	1.1109	43.80	1.0148	39.86
Union member	.0374	.93	.0715	1.77	.0300	.75	.0259	.65	.0641	1.63	.0682	1.71	.0888	2.19
Usual part time	1.2024	29.73	1.1132	27.24	1.1862	29.31	1.1595	28.60	1.4860	37.72	1.1466	28.46	.6603	15.04
Standard day	−.2945	−19.70	−.2449	−16.02	−.2880	−19.28	−.2748	−18.37	.4968	36.35	...	...	...	...
Workweek:														
50 or more hours	.1806	10.95	.0780	4.39	.1249	7.37	.0834	4.82	.2114	11.25	...	...	.1555	8.58
41–49 hours	...	...	...	...	−.2880	−14.05	−.3184	−15.42	−.1145	−5.44	...	...	...	...
40 hours	...	...	−.2205	−15.35	...	...	...	...	−.1592	−10.08	...	...	−.1455	−9.85
35–39 hours	...	...	...	...	...	...	−.3330	−12.68	−.1985	−7.54	...	...	...	...
Hours vary	...	...	...	...	...	...	...	...	...	...	...	...	.6796	27.60
Occupation:														
Managerial	.7584	4.87	.7457	4.78	...	...	.7799	5.04	...	...	.6800	4.35	.6354	4.04
Professional	.5699	3.63	.5624	3.57	...	...	.5794	3.71	...	...	.5147	3.26	.4281	2.69
Technicians	.6484	3.96	.6659	4.05	...	..	.6190	3.80	...	...	.5653	3.44	.5549	3.35
Sales	.7492	4.83	.7066	4.54	...	...	.7613	4.93	...	...	.7121	4.57	.6014	3.83
Administrative support and clerical	.1991	1.28	.1953	1.25	...	...	.1631	1.05	...	...	.1317	.84	.0502	.32
Other service	.1599	1.02	.1126	.72	...	...	.1432	.92	...	...	.1717	1.09	.1118	.70
Craft	.3403	2.18	.3409	2.18	...	...	.3093	2.00	...	...	.2943	1.88	.2130	1.35
Operators	−.2295	−1.45	−.2087	−1.32	...	...	−.2542	−1.62	...	...	−.2302	−1.45	−.2852	−1.79
Transportation	.1527	.97	.1360	.86	...	...	.1489	.95	...	...	.0987	.62	.0366	.23
Laborers	.0580	.37	.0489	.31	...	...	.0313	.20	...	...	.0401	.25	−.0249	−.16
Farming	.8608	5.43	.8287	5.21	...	...	.8401	5.33	...	...	.8387	5.27	.6538	4.08
Work shift:														
Evening	...	...	...	...	...	...	...	...	...	.1552	4.66	...	...	...
Night	...	...	...	...	...	...	...	...	...	−.3628	−6.79	...	...	...
Irregular	...	...	...	...	...	...	...	...	...	.8302	30.26	...	...	...
Constant	−1.2742	−7.62	−1.2389	−7.39	...	...	−1.1943	−7.17	−2.3067	−45.05	−1.4494	−8.62	−1.1835	−7.00
Pseudo R^2 =	.198	...	.207	...	.226	...	.2080	...	.2620	...	.2180	...	.21	...
Chi-square	15,200	...	15,824	...	23,054	...	15,953	...	26,786	...	16,072	...	16,346	...
n	56,982	...	56,982	...	56,982	...	56,982	...	56,982	...	56,982	...	56,982	...
Logarithm of likelihood	−30,618	...	−30,306	...	−39,689	...	−30,241	...	−37,823	...	−30,182	...	−30,046	...

NOTE: Dependent variable = 1 if worker reports being able to vary starting or ending times of work.

Table 7. Probit estimates of likelihood of having a flexible schedule, by detailed industry and occupation

Has a flexible schedule	Detailed occupations		Detailed occupations and industries	
	Coefficient	*z*-statistic	Coefficient	*z*-statistic
Age	−0.0061	−2.05	−0.0092	−2.08
Age squared	.0003	9.84	.0004	7.26
Doctoral degree	.5850	5.51	.3997	2.66
Master's degree	.6244	14.88	.5354	8.74
Bachelor's degree	.4868	14.87	.3950	8.25
Associate's degree	.4891	11.26	.3984	6.26
Some college	.2253	6.83	.1615	3.35
High school diploma	.1631	5.06	.0879	1.86
Less than high school	−.0581	−1.55	−.1612	−2.93
Nonwhite	−.4804	−24.06	−.5420	−18.27
Female	.0372	2.53	.0299	1.37
Married	.0301	2.07	.0038	.18
College student	.4100	9.00	.4625	6.92
Self-employed	.9116	34.88	.9072	23.79
Union member	.1335	3.21	.0672	1.08
Usual part time	.5932	13.09	.5403	8.14
Hours vary	.6964	26.32	.7764	19.64
50 or more hours	.1391	7.33	.1856	6.62
40 hours	−.2109	−13.68	−.1610	−7.02
Occupation:[1]				
Public administration	−.8078	−1.20	−.7974	−.98
Managers	.3707	1.17	.2462	.48
Management related	−.2200	−.69	−.4208	−.82
Engineers	.2161	.67	.1292	.25
Mathematical scientists	1.0590	3.29	.8573	1.66
Natural scientists	.3930	1.15	.1376	.26
Health assessment and treating	−.7195	−2.03	−.8733	−1.52
Teachers, college and university	.2424	.68	.0909	.16
Teachers, except college and university	.1940	.45	.2139	.30
Lawyers and judges	−.8261	−2.58	−.7974	−1.55
Other professional	.2144	.61	.2620	.47
Health technicians	.1810	.56	.1058	.20
Engineering and science technicians	.0466	.14	−.0203	−.04
Other technicians	.0976	.31	−.1349	−.26
Sales supervisors and proprietors	.3056	.96	.1422	.28
Sales representatives, finance and business services	.2717	.84	.0746	.14
Sales representatives, commodities, excluding retail	−.0489	−.15	−.2248	−.44
Sales, retail and personal services	−.3770	−.92	−.9819	−1.53
Sales-related occupations	−.2508	−.74	−.4640	−.87
Supervisors, administrative support	−1.7555	−5.28	−2.1924	−4.05
Computer equipment operators	−.6500	−2.03	−.7905	−1.54
Secretaries, stenographers, and typists	.6078	1.89	.3816	.74
Financial records, processing	−.8195	−2.49	−1.0371	−1.97
Mail and message distributing	−.4437	−1.39	−6010	−1.18
Other administrative support	−.4278	−1.21	−.4703	−.84
Private household service	−.1586	−.50	−.4248	−.83
Protective service occupations	−1.8389	−4.91	−2.2914	−3.54
Food service occupations	−.9237	−2.85	−.9996	−1.93
Health service occupations	−.0734	.21	−.3479	−.64
Cleaning and building service	−.6172	−1.93	−.7901	−1.54
Personal service occupations	.1453	.46	−.0310	−.06
Mechanics and repairers	−.5083	−1.59	−.6617	−1.29
Construction trades	−.7694	−2.40	−.9669	−1.88
Other precision production	−.6456	−2.01	−.7449	−1.45
Machine operators and tenders	−.2751	−.86	−.4198	−.82
Fabricators	−.7433	−2.29	−.9880	−1.90
Motor vehicle operators	−.5228	−1.61	−.6945	−1.34
Other transportation	−.3105	−.96	−.4340	−.84
Construction labor	−.6008	−1.86	−.8215	−1.59
Freight handlers	.6986	2.16	.6082	1.17
Other handlers and laborers	.0074	.02	−.2672	−.52
Farm operators	−.1051	−.27	−.5871	−.96

See footnotes at end of table.

Table 7. Continued—Probit estimates of likelihood of having a flexible schedule, by detailed industry and occupation

Has a flexible schedule	Detailed occupations		Detailed occupations and industries	
	Coefficient	*z*-statistic	Coefficient	*z*-statistic
Farmworkers	.3663	8.59	.2545	4.02
Forestry occupations	−.0406	−.19	−.3789	−1.10
Detailed Industry:				
Agricultural services	...	...	.0794	.91
Agricultural, other	...	...	−.1121	−1.73
Mining	...	...	.1363	1.16
Construction	...	...	.0711	1.89
Lumber	...	...	−.0202	−.17
Furniture	...	...	.1209	.95
Stone and glass	...	...	−.1793	−1.31
Primary metals	...	...	.2038	1.52
Fabricated metals	...	...	.0253	.28
Other metals	...	...	−.0132	−.19
Machinery, nonelectrical	...	...	.0605	.76
Machinery, electrical	...	...	.1361	1.39
Motor vehicles	...	...	.0884	.54
Aircraft	...	...	.0141	.10
Other transportation equipment	...	...	.3267	2.68
Professional photos and watches	...	...	−.0889	−.35
Toys and sporting goods	...	...	.2266	1.84
Miscellaneous manufacturing	...	...	.1830	2.36
Food	...	...	.0916	.20
Tobacco	...	...	-.0647	−.42
Textiles	...	...	.0766	.73
Apparel	...	...	.0950	.76
Paper	...	...	.0913	1.18
Printing and publishing	...	...	.0311	.37
Chemicals	...	...	−.0329	−.15
Petroleum and coal	...	...	.1580	1.38
Rubber and plastic goods	...	...	−.3239	−1.01
Leather	...	...	−.0004	−.01
Transportation	...	...	−.1913	−.43
Communication	...	...	−.3709	−.83
Utilities	...	...	−.2619	−.59
Wholesale trade	...	...	−.2337	−.53
Eating and drinking establishments	...	...	−.3039	−.69
Other retail trade	...	...	−.2393	−.54
Banking and finance	...	...	−.2316	−.52
Business services	...	...	−.3241	−.72
Automotive and repair services	...	...	−.1966	−.44
Personal services	...	...	−.1674	−.38
Entertainment and recreation	...	...	−.2177	−.49
Hospitals	...	...	−.1075	−1.60
Health services	...	...	.0347	.74
Educational services	...	...	.0936	2.16
Social services	...	...	.0491	1.43
Other professional services	...	...	−.0389	−.66
Forestry and fisheries	...	...	.0653	1.52
Justice, public order, and safety	...	...	.4015	1.97
Administration of human rights	...	...	.0908	1.25
National security and internal affairs	...	...	−.1901	−1.57
Other public administration	...	...	−.0775	−.59
Armed Forces	...	...	.1265	1.69
No industry response	...	...	.5886	1.15
Constant	−.8766	−2.70	−.6116	−1.18
Pseudo R^2	.252	...	.255	...
n	56,982.0	...	26,247.0	...
Logarithm of likelihood	−28,604.2	...	−13,115.5	...
Chi-square	19,228.0	...	8,966.2	...
Prob > chi-square	.000	...	...	...

[1] Health-diagnosing occupations, Armed Forces personnel, and the unemployed are dropped.

some flexibility in the daily timing of their work schedule. Still, there are disparities in access to such flexibility across workers according to their demographic, job, and work-hour characteristics. The analysis suggests that workers who wish to gain greater access to a flexible schedule sometimes must be willing to work very long workweeks (50 or more hours), work regularly nondaytime hours such as evening shifts, work irregular shifts, work an unpredictable number of hours each week, or make a transition to either part-time work or self-employment. Otherwise, workers may have to make longer term and presumably more costly mobility decisions, including pursuing further education credentials or switching to a different occupation or industry that tends not to utilize a standard 40-hour workweek as a norm. Thus, workers with a strong need or preference for daily flexibility in their work schedule may have to forgo leisure time, endure long-term reductions in income, or pay the costs associated with searching for a new job.

Likelihood of volatile hours

Table 8 shows that having variable hours, as evidenced by the respondent's reporting that his or her usual number of hours is impossible to specify, is a condition strongly influenced by several work characteristics as well as demographic factors. Being nonwhite heightens the marginal probability of having volatile hours, as does being female. However, almost half of the higher probability of having unstable workweeks for nonwhites, as well as all of the higher probability for women, is attributable to the distribution of the two groups' employment across industries, in effect reflecting industry segregation in employment. Married workers have a 9-percent to 19-percent lower likelihood of facing variable workweeks.

Being a government employee or a union member is associated with having a more predictable workweek length. Some of the workweek-stabilizing effect of unionism is traceable either to the detailed industry distribution of union jobs or to employment in government. Public-sector employment at all three levels—Federal, State, and especially local government—reduces the probability of having variable work hours. Self-employment increases the chances of having variable hours, due to the nature of the job, not the detailed industry in which the occupation is located.

Perhaps the most revealing finding of the analysis is that having variable hours is strongly positively associated with usually working part time, more than doubling the likelihood of having hours that vary weekly. Part-timers tend to face much more unpredictability in their workweeks than full-timers are confronted with. Indeed, usually working full time reduces the chances of having an unpredictable workweek by more than 40 percent, an assiciation which suggests that part-time workers specifically may be used by employers to absorb fluctuations in workload via changes in their number of hours or days at work. This use of part-time workers serves to buffer full-time employees' hours of work. Furthermore, not surprisingly, given the association revealed in the previous section's findings, having the ability to vary one's daily schedule leads to a (68-percent) greater likelihood of having a variable workweek length. It then follows that workers with more access to flexible daily starting and ending times, such as those with the shortest hours and those with the longest hours, experience a more unpredictable workweek length than those who are on fixed daily schedules.

In addition, certain major occupations—executive, managerial, and administrative positions; professional occupations, administrative support positions; and private household jobs—reduce the chances of having volatile hours. (Farming occupations make up the omitted category.) Those in craft jobs also have reduced chances of working variable hours, but this is due to the concentration of such jobs in certain industries. Conversely, machine operators, assemblers, and inspectors; handlers, equipment cleaners, and laborers; and, to a lesser extent, those in sales and service occupations other than protective and household services are more likely to work a variable-hour workweek. (Again, the last of these is in large measure due to their detailed industry distribution.[36] Note, however, that the reduced variability of hours in private household jobs and in craft jobs, as well perhaps as the greater variability of hours for sales workers, are attributable, to a large extent, to the more flexible scheduling commonly associated with those occupational classifications.)

THE ANALYSIS PRESENTED IN THIS ARTICLE has resulted in several noteworthy empirical findings:

1. Access to flexibility in one's daily work schedule rose across most types of jobs between 1991 and 1997, reaching more than 27 percent of the labor force the latter year and more than doubling since 1985. The form such access takes appears to be mainly in the differentiation and stretching out of the available workday. This is because more than 40 percent of the employed now regularly work past 5:00 P.M. each day, and 28 percent begin work at or earlier than 7:30 A.M. (Those starting early, of course, are not necessarily those who stay late.)
2. Many workers are experiencing a tradeoff wherein they work long usual weekly hours in full-time positions while gaining greater access to flexibility in their work schedules, because working in excess of 50 hours per week heightens the chances of obtaining a flexible work schedule. Given that fewer workers are reporting that they work exactly 40 hours and more workers are indicating that they work 49 or more hours,[37] more workers may be willing to endure the longer workweeks in order to get a more flexible work schedule. However, it is possible that the attainment of flexibility may be only a secondary aim of workers or may even be just coincidental across occupations, because working long

Table 8. Likelihood that workers' usual hours are variable

Category	With controls for government employment						With major industry controls		With detailed industry controls	
	Coefficient	*z*-statistic	Coefficient	*z*-statistic	Coefficient	*z*-statistic	Coefficient	*z*-statistic	Coefficient	*z*-statistic
Age	0.0239	7.36	0.0241	7.42	0.0223	6.93	0.0789	21.05	0.0707	18.65
Age squared	–.0001	–1.87	–.0001	–1.95	–.0001	–2.74	–.0007	–17.38	–.0006	–15.33
Doctoral degree	.0690	.57	.0745	.62	.0366	.30	.0269	.22	–.0048	–.04
Master's degree	–.6728	–11.34	–.6711	–11.30	–.7455	–12.57	–.8231	–12.89	–.8369	–13.03
Bachelor's degree	–.2633	–8.66	–.2630	–8.65	–.2886	–9.13	–.3326	–10.55	–.3875	–12.16
Some college	.1596	5.77	.1723	6.21	.2409	8.41	.0040	.14	–.0484	–1.64
High school diploma	–.0424	–1.59	–.0414	–1.55	.0388	1.39	–.1964	–7.02	–.1912	–6.79
Less than high school	–.0067	–.20	–.0076	–.23	.1172	3.43	–.2525	–7.14	–.2672	–7.50
Nonwhite	.3974	19.21	.4194	20.14	.4384	20.35	.2628	11.41	.2463	10.63
Female	.1657	9.59	.1606	9.27	.1512	8.49	–.0035	–.19	.0160	.84
Married	–.1088	–6.47	–.1117	–6.64	–.1910	–10.94	–.0934	–5.12	–.0994	–5.38
Union member	–.3321	–5.40	–.3024	–4.89	–.2854	–4.62	–.3037	–4.71	–.2347	–3.63
Self-employed	...	...	...	...	...	...	...	...	.5240	22.05
Federal Government	...	...	–.3954	–3.71	–.2784	–2.60	...	...	...	...
State government	...	...	–.4772	–2.37	–.4346	–2.10	...	...	...	...
Local government	...	...	–.9416	–8.43	–.8272	–7.29	...	...	...	...
Flexible schedule	...	...	...	...	.6818	41.43	...	...	...	...
Usually work part time	...	...	...	...	...	...	2.3074	53.28	2.2862	52.11
Usually work full time	...	...	...	...	...	...	–.4514	–23.12	–.4033	–20.29
Occupation:[1]										
Managerial	–.2882	–3.61	–.2977	–3.72	–.3510	–4.34	–.2077	–2.45	–.2595	–3.06
Professional	–.3503	–3.90	–.3576	–3.97	–.3281	–3.60	–.3461	–3.60	–.3579	–3.72
Sales	.2679	3.47	.2527	3.26	.1628	2.08	.2639	3.21	.1323	1.61
Administrative support and clerical	–.2940	–3.71	–.2796	–3.51	–.2192	–2.72	–.3894	–4.58	–.3828	–4.51
Private household	–.5099	–1.90	–.4489	–1.70	–.3418	–1.29	–.6184	–2.00	–.6146	–1.99
Protective service	.0450	.55	.0327	.40	.0885	1.06	–.1235	–1.39	–.1323	–1.49
Other service	.1738	2.19	.1679	2.11	.1656	2.06	.1778	2.11	.1261	1.50
Craft	–.2203	–2.61	–.2385	–2.81	–.0954	–1.11	–.1055	–1.18	–.1333	–1.49
Operators	.2847	3.41	.2929	3.50	.3497	4.13	.3475	3.93	.3022	3.42
Transportation	–.0110	–.13	–.0196	–.23	.0576	.66	–.0481	–.52	–.0618	–.68
Laborers	.4651	5.61	.4543	5.47	.3554	4.23	.4734	5.36	.4722	3.63
Constant	–2.2633	–21.36	–2.2510	–21.22	–2.4176	–22.84	–2.8719	–25.00	.4641	5.27
Number of observations	62,427	...	62,427	...	...	...	28,775	...	28,774	...
Chi-square	3,399	...	5,279	...	...	...	...	...	...	...
Prob > chi-square	0	...	0	...	...	...	0	...	0	...
Pseudo R^2	.086	...	.134	...	...	...	.245	...	.247	...
Logarithm of likelihood	...	...	–17,124	...	...	...	...	...	–6,906.2	...

[1] Technicians and farming are dropped.

hours also delivers an average hourly earnings premium across most occupations[38] and the greater income may be workers' primary goal. Alternatively, workers may get flexibility in their schedules by switching to part-time jobs or self-employment, by working evenings or irregular shifts, or by choosing to work unpredictable hours. Thus, the growing flexibility of work schedules may be producing a greater willingness on the part of workers to work considerably longer, considerably shorter, or less predictable hours than the 40-hour workweek norm. Still, the various causal connections may be muddied by the fact that some employers in certain occupations and industries may be increasingly inclined to offer more flexible scheduling in order to foster greater commitment by and retention of workers, either in conjunction with or in place of higher wages. Such offers may in turn induce a greater willingness on the part of employees to accept long average hours. Meanwhile, in other industries and occupations, employers may use more part-time or alternative-shift options to accomplish the same end.

3. Access to daily flexibility in one's schedule remains uneven by sector and not equally shared across individuals. It is less likely for nonwhites, women, unmarried persons, those with relatively less education, and individuals employed in the public sector. It is noticeably higher in many of the higher skilled, lower unemployment occupations and industries.
4. Almost 10 percent of the workforce now has workweeks that are variable and thus unpredictable from week to week. Having such unstable hours is more likely among nonwhites, women, unmarried persons, those who work in the private sector, those who are not members of a union, and individuals in less skilled occupations. The variable work-

week is perhaps most prominent among part-time workers.

How this trend toward a destandardized workweek, workday, and work schedule plays out over the next decade or so promises to be a most interesting subject of study for economists, sociologists, and, indeed, all analysts of labor. On the one hand, if employers adhere or revert to a uniform, one-size-fits-all standard workweek, the diverse needs of today's workers and their families may go unsatisfied. As the male-breadwinner model of work life and households wanes, workers' desired hours may fluctuate more widely than ever before. On the other hand, accessing flexible daily schedules may be coming at the dear price of lost leisure time, significantly lower lifetime earnings, a checkered career progression, or stresses associated with irregular work. Moreover, such flexibility in daily scheduling is most readily available to already advantaged workers, and it appears to promote more unpredictability in the length of the workweek and excessive work among those who usually work full time. The ultimate outcome of the ongoing destandardization and whether the various conflicting factors will improve the well-being of workers, on balance, cannot be foretold at the present time. □

Notes

[1] Thomas M. Beers, "Flexible schedules and shift work: replacing the '9-to-5' workday?" *Monthly Labor Review*, June 2000, pp. 33–40; "Workers on Flexible and Shift Schedules in 1997," *BLS News* (Bureau of Labor Statistics, Mar. 26, 1998). For comparison, see Earl Mellor, "Shift work and flexitime: how prevalent are they?" *Monthly Labor Review*, November 1986, pp. 14–21.

[2] Overtime hours, for which data are available only for production and nonsupervisory workers in the manufacturing sector, rose to a record peak by the end of the 1990s. (See Ron Hetrick, "Analyzing the recent upward surge in overtime hours," *Monthly Labor Review*, February 2000, pp. 30–33.) For an examination of the usually positive earnings premium employees receive for working longer hours, see Daniel Hecker, "How hours of work affect occupational earnings," *Monthly Labor Review*, October 1998, pp. 8–18. For a review of increases in labor force participation over the past 50 years and a projection of the aging of the workforce over the next 25 years, see Howard Fullerton, "Labor force participation: 75 years of change, 1950–98 and 1998–2025," *Monthly Labor Review*, December 1999, pp. 3–12. The recent trend of rising postretirement labor force participation is examined in Diane E. Herz, "Work after early retirement: an increasing trend among men," *Monthly Labor Review*, April 1995, pp. 13–20; and John R. Besl and Balkrishna D. Kale, "Older workers in the 21st century: active and educated, a case study," *Monthly Labor Review*, June 1996, pp. 18–28.

[3] For a discussion of pockets of occupational labor shortages, see Carolyn Veneri, "Can occupational labor shortages be identified using available data?" *Monthly Labor Review*, March 1999, pp. 15–21. Evidence relating to the effects of flexible work arrangements on outcomes such as productivity, job satisfaction, and absenteeism is presented in M. Krausz and N. Freibach, "Effects of Flexible Working Time for Employed Women upon Satisfaction, Training and Absenteeism," *Journal of Occupational Psychology*, vol. 56, no.2, 1983, pp. 155–59; R. L. Moss and T. D. Curtis, "The Economics of Flexitime," *Journal of Behavioral Economics*, summer 1985, pp. 95–114; C. Rodgers, "The Flexible Workplace: What Have We Learned?" in S. Lobel (ed.), *Human Resource Management, Special Issue on Work and Family*, fall 1993, pp. 183–99; T. Clifton, E. Shephard, and D. Kruse, "Flexible Work Hours and Productivity: Some Evidence from the Pharmaceutical Industry, *Industrial Relations*, January 1996, pp. 123–39; T. Scandura and M. Lankau, "Relationships of Gender, Family Responsibility and Flexible Work Hours to Organizational Commitment and Job Satisfaction," *Journal of Organizational Behavior*, July 1997, pp. 377–91; and Boris B. Baltes, Thomas E. Briggs, Joseph W. Huff, Julie A. Wright, and George A. Neuman, "Flexible and Compressed Workweek Schedules: A Meta-Analysis of Their Effects on Work-Related Criteria," *Journal of Applied Psychology*, August 1999, pp. 496–513.

[4] For evidence of the excess demand for more flexible work hours and schedules, see E. Galinsky, J. T. Bond, and J. Swanberg, *The 1997 Study of the Changing Work Force* (New York, Families and Work Institute, 1998). In a 1992 survey, as much as 25 percent of the workforce was found to be willing to sacrifice career prospects in order to attain more flexibility in daily hours of work—this despite the finding that 26 percent of workers surveyed already have such flexibility available on a daily basis. Nearly all workers (92 percent) say that they are concerned with having flexibility in their work schedule in order to take care of family needs, with 38 percent of workers saying that they are extremely concerned and 37 percent asserting that they are very concerned (*Work Trends: America's Attitudes about Work, Employers, and Government* (John J. Heldrich Center for Workforce Development at Rutgers University and Center for Survey Research at University of Connecticut, Mar. 18, 1999).)

[5] For evidence that work hours have risen in the United States since the early 1980s, see B. Bluestone and S. Rose, "Macroeconomics of Work Time," *Review of Social Economy*, winter 1998, pp. 425–41; and Galinsky, Bond, and Swanberg, *Changing Work Force*. For evidence of a rise in annual family hours, see L. Mishel, J. Bernstein, and J. Schmitt, *The State of Working America: 2000/2001* (Ithaca, NY, Economic Policy Institute and ILR Press, 2000), tables 1.29, 1.31, and 2.1; and L. Leete and J. Schor, "Assessing the Time-Squeeze Hypothesis: Hours Worked in the United States, 1969–89," *Industrial Relations*, January 1994, pp. 25–43. For evidence that average work hours have crept upward slightly, see Philip L. Rones, Randy E. Ilg, and Jennifer M. Gardner, "Trends in hours of work since the mid-1970s, *Monthly Labor Review*, April 1997, pp. 3–14. For evidence that average hours are growing among those workers in the upper tail of the distributions of income, weekly hours, and educational attainment, see M. Coleman and J. Pencavel, "Changes in Work Hours of Male Employees, 1940–1988," *Industrial and Labor Relations Review*, January 1993, pp. 262–83; and J. Jacobs and K. Gerson, "Who Are the Overworked Americans?" *Review of Social Economy*, winter 1998, pp. 442–59. For evidence that average hours are constant, but shifting toward youths, women, and married persons, see Ellen R. McGrattan and Richard Rogerson, "Changes in Hours Worked since 1950," *Federal Reserve Bank of Minneapolis Quarterly Review*, winter 1998, pp. 2–19. For the counterargument that average hours are declining, with data collected from time diaries, see John P. Robinson and Ann Bostrom, "The overestimated workweek? What time diary measures suggest," *Monthly Labor Review*, August 1994, pp. 11–23. This view is challenged by Jerry A. Jacobs, "Measuring time at work: are self-reports accurate?" *Monthly Labor Review*, December 1998, pp. 42–53.

[6] Daniel Hamermesh, "The Timing of Work over Time," *Economic Journal*, January 1999, pp. 37–66.

[7] Harriet Presser, "Toward a 24-Hour Economy," *Science*, June 11, 1999, pp. 1778–79; Harriet B. Presser and Amy G. Cox, "The work schedules of low-educated American women and welfare reform," *Monthly Labor Review*, April 1997, pp. 25–34.

[8] Presser and Cox, "Work schedules of low-educated American women"; Hamermesh, "Timing of Work."

[9] The May 1997 Supplement to the CPS queries the employed regarding the starting and ending times of their workday (at half-hour intervals) and their ability to vary those times. The regular CPS sample for May 1997 consists of 50,000 households, of which 48,000 are administered the Supplement's questions.

[10] These classifications were recoded from the respondents given three-digit industry and occupation response.

[11] In the basic monthly CPS, respondents are asked the number of hours they usually work per week and the actual number of hours they worked the previous week. Beginning with the redesigned CPS in 1994, they may answer, "It varies." In May 1997, 9.7 percent gave this optional response. For the notion that irregular, unpredictable work hours are one of three features that characterize "contingent" work, see Anne E. Polivka and Thomas Nardone, "On the definition of 'contingent work,'" *Monthly Labor Review*, December 1989, pp. 9–16. The CPS's estimate of the proportion of contingent workers, which has varied between 4 percent and 5 percent of the workforce, according to the 1995, 1997, and 1998 *Contingent Work Supplement (CWS) to the February CPS*, can be broadened by including those workers who face a workweek so variable that they cannot even specify what its usual length is. (See D. Belman and L. Golden, "Contingent and Nonstandard Work Arrangements in the United States: Dispersion and Contrasts by Industry, Occupation and Job Type," in F. Carré, M. Ferber, L. Golden, and S. Herzenberg (eds.), *Nonstandard Work: The Nature and Challenge of Changing Employment Arrangements*, Industrial Relations Research Association Series (Ithaca, NY, ILR Press, 2000).)

[12] See Daniel Hamermesh, *Work Days, Work Hours, Work Schedules: Evidence for the United States and Germany* (Kalamazoo, MI, W. E. Upjohn Institute for Employment Research, 1996). Indeed, in another work, Hamermesh argues that "we need to integrate the notion of work timing into a variety of areas of applied economics [such as]...evaluations of household welfare [and]...the timing of the household's economic activities, including work, not merely how much of each activity is undertaken" (Hamermesh, "Timing of Work," p. 65).

[13] *Variability* (or *variance*) *in hours* means the degree to which actual work hours deviate from their mean over the course of some period, such as a year. (See Lonnie Golden, "Projected Labor Market Consequences of Reforming the U.S. Overtime Hours Law," in G. De Geest, J. Siegers, and R. Van den Bergh (eds.), *Law and Economics and the Labour Market*, New Horizons in Law and Economics (Cheltenham, U.K., Edward Elgar, 1999, pp. 132–56).) While sometimes used as a proxy for flexibility (see, for example, A. King, "Industrial Structure, Flexibility of Working Hours and Women's Labor Force Participation," *Industrial and Labor Relations Review*, August 1978, pp. 399–407), variance in hours is clearly distinct from the ability to adjust one's hours or schedule in response to a change in preferences.

[14] See T. Idson and P. K. Robbins, "Determinants of Voluntary Overtime Decisions," *Economic-Inquiry*, January 1991, pp. 79–91.

[15] See K. Moore Scott and M. Micelli, "An Exploration of the Meaning and Consequences of Workaholism," *Human Relations*, March 1997, pp. 287–314; Linda Bell, "Differences in Work Hours and Hours Preferences by Race in the U.S." *Review of Social Economy*, winter 1998, pp. 481–500; and Wayne Eastman, "Working for Position: Women, Men and Managerial Work Hours," *Industrial Relations*, January 1998, pp. 51–66.

[16] See K. Rothschild, "A Note on Some Economic and Welfare Aspects of Working Time Regulations," *Australian Economic Papers*, vol. 21, 1982, pp. 214–18; and Juliet Schor, *The Overspent American: Upscaling, Downshifting and the New Consumer* (New York, Basic Books, 1999).

[17] See R. Landers, J. Rebitzer, and L. Taylor, "Rat Race Redux: Adverse Selection in the Determination of Work Hours in Law Firms," *American Economic Review*, June 1996, pp. 329–48; and B. Bluestone and S. Rose, "Macroeconomics of Work Time," *Review of Social Economy*, winter 1998, pp. 425–41.

[18] Using the 1998 CPS outgoing rotation file, the U.S. General Accounting Office, in "Fair Labor Standard Act: White Collar Exemptions in the Modern Work Place," GAO/HEHS–99–164, *Report to the Subcommittee on Workforce Protections, Committee on Education and the Workforce, US House of Representatives*, September 1999, pp. 59–60, estimated that 44 percent of "exempt" workers (those not covered by overtime pay requirements), but only 20 percent of "nonexempt" workers (those so covered), worked longer than 40 hours per week. Daniel Hamermesh and Stephen Trejo, "The Demand for Hours of Labor: Direct Evidence from California," *Review of Economics and Statistics*, February 2000, pp. 38–47, found that the daily overtime pay premium required in California shortens average hours worked relative to other States in the industries and occupations the authors targeted for study.

[19] Hours spent teleworking is a likely positive predictor of an employee's reporting that he or she has flexibility in scheduling work time. However, such flexibility, as well as the technologies facilitating it (for example, e-mail and voice mail), have lengthened workers' workdays. (See The Conference Board, "Work-Family Roundtable: Technology Is Helping Workers Balance Work-Family Issues," release no. 4457, Dec. 3, 1998.) Workers also say that devices like beepers, laptop computers, and cell phones make it difficult to escape work and even harder to catch up with missed work ("More Tech, Less Time," *HR Focus* (American Management Association, March 1999), p. 4).

[20] Conventional economic theory predicts that a competitive labor market will eventually sort workers and employers so that desired and required hours and schedules are matched. In the interim, the market should create fully compensating wage differentials, providing workers sufficient extra income to offset the ill effects of the adverse working conditions of inflexible or inconvenient hours and schedules. (See, for example, S. Rottenberg, "The Regulation of Work Hours and Its Externalities Defenses," *Journal of Labor Research*, January 1995, pp. 98–109.) However, this prediction has garnered little empirical support. (See, for instance, G. Duncan and B. Holmlund, "Was Adam Smith Right After All? Another Test of the Theory of Compensating Wage Differentials," *Journal of Labor Economics*, vol. 1, no. 4, 1983, pp. 366–79; R. Ehrenberg and P. Schumann, "Compensating Wage Differentials for Mandatory Overtime? *Economic Inquiry*, October 1984, pp. 460–78); and J. Altonji and C. Paxson, "Labor Supply Preferences, Hours Constraints, and Hours-Wage Trade-Offs," *Journal of Labor Economics*, April 1988, pp. 254–76.) Thus, the additional income gained by enduring undesired inflexibility is likely less than fully compensating.

[21] The majority of flexible work schedule arrangements are likely informal, because only 6 percent of employees are offered such arrangements by a formal employee benefit program. (See Beers, "Flexible schedules and shift work.") Much larger proportions of employers report in one-time surveys that they offer flexible schedules to their employees. Estimates range from just under half to more than three-quarters of (usually larger sized) firms. When asked, employers indicate that only about half such flexible scheduling systems are offered as a formal policy, and their offering is often subject to management discretion. One reason for the large discrepancy between the proportion of employers offering flextime and employees actually receiving or using it may be that flextime is often made available only, or first, to a particular segment of an organization's workforce—typically managerial and professional staff on a case-by-case basis—or only temporarily, seasonally, or experimentally. Another reason may be that 40 percent of employees fear that using flextime (or taking time off for family-related purposes) would damage their career prospects. (See Galinsky, Bond, and Swanberg, *Changing Work Force*; and the John J. Heldrich Center's *Work Trends*.) Almost 60 percent of women fear using flextime for the same reason. (See "Part 3: Work and Family: Flexibility on the Job," *Futurework—Trends and Challenges for Work in the 21st Century* (U.S. Department of Labor, 1999).) Time off and flexibility are strikingly important issues among women in particular. (See "Ask a Working Woman" survey, Working Women project, AFL-CIO, 1997.) Among the

most important employer policies are those which help working women gain more control of their time. The proportions of such women citing as "very important" having paid sick leave (82 percent), paid vacation time (76 percent), paid family leave for caregiving (70 percent), and flexible hours (61 percent) were greater than those citing protection from layoffs and downsizing and time off for child care (33 percent each). Another 25 percent indicated that having flexible hours or control over their hours was somewhat important. There remains a gap of 30 percent between those who deem this benefit at least somewhat important and those workers who have it. Still, 39 percent of respondents report lacking flexible hours.

[22] For evidence that workers taking part-time positions suffer both a current and a future loss of pay and benefit coverage, see Marianne A. Ferber and Jane Waldfogel, "The long-term consequences of nontraditional employment," *Monthly Labor Review*, May 1998, pp. 3–12.

[23] Results from the 1998 Families and Work Institute survey of firms are consistent with this pattern of the presence of flextime by major industry group. In offering general "work-life" assistance, the finance, insurance, and real-estate industry is the most generous, while the wholesale and retail trade industries are the least. Also, 82 percent of firms in which more than half the executive positions are filled by women offer flextime. By contrast, 56 percent of firms wherein less than half the executive staff is composed of women offer flextime.

[24] The higher variability of work hours for part-timers reinforces the findings of Ian Dey, "Flexible 'Parts' and Rigid 'Fulls,'" *Work, Employment and Society*, December 1990, pp. 465–90; Arne Kalleberg, "Part-Time Work and Workers in the U.S.: Correlates and Policy Issues," *Washington and Lee Law Review*, vol. 52, no. 3, 1995, pp. 772–98; and Belman and Golden, "Contingent and Nonstandard Work Arrangements."

[25] The source for the data on nonstandard workers is the February 1997 Contingent and Alternative Work Survey, which contains information on the same 52 detailed industries examined in the current analysis, for independent contractors, workers contracting with a temporary agency, employees working for a contracting firm, and on-call and day laborers.

[26] Indeed, it is also possible that the prolonged noninflationary economic expansion owed much to the spread of flexible schedules, at least to the extent that they contributed to the growth of labor productivity during the decade and served as a nonpecuniary substitute for wage increases to employees.

[27] Potentially important factors that are *not* observable in the CPS data include characteristics of the worker's industry of employment, such as the average size of enterprises, the degree of product market competition, the volatility of product market demand, and profitability.

[28] The columns labeled "coefficient" report derivatives of the likelihood function (dF/dx), for a discrete change of dummy variable from 0 to 1. The z-statistic represents a standard test of the coefficient being significantly different from zero.

[29] Workers with a professional school degree make up the omitted category in the regression on education level.

[30] J. Jacobs and K. Gerson, "Who Are the Overworked Americans?" *Review of Social Economy*, winter 1998, pp. 442–59, find that having flexible hours does not significantly lead workers to systematically exaggerate their reported work hours per week. Thus, the positive association between long hours spent at work and access to flextime is likely *not* a statistical artifact produced by workers on flextime tending to overreport their average work time.

[31] Professional jobs' greater flexibility disappears, however, when controls are included for their major industry. (Service occupations are omitted as the reference occupation.)

[32] Sample sizes in the account of some detailed occupational classifications that follow are likely to be insufficiently large to yield confidence in the stated estimated effects and significance, particularly for sales-related occupations, forestry occupations, computer equipment operators, and, to a lesser extent, public-sector administrators, health diagnosticians, lawyers and judges, natural scientists, health assessment and treating occupations, teachers other than college, health technicians, and protective service occupations.

[33] The flexibility of State and local public-sector employees may soon become even less, because the U.S. Supreme Court recently ruled, 6–3, in *Christensen et al.* vs. *Harris County* (120 S.Ct. 1655 (2000)) that public-sector employers can enforce a deadline before which employees have to use the compensatory time they have accumulated to avoid having to pay them cash for their extra time worked. (See "Public Employers Can Push Comp Time Usage," *Workforce*, June 2000, pp. 30–32.)

[34] That the self-employed are less dissatisfied with their work schedules is not surprising: "flexibility of schedule" is a key reason for becoming self-employed, particularly for women with children. (See R. Boden, "Flexible Working Hours, Family Responsibilities and Female Self-Employment: Gender Differences in Self-Employment Selection," *American Journal of Economics and Sociology*, January 1999, pp. 71–83.) However, Jennifer Glass, "Employer Characteristics and the Provision of Family Responsive Benefits," *Work and Occupations*, November 1995, pp. 380–411, finds no improvement in the flexibility of self-employed mothers' schedules.

[35] Using longitudinal data from 1973 to 1978, G. Duncan and F. Stafford, "Do Union Members Receive Compensating Wage Differentials? Reply," *American Economic Review*, vol. 72, no. 4, 1982, pp. 868–72, had found that workers who switched from union to nonunion status achieved larger-than-average increases in their own control, rather than their supervisors', over the setting of their overtime work hours. (For reasons that some employers desire to schedule overtime hours, see Darrell E. Carr, "Overtime work: an expanded view," *Monthly Labor Review*, November 1986, pp. 36–39; and M. Gunderson and K. Weiemair, "Labor Market Rigidities: Economic Analysis of Alternative Work Schedules Including Overtime Restrictions," in G. Dlugo, W. Doron, and K. Weiermair (eds.), *Management under Differing Labour Market and Employment Systems* (Berlin, Walter de Gruyter and Co., 1988), pp. 153–63.) S. M. Glosser and L. M. Golden, "Average Work Hours as a Leading Economic Variable in U.S. Manufacturing Industries," *International Journal of Forecasting*, June 1997, pp. 175–95, however, find that rising overtime hours no longer lead to imminent increases in employment in business cycle expansions.

[36] Results not reported in Table 8 reveal that several detailed occupations—managers, mathematical and computer scientists, lawyers and judges, health technicians, other administrative support, computer equipment operators, food service workers, cleaning and building services, and, most of all, protective services—raise the likelihood of having variable hours. In contrast, a few occupations—supervisors of clericals; freight, stock, and materials handlers; and farm operators and managers—increase the *stability* of hours. With occupation controlled for, four detailed industries are associated with volatile hours: agricultural services, mining, communication, and entertainment and recreation. One industry, paper manufacturing, stabilizes weekly hours.

[37] See *Report on the American Workforce*, table 3–1 (U.S. Department of Labor, 1999. In 1998, 20 percent of full-time workers reported working 49 or more hours per week, up from about 10 percent in 1979 (although only slightly since 1989). See also Philip L. Rones, Randy E. Ilg, and Jennifer M. Gardner, "Trends in hours of work since the mid-1970s," *Monthly Labor Review*, April 1997, pp. 3–14.

[38] For evidence of this possibility, see Daniel Hecker, "Work more, earn more? How hours of work affect occupational earnings," *Occupational Outlook Quarterly*, spring 1999, pp. 10–23, especially pp. 12–13.

Wage differentials associated with flextime

Analysis of the Current Population Survey indicates positive wage differentials overall for women on flextime in 1989 and for both men and women in 1997; significant differentials emerge for selected motivations, industries, and occupations

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This article presents an empirical test of wage differentials associated with flextime, by gender, stated motivation for using flextime, industry, and major occupation. The test implicitly compares the relative strengths of two opposing effects: a negative compensating wage differential resulting from workers' preferences for flextime and a positive wage differential associated with higher productivity of workers on flextime attributed to what economists call the "efficiency wage hypothesis." Although previous studies have found evidence that flextime increases both productivity[1] and workers' satisfaction,[2] scant evidence has emerged thus far regarding the net quantitative or qualitative impact of these factors on equilibrium wages.

One exception is an article by Nancy Johnson and Keith Provan,[3] who applied a similar test to a much smaller data set and found flextime to be positively associated with wages for professional women, negatively associated with wages for nonprofessional women, and not significantly associated with wages for men. Johnson and Provan's sample totaled 258, obtained by survey from within a single State. The study reported in the current article, by contrast, uses nationwide samples of more than 5,000 workers, obtained from the U.S. Current Population Survey (CPS) supplement, "Multiple Job Holding, Flexitime, and Volunteer Work," for 1989 and 1997. In addition to estimating aggregate wage effects by gender in each year, the article estimates the flextime wage differential associated with specific reasons each worker reportedly preferred flextime in 1989. (Reasons for choosing flextime were not reported in 1997, preventing a comparison with that year.) Also estimated is the flextime wage differential associated with specific industries and specific major occupations for 1997. (Again, in 1989, the number of workers on flextime in particular occupations and industries was too small to draw a meaningful comparison with the later year.)

Results of the study indicate that flextime is associated with significantly higher wages overall. The size of the flextime wage differential for women is stable across the years 1989 and 1997 and is similar to the 1997 estimate for men. However, the 1989 flextime wage differential for men is much smaller than in 1997 and is not significantly different from zero. This finding suggests that the pattern of compensation has evolved in a similar direction for both male and female workers, but it evolved later for men.

The more detailed regressions for 1989 find that the only stated reason for desiring flextime associated with a significant wage differential among women is transportation. Among men, flextime taken for personal reasons is associated

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with a positive wage differential at the 0.01 level. Only a small number of industries exhibit significant flextime wage differentials for either men or women in 1997, and all of those differentials are positive. Two major industries (automotive and repair services; and social services, other professional services, and forestry and fisheries—grouped collectively as "professional" industries (see p. 5)—exhibit significant wage differentials for both men and women. Significantly positive flextime wage differentials emerge for men in all major occupations except operators, movers, and handlers, while women exhibit significantly positive flextime wage differentials only for sales and administrative occupations.

The article continues by presenting a brief overview of the history of flextime, describing the empirical and conceptual framework of the analysis, and characterizing the sample data. The article concludes with a discussion of the results and some suggestions for future research.

Background

Flextime is generally defined as a worker's ability to alter the starting and quitting time of a workday. It was introduced in Germany in 1967, spread quickly to other parts of Europe, and has been adopted by some U.S. employers during the past 20 years.[4] One of the first groups in the United States to experiment with a system of flexible working hours was the Federal Government's agencies. Over time, other firms have begun to adopt some form of flexible working hours as a means of attracting employees of higher quality or from a larger pool of applicants.

As of 1992, more than 13 percent of the U.S. workforce was covered by flextime arrangements, with a higher incidence among part-time than full-time workers.[5] Many of the firms offering flextime have found that it confers benefits on the employer, besides fostering employee morale. Flextime has been reported to reduce absenteeism and turnover, increase lines of communication, reduce stress in the workplace, and, in some cases, even increase productivity.[6] Increasing flexibility in the work schedule can reduce the uncertainty of conflicts between market work, nonmarket work, and leisure, as well as enabling workers to devote themselves more fully to their job responsibilities.

Still, not everyone embraces the flexible work schedule. Unions have opposed the idea of flexible work hours because it makes labor laws more difficult to enforce and may create an opportunity for firms to abuse the system. Also, some have argued that flextime is a hindrance to the effectiveness of the workplace because a worker must be present and visible in order to contribute fully to the job. Thus, empirical research into the net effects of flextime continues to be useful. With this in mind, the objective of the present study is to quantify whether, on average, employees find that flextime is associated with productivity gains that are not only positive, but also great enough to more than offset any compensating wage differentials that would be expected when workers prefer flextime to traditional work schedules. The analysis that follows is based on equilibrium wage theories.

It seems clear why women, at least, desire flextime benefits as they pursue careers and families. Even women who are employed full time spend 20 to 30 hours per week on housework; employed men spend at most half that time.[7] Traditionally, flexible schedule arrangements were sometimes offered to women who needed to take care of their children. Recently, however, because of a shortage of qualified labor, growing numbers of working mothers in the labor force, unacceptable levels of career progress for women, and work schedules for women that constrained their productivity, more employers have begun to offer family-related benefits. (Some of these changes in the roles of women and men are explored by Francine D. Blau and Marianne A. Ferber.[8])

Empirical framework and sample

Both the compensating wage differential theory and the efficiency wage hypothesis predict that wage rates are affected by pecuniary and nonpecuniary attributes. The compensating wage differential refers to a worker's willingness to pay (or forgo income) for desirable job attributes.[9] In contrast, according to the efficiency wage hypothesis, in a competitive labor market an employer will be forced to pay higher wages for more productive workers.[10] Thus, any given job attribute may have two types of effect on the overall wage: one reflecting the worker's direct preference for the attribute, the other reflecting any impact of the attribute on the worker's productivity (or, in this case, any possible selection of more productive workers into the attribute). In the case of flextime, the two effects may be intertwined to the extent that improved employee morale associated with a flexible work schedule may contribute to improved productivity through lower absenteeism, lower turnover, and greater effort expended on the job. Also, flextime may be able to contribute to higher productivity by reducing any interference from employees' outside obligations, and employers may selectively offer flextime only to their more productive workers.

It is the objective of this section to isolate and measure the impact of flextime on wages. To the extent that flextime is desired by workers, the compensating wage theory alone would predict a negative association between flextime and wages, controlling for a vector of other job attributes. If, however, flextime is associated with higher productivity among workers, the predicted impact on wages is slightly more complex. One might question why an employer should pay more for the added productivity of employees who are working in an improved environment. One answer would involve competition

among employers, as in conventional applications of the efficiency wage theory, plus an element of asymmetric information in that only the worker knows his or her personal (hedonic) value of flextime. As long as more than one employer offers flextime for a particular category of worker, employers may be forced to bid up their wages—possibly as high as the marginal value of the worker's product. Whether such a positive wage differential exists is an empirical question. If one is found, it would represent a *lower bound* on the value of actual differences in productivity, bearing in mind that some offsetting compensating wage differential may also be reflected in the observations.

The sample used in the analysis was collected from the CPS of May 1989 and May 1997.[11] The supplement titled "Multiple Job Holding, Flextime, and Volunteer Work" contains data on the usual number of hours worked daily and weekly, usual number of days worked weekly, specific days worked weekly, starting and ending times of an individual's workday, whether the starting and ending times could be varied, and—for 1989—the primary reasons each individual desired the flextime benefit in his or her workplace. The sample is drawn from all persons aged 18 to 65 in the civilian noninstitutional population of the United States living in households.

The 1989 sample size of full-time workers totaled 5,385 observations, of which 2,324 (43.2 percent) were women and 3,061 (56.8 percent) were men. The average hourly wage rate was $9.23: $10.35 for men and $7.74 for women.[12] The 1997 sample comprised 8,358 observations, including 3,800 women (45.5 percent) and 4,558 men (54.5 percent). A minimum hourly wage of $2.00 was imposed to reduce the impact of miscoded responses.[13] Table 1 presents descriptive statistics. Because of small samples in certain industries and occupations, several categories are grouped together: social services, other professional services, and forestry and fisheries are collectively denoted as "professional," and operators, movers, and handlers are collectively denoted as "operators." These groupings resulted in a minimum of 15 flextime observations, plus larger numbers of nonflextime observations, per industry or occupation in 1997, as needed to obtain statistically meaningful estimates in table 4. As shown in that table, of the 40 parameter cells (representing 20 industry/or occupation categories times two genders), only 4 comprised fewer than 20 observations, while another 8 cells represented between 20 and 40 observations each. The 1989 data, representing a smaller sample and drawn from a period in which flextime was less common, contained fewer than 15 observations in each of 28 cells and between 15 and 17 observations in each of 6 more cells; those data were therefore not subjected to further decomposition. Smaller samples reported certain reasons for desiring flextime in 1989 (see table 3), but no natural groupings of those disparate reasons suggested themselves.

Besides observing the statistics in table 1, note that the 1989 mean wage rate was $8.97 for women on flextime, $7.66 for women not on flextime, $10.98 for men on flextime, and $10.31 for men not on flextime. These raw averages suggest an overall dominance of the efficiency wage hypothesis (reflecting higher productivity of flexing workers) over the compensating wage differential effect. The regressions that follow test this casual impression more formally.

The wage equation was estimated by gender, using the natural logarithm of wages as the dependent variable. Two versions were fitted, one with a simple FLEXTIME dummy variable, the other with a vector of FLEXREASONS described shortly:

$$\ln W_i = \alpha + X_{1i}\beta_1 + \beta_2 \text{FLEXTIME}_i + \varepsilon_i; \quad (1)$$

$$\ln W_i = \alpha + X_{1i}\beta_1 + \beta_2 \text{FLEXREASONS}_i + \varepsilon_i. \quad (2)$$

Here, X_{1i} is a vector of measurable characteristics that are expected to affect wages, such as potential work experience,[14] potential work experience squared, education, marital status, and race. These variables are commonly included in studies of compensating wage differentials.[15] Other included job characteristics that may affect earnings are union status, type of industry, occupation, and flextime. Nonpecuniary binary control variables include metropolitan area, the white race, and the southern geographic region. Also in X_{1i} is a vector of binary variables denoting each respondent's major occupation and major industry, as listed in table 1. Thus, the model that is being fit is a fixed-effects model that controls for both industry and occupation. To avoid a singularity in the presence of the intercept, the analysis omitted utilities as a major industry and farming as a major occupation. The stochastic error term is ε_i . Each equation was fitted by ordinary least squares.

In equation (1), FLEXTIME is a binary variable equal to unity for workers whose schedule allows them to vary the time they begin and end their workday, and equal to zero otherwise. In equation (2), FLEXREASON is a vector of binary variables indicating the primary reason workers on flextime reported for altering their schedules. The choices are as follows:

1. family and child responsibilities;
2. transportation;
3. helps to build up leave;
4. personal reasons;
5. enjoy flextime;
6. nature of the job.

Previous work by Johnson and Provan[16] yielded mixed results that failed to suggest any a priori hypothesis on the sign of FLEXTIME. However, one would expect that the average strength of workers' preferences for flextime might vary by reason, whereas the magnitude of any productivity effect of flextime might be relatively less sensitive to the reason. Thus, unequal coefficients across the reasons may primarily reflect unequal preferences, with the most preferred reasons possi-

Table 1. Sample statistics

Variable	Women				Men			
	1989 $n = 2,324$		1997 $n = 3,800$		1989 $n = 3,061$		1997 $n = 4,558$	
	Mean	Standard deviation	Mean	Standard deviation	Mean	Standard deviation	Mean	Standard deviation
ln(wage)	1.965	0.405	2.410	0.489	2.245	0.433	2.606	0.500
Potential experience	19.930	11.213	19.140	9.481	19.856	11.202	19.092	9.196
Flextime	.071	.257	.229	.420	.0595	.2365	.2667	.4423
South	.360	.480	.334	.472	.322	.467	.303	.460
Metro	.715	.452	.786	.410	.711	.454	.799	.401
Married	.588	.492	.605	.489	.684	.465	.689	.463
Education	12.558	2.094	13.632	2.292	12.216	2.153	13.515	2.442
White	.832	.374	.835	.371	.865	.342	.882	.323
Unions	.171	.377	.159	.366	.364	.481	.203	.403
Major industry:								
Mining	.017	.128	.016	.124	.166	.372	.118	.323
Manufacturing	.219	.414	.145	.352	.346	.476	.240	.427
Transportation	.025	.155	.024	.152	.072	.258	.073	.260
Communication	.017	.130	.020	.139	.018	.133	.021	.142
Utilities	.007	.083	.010	.098	.033	.179	.031	.173
Wholesale	.190	.392	.156	.363	.145	.353	.185	.389
Finance	.068	.252	.107	.309	.019	.135	.049	.216
Hospital	.122	.328	.086	.281	.024	.152	.019	.137
Medical	.093	.290	.084	.278	.010	.100	.013	.114
Educational	.052	.221	.127	.333	.025	.157	.045	.206
Social	.025	.156	.032	.176	.005	.067	.008	.089
Professional	.026	.159	.042	.200	.012	.109	.044	.205
Forestry	.0009	.0293	.0011	.0324	.0010	.0313	.0011	.0331
Public administration	.053	.224	.061	.240	.050	.218	.061	.240
Major occupation:								
Managerial	.156	.363	.372	.483	.075	.263	.284	.451
Technical	.045	.208	.043	.204	.035	.184	.035	.184
Sales	.090	.287	.099	.299	.036	.185	.098	.298
Administration	.335	.472	.270	.444	.073	.259	.068	.251
Service	.191	.393	.128	.335	.414	.493	.306	.461
Operator	.141	.348	.061	.239	.165	.371	.086	.280
Movers	.0	.0	.008	.088	.07	.26	.073	.261
Handlers	.032	.177	.016	.127	.092	.289	.042	.201
Reason for desiring flextime:								
Family or child care	.009	.095	[1]	[1]	.0007	.0256	[1]	[1]
Transportation	.002	.046	[1]	[1]	.002	.048	[1]	[1]
Build up leave	.0004	.0207	[1]	[1]	.0003	.0181	[1]	[1]
Personal reasons	.004	.065	[1]	[1]	.002	.048	[1]	[1]
Enjoy flextime	.011	.103	[1]	[1]	.011	.106	[1]	[1]
Nature of the job	.034	.182	[1]	[1]	.038	.190	[1]	[1]

[1] 1997 survey did not report reasons for desiring flextime.

bly indicating a negative coefficient, as the negative compensating wage differential more than offsets any positive efficiency wage differential. However, if employers tend to be more willing to grant requests for flextime to workers who have proven to be more productive, then a positive efficiency wage component could emerge in these samples. In addition, when flextime is adopted because of the nature of the job, it could be that flextime is more the employer's choice than the employee's choice. This suggests a zero or negative compensating wage differential, perhaps a positive efficiency wage differential (particularly if the nature of the job requires flextime for productivity reasons), and thus a positive coefficient overall in equation (2).

Following previous studies, we anticipate positive coefficients on experience, education, metropolitan area, the white race, and union membership and negative coefficients on experience squared and the southern geographic region. We similarly expect the coefficient on married to be positive for men, but negative for women.

In addition, we estimate two other equations to quantify any systematic differences in the wage differentials associated with flextime by industry and by major occupation for 1997:

$$\ln W_i = \acute{a} + X_{1i}\hat{a}_1 + \hat{a}_{2\text{FLEX} \times \text{INDUSTRY}_i} + \mathring{a}_i; \quad (3)$$

$$\ln W_i = \acute{a} + X_{1i}\hat{a}_1 + \hat{a}_{2\text{FLEX} \times \text{OCCUPATION}_i} + \mathring{a}_i. \quad (4)$$

These decompositions will permit us to infer whether any apparent productivity effects of flextime may be relatively greater than the hedonic effects for certain industries or occupations. Although it is natural to suppose that productivity effects may be unequal across the various industry or occupation

categories, we did not hypothesize specific effects a priori.

Results

Table 2 presents the regression results for wage equation (1) by gender. The results for 1989 indicate that flextime is associated with higher wages for women ($t = 2.53$, significant at the 0.05 level), as in Johnson and Provan's subsample of professional women.[17] This outcome is consistent with an efficiency wage effect—reflecting higher productivity—dominating any compensating wage differential. For men, no significant wage differential is associated with flextime ($t = 0.48$), suggesting that any positive efficiency wage effect is roughly offset by a negative compensating wage differential (and conversely). For 1997, flextime is associated with significantly higher wages for both men and women at the 0.01 level; the magnitude of the "flextime premium" for women is virtually unchanged from its 1989 value, while that for men is nearly the same as for women.

The majority of other control variables exhibit significant coefficients, except for occupation effects on women. Experience shows positive, but declining, marginal returns, and wages are higher in metropolitan areas, but lower in the south. Education, unionization, and being a member of the white race are all associated with higher wages, as in previous studies.

Table 3 presents the regression results for wage equation (2), distinguishing the various reasons for flextime in 1989. For each gender, only one flextime reason is associated with a significant wage differential: transportation for women and personal reasons for men, each with a positive coefficient. For the other reasons for adopting flextime, a coefficient not significantly different from zero could be consistent with a net offset of positive and negative wage differentials from productivity and compensating wage effects. However, as noted earlier, a sparse representation for some of these reasons (especially among men) makes it difficult to detect significance in

Table 2. Parameter estimates, wage equation (1)

Variable	Women				Men			
	1989		1997		1989		1997	
	Coefficient	*t*-statistic	Coefficient	*t*-statistic	Coefficient	*t*-statistic	Coefficient	*t*-statistic
Intercept	1.129	[1]5.44	0.928	[1]5.13	0.874	[1]10.57	0.745	[1]8.16
Experience	.013	[1]5.58	.024	[1]9.06	.022	[1]9.20	.026	[1]9.59
Experience squared	−.00020	[1]−4.01	−.00044	[1]−6.56	−.0003	[1]−7.05	−.00041	[1]−6.17
Education	.041	[1]10.63	.0728	[1]20.80	.040	[1]11.65	.068	[1]21.51
South	−.053	[1]−3.75	−.047	[1]−3.50	−.087	[1]−6.21	−.047	[1]−3.60
Metro	.102	[1]6.82	.137	[1]8.87	.097	[1]6.75	.119	[1]7.92
Married	−.003	−.26	.013	.99	.060	[1]4.14	.093	[1]6.91
White	.046	[2]2.49	.032	[3]1.82	.106	[1]5.53	.122	[1]6.54
Union	.230	[1]12.22	.143	[1]7.50	.235	[1]15.97	.137	[1]8.54
Flextime	.066	[2]2.53	.067	[1]4.41	.013	.48	.062	[1]4.41
Major industry:								
Mining	.231	[1]4.16	.114	[2]2.12	.347	[1]12.14	.210	[1]7.91
Manufacturing	.242	[1]8.26	.111	[1]3.92	.230	[1]8.58	.149	[1]6.28
Transportation	.266	[1]5.43	.143	[1]3.10	.242	[1]6.95	.128	[1]4.06
Communication	.243	[1]4.35	.154	[1]31.4	.289	[1]5.45	.210	[1]4.60
Utilities	.233	[1]2.83	.198	[1]2.99	.321	[1]7.59	.274	[1]6.98
Wholesale	.002	.07	−.133	[1]−4.86	.059	[2]1.99	−.060	[2]−2.41
Finance	.133	[1]3.87	.046	1.61	.052	.99	.071	[2]2.14
Hospital	.291	[1]9.64	.094	[1]3.13	.060	1.26	−.048	−1.01
Medical	.124	[1]3.93	.022	.74	−.015	−.23	−.052	−.94
Educational	.037	.98	−.095	[1]−3.16	.016	.34	−.126	[1]−3.55
Social	−.157	[1]−3.31	−.161	[1]−3.97	−.062	−.64	−.150	[2]−2.17
Professional	.115	[2]2.44	.042	1.12	.217	[1]3.43	.099	[1]2.83
Forestry	.044	.18	−.373	[3]−1.94	−.314	−1.54	.254	1.40
Public administration	.198	[1]5.33	.076	[2]2.29	.257	[1]6.96	.131	[1]4.15
Occupation:								
Managerial	.118	.59	.214	1.25	.345	[1]5.04	.417	[1]5.44
Technical	.085	.42	.105	.60	.293	[1]4.05	.378	[1]4.62
Sales	−.150	−.75	.079	.46	.067	.91	.300	[1]3.82
Administrative	−.069	−.35	−.035	−.21	.134	[2]1.98	.176	[2]2.23
Service	−.264	−1.32	−.180	−1.05	.189	[1]2.96	.171	[2]2.25
Operator	−.230	−1.14	−.170	−.98	.148	[2]2.25	.059	.76
Movers	−.093	−.43	−.004	−.02	.103	1.54	.126	1.60
Handlers	−.232	−1.14	−.181	−1.02	.021	.32	.051	.63
Observations	2,324		3,800		3,061		4,558	
Adjusted R^2	.40		.40		.35		.37	

[1]Significant at 0.01 level.
[2]Significant at 0.05 level.
[3]Significant at 0.10 level (two-tailed tests).

a number of these cases. None of the reasons exhibit a significantly negative coefficient, suggesting that no reason is valued strongly enough by workers to more than offset any positive productivity effect.

Table 4 reports regressions for 1997, incorporating interactive variables between flextime and major industry (wage equation (3)) and between flextime and major occupation (wage equation (4)). In equation (3), for women, two interactive terms (automotive and repair, and hospital) are significant at the 0.05 level, while two more (communication and professional) are significant at the 0.10 level in a two-tailed test. These findings are consistent with several possible interpretations, which the analysis presented here cannot distinguish. First, flextime may be associated with an exceptionally large improvement in productivity among women in the four industries mentioned. Second, employers in those industries may selectively grant requests for flextime (or perhaps even impose flextime) on their more productive female employees. Third, the association between productivity and flextime—whatever the causality—may be positive across all industries, but women who choose to work in manufacturing may not value flexible work schedules to the same extent as women who work in other industries.

Table 3. Parameter estimates, wage equation (2), 1989

Variable	Women		Men	
	Coefficient	*t*-statistic	Coefficient	*t*-statistic
Intercept	1.14	[1]5.48	0.87	[1]10.54
Experience	.01	[1]5.50	.02	[1]9.24
Experience squared	–0.0	[1]–3.94	–.00	[1]–7.08
Education	.04	[1]10.61	.04	[1]11.62
South	–.05	[1]–3.74	–.09	[1]–6.26
Metro	.10	[1]6.88	.10	[1]6.66
Married	–.00	–.26	.06	[1]4.12
White	.05	[2]2.49	.11	[1]5.59
Unions	.23	[1]12.27	.24	[1]16.02
Reason for desiring flextime:				
Family or child care	.07	1.18	.01	.08
Transportation	.45	[1]3.17	.04	.28
Build up leave	–.31	–1.00	–.02	–.05
Personal reasons	.12	1.21	.37	[2]2.79
Enjoy flextime	.05	.84	.06	.97
Nature of the job	.04	1.05	–.03	–.79
Major industry:				
Mining	.22	[1]3.96	.35	[1]12.27
Manufacturing	.24	[1]8.08	.23	[1]8.72
Transportation	.26	[1]5.38	.25	[1]7.11
Communication	.24	[1]4.32	.29	[1]5.54
Utilities	.23	[1]2.79	.33	[1]7.69
Wholesale	.00	.01	.06	[2]2.17
Finance	.13	[1]3.83	.06	1.11
Hospital	.29	[1]9.63	.06	1.25
Medical	.12	[1]3.88	–.01	–.17
Educational	.04	.96	.02	.45
Social	–.16	[1]–3.31	–.05	–.48
Professional	.12	[2]2.46	.22	[1]3.46
Forestry	.06	.23	–.33	–1.59
Public administration	.20	[1]5.32	.26	[1]7.10
Major occupation:				
Managerial	.11	.56	.34	[1]5.02
Technical	.08	.41	.29	[1]4.03
Sales	–.15	–.76	.07	.91
Administrative	–.07	–.36	.13	1.94
Service	–.27	–1.34	.19	[2]2.95
Operator	–.23	–1.15	.15	[2]2.20
Movers	–.10	–.45	.10	1.51
Handlers	–.23	–1.15	.02	.31
Adjusted R^2	.41		.36	

[1]Significant at 0.01 level.
[2]Significant at 0.05 level.
[3]Significant at 0.10 level (two-tailed tests).

In equation (4), for women, two interactive variables are highly significant and positive: flextime × sales, with $t = 4.17$, and flextime × administrative, with $t = 3.51$. Each of these is significant at the 0.01 level. The positive sign of both coefficients suggests either a stronger positive productivity effect of flextime in those occupations (again, whichever way the causality runs) or a systematically weaker personal preference for flextime in those occupations, combined with a positive productivity effect.

For the sample of men, equation (3) exhibits significantly positive coefficients for four major industries. As with women, flextime ×automotive and repair and flextime × professional exhibit positive coefficients, with $t = 4.31$ and 1.67, respectively. In contrast to the sample of women, however, flextime × manufacturing and flextime × medical are significant, with $t = 1.84$ and 2.30, respectively. These coefficients are consistent with a stronger association between flextime and productivity or with weaker preferences for flextime in those four industries. For men, equation (4) exhibits positive coefficients that are significant for all major occupations except operators.

From equations (3) and (4), the emergence of distinct gender-based marginal wage effects of flextime across some industries and occupations raises questions that could usefully be addressed in future studies. Are the differences due primarily to differences in productivity or in hedonic preferences? Can such findings identify those industries or occupations which could benefit more than others from a more widespread adoption of flextime? Do the differences reflect systematic discrimination by gender, or do they instead point to additional factors that must be controlled for in studies aimed at measuring wage discrimination? To what extent do any positive productivity effects that are observed result from flextime itself, as opposed to reflecting an employer's selective offering of flextime to a more productive subset of workers?

FLEXTIME IS AN EMERGING TREND IN THE MODERN WORKPLACE, with potential benefits for employers as well as employees. Theoretically, the net impact of flextime on wages depends on the relative strengths of two opposing effects and therefore raises the important empirical question of which effect is stronger either in general or in a given case. The CPS supplements from 1989 and 1997 offer a rich data set that may be used to answer that question.

Table 4. Parameter estimates for interactive flextime terms, 1997

Variable	Women			Men		
	Coefficient	*t*-statistic	Number of observations[1]	Coefficient	*t*-statistic	Number of observations[1]
Equation (3)						
Flextime × industry:						
Flextime × mining	0.0843	0.74	15	0.0456	1.05	103
Flextime × manufacturing	.0204	.46	97	.0545	[4]1.84	252
Flextime × transportation	.0857	.93	23	.0671	1.26	71
Flextime × communication	.1798	[4]1.84	21	.1304	1.42	26
Flextime × wholesale	.0348	1.00	165	.0191	.63	247
Flextime × finance	.1558	[2]3.65	108	.0668	1.21	81
Flextime × automotive and repair	.1410	[3]2.18	45	.2070	[2]4.31	108
Flextime × services	.0385	.40	20	.0168	.14	16
Flextime × entertainment	−.1055	−.89	16	−.0310	−.28	18
Flextime × hospital	.1051	[3]1.97	63	.1272	1.26	20
Flextime × medical	.0278	.52	63	.2505	[3]2.30	20
Flextime × educational	−.000278	−.00	46	−.0187	−.27	43
Flextime × professional	.0777	[4]1.65	104	.0866	[4]1.67	101
Flextime × public administration	.0412	.77	74	.0377	.73	86
Equation (4)						
Flextime × occupation:						
Flextime × managerial	.0284	1.24	415	.0576	[2]2.55	547
Flextime × technical	−.0608	−.84	36	.1542	[2]2.38	61
Flextime × sales	.1773	[2]4.17	116	.0843	[3]2.21	182
Flextime × administrative	.1050	[2]3.51	203	.0900	[4]1.62	66
Flextime × service	.0637	1.37	81	.0657	[3]2.25	223
Flextime × operators	.0368	.42	20	−.0057	−.15	130

[1]The number of observations is the number of flexing employees in each industry or profession.
[2]Significant at 0.01 level.
[3]Significant at 0.05 level.
[4]Significant at 0.10 level (two-tailed tests).

This article has found evidence of a positive wage differential associated with flextime for a sample of 2,324 women in 1989 and 3,800 in 1997, presumably reflecting a positive productivity effect that more than offsets any compensating wage differential reflecting hedonic preferences for flextime. No significant wage differential accompanied the adoption of flextime for the 1989 sample of more than 3,000 men, a finding that is consistent with the hypothesis that any productivity effects are approximately offset by hedonic effects within that sample. These results are all generally consistent with earlier findings obtained by Johnson and Provan for a much smaller and more locally limited sample, with the exception of their results for nonprofessional women.[18] However, the 1997 sample of more than 4,500 men exhibited a significantly positive wage differential associated with flextime, consistent with the findings from the sample of women.

Decomposing the 1989 observations by stated reason for adopting flextime, the analysis presented finds that only a single reason was associated with measurable wage effects for each gender: transportation for women on flextime and personal reasons for men on flextime. Both of those reasons exhibited positive wage differentials, suggesting productivity benefits of flextime in those cases. This issue has apparently not been previously studied, and the omission of reasons for flextime from the 1997 survey prevented its further exploration.

Decomposing the observations by industry and by occupation for 1997 reveals positive wage differentials for women in communication, finance, automotive and repair, hospitals, and professional services and for men in manufacturing, automotive and repair, medical services, and professional services. Positive wage differentials were associated with women on flextime in sales and administrative occupations and with men on flextime in managerial, technical, and service occupations. Again, these decompositions appear never to have been addressed in the literature. The differences found across industries and occupations by gender may warrant further research to determine whether they are specific to the samples used or more systematic.

Further research on the incidence and causes of a positive flextime wage differential appears warranted. Some may find the efficiency wage hypothesis an unconvincing explanation in this context, despite more direct evidence that flextime may enhance productivity.[19] As discussed earlier, one variant of this idea is that some employers may allow only their most productive and reliable employees the option of flextime, using it as a nonpecuniary form of compensation that complements pecuniary compensation, or possibly relying on the personal integrity of their best workers to mitigate a greater

difficulty involved in monitoring the effort contributed by employees on flextime. An alternative, more cynical, explanation is that employers who offer flextime are, on average, simply less serious about maximizing profits and may also pay above-market wages as another dimension of corporate inefficiency. If data on employers as well as employees were available, this hypothesis could be tested by comparing the overall cost efficiency, profit efficiency, or other kind of efficiency of employers who allow their employees to use flextime, as opposed to those who do not.

Another question revolves around the stated reasons for adopting flextime: might these reasons mask a pattern of strategic misreporting as workers seek to conform to entrenched organizational and cultural norms or to avoid signaling that they place a large hedonic value on flextime? For instance, other things being equal, are women on flextime paid more if their stated motivation is transportation rather than family and child responsibilities? Are fathers on flextime paid more if their stated motivation is unspecified personal reasons rather than family and child responsibilities? The empirical results reported in this article are consistent with these hypotheses and others, but are merely suggestive, given the data currently available. □

Notes

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[1] See John D. Owen, "Flexitime: Some Problems and Solutions," *Industrial and Labor Relations Review*, January 1977, pp. 152–160; Steven G. Allen, "An Empirical Model of Work Attendance," *Review of Economics and Statistics*, February 1980, pp. 77–87; D. R. Dalton and D. Mesch, "The Impact of Flexible Scheduling on Employee Attendance and Turnover," *Administrative Science Quarterly*, June 1990, pp. 370–87; and Edward M. Shepard, Thomas J. Clifton, and Douglas Kruse, "Flexible Work Hours and Productivity: Some Evidence from the Pharmaceutical Industry," *Industrial Relations*, January 1996, pp. 123–39.

[2] Marni Ezra and Melissa Deckman, "Balancing Work and Family Responsibilities: Flextime and Child Care in the Federal Government," *Public Administration Review*, March–April 1996, pp. 174–79.

[3] Nancy Johnson and Keith Provan, "The Relationship between Work/Family Benefit and Earnings: A Test of Competing Predictions," *Journal of Socio-Economics*, Winter 1995, pp. 571–84.

[4] See Owen, "Flexitime"; and Barney Olmstead, "Flexible Work Arrangements: From Accommodation to Strategy," *Employment Relations Today*, summer 1995, pp. 11–20.

[5] David Lewin and Daniel J. Mitchell, *Human Resource Management: An Economic Approach*, 2d ed. (Cincinnati, South-Western College Publishing, 1995), see especially p. 155.

[6] See Owen, "Flexitime"; Allen, "Model of Work Attendance"; Dalton and Mesch, "Impact of Flexible Scheduling"; and Shepard, Clifton, and Kruse, "Flexible Work Hours and Productivity."

[7] Joni Hersch and Leslie Stratton, "Housework, Fixed Effects, and Wages of Married Workers," *Journal of Human Resources*, spring 1997, pp. 285–307.

[8] Francine D. Blau and Marianne A. Ferber, *The Economics of Women, Men, and Work*, 2d ed. (Englewood Cliffs, NJ, Prentice Hall, 1992).

[9] Sherwin Rosen, "Hedonic Prices and Implicit Markets: Product Differentiation in Pure Competition," *Journal of Political Economy*, January–February 1974, pp. 34–55.

[10] See Harvey Leibenstein, *Economic Backwardation and Economic Growth* (New York, John Wiley and Sons, 1957); and Joseph E. Stiglitz, "The Efficiency Wage Hypothesis, Surplus Labour, and the Distribution of Income in L.D.C.s," *Oxford Economic Papers*, July 1976, pp. 185–207.

[11] The CPS is conducted by the U.S. Bureau of the Census for the Bureau of Labor Statistics.

[12] Full-time salaried workers whose usual weekly hours are not less than 35 were included in the sample with an imputed hourly wage rate equal to the ratio of weekly earnings to usual hours. Note that, because CPS wage data are top coded, average hourly wage data will be biased downward.

[13] At the time of the survey, the Federal minimum wage was $3.35 per hour. However, some States had minimum wage rates that were lower than the Federal minimum, and some jobs did not fit the Federal definition of interstate commerce and so were exempt from the minimum. The value of $2.00 was chosen to correspond to known wage rates of certain jobs (for example, waitress) at the time of the survey. Observations reporting a wage rate lower than $2.00 per hour were treated as miscoded responses and were ignored.

[14] Potential work experience is defined as age, minus education, minus 6 years and is usually a larger number than actual work experience.

[15] See Rosen, "Hedonic Prices and Implicit Markets"; and Charles Brown, "Equalizing Differences in the Labor Market," *Quarterly Journal of Economics*, February 1980, pp. 113–34.

[16] Johnson and Provan, "Work/Family Benefit and Earnings."

[17] *Ibid.*

[18] *Ibid.*

[19] See Owen, "Flexitime"; Allen, "Model of Work Attendance"; Dalton and Mesch, "Impact of Flexible Scheduling"; and Shepard, Clifton, and Kruse, "Flexible Work Hours and Productivity."

New economy and productivity

The "new economy" has become a popular topic of discussion, in the *Review* and elsewhere. In "Productivity Growth and the New Economy" (NBER Working Paper 8096), William D. Nordhaus of Yale University adds to the discussion by estimating the effect of the new economy on labor productivity growth. This study is the third of a series of three recent papers by Nordhaus on productivity measurement.

In this latest paper, Nordhaus presents alternative productivity measures using concepts and data that he describes in the second paper of the series. He uses "income-side" output measures in his productivity calculations, in contrast to standard productivity statistics such as those published by the Bureau of Labor Statistics, which uses "product-side" output measures. (The "sides" refer to which part of the national accounts serve as the data source.)

The productivity series that Nordhaus constructed for the business sector increased at a slower rate than the corresponding BLS series in 1977–95. However, in 1996–98, his series grew more rapidly than the BLS series.

Nordhaus examines the contribution of the new economy to business-sector productivity growth. For measurement purposes, he defines the new economy as machinery, electric equipment, telephone and telegraph, and software. He finds that one-third of the acceleration in business-sector labor productivity in 1996–98 is due to the acceleration in the new economy's contribution to productivity growth. He does caution that his results are likely to underestimate the effect of the new economy because they only include the direct contribution of it.

The 'Net and the labor market

In addition to their impacts on capital stocks and industry production, the Internet and the new economy are having effects on the institutions and functioning of the labor markets. David A. Autor's article, "Wiring the Labor Market," in the *Journal of Economic Perspectives* analyzes three aspects of the labor market in which the forces of the new economy are likely to have significant consequences.

Job search is likely to become more efficient. There may already be some evidence of this. The index of help-wanted advertising, which usually rises as unemployment falls, has been relatively flat even as the unemployment rate fell to 30-year lows in the late-1990s. This is consistent with a shift of the Beveridge curve—a negative relationship between vacancies and joblessness—toward its origin. If job search is indeed becoming more efficient, Autor points out that labor market theory predicts an improvement in productivity. As the number of potential matches employers and workers can consider goes up, the "reservation match quality" rises on both sides of the table.

There may also be changes in the way labor services are delivered, according to Autor. "Remote access to e-mail and company documents will enable many workers to perform some or all of their work from home or elsewhere." One efficiency gain from such remote locations is that unproductive commute times may be reduced and there is also some evidence that employees who use Internet access at home actually spend more hours working at home without spending less lime working in the office. Autor attributes this to the possibility that "by increasing the productivity of working at home, telecommuting may induce substitution from leisure to production."

Finally, the demand for labor may depend less on local labor supplies. Says Autor, "...businesses are likely to subdivide work into component parts, ship subtasks electronically to sources of labor supply, and use information technology to coordinate the geographically dispersed production process." This might lead to the reallocation of work to regions where labor is least costly and will allow producers to find economies of scale that smaller, more localized markets for their products would not support. As producers thus arbitrage regional wage differentials, Autor points out that there is the theoretical possibility that wages would become more equal and some high local rates of unemployment could be reduced. □

We are interested in your feedback on this column. Please let us know what you have found most interesting and what essential readings we may have missed. Write to: Executive Editor, *Monthly Labor Review*, Bureau of Labor Statistics, Washington, DC, 20212, or e-mail MLR@bls.gov

Canada's "pit" boys

Boys in the Pits: Child Labour in Coal Mines. By Robert McIntosh. Montreal, Quebec, McGill-Queen's University Press, 2000, 305 pp. bibliography. $34.95.

Robert McIntosh, an employee at the National Archives of Canada, has written an interesting book on child labor in Canada in the 19th and early 20th centuries. *Boys in the Pits* explores the history of boys, aged 8 to 15, who worked in the coal mines in Canada. They labored underground, leading horses along lengthy and treacherous subterranean roads, manipulating ventilation doors, helping miners cut and lift tons of coal, and filling wagon after wagon with freshly-mined coal, as the first step in its removal from the mines. For young boys, the work was very hard, as justified by their role in producing the energy that fueled Canada's Industrial Revolution.

The author examines how the various roles of changing technology, alternative sources of unskilled labor, and legislation concerning the children from 1820 to 1940—which eventually banned children in the mine and required compulsory education—affected Canadian society, as it moved from the Industrial Age into the modern era.

One British author of a child labor book argues that, "the exploitation of little children, on this scale and with this intensity, was one of the most shameful events in our history." The history of child labor is, thus, reduced to a chronicle of blighted childhood. McIntosh, in *Boys in the Pits*, reassesses this orthodoxy. In the first part, he examines "how changing attitudes and practices regarding childhood, class relations at the colliery, mining technology, the state, the working-class family, and the mining community shaped the world pit boys encountered. These circumstances drew boys into the mine, defined their place there, and eventually expelled them from the colliery."

The author writes: "The history of children is a history of their labor." Until the 19th century, the majority of young people worked in a household setting. In the growing cities, they worked shining shoes, selling newspapers, and doing odd jobs.

Large new mills, factories, and mines were more characteristic of the emerging Industrial Age. By the last decades of the 19th century, the reorganization or mechanization of traditional crafts such as cigarmaking, printing, and boot, shoe, and clothing manufacturing produced a brisk demand for child labor in urban areas of Canada. Textile mills were known for hiring girls and boys. Children also labored in sawmills, match factories, ropemaking, and bakeries across the country. Wherever new divisions of labor and machinery produced jobs that required little skill or strength, children were found employed.

Coal was the basic fuel of the Industrial Age from the 1850s on into the 1900s. It was used increasingly in railway and steam engines, to propel ocean shipping, and to heat homes and other buildings. Coal was the main source of fuel during that era, occupying the niche that petroleum does today.

The majority of the boys were taken into the mines by their fathers, brothers, or other relatives. The family claimed they were putting their sons into an apprenticeship. However, there were times when the adults were jealous of the boys because two boys were hired for each man. The men were also resentful of the boys, at times, because the boys were unionized and went on strike often, for example, when a coworker was fired, for better pay, when mine foremen whipped the boys, or when a boy's horse died, and the company demanded that he pay $150 for it. (Although one boy admitted later that he hit one horse in the head and killed him because the horse was reckless and kicked him in the head.) The work day was long, and the boys labored in the mines for 10 to 12 hours at 32 cents to $1 per day as trappers (opening and closing the ventilation doors); drivers of horses got from 60 cents to $1 per day; boys, on balances, got from 80 cents to $1; loaders earned $1.20 to $1.30; laborers were paid from 85 cents to $1.

One miner commented in 1891: "There are no children working in the mine. They may be children when they go in at 10 or 12 years of age, but a fortnight or so thoroughly works that out of them. They then become old fashioned boys. They get inured to all sorts of danger and hardship."

After World War I, the age for starting in the mines was raised a bit, from approximately 10–12 years to 14 or 15 years. Miners were recruited from England and Wales to Canada. They also bought their children, but they encountered some resistance when they tried to bring their sons into the mines. On the Pacific coast, which had a ready supply of Asian laborers, child labor in the mines was restricted by legislation in 1877. By the late 1880s, with the mechanization of underground hauling, railroad tracks were installed and box cars were used, as well as other technology; therefore, the demand was reversed. Other innovations discouraged the employment of boys in some mines. At the same time, older miners began steering their sons away from what they viewed as a declining craft, the craft of collier.

In some areas of Canada, young-boy labor accounted for 15 to 20 percent of the coal-mining labor force in the early 1900s. Working as general laborers, some boys distributed miners' hand picks or they greased coal tubs, changed batteries, serviced lamps, filled powder cans, loaded timbers and cordwood onto flatcars, or pushed and assembled empty tubs for return trips into the mine. The "tally" boy kept track of the amount of coal each miner sent to the surface. Some worked as helpers to the tradesmen, including blacksmiths, boilermakers, and foundry men. Other boys operated pumps, or worked as wharf hands helping to dump coal cars. Rarely did they

work in the mine office. Many also worked on the mine surface cleaning coal, which consisted of removing impurities of dirt, slate, and rocks. One 13 year old recalled, "it was the most mind-stifling occupation that can be imagined. Our job was to pick out the pieces of shale from the coal as it passed on a conveyer. Watching a slow-moving conveyer passing one's eye was enough to drive one crazy." Most boys preferred to work underground.

The work enviroment was harsh and frightening. There were rough footing, steep grades, low roofs, dripping water, narrow passageways, pools of stagnant water and mud, cold, rushing-air currents, clouds of bitter smoke and choking coal dust, falling stones and coal from overhead, fatal pockets of methane gas embedded in the seams, and almost universal darkness. The absence of light accentuated sounds underground: the clatter of coal tubs against underground rail lines, the scurrying of rats, the dull sound of distant explosions. One pit boy who started in the mines at age 11, in 1912, recalled that "most of the miners had to walk to their place of work. The first day I worked I had to walk 3 miles underground before I got to work, then do my 12 hours and walk back 3 miles." Some boys refused to return after the first day.

On February 21, 1891, at a mine in Nova Scotia, a charge of gunpowder was lit 1,900 feet underground to dislodge a small quantity of coal. The explosion backfired, igniting airborne coal dust. Wind and flame followed by balls of fire stormed through the mine, where 125 workers died that day; 21 of the victims were under 18 years of age, the youngest being 12 years old. Many of the pit boys experienced accidents in the mine, including broken bones, and even death as a result of rock and coal falls, being crushed, working around underground transportation on mine slopes and traveling roads. Management frequently tried to shift the blame to the pit boys, citing their irresponsibility. Trapper boys were often killed or injured. But inspectors recognized that it was not the youthfulness of the boys that caused accidents; instead, as the author notes, the root of the problem lay with careless individuals who made bad decisions.

The Provincial Workman's Association (PWA) established a boys' lodge in 1883 as a union among the pit boys, who were able to use the union as a bargaining tool. The pit boys did lead strikes, shutting down the mines. The young haulers were particularly strike-prone. They only needed a five-minute strike to bring the whole pit to a standstill, as tubs clogged up waiting to be removed. By the 1900s, wage structures were formalized through collective bargaining. Boys up to 17 were paid a certain rate and from ages 17 to 18, an augmented boys' rate. After that, a boy would have to quit the job or go to a job that called for a man's rate.

Boys in the Pits is well documented, with detailed footnotes and an extensive 37-page bibliography. It will be useful to labor historians interested in Canada, child labor, and the history of mining.

—Ernestine Patterson Leary

Office of Publications and
Special Studies
Bureau of Labor Statistics

Notes on Current Labor Statistics

This section of the *Review* presents the principal statistical series collected and calculated by the Bureau of Labor Statistics: series on labor force; employment; unemployment; labor compensation; consumer, producer, and international prices; productivity; international comparisons; and injury and illness statistics. In the notes that follow, the data in each group of tables are briefly described; key definitions are given; notes on the data are set forth; and sources of additional information are cited.

General notes

The following notes apply to several tables in this section:

Seasonal adjustment. Certain monthly and quarterly data are adjusted to eliminate the effect on the data of such factors as climatic conditions, industry production schedules, opening and closing of schools, holiday buying periods, and vacation practices, which might prevent short-term evaluation of the statistical series. Tables containing data that have been adjusted are identified as "seasonally adjusted." (All other data are not seasonally adjusted.) Seasonal effects are estimated on the basis of past experience. When new seasonal factors are computed each year, revisions may affect seasonally adjusted data for several preceding years.

Seasonally adjusted data appear in tables 1–14, 16–17, 39, and 43. Seasonally adjusted labor force data in tables 1 and 4–9 were revised in the February 2001 issue of the *Review*. Seasonally adjusted establishment survey data shown in tables 1, 12–14 and 16–17 were revised in the July 2000 *Review* and reflect the experience through March 2000. A brief explanation of the seasonal adjustment methodology appears in "Notes on the data."

Revisions in the productivity data in table 45 are usually introduced in the September issue. Seasonally adjusted indexes and percent changes from month-to-month and quarter-to-quarter are published for numerous Consumer and Producer Price Index series. However, seasonally adjusted indexes are not published for the U.S. average All-Items CPI. Only seasonally adjusted percent changes are available for this series.

Adjustments for price changes. Some data—such as the "real" earnings shown in table 14—are adjusted to eliminate the effect of changes in price. These adjustments are made by dividing current-dollar values by the Consumer Price Index or the appropriate component of the index, then multiplying by 100. For example, given a current hourly wage rate of $3 and a current price index number of 150, where 1982 = 100, the hourly rate expressed in 1982 dollars is $2 ($3/150 x 100 = $2). The $2 (or any other resulting values) are described as "real," "constant," or "1982" dollars.

Sources of information

Data that supplement the tables in this section are published by the Bureau in a variety of sources. Definitions of each series and notes on the data are contained in later sections of these Notes describing each set of data. For detailed descriptions of each data series, see *BLS Handbook of Methods*, Bulletin 2490. Users also may wish to consult *Major Programs of the Bureau of Labor Statistics*, Report 919. News releases provide the latest statistical information published by the Bureau; the major recurring releases are published according to the schedule appearing on the back cover of this issue.

More information about labor force, employment, and unemployment data and the household and establishment surveys underlying the data are available in the Bureau's monthly publication, *Employment and Earnings*. Historical unadjusted and seasonally adjusted data from the household survey are available on the Internet:

http://stats.bls.gov/cpshome.htm

Historically comparable unadjusted and seasonally adjusted data from the establishment survey also are available on the Internet:

http://stats.bls.gov/ceshome.htm

Additional information on labor force data for areas below the national level are provided in the BLS annual report, *Geographic Profile of Employment and Unemployment*.

For a comprehensive discussion of the Employment Cost Index, see *Employment Cost Indexes and Levels, 1975–95*, BLS Bulletin 2466. The most recent data from the Employee Benefits Survey appear in the following Bureau of Labor Statistics bulletins: *Employee Benefits in Medium and Large Firms; Employee Benefits in Small Private Establishments;* and *Employee Benefits in State and Local Governments*.

More detailed data on consumer and producer prices are published in the monthly periodicals, *The CPI Detailed Report* and *Producer Price Indexes*. For an overview of the 1998 revision of the CPI, see the December 1996 issue of the *Monthly Labor Review*. Additional data on international prices appear in monthly news releases.

Listings of industries for which productivity indexes are available may be found on the Internet:

http://stats.bls.gov/iprhome.htm

For additional information on international comparisons data, see *International Comparisons of Unemployment*, BLS Bulletin 1979.

Detailed data on the occupational injury and illness series are published in *Occupational Injuries and Illnesses in the United States, by Industry*, a BLS annual bulletin.

Finally, the *Monthly Labor Review* carries analytical articles on annual and longer term developments in labor force, employment, and unemployment; employee compensation and collective bargaining; prices; productivity; international comparisons; and injury and illness data.

Symbols

n.e.c. = not elsewhere classified.
n.e.s. = not elsewhere specified.
p = preliminary. To increase the timeliness of some series, preliminary figures are issued based on representative but incomplete returns.
r = revised. Generally, this revision reflects the availability of later data, but also may reflect other adjustments.

Comparative Indicators

(Tables 1–3)

Comparative indicators tables provide an overview and comparison of major BLS statistical series. Consequently, although many of the included series are available monthly, all measures in these comparative tables are presented quarterly and annually.

Labor market indicators include employment measures from two major surveys and information on rates of change in compensation provided by the Employment Cost Index (ECI) program. The labor force participation rate, the employment-to-population ratio, and unemployment rates for major demographic groups based on the Current Population ("household") Survey are presented, while measures of employment and average weekly hours by major industry sector are given using nonfarm payroll data. The Employment Cost Index (compensation), by major sector and by bargaining status, is chosen from a variety of BLS compensation and wage measures because it provides a comprehensive measure of employer costs for hiring labor, not just outlays for wages, and it is not affected by employment shifts among occupations and industries.

Data on **changes in compensation, prices, and productivity** are presented in table 2.

Measures of rates of change of compensation and wages from the Employment Cost Index program are provided for all civilian nonfarm workers (excluding Federal and household workers) and for all private nonfarm workers. Measures of changes in consumer prices for all urban consumers; producer prices by stage of processing; overall prices by stage of processing; and overall export and import price indexes are given. Measures of productivity (output per hour of all persons) are provided for major sectors.

Alternative measures of wage and compensation rates of change, which reflect the overall trend in labor costs, are summarized in table 3. Differences in concepts and scope, related to the specific purposes of the series, contribute to the variation in changes among the individual measures.

Notes on the data

Definitions of each series and notes on the data are contained in later sections of these notes describing each set of data.

Employment and Unemployment Data

(Tables 1; 4–20)

Household survey data

Description of the series

EMPLOYMENT DATA in this section are obtained from the Current Population Survey, a program of personal interviews conducted monthly by the Bureau of the Census for the Bureau of Labor Statistics. The sample consists of about 50,000 households selected to represent the U.S. population 16 years of age and older. Households are interviewed on a rotating basis, so that three-fourths of the sample is the same for any 2 consecutive months.

Definitions

Employed persons include (1) all those who worked for pay any time during the week which includes the 12th day of the month or who worked unpaid for 15 hours or more in a family-operated enterprise and (2) those who were temporarily absent from their regular jobs because of illness, vacation, industrial dispute, or similar reasons. A person working at more than one job is counted only in the job at which he or she worked the greatest number of hours.

Unemployed persons are those who did not work during the survey week, but were available for work except for temporary illness and had looked for jobs within the preceding 4 weeks. Persons who did not look for work because they were on layoff are also counted among the unemployed. **The unemployment rate** represents the number unemployed as a percent of the civilian labor force.

The **civilian labor force** consists of all employed or unemployed persons in the civilian noninstitutional population. Persons **not in the labor force** are those not classified as employed or unemployed. This group includes discouraged workers, defined as persons who want and are available for a job and who have looked for work sometime in the past 12 months (or since the end of their last job if they held one within the past 12 months), but are not currently looking, because they believe there are no jobs available or there are none for which they would qualify. The **civilian noninstitutional population** comprises all persons 16 years of age and older who are not inmates of penal or mental institutions, sanitariums, or homes for the aged, infirm, or needy. The **civilian labor force participation** rate is the proportion of the civilian noninstitutional population that is in the labor force. The **employment-population ratio** is employment as a percent of the civilian noninstitutional population.

Notes on the data

From time to time, and especially after a decennial census, adjustments are made in the Current Population Survey figures to correct for estimating errors during the intercensal years. These adjustments affect the comparability of historical data. A description of these adjustments and their effect on the various data series appears in the Explanatory Notes of *Employment and Earnings*.

Labor force data in tables 1 and 4–9 are seasonally adjusted. Since January 1980, national labor force data have been seasonally adjusted with a procedure called X-11 ARIMA which was developed at Statistics Canada as an extension of the standard X-11 method previously used by BLS. A detailed description of the procedure appears in the X-11 *ARIMA Seasonal Adjustment Method*, by Estela Bee Dagum (Statistics Canada, Catalogue No. 12-564E, January 1983).

At the beginning of each calendar year, historical seasonally adjusted data usually are revised, and projected seasonal adjustment factors are calculated for use during the January–June period. The historical seasonally adjusted data usually are revised for only the most recent 5 years. In July, new seasonal adjustment factors, which incorporate the experience through June, are produced for the July–December period, but no revisions are made in the historical data.

FOR ADDITIONAL INFORMATION on national household survey data, contact the Division of Labor Force Statistics: (202) 691–6378.

Establishment survey data

Description of the series

EMPLOYMENT, HOURS, AND EARNINGS DATA in this section are compiled from payroll records reported monthly on a voluntary basis to the Bureau of Labor Statistics and its cooperating State agencies by about 300,000 establishments representing all industries except agriculture. Industries are classified in accordance with the 1987 *Standard Industrial Classification (SIC) Manual*. In most industries, the sampling probabilities are based on the size of the establishment; most large establishments are therefore in the sample. (An establishment is not necessarily a firm; it may be a branch plant, for example, or warehouse.) Self-employed persons and others not on a regular civilian payroll are outside the scope of the survey because they are excluded from establishment records. This largely accounts for the difference in employment figures between the household and establishment surveys.

Definitions

An **establishment** is an economic unit which produces goods or services (such as a factory or store) at a single location and is engaged in one type of economic activity.

Employed persons are all persons who received pay (including holiday and sick pay) for any part of the payroll period including the 12th day of the month. Persons holding more than one job (about 5 percent of all persons in the labor force) are counted in each establishment which reports them.

Production workers in manufacturing include working supervisors and nonsupervisory workers closely associated with production operations. Those workers mentioned in tables 11–16 include production workers in manufacturing and mining; construction workers in construction; and nonsupervisory workers in the following industries: transportation and public utilities; wholesale and retail trade; finance, insurance, and real estate; and services. These groups account for about four-fifths of the total employment on private nonagricultural payrolls.

Earnings are the payments production or nonsupervisory workers receive during the survey period, including premium pay

for overtime or late-shift work but excluding irregular bonuses and other special payments. **Real earnings** are earnings adjusted to reflect the effects of changes in consumer prices. The deflator for this series is derived from the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W).

Hours represent the average weekly hours of production or nonsupervisory workers for which pay was received, and are different from standard or scheduled hours. **Overtime hours** represent the portion of average weekly hours which was in excess of regular hours and for which overtime premiums were paid.

The **Diffusion Index** represents the percent of industries in which employment was rising over the indicated period, plus one-half of the industries with unchanged employment; 50 percent indicates an equal balance between industries with increasing and decreasing employment. In line with Bureau practice, data for the 1-, 3-, and 6-month spans are seasonally adjusted, while those for the 12-month span are unadjusted. Data are centered within the span. Table 17 provides an index on private nonfarm employment based on 356 industries, and a manufacturing index based on 139 industries. These indexes are useful for measuring the dispersion of economic gains or losses and are also economic indicators.

Notes on the data

Establishment survey data are annually adjusted to comprehensive counts of employment (called "benchmarks"). The latest adjustment, which incorporated March 1999 benchmarks, was made with the release of May 2000 data, published in the July 2000 issue of the *Review*. Coincident with the benchmark adjustment, historical seasonally adjusted data were revised to reflect updated seasonal factors. Unadjusted data from April 1999 forward and seasonally adjusted data from January 1996 forward are subject to revision in future benchmarks.

In addition to the routine benchmark revisions and updated seasonal factors introduced with the release of the May 2000 data, all estimates for the wholesale trade division from April 1998 forward were revised to incorporate a new sample design. This represented the first major industry division to convert to a probability-based sample under a 4-year phase-in plan for the establishment survey sample redesign project. For additional information, see the the June 2000 issue of *Employment and Earnings*.

Revisions in State data (table 11) occurred with the publication of January 2000 data.

Beginning in June 1996, the BLS uses the X-12 ARIMA methodology to seasonally adjust establishment survey data. This procedure, developed by the Bureau of the Census, controls for the effect of varying survey intervals (also known as the 4- versus 5-week effect), thereby providing improved measurement of over-the-month changes and underlying economic trends. Revisions of data, usually for the most recent 5-year period, are made once a year coincident with the benchmark revisions.

In the establishment survey, estimates for the most recent 2 months are based on incomplete returns and are published as preliminary in the tables (12–17 in the *Review*). When all returns have been received, the estimates are revised and published as "final" (prior to any benchmark revisions) in the third month of their appearance. Thus, December data are published as preliminary in January and February and as final in March. For the same reasons, quarterly establishment data (table 1) are preliminary for the first 2 months of publication and final in the third month. Thus, fourth-quarter data are published as preliminary in January and February and as final in March.

FOR ADDITIONAL INFORMATION on establishment survey data, contact the Division of Monthly Industry Employment Statistics: (202) 691–6555.

Unemployment data by State

Description of the series

Data presented in this section are obtained from the Local Area Unemployment Statistics (LAUS) program, which is conducted in cooperation with State employment security agencies.

Monthly estimates of the labor force, employment, and unemployment for States and sub-State areas are a key indicator of local economic conditions, and form the basis for determining the eligibility of an area for benefits under Federal economic assistance programs such as the Job Training Partnership Act. Seasonally adjusted unemployment rates are presented in table 10. Insofar as possible, the concepts and definitions underlying these data are those used in the national estimates obtained from the CPS.

Notes on the data

Data refer to State of residence. Monthly data for all States and the District of Columbia are derived using standardized procedures established by BLS. Once a year, estimates are revised to new population controls, usually with publication of January estimates, and benchmarked to annual average CPS levels.

FOR ADDITIONAL INFORMATION on data in this series, call (202) 691–6392 (table 10) or (202) 691–6559 (table 11).

Compensation and Wage Data

(Tables 1–3; 21–27)

COMPENSATION AND WAGE DATA are gathered by the Bureau from business establishments, State and local governments, labor unions, collective bargaining agreements on file with the Bureau, and secondary sources.

Employment Cost Index

Description of the series

The **Employment Cost Index** (ECI) is a quarterly measure of the rate of change in compensation per hour worked and includes wages, salaries, and employer costs of employee benefits. It uses a fixed market basket of labor—similar in concept to the Consumer Price Index's fixed market basket of goods and services—to measure change over time in employer costs of employing labor.

Statistical series on total compensation costs, on wages and salaries, and on benefit costs are available for private nonfarm workers excluding proprietors, the self-employed, and household workers. The total compensation costs and wages and salaries series are also available for State and local government workers and for the civilian nonfarm economy, which consists of private industry and State and local government workers combined. Federal workers are excluded.

The Employment Cost Index probability sample consists of about 4,400 private nonfarm establishments providing about 23,000 occupational observations and 1,000 State and local government establishments providing 6,000 occupational observations selected to represent total employment in each sector. On average, each reporting unit provides wage and compensation information on five well-specified occupations. Data are collected each quarter for the pay period including the 12th day of March, June, September, and December.

Beginning with June 1986 data, fixed employment weights from the 1980 Census of Population are used each quarter to calculate the civilian and private indexes and the index for State and local governments. (Prior to June 1986, the employment weights are from the 1970 Census of Population.) These fixed weights, also used to derive all of the industry and occupation series indexes, ensure that changes in these indexes reflect only changes in compensation, not employment shifts among industries or occupations with different levels of

wages and compensation. For the bargaining status, region, and metropolitan/non-metropolitan area series, however, employment data by industry and occupation are not available from the census. Instead, the 1980 employment weights are reallocated within these series each quarter based on the current sample. Therefore, these indexes are not strictly comparable to those for the aggregate, industry, and occupation series.

Definitions

Total compensation costs include wages, salaries, and the employer's costs for employee benefits.

Wages and salaries consist of earnings before payroll deductions, including production bonuses, incentive earnings, commissions, and cost-of-living adjustments.

Benefits include the cost to employers for paid leave, supplemental pay (including nonproduction bonuses), insurance, retirement and savings plans, and legally required benefits (such as Social Security, workers' compensation, and unemployment insurance).

Excluded from wages and salaries and employee benefits are such items as payment-in-kind, free room and board, and tips.

Notes on the data

The Employment Cost Index for changes in wages and salaries in the private nonfarm economy was published beginning in 1975. Changes in total compensation cost—wages and salaries and benefits combined—were published beginning in 1980. The series of changes in wages and salaries and for total compensation in the State and local government sector and in the civilian nonfarm economy (excluding Federal employees) were published beginning in 1981. Historical indexes (June 1981=100) are available on the Internet:

http://stats.bls.gov/ecthome.htm

FOR ADDITIONAL INFORMATION on the Employment Cost Index, contact the Office of Compensation Levels and Trends: (202) 691–6199.

Employee Benefits Survey

Description of the series

Employee benefits data are obtained from the Employee Benefits Survey, an annual survey of the incidence and provisions of selected benefits provided by employers. The survey collects data from a sample of approximately 9,000 private sector and State and local government establishments. The data are presented as a percentage of employees who participate in a certain benefit, or as an average benefit provision (for example, the average number of paid holidays provided to employees per year). Selected data from the survey are presented in table 25 for medium and large private establishments and in table 26 for small private establishments and State and local government.

The survey covers paid leave benefits such as holidays and vacations, and personal, funeral, jury duty, military, family, and sick leave; short-term disability, long-term disability, and life insurance; medical, dental, and vision care plans; defined benefit and defined contribution plans; flexible benefits plans; reimbursement accounts; and unpaid family leave.

Also, data are tabulated on the incidence of several other benefits, such as severance pay, child-care assistance, wellness programs, and employee assistance programs.

Definitions

Employer-provided benefits are benefits that are financed either wholly or partly by the employer. They may be sponsored by a union or other third party, as long as there is some employer financing. However, some benefits that are fully paid for by the employee also are included. For example, long-term care insurance and postretirement life insurance paid entirely by the employee are included because the guarantee of insurability and availability at group premium rates are considered a benefit.

Participants are workers who are covered by a benefit, whether or not they use that benefit. If the benefit plan is financed wholly by employers and requires employees to complete a minimum length of service for eligibility, the workers are considered participants whether or not they have met the requirement. If workers are required to contribute towards the cost of a plan, they are considered participants only if they elect the plan and agree to make the required contributions.

Defined benefit pension plans use predetermined formulas to calculate a retirement benefit (if any), and obligate the employer to provide those benefits. Benefits are generally based on salary, years of service, or both.

Defined contribution plans generally specify the level of employer and employee contributions to a plan, but not the formula for determining eventual benefits. Instead, individual accounts are set up for participants, and benefits are based on amounts credited to these accounts.

Tax-deferred savings plans are a type of defined contribution plan that allow participants to contribute a portion of their salary to an employer-sponsored plan and defer income taxes until withdrawal.

Flexible benefit plans allow employees to choose among several benefits, such as life insurance, medical care, and vacation days, and among several levels of coverage within a given benefit.

Notes on the data

Surveys of employees in medium and large establishments conducted over the 1979–86 period included establishments that employed at least 50, 100, or 250 workers, depending on the industry (most service industries were excluded). The survey conducted in 1987 covered only State and local governments with 50 or more employees. The surveys conducted in 1988 and 1989 included medium and large establishments with 100 workers or more in private industries. All surveys conducted over the 1979–89 period excluded establishments in Alaska and Hawaii, as well as part-time employees.

Beginning in 1990, surveys of State and local governments and small private establishments were conducted in even-numbered years, and surveys of medium and large establishments were conducted in odd-numbered years. The small establishment survey includes all private nonfarm establishments with fewer than 100 workers, while the State and local government survey includes all governments, regardless of the number of workers. All three surveys include full- and part-time workers, and workers in all 50 States and the District of Columbia.

FOR ADDITIONAL INFORMATION on the Employee Benefits Survey, contact the Office of Compensation Levels and Trends on the Internet:

http://stats.bls.gov/ebshome.htm

Work stoppages

Description of the series

Data on work stoppages measure the number and duration of major strikes or lockouts (involving 1,000 workers or more) occurring during the month (or year), the number of workers involved, and the amount of work time lost because of stoppage. These data are presented in table 27.

Data are largely from a variety of published sources and cover only establishments directly involved in a stoppage. They do not measure the indirect or secondary effect of stoppages on other establishments whose employees are idle owing to material shortages or lack of service.

Definitions

Number of stoppages: The number of strikes and lockouts involving 1,000 workers or more and lasting a full shift or longer.

Workers involved: The number of

workers directly involved in the stoppage.

Number of days idle: The aggregate number of workdays lost by workers involved in the stoppages.

Days of idleness as a percent of estimated working time: Aggregate workdays lost as a percent of the aggregate number of standard workdays in the period multiplied by total employment in the period.

Notes on the data

This series is not comparable with the one terminated in 1981 that covered strikes involving six workers or more.

FOR ADDITIONAL INFORMATION on work stoppages data, contact the Office of Compensation and Working Conditions: (202) 691–6282, or the Internet:

http://stats.bls.gov/cbahome.htm

Price Data

(Tables 2; 28–38)

PRICE DATA are gathered by the Bureau of Labor Statistics from retail and primary markets in the United States. Price indexes are given in relation to a base period—1982 = 100 for many Producer Price Indexes, 1982–84 = 100 for many Consumer Price Indexes (unless otherwise noted), and 1990 = 100 for International Price Indexes.

Consumer Price Indexes

Description of the series

The **Consumer Price Index** (CPI) is a measure of the average change in the prices paid by urban consumers for a fixed market basket of goods and services. The CPI is calculated monthly for two population groups, one consisting only of urban households whose primary source of income is derived from the employment of wage earners and clerical workers, and the other consisting of all urban households. The wage earner index (CPI-W) is a continuation of the historic index that was introduced well over a half-century ago for use in wage negotiations. As new uses were developed for the CPI in recent years, the need for a broader and more representative index became apparent. The all-urban consumer index (CPI-U), introduced in 1978, is representative of the 1993–95 buying habits of about 87 percent of the noninstitutional population of the United States at that time, compared with 32 percent represented in the CPI-W. In addition to wage earners and clerical workers, the CPI-U covers professional, managerial, and technical workers, the self-employed, short-term workers, the unemployed, retirees, and others not in the labor force.

The CPI is based on prices of food, clothing, shelter, fuel, drugs, transportation fares, doctors' and dentists' fees, and other goods and services that people buy for day-to-day living. The quantity and quality of these items are kept essentially unchanged between major revisions so that only price changes will be measured. All taxes directly associated with the purchase and use of items are included in the index.

Data collected from more than 23,000 retail establishments and 5,800 housing units in 87 urban areas across the country are used to develop the "U.S. city average." Separate estimates for 14 major urban centers are presented in table 29. The areas listed are as indicated in footnote 1 to the table. The area indexes measure only the average change in prices for each area since the base period, and do not indicate differences in the level of prices among cities.

Notes on the data

In January 1983, the Bureau changed the way in which homeownership costs are meaured for the CPI-U. A rental equivalence method replaced the asset-price approach to homeownership costs for that series. In January 1985, the same change was made in the CPI-W. The central purpose of the change was to separate shelter costs from the investment component of home-ownership so that the index would reflect only the cost of shelter services provided by owner-occupied homes. An updated CPI-U and CPI-W were introduced with release of the January 1987 and January 1998 data.

FOR ADDITIONAL INFORMATION on consumer prices, contact the Division of Consumer Prices and Price Indexes: (202) 691–7000.

Producer Price Indexes

Description of the series

Producer Price Indexes (PPI) measure average changes in prices received by domestic producers of commodities in all stages of processing. The sample used for calculating these indexes currently contains about 3,200 commodities and about 80,000 quotations per month, selected to represent the movement of prices of all commodities produced in the manufacturing; agriculture, forestry, and fishing; mining; and gas and electricity and public utilities sectors. The stage-of-processing structure of PPI organizes products by class of buyer and degree of fabrication (that is, finished goods, intermediate goods, and crude materials). The traditional commodity structure of PPI organizes products by similarity of end use or material composition. The industry and product structure of PPI organizes data in accordance with the Standard Industrial Classification (SIC) and the product code extension of the SIC developed by the U.S. Bureau of the Census.

To the extent possible, prices used in calculating Producer Price Indexes apply to the first significant commercial transaction in the United States from the production or central marketing point. Price data are generally collected monthly, primarily by mail questionnaire. Most prices are obtained directly from producing companies on a voluntary and confidential basis. Prices generally are reported for the Tuesday of the week containing the 13th day of the month.

Since January 1992, price changes for the various commodities have been averaged together with implicit quantity weights representing their importance in the total net selling value of all commodities as of 1987. The detailed data are aggregated to obtain indexes for stage-of-processing groupings, commodity groupings, durability-of-product groupings, and a number of special composite groups. All Producer Price Index data are subject to revision 4 months after original publication.

FOR ADDITIONAL INFORMATION on producer prices, contact the Division of Industrial Prices and Price Indexes: (202) 691–7705.

International Price Indexes

Description of the series

The **International Price Program** produces monthly and quarterly export and import price indexes for nonmilitary goods traded between the United States and the rest of the world. The export price index provides a measure of price change for all products sold by U.S. residents to foreign buyers. ("Residents" is defined as in the national income accounts; it includes corporations, businesses, and individuals, but does not require the organizations to be U.S. owned nor the individuals to have U.S. citizenship.) The import price index provides a measure of price change for goods purchased from other countries by U.S. residents.

The product universe for both the import and export indexes includes raw materials, agricultural products, semifinished manufactures, and finished manufactures, including both capital and consumer goods. Price data for these items are collected primarily by mail questionnaire. In nearly all cases, the data are collected directly from the exporter or importer, although in a few cases, prices are obtained from other sources.

To the extent possible, the data gathered refer to prices at the U.S. border for exports and at either the foreign border or the U.S. border for imports. For nearly all products,

the prices refer to transactions completed during the first week of the month. Survey respondents are asked to indicate all discounts, allowances, and rebates applicable to the reported prices, so that the price used in the calculation of the indexes is the actual price for which the product was bought or sold.

In addition to general indexes of prices for U.S. exports and imports, indexes are also published for detailed product categories of exports and imports. These categories are defined according to the five-digit level of detail for the Bureau of Economic Analysis End-use Classification (SITC), and the four-digit level of detail for the Harmonized System. Aggregate import indexes by country or region of origin are also available.

BLS publishes indexes for selected categories of internationally traded services, calculated on an international basis and on a balance-of-payments basis.

Notes on the data

The export and import price indexes are weighted indexes of the Laspeyres type. Price relatives are assigned equal importance within each harmonized group and are then aggregated to the higher level. The values assigned to each weight category are based on trade value figures compiled by the Bureau of the Census. The trade weights currently used to compute both indexes relate to 1995.

Because a price index depends on the same items being priced from period to period, it is necessary to recognize when a product's specifications or terms of transaction have been modified. For this reason, the Bureau's questionnaire requests detailed descriptions of the physical and functional characteristics of the products being priced, as well as information on the number of units bought or sold, discounts, credit terms, packaging, class of buyer or seller, and so forth. When there are changes in either the specifications or terms of transaction of a product, the dollar value of each change is deleted from the total price change to obtain the "pure" change. Once this value is determined, a linking procedure is employed which allows for the continued repricing of the item.

For the export price indexes, the preferred pricing is f.a.s. (free alongside ship) U.S. port of exportation. When firms report export prices f.o.b. (free on board), production point information is collected which enables the Bureau to calculate a shipment cost to the port of exportation. An attempt is made to collect two prices for imports. The first is the import price f.o.b. at the foreign port of exportation, which is consistent with the basis for valuation of imports in the national accounts. The second is the import price c.i.f.(costs, insurance, and freight) at the U.S. port of importation, which also includes the other costs associated with bringing the product to the U.S. border. It does not, however, include duty charges. For a given product, only one price basis series is used in the construction of an index.

FOR ADDITIONAL INFORMATION on international prices, contact the Division of International Prices: (202) 691–7155.

Productivity Data

(Tables 2; 39–42)

Business sector and major sectors

Description of the series

The productivity measures relate real output to real input. As such, they encompass a family of measures which include single-factor input measures, such as output per hour, output per unit of labor input, or output per unit of capital input, as well as measures of multifactor productivity (output per unit of combined labor and capital inputs). The Bureau indexes show the change in output relative to changes in the various inputs. The measures cover the business, nonfarm business, manufacturing, and nonfinancial corporate sectors.

Corresponding indexes of hourly compensation, unit labor costs, unit nonlabor payments, and prices are also provided.

Definitions

Output per hour of all persons (labor productivity) is the quantity of goods and services produced per hour of labor input. **Output per unit of capital services** (capital productivity) is the quantity of goods and services produced per unit of capital services input. **Multifactor productivity** is the quantity of goods and services produced per combined inputs. For private business and private nonfarm business, inputs include labor and capital units. For manufacturing, inputs include labor, capital, energy, non-energy materials, and purchased business services.

Compensation per hour is total compensation divided by hours at work. Total compensation equals the wages and salaries of employees plus employers' contributions for social insurance and private benefit plans, plus an estimate of these payments for the self-employed (except for nonfinancial corporations in which there are no self-employed). **Real compensation per hour** is compensation per hour deflated by the change in the Consumer Price Index for All Urban Consumers.

Unit labor costs are the labor compensation costs expended in the production of a unit of output and are derived by dividing compensation by output. **Unit nonlabor payments** include profits, depreciation, interest, and indirect taxes per unit of output. They are computed by subtracting compensation of all persons from current-dollar value of output and dividing by output.

Unit nonlabor costs contain all the components of unit nonlabor payments except unit profits.

Unit profits include corporate profits with inventory valuation and capital consumption adjustments per unit of output.

Hours of all persons are the total hours at work of payroll workers, self-employed persons, and unpaid family workers.

Labor inputs are hours of all persons adjusted for the effects of changes in the education and experience of the labor force.

Capital services are the flow of services from the capital stock used in production. It is developed from measures of the net stock of physical assets—equipment, structures, land, and inventories—weighted by rental prices for each type of asset.

Combined units of labor and capital inputs are derived by combining changes in labor and capital input with weights which represent each component's share of total cost. Combined units of labor, capital, energy, materials, and purchased business services are similarly derived by combining changes in each input with weights that represent each input's share of total costs. The indexes for each input and for combined units are based on changing weights which are averages of the shares in the current and preceding year (the Tornquist index-number formula).

Notes on the data

Business sector output is an annually-weighted index constructed by excluding from real gross domestic product (GDP) the following outputs: general government, nonprofit institutions, paid employees of private households, and the rental value of owner-occupied dwellings. Nonfarm business also excludes farming. Private business and private nonfarm business further exclude government enterprises. The measures are supplied by the U.S. Department of Commerce's Bureau of Economic Analysis. Annual estimates of manufacturing sectoral output are produced by the Bureau of Labor Statistics. Quarterly manufacturing output indexes from the Federal Reserve Board are adjusted to these annual output measures by the BLS. Compensation data are developed from data of the Bureau of Economic Analysis and the Bureau of Labor Statistics. Hours data are developed from data of the Bureau of Labor Statistics.

The productivity and associated cost measures in tables 39–42 describe the relation-

ship between output in real terms and the labor and capital inputs involved in its production. They show the changes from period to period in the amount of goods and services produced per unit of input.

Although these measures relate output to hours and capital services, they do not measure the contributions of labor, capital, or any other specific factor of production. Rather, they reflect the joint effect of many influences, including changes in technology; shifts in the composition of the labor force; capital investment; level of output; changes in the utilization of capacity, energy, material, and research and development; the organization of production; managerial skill; and characteristics and efforts of the work force.

FOR ADDITIONAL INFORMATION on this productivity series, contact the Division of Productivity Research: (202) 691–5606.

Industry productivity measures

Description of the series

The BLS industry productivity data supplement the measures for the business economy and major sectors with annual measures of labor productivity for selected industries at the three- and four-digit levels of the Standard Industrial Classification system. In addition to labor productivity, the industry data also include annual measures of compensation and unit labor costs for three-digit industries and measures of multifactor productivity for three-digit manufacturing industries and railroad transportation. The industry measures differ in methodology and data sources from the productivity measures for the major sectors because the industry measures are developed independently of the National Income and Product Accounts framework used for the major sector measures.

Definitions

Output per hour is derived by dividing an index of industry output by an index of labor input. For most industries, **output** indexes are derived from data on the value of industry output adjusted for price change. For the remaining industries, output indexes are derived from data on the physical quantity of production.

The **labor input** series consist of the hours of all employees (production workers and nonproduction workers), the hours of all persons (paid employees, partners, proprietors, and unpaid family workers), or the number of employees, depending upon the industry.

Unit labor costs represent the labor compensation costs per unit of output produced, and are derived by dividing an index of labor compensation by an index of output. **Labor compensation** includes payroll as well as supplemental payments, including both legally required expenditures and payments for voluntary programs.

Multifactor productivity is derived by dividing an index of industry output by an index of the combined inputs consumed in producing that output. **Combined inputs** include capital, labor, and intermediate purchases. The measure of **capital input** used represents the flow of services from the capital stock used in production. It is developed from measures of the net stock of physical assets—equipment, structures, land, and inventories. The measure of **intermediate purchases** is a combination of purchased materials, services, fuels, and electricity.

Notes on the data

The industry measures are compiled from data produced by the Bureau of Labor Statistics and the Bureau of the Census, with additional data supplied by other government agencies, trade associations, and other sources.

For most industries, the productivity indexes refer to the output per hour of all employees. For some trade and services industries, indexes of output per hour of all persons (including self-employed) are constructed. For some transportation industries, only indexes of output per employee are prepared.

FOR ADDITIONAL INFORMATION on this series, contact the Division of Industry Productivity Studies: (202) 691–5618.

International Comparisons

(Tables 43–45)

Labor force and unemployment

Description of the series

Tables 43 and 44 present comparative measures of the labor force, employment, and unemployment—approximating U.S. concepts—for the United States, Canada, Australia, Japan, and several European countries. The unemployment statistics (and, to a lesser extent, employment statistics) published by other industrial countries are not, in most cases, comparable to U.S. unemployment statistics. Therefore, the Bureau adjusts the figures for selected countries, where necessary, for all known major definitional differences. Although precise comparability may not be achieved, these adjusted figures provide a better basis for international comparisons than the figures regularly published by each country. For further information on adjustments and comparability issues, see Constance Sorrentino, "International unemployment rates: how comparable are they?" *Monthly Labor Review*, June 2000, pp. 3-20.

Definitions

For the principal U.S. definitions of the **labor force**, **employment**, and **unemployment**, see the Notes section on Employment and Unemployment Data: Household survey data.

Notes on the data

The adjusted statistics have been adapted to the age at which compulsory schooling ends in each country, rather than to the U.S. standard of 16 years of age and older. Therefore, the adjusted statistics relate to the population aged 16 and older in France, Sweden, and the United Kingdom; 15 and older in Australia, Japan, Germany, Italy from 1993 onward, and the Netherlands; and 14 and older in Italy prior to 1993. An exception to this rule is that the Canadian statistics for 1976 onward are adjusted to cover ages 16 and older, whereas the age at which compulsory schooling ends remains at 15. The institutional population is included in the denominator of the labor force participation rates and employment-population ratios for Japan and Germany; it is excluded for the United States and the other countries.

In the U.S. labor force survey, persons on layoff who are awaiting recall to their jobs are classified as unemployed. European and Japanese layoff practices are quite different in nature from those in the United States; therefore, strict application of the U.S. definition has not been made on this point. For further information, see *Monthly Labor Review*, December 1981, pp. 8–11.

The figures for one or more recent years for France, Germany, Italy, the Netherlands, and the United Kingdom are calculated using adjustment factors based on labor force surveys for earlier years and are considered preliminary. The recent-year measures for these countries, therefore, are subject to revision whenever data from more current labor force surveys become available.

There are breaks in the data series for the United States (1990, 1994, 1997, 1998, 1999, 2000), Canada (1976) France (1992), Germany (1991), Italy (1991, 1993), the Netherlands (1988), and Sweden (1987).

For the United States, the break in series reflects a major redesign of the labor force survey questionnaire and collection methodology introduced in January 1994. Revised population estimates based on the 1990 census, adjusted for the estimated undercount, also were incorporated. In 1996, previously

published data for the 1990–93 period were revised to reflect the 1990 census-based population controls, adjusted for the undercount. In 1997, revised population controls were introduced into the household survey. Therefore, the data are not strictly conparable with prior years. In 1998, new composite estimation procedures and minor revisions in population controls were introduced into the household survey. Therefore, the data are not strictly comparable with data for 1997 and earlier years. See the Notes section on Employment and Unemployment Data of this *Review*.

BLS recently introduced a new adjusted series for Canada. Beginning with the data for 1976, Canadian data are adjusted to more closely approximate U.S. concepts. Adjustments are made to the unemployed and labor force to exclude: (1) 15-year-olds; (2) passive jobseekers (persons only reading newspaper ads as their method of job search); (3) persons waiting to start a new job who did not seek work in the past 4 weeks; and (4) persons unavailable for work due to personal or family responsibilities. An adjustment is made to include full-tine students looking for full-time work. The impact of the adjustments was to lower the annual average unemployment rate by 0.1–0.4 percentage point in the 1980s and 0.4–1.0 percentage point in the 1990s.

For France, the 1992 break reflects the substitution of standardized European Union Statistical Office (EUROSTAT) unemployment statistics for the unemployment data estimated according to the International Labor Office (ILO) definition and published in the Organization for Economic Cooperation and Development (OECD) annual yearbook and quarterly update. This change was made because the EUROSTAT data are more up-to-date than the OECD figures. Also, since 1992, the EUROSTAT definitions are closer to the U.S. definitions than they were in prior years. The impact of this revision was to lower the unemployment rate by 0.1 percentage point in 1992 and 1993, by 0.4 percentage point in 1994, and 0.5 percentage point in 1995.

For Germany, the data for 1991 onward refer to unified Germany. Data prior to 1991 relate to the former West Germany. The impact of including the former East Germany was to increase the unemployment rate from 4.3 to 5.6 percent in 1991.

For Italy, the 1991 break reflects a revision in the method of weighting sample data. The impact was to increase the unemployment rate by approximately 0.3 percentage point, from 6.6 to 6.9 percent in 1991.

In October 1992, the survey methodology was revised and the definition of unemployment was changed to include only those who were actively looking for a job within the 30 days preceding the survey and who were available for work. In addition, the lower age limit for the labor force was raised from 14 to 15 years. (Prior to these changes, BLS adjusted Italy's published unemployment rate downward by excluding from the unemployed those persons who had not actively sought work in the past 30 days.) The break in the series also reflects the incorporation of the 1991 population census results. The impact of these changes was to raise Italy's adjusted unemployment rate by approximately 1.2 percentage points, from 8.3 to 9.5 percent in fourth-quarter 1992. These changes did not affect employment significantly, except in 1993. Estimates by the Italian Statistical Office indicate that employment declined by about 3 percent in 1993, rather than the nearly 4 percent indicated by the data shown in table 44. This difference is attributable mainly to the incorporation of the 1991 population benchmarks in the 1993 data. Data for earlier years have not been adjusted to incorporate the 1991 census results.

For the Netherlands, a new survey questionnaire was introduced in 1992 that allowed for a closer application of ILO guidelines. EUROSTAT has revised the Dutch series back to 1988 based on the 1992 changes. The 1988 revised unemployment rate is 7.6 percent; the previous estimate for the same year was 9.3 percent.

There have been two breaks in series in the Swedish labor force survey, in 1987 and 1993. Adjustments have been made for the 1993 break back to 1987. In 1987, a new questionnaire was introduced. Questions regarding current availability were added and the period of active workseeking was reduced from 60 days to 4 weeks. These changes lowered Sweden's 1987 unemployment rate by 0.4 percentage point, from 2.3 to 1.9 percent. In 1993, the measurement period for the labor force survey was changed to represent all 52 weeks of the year rather than one week each month and a new adjustment for population totals was introduced. The impact was to raise the unemployment rate by approximately 0.5 percentage point, from 7.6 to 8.1 percent. Statistics Sweden revised its labor force survey data for 1987–92 to take into account the break in 1993. The adjustment raised the Swedish unemployment rate by 0.2 percentage point in 1987 and gradually rose to 0.5 percentage point in 1992.

Beginning with 1987, BLS has adjusted the Swedish data to classify students who also sought work as unemployed. The impact of this change was to increase the adjusted unemployment rate by 0.1 percentage point in 1987 and by 1.8 percentage points in 1994, when unemployment was higher. In 1998, the adjusted unemployment rate had risen from 6.5 to 8.4 percent due to the adjustment to include students.

The net effect of the 1987 and 1993 changes and the BLS adjustment for students seeking work lowered Sweden's 1987 unemployment rate from 2.3 to 2.2 percent.

FOR ADDITIONAL INFORMATION on this series, contact the Division of Foreign Labor Statistics: (202) 691–5654.

Manufacturing productivity and labor costs

Description of the series

Table 45 presents comparative indexes of manufacturing labor productivity (output per hour), output, total hours, compensation per hour, and unit labor costs for the United States, Canada, Japan, and nine European countries. These measures are trend comparisons—that is, series that measure changes over time—rather than level comparisons. There are greater technical problems in comparing the levels of manufacturing output among countries.

BLS constructs the comparative indexes from three basic aggregate measures—output, total labor hours, and total compensation. The hours and compensation measures refer to all employed persons (wage and salary earners plus self-employed persons and unpaid family workers) in the United States, Canada, Japan, France, Germany, Norway, and Sweden, and to all employees (wage and salary earners) in the other countries.

Definitions

Output, in general, refers to value added in manufacturing from the national accounts of each country. However, the output series for Japan prior to 1970 is an index of industrial production, and the national accounts measures for the United Kingdom are essentially identical to their indexes of industrial production.

The 1977–97 output data for the United States are the gross product originating (value added) measures prepared by the Bureau of Economic Analysis of the U.S. Department of Commerce. Comparable manufacturing output data currently are not available prior to 1977.

U.S. gross product originating is a chain-type annual-weighted series. (For more information on the U.S. measure, see Robert E. Yuskavage, "Improved Estimates of Gross Product by Industry, 1959–94," *Survey of Current Business*, August 1996, pp. 133–55.) The Japanese value added series is based upon one set of fixed price weights for the years 1970 through 1997. Output series for the other foreign economies also employ fixed price weights, but the weights are updated periodically (for example, every 5 or 10 years).

To preserve the comparability of the U.S. measures with those for other economies, BLS uses gross product originating in manufacturing for the United States for these comparative measures. The gross product originating series differs from the manufacturing output series that BLS publishes in its news releases on quarterly measures of U.S. productivity and costs (and that underlies the measures that appear in tables 39 and 41 in this section). The quarterly measures are on a "sectoral output" basis, rather than a value-added basis. Sectoral output is gross output less intrasector transactions.

Total labor hours refers to hours worked in all countries. The measures are developed from statistics of manufacturing employment and average hours. The series used for France (from 1970 forward), Norway, and Sweden are official series published with the national accounts. Where official total hours series are not available, the measures are developed by BLS using employment figures published with the national accounts, or other comprehensive employment series, and estimates of annual hours worked. For Germany, BLS uses estimates of average hours worked developed by a research institute connected to the Ministry of Labor for use with the national accounts employment figures. For the other countries, BLS constructs its own estimates of average hours.

Denmark has not published estimates of average hours for 1994–97; therefore, the BLS measure of labor input for Denmark ends in 1993.

Total compensation (labor cost) includes all payments in cash or in-kind made directly to employees plus employer expenditures for legally required insurance programs and contractual and private benefit plans. The measures are from the national accounts of each country, except those for Belgium, which are developed by BLS using statistics on employment, average hours, and hourly compensation. For Canada, France, and Sweden, compensation is increased to account for other significant taxes on payroll or employment. For the United Kingdom, compensation is reduced between 1967 and 1991 to account for employment-related subsidies. Self-employed workers are included in the all-employed-persons measures by assuming that their hourly compensation is equal to the average for wage and salary employees.

Notes on the data

In general, the measures relate to total manufacturing as defined by the International Standard Industrial Classification. However, the measures for France (for all years) and Italy (beginning 1970) refer to mining and manufacturing less energy-related products, and the measures for Denmark include mining and exclude manufacturing handicrafts from 1960 to 1966.

The measures for recent years may be based on current indicators of manufacturing output (such as industrial production indexes), employment, average hours, and hourly compensation until national accounts and other statistics used for the long-term measures become available.

FOR ADDITIONAL INFORMATION on this series, contact the Division of Foreign Labor Statistics: (202) 691–5654.

Occupational Injury and Illness Data

(Tables 46–47)

Survey of Occupational Injuries and Illnesses

Description of the series

The Survey of Occupational Injuries and Illnesses collects data from employers about their workers' job-related nonfatal injuries and illnesses. The information that employers provide is based on records that they maintain under the Occupational Safety and Health Act of 1970. Self-employed individuals, farms with fewer than 11 employees, employers regulated by other Federal safety and health laws, and Federal, State, and local government agencies are excluded from the survey.

The survey is a Federal-State cooperative program with an independent sample selected for each participating State. A stratified random sample with a Neyman allocation is selected to represent all private industries in the State. The survey is stratified by Standard Industrial Classification and size of employment.

Definitions

Under the Occupational Safety and Health Act, employers maintain records of nonfatal work-related injuries and illnesses that involve one or more of the following: loss of consciousness, restriction of work or motion, transfer to another job, or medical treatment other than first aid.

Occupational injury is any injury such as a cut, fracture, sprain, or amputation that results from a work-related event or a single, instantaneous exposure in the work environment.

Occupational illness is an abnormal condition or disorder, other than one resulting from an occupational injury, caused by exposure to factors associated with employment. It includes acute and chronic illnesses or disease which may be caused by inhalation, absorption, ingestion, or direct contact.

Lost workday injuries and illnesses are cases that involve days away from work, or days of restricted work activity, or both.

Lost workdays include the number of workdays (consecutive or not) on which the employee was either away from work or at work in some restricted capacity, or both, because of an occupational injury or illness. BLS measures of the number and incidence rate of lost workdays were discontinued beginning with the 1993 survey. The number of days away from work or days of restricted work activity does not include the day of injury or onset of illness or any days on which the employee would not have worked, such as a Federal holiday, even though able to work.

Incidence rates are computed as the number of injuries and/or illnesses or lost work days per 100 full-time workers.

Notes on the data

The definitions of occupational injuries and illnesses are from *Recordkeeping Guidelines for Occupational Injuries and Illnesses* (U.S. Department of Labor, Bureau of Labor Statistics, September 1986).

Estimates are made for industries and employment size classes for total recordable cases, lost workday cases, days away from work cases, and nonfatal cases without lost workdays. These data also are shown separately for injuries. Illness data are available for seven categories: occupational skin diseases or disorders, dust diseases of the lungs, respiratory conditions due to toxic agents, poisoning (systemic effects of toxic agents), disorders due to physical agents (other than toxic materials), disorders associated with repeated trauma, and all other occupational illnesses.

The survey continues to measure the number of new work-related illness cases which are recognized, diagnosed, and reported during the year. Some conditions, for example, long-term latent illnesses caused by exposure to carcinogens, often are difficult to relate to the workplace and are not adequately recognized and reported. These long-term latent illnesses are believed to be understated in the survey's illness measure. In contrast, the overwhelming majority of the reported new illnesses are those which are easier to directly relate to workplace activity (for example, contact dermatitis and carpal tunnel syndrome).

Most of the estimates are in the form of incidence rates, defined as the number of injuries and illnesses per 100 equivalent full-time workers. For this purpose, 200,000 employee hours represent 100 employee years (2,000 hours per employee). Full detail on the

available measures is presented in the annual bulletin, *Occupational Injuries and Illnesses: Counts, Rates, and Characteristics.*

Comparable data for more than 40 States and territories are available from the BLS Office of Safety, Health and Working Conditions. Many of these States publish data on State and local government employees in addition to private industry data.

Mining and railroad data are furnished to BLS by the Mine Safety and Health Administration and the Federal Railroad Administration. Data from these organizations are included in both the national and State data published annually.

With the 1992 survey, BLS began publishing details on serious, nonfatal incidents resulting in days away from work. Included are some major characteristics of the injured and ill workers, such as occupation, age, gender, race, and length of service, as well as the circumstances of their injuries and illnesses (nature of the disabling condition, part of body affected, event and exposure, and the source directly producing the condition). In general, these data are available nationwide for detailed industries and for individual States at more aggregated industry levels.

FOR ADDITIONAL INFORMATION on occupational injuries and illnesses, contact the Office of Occupational Safety, Health and Working Conditions at (202) 691–6180, or access the Internet at:

http://www.bls.gov/oshhome.htm

Census of Fatal Occupational Injuries

The Census of Fatal Occupational Injuries compiles a complete roster of fatal job-related injuries, including detailed data about the fatally injured workers and the fatal events. The program collects and cross checks fatality information from multiple sources, including death certificates, State and Federal workers' compensation reports, Occupational Safety and Health Administration and Mine Safety and Health Administration records, medical examiner and autopsy reports, media accounts, State motor vehicle fatality records, and follow-up questionnaires to employers.

In addition to private wage and salary workers, the self-employed, family members, and Federal, State, and local government workers are covered by the program. To be included in the fatality census, the decedent must have been employed (that is working for pay, compensation, or profit) at the time of the event, engaged in a legal work activity, or present at the site of the incident as a requirement of his or her job.

Definition

A fatal work injury is any intentional or unintentional wound or damage to the body resulting in death from acute exposure to energy, such as heat or electricity, or kinetic energy from a crash, or from the absence of such essentials as heat or oxygen caused by a specific event or incident or series of events within a single workday or shift. Fatalities that occur during a person's commute to or from work are excluded from the census, as well as work-related illnesses, which can be difficult to identify due to long latency periods.

Notes on the data

Twenty-eight data elements are collected, coded, and tabulated in the fatality program, including information about the fatally injured worker, the fatal incident, and the machinery or equipment involved. Summary worker demographic data and event characteristics are included in a national news release that is available about 8 months after the end of the reference year. The Census of Fatal Occupational Injuries was initiated in 1992 as a joint Federal-State effort. Most States issue summary information at the time of the national news release.

FOR ADDITIONAL INFORMATION on the Census of Fatal Occupational Injuries contact the BLS Office of Safety, Health, and Working Conditions at (202) 691–6175, or the Internet at:

http://www.bls.gov/oshhome.htm

Bureau of Labor Statistics Internet

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

http://stats.bls.gov

Also, some data can be accessed through anonymous FTP or Gopher at

stats.bls.gov

1. Labor market indicators

Selected indicators	1999	2000	1998	1999				2000			
			IV	I	II	III	IV	I	II	III	IV
Employment data											
Employment status of the civilian noninstitutionalized population (household survey):[1]											
Labor force participation rate	67.1	67.2	67.2	67.1	67.1	67.1	67.1	67.4	67.3	67.0	67.
Employment-population ratio	64.3	64.5	64.2	64.3	64.2	64.2	64.3	64.6	64.6	64.3	64.
Unemployment rate	4.2	4.0	4.4	4.3	4.3	4.2	4.1	4.1	4.0	4.0	4.
Men	4.1	3.9	4.3	4.1	4.2	4.1	4.0	3.9	3.9	3.9	4.
16 to 24 years	10.3	9.7	10.5	10.4	10.5	10.1	10.3	9.7	9.8	9.8	9.
25 years and over	3.0	2.8	3.1	3.0	3.0	3.0	2.9	2.8	2.8	2.8	2.
Women	4.3	4.1	4.6	4.4	4.4	4.3	4.2	4.2	4.1	4.2	4.
16 to 24 years	9.5	8.9	9.4	9.7	9.2	9.6	9.4	9.5	9.0	8.6	8.
25 years and over	3.3	3.2	3.6	3.4	3.5	3.3	3.1	3.2	3.2	3.3	3.
Employment, nonfarm (payroll data), in thousands:[1]											
Total	128,786	131,417	126,967	127,800	128,430	129,073	129,783	130,626	131,552	131,619	131,831
Private sector	108,616	110,847	107,016	107,741	108,319	108,874	109,507	110,195	110,725	111,084	111,403
Goods-producing	25,482	25,661	25,469	25,488	25,454	25,459	25,524	25,680	25,703	25,680	25,620
Manufacturing	18,543	18,437	18,716	18,632	18,543	18,516	18,482	18,481	18,488	18,453	18,347
Service-producing	103,304	105,756	101,498	102,312	102,976	103,614	104,259	104,946	105,849	105,940	106,211
Average hours:											
Private sector	34.5	34.5	34.6	34.5	34.5	34.5	34.5	34.5	34.5	34.4	34.
Manufacturing	41.7	41.5	41.7	41.6	41.7	41.8	41.7	41.7	41.7	41.5	41.
Overtime	4.6	4.5	4.5	4.5	4.6	4.6	4.7	4.6	4.7	4.5	4.
Employment Cost Index[2]											
Percent change in the ECI, compensation:											
All workers (excluding farm, household and Federal workers)	3.4	4.1	.6	.4	1.0	1.1	.9	1.3	1.0	1.0	.
Private industry workers	3.4	4.4	.6	.4	1.1	.9	.9	1.5	1.2	.9	.
Goods-producing[3]	3.4	4.4	.5	.8	.7	.9	1.0	1.6	1.2	.9	.
Service-producing[3]	3.4	4.4	.6	.3	1.3	.9	.8	1.4	1.2	1.0	.
State and local government workers	3.4	3.0	.6	.5	.4	1.5	1.0	.6	.3	1.3	.
Workers by bargaining status (private industry):											
Union	2.7	4.0	.5	.4	.7	.9	.7	1.3	1.0	1.2	.
Nonunion	3.6	4.4	.6	.5	1.2	.9	1.0	1.5	1.2	1.0	.

[1] Quarterly data seasonally adjusted.

[2] Annual changes are December-to-December changes. Quarterly changes are calculated using the last month of each quarter.

[3] Goods-producing industries include mining, construction, and manufacturing. Service-producing industries include all other private sector industries.

2. Annual and quarterly percent changes in compensation, prices, and productivity

Selected measures	1999	2000	1998	1999				2000			
			IV	I	II	III	IV	I	II	III	IV
Compensation data[1,2]											
Employment Cost Index—compensation (wages, salaries, benefits):											
Civilian nonfarm	3.4	4.1	0.6	0.4	1.0	1.1	0.9	1.3	1.0	1.0	0.7
Private nonfarm	3.4	4.4	.6	.4	1.1	.9	.9	1.5	1.2	.9	.7
Employment Cost Index—wages and salaries:											
Civilian nonfarm	3.5	3.8	.7	.5	1.0	1.1	.8	1.1	1.0	1.1	.6
Private nonfarm	3.5	3.9	.6	.5	1.2	.9	.9	1.2	1.0	1.0	.6
Price data[1]											
Consumer Price Index (All Urban Consumers): All Items	2.7	3.4	.2	.7	.7	1.0	.2	1.7	.7	.8	.2
Producer Price Index:											
Finished goods	2.9	4.3	.4	.0	1.2	1.5	.1	1.4	1.3	.6	.2
Finished consumer goods	3.8	3.8	.2	.0	1.8	2.2	–.2	1.8	1.8	.7	.0
Capital equipment	.3	1.2	.9	–.1	–.4	–.4	1.2	.1	.0	.0	.9
Intermediate materials, supplies, and components	3.7	4.1	–1.6	–.2	1.9	1.9	.1	1.9	1.6	1.0	–.4
Crude materials	15.3	31.6	–2.5	–.1	9.4	10.2	–3.5	9.1	11.2	.3	8.1
Productivity data[3]											
Output per hour of all persons:											
Business sector	2.8	4.3	3.5	2.7	.5	4.7	7.6	1.7	7.0	2.4	3.2
Nonfarm business sector	2.6	4.3	3.2	2.0	.2	5.0	8.0	2.1	6.3	3.0	2.4
Nonfinancial corporations[4]	3.5	–	2.4	3.0	2.7	4.4	5.8	3.1	5.6	4.4	–

[1] Annual changes are December-to-December changes. Quarterly changes are calculated using the last month of each quarter. Compensation and price data are not seasonally adjusted, and the price data are not compounded.

[2] Excludes Federal and private household workers.

[3] Annual rates of change are computed by comparing annual averages. Quarterly percent changes reflect annual rates of change in quarterly indexes. The data are seasonally adjusted.

[4] Output per hour of all employees.

NOTE: Dash indicates data not available.

3. Alternative measures of wage and compensation changes

Components	Quarterly average						Four quarters ending—					
	1999		2000				1999		2000			
	III	IV	I	II	III	IV	III	IV	I	II	III	IV
Average hourly compensation:[1]												
All persons, business sector	5.1	3.8	3.7	7.1	5.7	7.5	4.6	4.5	4.3	4.9	5.0	6.0
All persons, nonfarm business sector	5.2	4.2	4.1	6.0	6.2	6.6	4.4	4.4	4.5	4.9	5.1	5.7
Employment Cost Index—compensation:												
Civilian nonfarm[2]	1.1	.9	1.3	1.0	1.0	.7	3.1	3.4	4.3	4.4	4.3	4.1
Private nonfarm	.9	.9	1.5	1.2	.9	.7	3.1	3.4	4.6	4.6	4.6	4.4
Union	.9	.7	1.3	1.0	1.2	.1	2.5	2.7	3.6	3.9	4.2	4.0
Nonunion	.9	1.0	1.5	1.2	1.0	.7	3.2	3.6	4.7	4.6	4.7	4.4
State and local governments	1.5	1.0	.6	.3	1.3	.7	2.9	3.4	3.6	3.5	3.3	3.0
Employment Cost Index—wages and salaries:												
Civilian nonfarm[2]	1.1	.8	1.1	1.0	1.1	.6	3.3	3.5	4.0	4.0	4.0	3.8
Private nonfarm	.9	.9	1.2	1.0	1.0	1.0	3.2	3.5	4.2	4.1	4.1	3.9
Union	.7	.6	.5	.9	1.1	.9	2.5	2.6	2.7	2.8	3.2	3.4
Nonunion	.9	.9	1.3	1.1	1.0	.6	3.3	3.6	4.4	4.3	4.3	4.0
State and local governments	1.9	.9	.6	.3	1.7	.7	3.3	3.6	3.8	3.7	3.5	3.3

[1] Seasonally adjusted. "Quarterly average" is percent change from a quarter ago, at an annual rate.

[2] Excludes Federal and household workers.

4. Employment status of the population, by sex, age, race, and Hispanic origin, monthly data seasonally adjusted

[Numbers in thousands]

Employment status	Annual average		2000												2001
	1999	2000	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.
TOTAL															
Civilian noninstitutional population[1]	207,753	209,699	208,782	208,907	209,053	209,216	209,371	209,543	209,727	209,935	210,161	210,378	210,577	210,743	210,889
Civilian labor force	139,368	140,863	140,645	141,860	140,705	141,114	140,573	140,757	140,546	140,724	140,847	141,000	141,136	141,489	141,955
Participation rate	67.1	67.2	67.4	67.4	67.3	67.4	67.1	67.2	67.0	67.0	67.0	67.0	67.0	67.1	67.3
Employed	133,488	135,208	134,976	135,120	135,013	135,517	134,843	135,183	134,898	134,939	135,310	135,464	135,478	135,836	135,999
Employment-population ratio[2]	64.3	64.5	64.6	64.7	64.6	64.8	64.4	64.5	64.3	64.3	64.4	64.4	64.3	64.5	64.5
Unemployed	5,880	5,655	5,669	5,740	5,692	5,597	5,730	5,574	5,648	5,785	5,537	5,536	5,658	5,653	5,956
Unemployment rate	4.2	4.0	4.0	4.1	4.0	4.0	4.1	4.0	4.0	4.1	3.9	3.9	4.0	4.0	4.2
Not in the labor force	68,385	68,836	68,137	68,047	68,348	68,102	68,798	68,786	69,181	69,211	69,314	69,378	69,441	69,254	68,934
Men, 20 years and over															
Civilian noninstitutional population[1]	91,555	92,580	92,057	92,092	92,145	92,303	92,408	92,546	92,642	92,754	92,863	92,969	93,061	93,117	93,184
Civilian labor force	79,104	70,930	70,777	70,952	70,773	70,776	70,666	70,785	70,782	71,029	71,053	71,155	71,135	71,289	71,492
Participation rate	76.7	76.6	76.9	77.0	76.8	76.7	76.5	76.5	76.4	76.6	76.5	76.5	76.4	76.6	76.7
Employed	67,761	68,580	68,440	68,557	68,445	68,473	68,315	68,489	68,495	68,710	68,728	68,774	68,683	68,848	68,916
Employment-population ratio[2]	74.0	74.1	74.3	74.5	74.3	74.2	73.9	74.0	73.9	74.1	74.0	74.0	73.8	73.9	74.0
Agriculture	2,028	2,252	2,285	2,283	2,240	2,248	2,228	2,262	2,280	2,276	2,350	2,219	2,122	2,232	2,122
Nonagricultural industries	65,517	66,328	66,155	66,294	66,205	66,225	66,087	66,227	66,215	66,434	66,378	66,555	66,561	66,616	66,795
Unemployed	2,433	2,350	2,337	2,375	2,328	2,303	2,347	2,296	2,287	2,319	2,325	2,381	2,452	2,441	2,576
Unemployment rate	3.5	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.3	3.3	3.3	3.4	3.4	3.6
Women, 20 years and over															
Civilian noninstitutional population[1]	100,158	101,078	100,579	100,666	100,713	100,809	100,929	101,007	101,111	101,209	101,321	101,448	101,533	101,612	101,643
Civilian labor force	60,840	61,565	61,462	61,488	61,573	61,856	61,582	61,561	61,535	61,265	61,486	61,528	61,625	61,819	62,126
Participation rate	60.7	60.9	61.1	61.1	61.1	61.4	61.0	60.9	60.9	60.5	60.7	60.6	60.7	60.8	61.1
Employed	58,555	59,352	59,209	59,285	59,326	59,651	59,264	59,282	59,273	58,992	59,344	59,425	59,506	59,708	59,894
Employment-population ratio[2]	58.5	58.7	58.9	58.9	58.9	59.2	58.7	58.7	58.6	58.3	58.6	58.6	58.6	58.8	58.9
Agriculture	803	818	826	854	866	871	846	829	797	808	764	748	797	822	852
Nonagricultural industries	57,752	58,535	58,383	58,431	58,460	58,780	58,418	58,453	58,476	58,184	58,580	58,677	58,709	58,886	59,042
Unemployed	2,285	2,212	2,253	2,203	2,247	2,205	2,318	2,279	2,262	2,273	2,142	2,103	2,119	2,111	2,232
Unemployment rate	3.8	3.6	3.7	3.6	3.6	3.6	3.8	3.7	3.7	3.7	3.5	3.4	3.4	3.4	3.6
Both sexes, 16 to 19 years															
Civilian noninstitutional population[1]	16,040	16,042	16,147	16,149	16,196	16,104	16,034	15,991	15,974	15,972	15,977	15,960	15,983	16,014	16,063
Civilian labor force	8,333	8,369	8,406	8,420	8,359	8,482	8,329	8,411	8,229	8,430	8,308	8,317	8,376	8,381	8,337
Participation rate	52.0	52.2	52.1	52.1	51.6	52.7	51.9	52.6	51.5	52.8	52.0	52.1	52.4	52.3	51.9
Employed	7,172	7,216	7,327	7,258	7,242	7,393	7,264	7,412	7,130	7,237	7,238	7,265	7,289	7,280	7,188
Employment-population ratio[2]	44.7	45.4	45.4	44.9	44.7	45.9	45.3	46.4	44.6	45.3	45.3	45.5	45.6	45.5	44.7
Agriculture	234	235	245	230	232	241	220	222	218	233	242	274	257	220	205
Nonagricultural industries	6,938	7,041	7,082	7,028	7,010	7,152	7,044	7,190	6,912	7,004	6,996	6,991	7,032	7,060	6,983
Unemployed	1,162	1,093	1,079	1,162	1,117	1,089	1,065	999	1,099	1,193	1,070	1,052	1,087	1,101	1,149
Unemployment rate	13.9	13.1	12.8	13.8	13.4	12.8	12.8	11.9	13.4	14.2	12.9	12.6	13.0	13.1	13.8
White															
Civilian noninstitutional population[1]	173,085	174,428	173,812	173,886	173,983	174,092	174,197	174,316	174,443	174,587	174,745	174,899	175,034	175,145	175,246
Civilian labor force	116,509	117,574	117,484	117,661	117,592	117,800	117,329	117,477	117,298	117,554	117,553	117,603	117,640	117,945	118,276
Participation rate	67.3	67.4	67.6	67.7	67.6	67.7	67.4	67.4	67.2	67.3	67.3	67.2	67.2	67.3	67.5
Employed	112,235	113,475	113,442	113,501	113,435	113,710	113,240	113,493	113,201	113,378	113,464	113,584	113,509	113,811	114,015
Employment-population ratio[2]	64.8	65.1	65.3	65.3	65.2	65.3	65.0	65.1	64.9	64.9	64.9	64.9	64.8	65.0	65.1
Unemployed	4,273	4,099	4,042	4,160	4,157	4,090	4,089	3,984	4,097	4,176	4,089	4,019	4,131	4,134	4,261
Unemployment rate	3.7	3.5	3.4	3.5	3.5	3.5	3.5	3.4	3.5	3.6	3.5	3.4	3.5	3.5	3.6
Black															
Civilian noninstitutional population[1]	24,855	25,218	25,047	25,076	25,105	25,135	25,161	25,191	25,221	25,258	25,299	25,339	25,376	25,408	25,382
Civilian labor force	16,365	16,603	16,587	16,721	16,550	16,586	16,577	16,573	16,501	16,540	16,489	16,627	16,732	16,742	16,773
Participation rate	65.8	65.8	66.2	66.7	65.9	66.0	65.9	65.8	65.4	65.5	65.2	65.6	65.9	65.9	66.1
Employed	15,056	15,334	15,238	15,416	15,312	16,376	15,264	15,277	15,232	15,239	15,304	15,401	15,485	15,470	15,372
Employment-population ratio[2]	60.6	60.8	60.8	61.5	61.0	61.2	60.7	60.6	60.4	60.3	60.5	60.8	61.0	60.9	60.6
Unemployed	1,309	1,269	1,349	1,305	1,238	1,210	1,313	1,296	1,269	1,301	1,185	1,226	1,247	1,272	1,401
Unemployment rate	8.0	7.6	8.1	7.8	7.5	7.3	7.9	7.8	7.7	7.9	7.2	7.4	7.5	7.6	8.4

See footnotes at end of table.

4. Continued—Employment status of the population, by sex, age, race, and Hispanic origin, monthly data seasonally adjusted

[Numbers in thousands]

Employment status	Annual average		2000												2001
	1999	2000	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.
Hispanic origin															
Civilian noninstitutional population[1]	21,650	22,393	22,047	22,108	22,166	22,231	22,292	22,355	22,422	22,488	22,555	22,618	22,687	22,749	22,008
Civilian labor force	14,665	15,368	15,181	15,194	15,271	15,327	15,294	15,320	15,243	15,312	15,513	15,491	15,626	15,671	15,540
Participation rate	67.7	68.6	68.9	68.7	68.9	68.9	68.6	68.5	68.0	68.1	68.8	68.5	68.9	68.9	68.2
Employed	13,720	14,492	14,309	14,322	14,340	14,463	14,411	14,456	14,384	14,439	14,647	14,711	14,686	14,772	14,612
Employment-population ratio[2]	63.4	64.7	64.9	64.8	64.7	65.1	64.6	64.7	64.2	64.2	64.9	65.0	64.7	64.9	64.2
Unemployed	945	876	872	872	931	864	883	864	859	873	866	780	940	899	927
Unemployment rate	6.4	5.7	5.7	5.7	6.1	5.6	5.8	5.6	5.6	5.7	5.6	5.0	6.0	5.7	6.0

[1] The population figures are not seasonally adjusted.

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

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

5. Selected employment indicators, monthly data seasonally adjusted

[In thousands]

Selected categories	Annual average		2000												2001
	1999	2000	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.
Characteristic															
Employed, 16 years and over	133,488	135,208	134,976	135,120	135,013	135,517	134,843	135,183	134,898	134,939	135,310	135,464	135,478	135,836	135,999
Men	771,446	72,293	72,201	62,333	72,246	72,257	72,049	72,240	72,141	72,379	72,398	72,427	72,354	72,534	72,589
Women	62,042	62,915	62,775	62,787	62,767	63,260	62,794	62,943	62,757	62,560	62,912	63,037	63,124	63,302	63,410
Married men, spouse present	43,254	43,368	3,763	43,437	43,341	43,321	43,306	43,364	43,308	43,375	43,321	43,345	43,251	43,293	43,134
Married women, spouse present	33,450	33,708	34,132	33,841	33,765	33,795	33,723	33,745	33,621	33,507	33,491	33,622	33,633	33,635	34,249
Women who maintain families	8,229	8,387	8,335	8,251	8,119	8,330	8,335	8,340	8,460	8,492	8,516	8,449	8,495	8,501	8,426
Class of worker															
Agriculture:															
Wage and salary workers	1,944	2,034	2,022	2,024	2,037	2,042	2,013	2,051	2,065	2,048	2,018	2,041	2,005	2,019	1,983
Self-employed workers	1,297	1,233	1,295	1,303	1,272	1,257	1,246	1,187	1,189	1,241	1,274	1,182	1,180	1,198	1,182
Unpaid family workers	40	38	39	47	42	43	38	44	39	36	38	32	25	34	25
Nonagricultural industries:															
Wage and salary workers	121,323	123,128	122,713	122,972	122,951	123,209	122,871	123,020	122,744	122,931	123,117	123,461	123,632	123,813	124,035
Government	18,903	19,053	19,011	19,259	19,451	19,168	19,084	18,836	18,592	18,644	19,003	19,073	19,146	19,352	18,843
Private industries	102,420	104,076	103,702	103,713	103,500	104,041	103,787	104,184	104,152	104,287	104,114	104,388	104,486	104,461	105,192
Private households	933	890	949	980	967	977	934	926	821	781	824	812	827	879	859
Other	101,487	103,186	102,753	102,733	102,533	103,064	102,853	103,258	103,331	103,506	103,290	103,576	103,659	103,582	104,333
Self-employed workers	8,790	8,674	8,778	8,780	8,712	8,727	8,708	8,660	8,619	8,618	8,786	8,561	8,533	8,600	8,698
Unpaid family workers	95	101	91	76	101	96	89	74	86	114	108	136	128	121	110
Persons at work part time[1]															
All industries:															
Part time for economic reasons	3,357	3,190	3,195	3,149	3,139	3,135	3,240	3,125	3,110	3,170	33,188	3,222	3,416	3,234	3,327
Slack work or business conditions	1,968	1,927	1,879	1,828	1,836	1,862	1,935	1,858	1,871	1,980	2,051	1,909	2,183	1,964	2,035
Could only find part-time work	1,079	944	1,014	1,015	972	1,002	972	981	918	880	831	947	886	896	954
Part time for noneconomic reasons	18,758	18,722	18,752	18,892	18,723	18,606	18,513	18,444	18,579	18,704	18,595	18,758	18,896	18,993	18,568
Nonagricultural industries:															
Part time for economic reasons	3,189	3,045	3,048	2,997	3,002	3,021	3,077	2,981	2,972	3,038	3,030	3,044	3,285	3,088	3,227
Slack work or business conditions	1,861	1,835	1,792	1,731	1,770	1,791	1,831	1,760	1,773	1,901	1,940	1,808	2,082	1,882	1,971
Could only find part-time work	1,056	924	988	994	942	975	952	982	896	861	817	923	871	877	945
Part time for noneconomic reasons	18,197	18,165	18,207	18,257	18,159	18,043	17,957	17,897	18,052	18,142	18,024	18,206	18,323	18,437	18,040

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

6. Selected unemployment indicators, monthly data seasonally adjusted

[Unemployment rates]

Selected categories	Annual average		2000												2001
	1998	2000	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.
Characteristic															
Total, 16 years and over	4.2	4.0	4.0	4.1	4.0	4.0	4.1	4.0	4.0	4.1	3.9	3.9	4.0	4.0	4.2
Both sexes, 16 to 19 years	13.9	13.1	12.8	13.8	13.4	12.8	12.8	11.9	13.4	14.2	12.9	12.6	13.0	13.1	13.8
Men, 20 years and over	3.5	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.3	3.3	3.3	3.4	3.4	3.6
Women, 20 years and over	3.8	3.6	3.7	3.6	3.6	3.6	3.8	3.7	3.7	3.7	3.5	3.4	3.4	3.4	3.6
White, total	3.7	3.5	3.4	3.5	3.5	3.5	3.5	3.4	3.5	3.6	3.5	3.4	11.5	3.5	3.6
Both sexes, 16 to 19 years	12.0	11.4	11.1	12.2	11.8	11.6	10.7	9.9	11.5	12.0	11.4	11.2	11.7	11.5	11.7
Men, 16 to 19 years	12.6	12.3	12.4	13.8	11.6	12.9	10.9	11.7	12.5	13.1	12.2	11.8	12.4	12.2	13.3
Women, 16 to 19 years	11.3	10.4	9.6	10.4	11.9	10.1	10.5	7.9	10.4	10.8	10.6	10.5	10.9	10.7	9.8
Men, 20 years and over	3.0	2.8	2.8	2.9	2.8	2.8	2.8	2.8	2.8	2.8	2.9	2.9	3.0	2.9	3.2
Women, 20 years and over	3.3	3.1	3.1	3.1	3.2	3.1	3.3	3.2	3.2	3.3	3.1	3.0	3.0	3.1	3.0
Black, total	8.0	7.6	8.1	7.8	7.5	7.3	7.9	7.8	7.7	7.9	7.2	7.4	7.5	7.6	8.4
Both sexes, 16 to 19 years	27.9	24.7	24.3	24.3	24.7	23.3	24.4	25.6	26.4	26.8	24.1	23.9	21.9	26.7	27.9
Men, 16 to 19 years	30.9	26.4	24.7	23.0	22.8	23.7	27.4	31.5	25.7	31.7	26.7	27.0	22.5	30.1	26.9
Women, 16 to 19 years	25.1	23.0	23.9	25.6	26.7	22.8	21.5	19.3	27.1	22.3	21.7	21.2	21.3	23.4	28.9
Men, 20 years and over	6.7	7.0	7.3	7.1	6.7	6.7	7.1	6.9	6.8	7.2	6.5	7.0	6.9	7.3	6.9
Women, 20 years and over	6.8	6.3	7.1	6.5	6.2	5.9	6.7	6.5	6.3	6.2	5.8	5.8	6.2	5.7	7.3
Hispanic origin, total	6.4	5.7	5.7	5.7	6.1	5.6	5.8	5.6	5.6	5.7	5.6	5.0	6.0	5.7	6.0
Married men, spouse present	2.2	2.0	2.0	2.0	2.0	1.8	1.9	1.9	2.0	2.0	2.1	2.1	2.2	2.2	2.3
Married women, spouse present	2.7	2.7	2.6	2.6	2.7	2.7	2.8	2.6	2.7	2.8	2.7	2.5	2.5	2.6	2.5
Women who maintain families	6.4	5.9	6.2	6.2	6.6	6.2	6.3	6.0	7.7	6.0	5.4	5.4	5.2	5.1	6.4
Full-time workers	4.1	3.9	3.9	3.9	3.8	3.8	3.9	3.8	3.8	3.9	3.8	3.8	3.9	3.9	4.1
Part-time workers	5.0	4.8	4.7	4.9	4.9	4.7	5.1	4.9	5.1	5.0	4.6	4.5	4.5	4.6	4.9
Industry															
Nonagricultural wage and salary workers	4.3	4.1	4.2	4.2	4.3	4.1	4.1	4.0	4.1	4.1	4.0	4.0	4.0	4.0	4.3
Mining	5.7	3.9	2.8	3.8	2.7	3.0	4.1	3.9	4.5	4.3	5.0	7.1	3.5	3.6	2.2
Construction	7.0	6.4	6.4	7.2	6.6	5.4	5.9	6.0	6.0	6.4	6.4	6.5	6.9	6.5	6.8
Manufacturing	3.6	3.6	3.3	3.4	3.9	4.0	3.7	3.4	3.6	3.5	3.6	4.0	3.6	3.6	4.2
Durable goods	3.5	3.4	2.9	3.1	3.2	3.9	3.6	3.4	3.3	3.1	3.2	3.8	3.5	3.4	4.2
Nondurable goods	3.9	4.0	3.8	3.8	4.9	4.1	3.8	3.2	4.0	4.1	4.3	4.3	3.9	4.0	4.3
Transportation and public utilities	3.0	3.1	3.3	3.2	3.1	3.0	3.2	2.9	3.1	3.1	3.2	2.8	2.6	3.2	2.8
Wholesale and retail trade	5.2	5.0	5.1	5.3	5.3	5.0	5.1	5.1	5.0	5.1	4.8	4.8	4.7	4.8	5.0
Finance, insurance, and real estate	2.3	2.3	2.5	2.7	4.4	2.5	2.4	2.3	2.2	2.4	2.1	2.3	1.9	2.1	2.3
Services	4.1	3.8	4.1	3.8	4.0	3.8	3.9	3.8	3.9	3.8	3.7	3.6	3.7	3.6	4.0
Government workers	2.2	2.1	2.1	2.1	1.8	1.7	2.0	2.5	2.1	2.3	2.1	2.0	2.3	2.2	2.2
Agricultural wage and salary workers	8.9	7.5	5.4	6.6	6.0	8.3	7.4	7.2	7.2	8.0	7.9	8.8	9.4	8.9	9.0
Educational attainment[1]															
Less than a high school diploma	6.7	6.4	6.5	6.1	6.7	6.1	6.9	6.4	6.4	6.3	6.2	6.4	6.6	6.3	6.8
High school graduates, no college	3.5	3.5	3.5	3.5	3.4	3.4	3.5	3.4	3.4	3.7	3.4	3.5	3.5	3.4	3.8
Some college, less than a bachelor's degree	2.8	2.7	2.6	2.8	2.7	2.6	2.6	2.8	2.7	2.7	2.6	2.4	2.7	2.7	3.0
College graduates	1.8	1.7	1.8	1.6	1.6	1.6	1.6	1.6	1.7	1.7	1.9	1.6	1.6	1.6	1.6

[1] Data refer to persons 25 years and over.

7. Duration of unemployment, monthly data seasonally adjusted

[Numbers in thousands]

Weeks of unemployment	Annual average		2000												2001
	1999	2000	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept	Oct.	Nov.	Dec.	Jan.
Less than 5 weeks	2,568	2,543	2,521	2,582	2,764	2,500	2,536	2,572	2,493	2,567	2,498	2,510	2,531	2,440	2,613
5 to 14 weeks	1,832	1,803	1,768	1,830	1,743	1,835	1,901	1,776	1,811	1,832	1,750	1,755	1,796	1,852	1,977
15 weeks and over	1,480	1,309	1,364	1,292	1,300	1,274	1,325	1,260	1,319	1,373	1,247	1,311	1,317	1,326	1,371
15 to 26 weeks	755	665	683	687	655	660	670	609	650	673	618	702	713	675	731
27 weeks and over	725	644	681	605	645	614	655	651	669	700	629	609	604	651	640
Mean duration, in weeks	13.4	12.6	12.9	12.5	12.7	12.5	12.6	12.5	13.2	13.0	12.1	12.4	12.4	12.6	12.6
Median duration, in weeks	6.4	5.9	5.8	6.1	6.0	6.0	5.9	5.9	5.9	6.1	5.3	6.1	6.1	6.1	5.9

8. Unemployed persons by reason for unemployment, monthly data seasonally adjusted

[Numbers in thousands]

Reason for unemployment	Annual average		2000												2001
	1999	2000	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.
Job losers[1]	2,622	2,492	2,493	2,614	2,463	2,402	2,460	2,439	2,450	2,585	2,502	2,446	2,501	2,514	2,742
On temporary layoff	848	842	764	833	803	723	875	917	857	907	837	825	877	937	1,032
Not on temporary layoff	1,774	1,650	1,729	1,781	1,660	1,679	1,585	1,522	1,593	1,678	1,665	1,621	1,624	1,577	1,711
Job leavers	783	775	781	767	813	812	776	692	788	780	756	815	768	746	838
Reentrants	2,005	1,957	2,033	1,992	1,981	1,967	2,052	2,042	1,960	1,930	1,798	1,868	1,936	1,899	1,956
New entrants	469	431	403	400	428	411	477	416	412	503	429	398	429	466	446
Percent of unemployed															
Job losers[1]	44.6	44.1	43.7	45.3	43.3	43.0	42.7	43.6	43.7	44.6	45.6	44.3	44.4	44.7	45.8
On temporary layoff	14.4	14.9	13.4	14.4	14.1	12.9	15.2	16.4	15.3	15.6	15.3	14.9	15.6	16.7	17.2
Not on temporary layoff	30.2	29.2	30.3	30.9	29.2	30.0	27.5	27.2	28.4	28.9	30.4	29.3	28.8	28.0	28.6
Job leavers	13.3	13.7	13.7	13.3	14.3	14.5	13.5	12.4	14.0	13.5	13.8	14.7	13.6	13.3	14.0
Reentrants	34.1	34.6	35.6	34.5	34.8	35.2	35.6	36.5	34.9	33.3	32.8	33.8	34.4	33.8	32.7
New entrants	8.0	7.6	7.1	6.9	7.5	7.3	8.3	7.4	7.3	8.7	7.8	7.2	7.6	8.3	7.4
Percent of civilian labor force															
Job losers[1]	1.9	1.8	1.8	1.9	1.8	1.7	1.7	1.7	1.7	1.8	1.8	1.7	1.8	1.8	1.9
Job leavers	.6	.6	.6	.5	.6	.6	.6	.5	.6	.6	.5	.6	.5	.5	.6
Reentrants	1.4	1.4	1.4	1.4	1.4	1.4	1.5	1.5	1.4	1.4	1.3	1.3	1.4	1.3	1.4
New entrants	.3	.3	.3	.3	.3	.3	.3	.3	.3	.4	.3	.3	.3	.3	.3

[1] Includes persons who completed temporary jobs.

9. Unemployment rates by sex and age, monthly data seasonally adjusted

[Civilian workers]

Sex and age	Annual average		2000												2001
	1999	2000	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.
Total, 16 years and over	4.2	4.0	4.0	4.1	4.0	4.0	4.1	4.0	4.0	4.1	3.9	3.9	4.0	4.0	4.2
16 to 24 years	9.9	9.3	9.4	9.8	9.7	9.4	9.7	9.1	9.2	9.4	8.9	8.9	9.1	9.2	9.6
16 to 19 years	13.9	13.1	12.8	13.8	13.4	12.8	12.8	11.9	13.4	14.2	12.9	12.6	13.0	13.1	13.8
16 to 17 years	16.3	15.4	14.6	15.6	15.3	14.9	15.8	13.4	16.3	16.9	15.7	15.2	15.4	15.8	17.4
18 to 19 years	12.4	11.5	11.7	12.5	12.0	11.5	10.8	10.7	11.5	12.6	11.1	11.1	11.4	11.6	11.5
20 to 24 years	7.5	7.1	7.4	7.4	7.5	7.3	7.9	7.5	6.9	6.6	6.6	6.8	6.8	7.0	7.2
25 years and over	3.1	3.0	3.0	3.0	3.0	2.9	3.0	3.0	3.0	3.1	3.0	2.9	3.0	3.0	3.2
25 to 54 years	3.2	3.1	3.1	3.0	3.0	3.0	3.1	3.1	3.1	3.2	3.0	3.0	3.0	3.0	3.2
55 years and over	2.8	2.6	2.7	2.9	2.7	2.4	2.5	2.4	2.4	2.7	2.7	2.8	2.9	2.6	2.7
Men, 16 years and over	4.1	3.9	3.9	4.0	3.8	3.9	3.9	3.9	3.8	4.0	3.9	3.9	4.0	4.0	4.3
16 to 24 years	10.3	9.7	9.8	10.1	9.3	9.7	10.0	9.6	9.6	10.2	9.5	9.4	9.5	9.7	10.3
16 to 19 years	14.7	14.0	14.0	14.9	12.7	13.8	13.5	14.2	14.1	15.8	13.7	13.4	13.6	14.1	15.0
16 to 17 years	17.0	16.8	15.2	16.6	15.6	16.0	16.8	15.9	17.5	17.1	17.5	17.6	17.5	18.4	20.5
18 to 19 years	13.1	12.2	13.4	13.5	10.6	12.4	11.4	13.0	12.0	15.2	11.2	10.7	11.3	11.7	11.8
20 to 24 years	7.7	7.3	7.3	7.3	7.4	7.4	8.1	7.0	7.1	6.9	7.1	7.3	7.3	7.2	7.6
25 years and over	3.0	2.8	2.8	2.9	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.9	3.0	3.0	3.1
25 to 54 years	3.0	2.9	2.9	2.9	2.8	2.8	2.8	2.9	2.8	2.9	2.9	2.9	2.9	2.9	3.1
55 years and over	2.8	2.7	2.6	2.7	2.7	2.7	2.6	2.3	2.4	2.7	2.6	2.8	2.9	2.8	3.0
Women, 16 years and over	4.3	4.1	4.2	4.1	4.3	4.1	4.3	4.1	4.2	4.2	4.0	3.9	4.0	4.0	4.1
16 to 24 years	9.5	8.9	9.0	9.4	10.0	8.9	9.4	8.5	8.9	8.6	8.2	8.4	8.6	8.7	8.8
16 to 19 years	13.2	12.1	11.6	12.5	14.1	11.8	12.1	9.4	12.6	12.4	12.0	11.9	12.3	12.1	12.4
16 to 17 years	15.5	14.0	14.0	14.3	15.0	13.7	14.8	10.7	15.0	16.8	13.8	12.8	13.4	13.2	14.1
18 to 19 years	11.6	10.8	9.8	11.3	13.4	10.5	10.2	8.2	10.9	9.8	11.0	11.6	11.5	11.6	11.3
20 to 24 years	7.2	7.0	7.5	7.6	7.5	7.2	7.8	8.0	6.7	6.3	6.0	6.3	6.3	6.7	6.7
25 years and over	3.3	3.2	3.2	3.1	3.2	3.1	3.2	3.2	3.3	3.4	3.2	3.0	3.1	3.0	3.2
25 to 54 years	3.4	3.3	3.3	3.1	3.3	3.2	3.4	3.3	3.4	3.5	3.2	3.1	3.2	3.1	3.4
55 years and over	2.8	2.6	2.9	3.1	2.6	2.0	2.4	2.4	2.4	2.6	2.8	2.8	2.7	2.4	2.5

10. Unemployment rates by State, seasonally adjusted

State	Dec. 1999	Nov. 2000	Dec. 2000[p]	State	Dec. 1999	Nov. 2000	Dec. 2000[p]
Alabama	4.7	4.7	4.6	Missouri	2.8	3.2	3.4
Alaska	5.7	6.0	6.0	Montana	4.8	5.0	4.4
Arizona	4.0	3.7	3.7	Nebraska	2.6	2.8	2.8
Arkansas	4.2	4.2	4.1	Nevada	4.1	4.4	4.5
California	5.0	4.8	4.6	New Hampshire	2.4	1.8	2.3
Colorado	2.8	2.7	2.4	New Jersey	4.2	4.0	3.9
Connecticut	2.8	1.8	1.9	New Mexico	5.8	5.5	5.3
Delaware	3.5	3.8	3.8	New York	4.8	4.6	4.5
District of Columbia	6.0	5.7	6.3	North Carolina	3.2	3.8	4.0
Florida	3.8	3.6	3.6	North Dakota	2.9	2.9	2.7
Georgia	3.6	3.1	3.3	Ohio	4.1	3.9	3.9
Hawaii	5.1	3.8	4.3	Oklahoma	3.3	3.0	2.7
Idaho	4.4	4.9	4.9	Oregon	5.0	4.2	4.2
Illinois	4.2	4.4	4.8	Pennsylvania	4.2	4.2	4.4
Indiana	2.9	2.6	2.8	Rhode Island	3.8	3.6	3.7
Iowa	2.2	2.5	2.5	South Carolina	4.4	2.8	3.7
Kansas	3.2	3.4	3.4	South Dakota	2.5	2.3	2.3
Kentucky	3.9	3.9	4.1	Tennessee	3.7	4.1	4.3
Louisiana	4.3	6.0	5.8	Texas	4.6	4.2	3.7
Maine	3.7	2.6	2.8	Utah	3.0	3.3	3.3
Maryland	3.2	3.6	3.7	Vermont	2.7	2.8	2.5
Massachusetts	3.2	2.6	2.3	Virginia	2.8	2.1	2.1
Michigan	3.6	3.9	3.8	Washington	4.3	5.1	4.9
Minnesota	2.5	3.1	3.1	West Virginia	6.1	5.8	5.5
Mississippi	5.1	6.0	5.1	Wisconsin	3.0	3.0	3.3
				Wyoming	4.4	3.8	3.7

[p] = preliminary

11. Employment of workers on nonfarm payrolls by State, seasonally adjusted

[In thousands]

State	Dec. 1999	Nov. 2000	Dec. 2000[p]	State	Dec. 1999	Nov. 2000	Dec. 2000[p]
Alabama	1,940.5	1,940.9	1,941.3	Missouri	2,740.1	2,778.0	2,770.3
Alaska	280.3	281.4	284.0	Montana	386.8	393.0	393.2
Arizona	2,203.0	2,272.1	2,285.6	Nebraska	894.9	884.8	886.4
Arkansas	1,153.8	1,178.4	1,177.5	Nevada	1,007.0	1,049.4	1,056.5
California	14,171.3	14,561.3	14,614.4	New Hampshire	610.7	614.5	612.6
Colorado	2,166.5	2,223.3	2,216.9	New Jersey	3,896.5	3,946.1	3,949.1
Connecticut	1,680.7	1,698.6	1,697.3	New Mexico	735.5	749.4	750.5
Delaware	417.4	424.2	424.1	New York	8,530.7	8,677.9	8,683.2
District of Columbia	620.8	624.1	627.1	North Carolina	3,886.4	3,916.0	3,910.3
Florida	7,016.6	7,248.2	7,278.9	North Dakota	326.1	325.3	325.8
Georgia	3,948.1	3,994.9	3,993.6	Ohio	5,580.3	5,604.9	5,605.8
Hawaii	536.8	546.3	548.5	Oklahoma	1,475.5	1,497.0	1,495.2
Idaho	548.9	567.5	568.2	Oregon	1,588.9	1,601.8	1,598.0
Illinois	5,983.6	6,022.9	6,026.0	Pennsylvania	5,580.6	5,595.3	5,597.3
Indiana	2,986.8	2,996.1	2,989.7	Rhode Island	467.6	474.4	474.6
Iowa	1,473.4	1,501.6	1,501.6	South Carolina	1,855.8	1,895.1	1,885.2
Kansas	1,339.9	1,363.7	1,365.1	South Dakota	278.5	380.8	381.3
Kentucky	1,813.9	1,840.2	1,843.5	Tennessee	2,691.8	2,712.2	2,714.5
Louisiana	1,907.4	1,918.0	1,923.8	Texas	9,264.9	9,489.6	9,521.0
Maine	593.1	602.3	603.7	Utah	1,061.9	1,086.8	1,087.2
Maryland	2,409.8	2,459.4	2,460.1	Vermont	292.2	297.1	297.8
Massachusetts	3,264.3	3,315.3	3,320.5	Virginia	3,440.9	3,508.9	3,511.1
Michigan	4,583.2	4,618.7	4,600.3	Washington	2,665.6	2,713.2	2,718.9
Minnesota	2,632.7	2,673.3	2,673.5	West Virginia	728.3	735.2	734.1
Mississippi	1,156.9	1,149.2	1,147.8	Wisconsin	2,794.5	2,841.7	2,833.3
				Wyoming	235.1	241.4	240.7

[p] = preliminary

NOTE: Some data in this table may differ from data published elsewhere because of the continual updating of the data base.

12. Employment of workers on nonfarm payrolls by industry, monthly data seasonally adjusted

[In thousands]

Industry	Annual average		2000												2001
	1999	2000[P]	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov	Dec.[P]	Jan.[P]
TOTAL	128,786	131,417	130,387	130,482	131,009	131,419	131,590	131,647	131,607	131,528	131,723	131,789	131,842	131,861	132,129
PRIVATE SECTOR	108,616	110,847	110,036	110,088	110,462	110,752	110,578	110,845	111,001	111,018	111,232	111,325	111,437	111,447	111,661
GOODS-PRODUCING	25,482	25,661	25,677	25,624	25,738	25,725	25,684	25,700	25,756	25,644	25,639	25,665	25,527	25,560	25,645
Mining	535	538	530	533	536	539	539	539	538	537	539	542	541	540	545
Metal mining	45	44	45	45	45	45	44	44	43	44	44	44	43	44	43
Oil and gas extraction	293	304	293	296	300	303	305	306	306	304	307	309	311	311	315
Nonmetallic minerals, except fuels	112	110	111	111	111	111	110	110	110	109	108	109	109	107	108
Construction	6,404	6,687	6,652	6,618	6,726	6,694	6,666	6,668	6,670	6,675	6,720	6,745	6,734	6,716	6,861
General building contractors	1,450	1,505	1,498	1,491	1,508	1,497	1,497	1,498	1,498	1,505	1,510	1,517	1,523	1,525	1,544
Heavy construction, except building	869	886	892	885	905	899	888	877	881	882	885	892	882	867	889
Special trades contractors	4,084	4,296	4,262	4,242	4,313	4,298	4,281	4,293	4,291	4,288	4,325	4,336	4,329	4,324	4,428
Manufacturing	18,543	18,437	18,495	18,473	18,476	18,492	18,479	18,493	18,548	18,432	18,380	18,378	18,360	18,304	18,239
Production workers	12,739	12,642	12,713	12,697	12,683	12,689	12,682	12,683	12,741	12,630	12,585	12,583	12,567	12,511	12,445
Durable goods	11,103	11,084	11,099	11,088	11,094	11,104	11,106	11,120	11,161	11,087	11,052	11,052	11,058	11,032	10,961
Production workers	7,590	7,569	7,592	7,592	7,580	7,584	7,584	7,593	7,629	7,567	7,541	7,542	7,546	7,517	7,451
Lumber and wood products	828	821	830	832	830	830	828	827	825	818	816	812	807	802	796
Furniture and fixtures	548	555	553	553	555	557	558	558	564	555	556	555	554	551	548
Stone, clay, and glass products	563	566	568	567	568	567	566	568	571	566	565	564	563	561	564
Primary metal industries	700	695	699	699	701	699	699	699	698	695	691	691	690	682	675
Fabricated metal products	1,517	1,533	1,523	1,525	1,528	1,534	1,535	1,540	1,539	1,539	1,534	1,533	1,535	1,531	1,518
Industrial machinery and equipment	2,141	2,128	2,130	2,131	2,124	2,126	2,125	2,130	2,137	2,133	2,121	2,124	2,127	2,127	2,123
Computer and office equipment	370	363	369	368	366	364	360	360	361	363	361	361	361	362	363
Electronic and other electrical equipment	1,670	1,704	1,679	1,684	1,682	1,691	1,693	1,697	1,719	1,718	1,714	1,719	1,724	1,727	1,726
Electronic components and accessories	636	667	642	645	646	651	654	661	670	675	681	687	694	696	698
Transportation equipment	1,884	1,841	1,871	1,855	1,865	1,859	1,863	1,864	1,863	1,818	1,813	1,812	1,814	1,808	1,765
Motor vehicles and equipment	1,019	1,011	1,027	1,029	1,028	1,026	1,026	1,030	1,029	993	993	991	989	983	945
Aircraft and parts	495	459	469	453	467	461	463	460	460	456	457	456	455	457	454
Instruments and related products	856	846	847	844	844	844	845	844	849	849	847	847	850	850	853
Miscellaneous manufacturing industries	395	396	399	398	397	397	394	393	396	396	395	395	394	393	393
Nondurable goods	7,440	7,352	7,396	7,385	7,382	7,388	7,373	7,373	7,387	7,345	7,328	7,326	7,302	7,272	7,278
Production workers	5,149	5,073	5,121	5,105	5,103	5,105	5,098	5,090	5,112	5,063	5,044	5,041	5,018	4,994	4,994
Food and kindred products	1,677	1,672	1,681	1,672	1,671	1,678	1,675	1,679	1,680	1,670	1,661	1,673	1,667	6,777	1,677
Tobacco products	39	36	38	37	35	37	37	37	37	34	37	37	37	37	37
Textile mill products	560	541	548	549	549	548	545	542	544	542	539	536	530	525	524
Apparel and other textile products	692	649	666	665	665	665	660	652	656	644	639	633	630	623	621
Paper and allied products	668	661	664	663	662	662	661	663	662	660	660	660	657	656	656
Printing and publishing	1,553	1,556	1,549	1,550	1,551	1,554	1,552	1,558	1,561	1,560	1,560	1,559	1,557	1,554	1,555
Chemicals and allied products	1,034	1,027	1,031	1,031	1,031	1,030	1,028	1,028	1,026	1,024	1,024	1,023	1,024	1,022	1,024
Petroleum and coal products	134	131	132	132	132	132	132	132	131	132	132	131	130	128	128
Rubber and miscellaneous plastics products	1,006	1,005	1,011	1,010	1,010	1,007	1,008	1,008	1,014	1,005	1,002	1,001	998	990	986
Leather and leather products	78	74	76	76	76	75	75	74	76	74	74	73	72	71	70
SERVICE-PRODUCING	103,304	105,756	104,710	104,858	105,271	105,694	105,906	105,947	105,851	105,884	106,084	106,124	106,207	106,301	106,484
Transportation and public utilities	6,826	6,993	6,925	6,937	6,953	6,970	6,962	6,985	7,010	6,941	7,037	7,046	7,060	7,086	7,083
Transportation	4,409	4,524	4,470	4,479	4,492	4,509	4,501	4,510	4,536	4,549	4,549	4,549	4,563	4,580	4,579
Railroad transportation	230	220	225	225	222	221	219	217	219	221	219	219	220	217	221
Local and interurban passenger transit	485	497	493	494	494	498	498	493	502	503	500	498	500	500	501
Trucking and warehousing	1,805	1,839	1,827	1,828	1,833	1,839	1,834	1,834	1,846	1,845	1,845	1,843	1,839	1,850	1,856
Water transportation	187	201	192	196	197	200	200	202	199	204	206	206	206	206	206
Transportation by air	1,227	1,282	1,256	1,259	1,268	1,270	1,269	1,279	1,282	1,288	1,291	1,297	1,310	1,317	1,305
Pipelines, except natural gas	13	13	13	12	12	12	12	12	13	12	12	12	13	12	13
Transportation services	463	472	464	465	466	469	469	473	475	476	476	474	475	478	477
Communications and public utilities	2,416	2,469	2,455	2,458	2,461	2,461	2,461	2,475	2,474	2,392	2,488	2,497	2,497	2,506	2,504
Communications	1,552	1,612	1,591	1,598	1,602	1,604	1,606	1,619	1,618	1,537	1,632	1,641	1,644	1,654	1,651
Electric, gas, and sanitary services	865	857	864	860	859	857	855	856	856	855	856	856	853	852	853
Wholesale trade	6,924	7,054	7,005	7,011	7,017	7,055	7,048	7,049	7,050	7,062	7,070	7,087	7,093	7,085	7,080
Retail trade	22,788	23,137	22,973	22,987	23,027	23,197	23,064	23,122	23,196	23,191	23,179	23,193	23,238	23,256	23,283
Building materials and garden supplies	989	1,021	1,016	1,020	1,034	1,032	1,025	1,018	1,018	1,021	1,019	1,022	1,020	1,018	1,012
General merchandise stores	2,771	2,753	2,765	2,762	2,756	2,791	2,744	2,741	2,727	2,740	2,739	2,740	2,770	2,747	2,733
Department stores	2,431	2,402	2,419	2,417	2,409	2,443	2,388	2,386	2,373	2,393	2,389	2,389	2,419	2,415	2,394

See footnotes at end of table.

12. Continued—Employment of workers on nonfarm payrolls by industry, monthly data seasonally adjusted

[In thousands]

Industry	Annual average		2000												2001
	1999	2000[P]	Jan.	Feb.	Mar.	Apr.	May.	June	July	Aug.	Sept.	Oct.	Nov.	Dec.[P]	Jan.[P]
Food stores	3,495	3,516	3,501	3,503	3,502	3,522	3,516	3,515	3,519	3,522	3,522	3,519	3,516	3,527	3,528
Automotive dealers and service stations	2,369	2,414	2,399	2,394	2,407	2,410	2,408	2,412	2,411	2,418	2,424	2,431	2,430	2,428	3,432
New and used car dealers	1,079	1,111	1,097	1,100	1,105	1,106	1,107	1,110	1,111	1,115	1,118	1,120	1,120	1,121	1,124
Apparel and accessory stores	1,174	1,174	1,176	1,184	1,188	1,195	1,195	1,197	1,206	1,202	1,209	1,205	1,211	1,217	1,227
Furniture and home furnishings stores	1,082	1,199	1,099	1,102	1,111	1,113	1,113	1,118	1,119	1,121	1,122	1,128	1,130	1,139	1,139
Eating and drinking places	7,940	8,065	7,998	7,992	8,000	8,097	8,028	8,071	8,132	8,099	8,076	8,073	8,097	8,113	8,124
Miscellaneous retail establishments	2,969	3,050	3,019	3,021	3,029	3,037	3,035	3,050	3,064	3,068	3,068	3,075	3,064	3,067	3,088
Finance, insurance, and real estate	7,569	7,618	7,612	7,624	7,621	7,610	7,600	7,588	7,586	7,608	7,622	7,638	7,647	7,660	7,689
Finance	3,691	3,720	3,709	3,717	3,713	3,709	3,703	3,705	3,708	3,717	3,729	3,737	3,739	3,748	3,763
Depository institutions	2,061	2,043	2,058	2,057	2,054	2,052	2,044	2,042	2,036	2,037	2,038	2,034	2,033	2,035	2,038
Commercial banks	1,476	1,455	1,470	1,469	1,466	1,464	1,456	1,454	1,449	1,450	1,450	1,446	1,445	1,445	1,444
Savings institutions	252	241	247	245	243	243	243	242	240	240	239	238	237	237	237
Nondepository institutions	710	689	699	699	692	686	684	682	683	683	687	689	690	690	697
Security and commodity brokers	688	745	716	723	728	732	736	741	748	753	759	766	768	773	776
Holding and other investment offices	231	242	236	238	239	239	239	240	241	244	245	248	248	250	252
Insurance	2,371	2,362	2,372	2,373	2,373	2,365	2,361	2,359	2,354	2,358	2,353	2,355	2,362	2,362	2,368
Insurance carriers	1,611	1,592	1,606	1,606	1,605	1,597	1,594	1,593	1,585	1,587	1,582	1,581	1,587	1,586	1,591
Insurance agents, brokers, and service	761	770	766	767	768	768	767	766	769	771	771	774	775	776	777
Real estate	1,507	1,536	1,531	1,534	1,535	1,536	1,536	1,524	1,524	1,533	1,540	1,546	1,546	1,550	1,558
Services[1]	39,027	40,384	39,844	39,914	40,090	40,195	40,220	40,401	40,403	40,572	40,685	40,696	40,764	40,800	40,881
Agricultural services	766	800	806	796	812	801	790	788	794	799	801	806	810	806	816
Hotels and other lodging places	1,848	1,910	1,866	1,868	1,885	1,902	1,904	1,922	1,925	1,921	1,923	1,924	1,939	1,945	1,940
Personal services	1,233	1,276	1,263	1,265	1,265	1,272	1,262	1,271	1,273	1,285	1,285	1,285	1,288	1,291	1,309
Business services	9,267	9,746	9,571	9,615	9,681	9,735	9,715	9,773	9,768	9,800	9,853	9,829	9,823	9,745	9,744
Services to buildings	985	1,001	997	1,000	1,004	1,001	996	997	1,002	1,000	1,001	1,000	1,004	1,007	1,010
Personnel supply services	3,601	3,835	3,753	3,773	3,817	3,885	3,855	3,873	3,851	3,865	3,891	3,861	3,845	3,746	3,711
Help supply services	3,228	3,419	3,361	3,382	3,418	3,485	3,440	3,444	3,433	3,436	3,463	3,432	3,413	3,340	3,301
Computer and data processing services	1,831	1,941	1,896	1,906	1,915	1,927	1,929	1,933	1,950	1,951	1,955	1,966	1,928	1,966	1,997
Auto repair services and parking	1,184	1,198	1,194	1,195	1,192	1,195	1,192	1,191	1,194	1,198	1,200	1,206	1,206	1,216	1,227
Miscellaneous repair services	377	384	382	384	384	383	383	384	384	384	385	386	386	383	385
Motion pictures	610	631	626	623	630	634	632	635	634	636	631	630	631	639	646
Amusement and recreation services	1,660	1,771	1,721	1,723	1,729	1,752	1,755	1,789	1,795	1,808	1,785	1,791	1,793	1,790	1,810
Health services	9,989	10,139	10,066	10,078	10,091	10,093	10,104	10,116	10,143	10,161	10,178	10,191	10,208	10,228	10,258
Offices and clinics of medical doctors	1,877	1,933	1,910	1,914	1,920	1,925	1,928	1,928	1,930	1,935	1,945	1,950	1,953	1,958	1,969
Nursing and personal care facilities	1,785	1,791	1,788	1,790	1,791	1,789	1,788	1,786	1,787	1,793	1,791	1,793	1,793	1,796	1,797
Hospitals	3,982	4,019	4,001	4,002	4,004	3,999	4,005	4,008	4,018	4,021	4,029	4,032	4,045	4,053	4,065
Home health care services	636	642	638	639	639	641	641	642	645	646	645	645	644	642	643
Legal services	997	1,011	1,008	1,007	1,007	1,004	1,006	1,009	1,012	1,014	1,014	1,016	1,014	1,015	1,015
Educational services	2,276	2,355	2,308	2,309	2,329	2,329	2,356	2,374	2,374	2,395	2,388	2,357	2,365	2,389	2,379
Social services	2,800	2,963	2,905	2,912	2,929	2,940	2,946	2,945	2,919	2,955	3,001	3,019	3,032	3,055	3,057
Child day care services	695	764	737	740	749	753	758	760	768	774	779	784	787	792	792
Residential care	775	823	803	807	810	812	816	820	826	827	833	838	840	845	849
Museums and botanical and zoological gardens	98	102	100	100	101	102	101	103	103	103	103	103	104	104	104
Membership organizations	2,425	2,441	2,439	2,439	2,440	2,439	2,438	2,441	2,429	2,433	2,445	2,446	2,450	2,451	2,447
Engineering and management services	3,254	3,413	3,344	3,354	3,369	3,368	3,390	3,415	3,411	3,435	3,449	3,463	3,471	3,489	3,499
Engineering and architectural services	953	1,002	982	984	985	987	995	1,005	1,007	1,010	1,012	1,015	1,015	1,023	1,030
Management and public relations	1,036	1,107	1,074	1,077	1,085	1,088	1,096	1,110	1,107	1,118	1,123	1,129	1,137	1,141	1,146
Government	20,170	20,570	20,351	20,394	20,547	20,667	21,012	20,802	20,606	20,510	20,491	20,464	20,405	20,414	20,468
Federal	2,669	2,778	2,663	2,700	2,816	2,885	3,238	3,092	2,819	2,657	2,627	2,625	2,615	2,570	2,607
Federal, except Postal Service	1,796	1,918	1,797	1,835	1,951	2,022	2,374	2,230	1,954	1,790	1,764	1,762	1,760	1,757	1,749
State	4,695	4,746	4,725	4,728	4,733	4,744	4,737	4,716	4,774	4,765	4,776	4,755	4,748	4,768	4,771
Education	1,968	1,988	1,981	1,981	1,982	1,990	1,983	1,967	1,994	2,002	2,009	1,988	1,977	1,992	1,999
Other State government	2,727	2,758	2,744	2,747	2,751	2,754	2,754	2,749	2,750	2,763	2,767	2,767	2,771	2,776	2,772
Local	12,806	13,047	12,963	12,966	12,998	13,038	13,037	12,994	13,043	13,088	13,088	13,084	13,042	13,076	13,090
Education	7,272	7,394	7,356	7,355	7,373	7,408	7,395	7,361	7,394	7,411	7,396	7,391	7,377	7,383	7,387
Other local government	5,534	5,656	5,607	5,611	5,625	5,630	5,642	5,633	5,649	5,677	5,692	5,693	5,665	5,693	5,703

[1] Includes other industries not shown separately.

[P] = preliminary.

NOTE: See "Notes on the data" for a description of the most recent benchmark revision.

13. Average weekly hours of production or nonsupervisory workers on private nonfarm payrolls, by industry, monthly data seasonally adjusted

Industry	Annual average		2000												2001
	1999	2000[P]	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.[P]	Jan.[P]
PRIVATE SECTOR	34.5	34.5	34.5	34.6	34.5	34.6	34.4	34.5	34.4	34.3	34.4	34.4	34.3	34.1	34.3
GOODS-PRODUCING	41.0	40.9	41.1	41.3	41.2	41.5	40.9	40.9	41.1	40.8	40.7	40.9	40.5	39.7	40.4
MINING	43.8	44.9	44.7	44.7	44.7	45.3	44.1	44.7	45.3	44.6	45.2	45.6	44.9	44.4	45.1
MANUFACTURING	41.7	41.5	41.7	41.8	41.7	42.2	41.4	41.6	41.7	41.4	41.3	41.4	41.2	40.4	40.9
Overtime hours	4.6	4.5	4.6	4.7	4.6	4.9	4.5	4.6	4.6	4.5	4.4	4.5	4.3	4.0	4.1
Durable goods	42.2	42.0	42.3	42.3	42.3	42.8	42.0	42.2	42.4	41.9	41.8	41.9	41.7	40.6	41.2
Overtime hours	4.8	4.7	4.8	4.9	4.8	5.1	4.7	4.8	4.7	4.6	4.5	4.6	4.4	4.0	4.1
Lumber and wood products	41.2	40.7	41.1	41.0	40.9	41.2	40.7	40.8	41.1	40.4	40.5	40.6	40.6	39.7	39.9
Furniture and fixtures	40.3	39.8	40.2	40.3	40.2	40.6	40.3	39.9	39.7	39.4	39.4	39.7	39.4	38.8	38.9
Stone, clay, and glass products	43.5	43.2	43.6	43.5	43.4	43.6	43.0	42.9	43.7	43.2	43.1	43.2	42.7	41.7	42.4
Primary metal industries	44.2	44.0	44.5	44.5	44.4	44.9	43.8	43.9	44.3	43.7	43.7	43.8	43.6	42.5	42.8
Blast furnaces and basic steel products	44.8	44.7	45.3	45.4	45.2	45.0	44.7	45.0	45.2	44.4	44.5	44.2	44.1	43.2	43.1
Fabricated metal products	42.2	42.2	42.4	42.4	42.5	43.0	42.3	42.4	42.6	42.1	42.0	42.1	41.7	40.6	41.5
Industrial machinery and equipment	42.2	42.3	42.3	42.3	42.3	42.9	42.2	42.5	42.6	42.2	42.1	42.1	42.0	41.2	41.7
Electronic and other electrical equipment	41.4	41.4	41.6	41.6	41.8	42.2	41.3	41.4	41.9	41.0	41.2	41.2	40.9	40.5	41.0
Transportation equipment	43.8	43.4	43.8	44.0	43.7	44.3	43.2	44.0	43.9	43.4	42.9	43.1	42.9	40.6	41.6
Motor vehicles and equipment	45.0	44.2	45.0	45.0	44.6	45.5	44.2	45.3	44.5	44.5	43.6	44.0	43.2	39.8	40.8
Instruments and related products	41.5	41.2	41.3	41.2	41.2	41.6	41.2	41.3	41.6	41.1	41.1	41.2	41.0	40.4	40.8
Miscellaneous manufacturing	39.8	39.4	39.5	39.5	39.4	39.8	39.3	39.4	39.7	39.4	39.3	39.3	39.1	38.7	39.2
Nondurable goods	40.9	40.7	40.9	41.0	40.9	41.3	40.6	40.7	40.7	40.6	40.6	40.6	40.4	40.0	40.4
Overtime hours	4.4	4.3	4.4	4.5	4.3	4.6	4.3	4.3	4.3	4.2	4.3	4.3	4.1	4.0	4.1
Food and kindred products	41.8	41.4	41.6	41.6	41.6	41.9	41.2	41.5	41.2	41.5	41.4	41.4	41.2	40.7	41.2
Textile mill products	40.9	41.1	41.1	41.7	41.6	41.9	41.1	41.1	41.2	40.7	41.0	40.9	40.5	40.5	40.4
Apparel and other textile products	37.5	37.2	37.6	37.7	37.8	38.0	37.1	37.0	37.3	36.9	36.8	36.9	36.6	36.4	36.5
Paper and allied products	43.5	42.8	43.3	43.5	43.2	43.6	42.8	42.8	42.4	42.4	42.7	42.5	42.6	41.8	42.4
Printing and publishing	38.2	38.1	38.3	38.3	38.2	38.5	38.0	38.2	38.1	37.9	38.1	38.2	38.0	37.7	38.1
Chemicals and allied products	43.0	42.8	42.9	42.7	42.6	42.9	42.7	42.9	43.4	43.0	42.9	43.0	42.6	42.4	42.7
Rubber and miscellaneous plastics products	41.7	41.3	41.6	41.6	41.5	42.1	41.3	41.4	41.4	41.2	41.1	41.1	41.0	40.0	40.9
Leather and leather products	37.8	37.8	37.8	38.1	38.0	38.9	38.2	37.8	37.1	37.1	37.4	37.4	38.1	37.2	38.2
SERVICE-PRODUCING	32.8	32.8	32.9	32.8	32.8	32.8	32.7	32.9	32.7	32.7	32.8	32.7	32.8	32.7	32.8
TRANSPORTATION AND PUBLIC UTILITIES	38.7	38.5	38.4	38.3	38.3	38.7	38.4	38.4	38.8	38.2	38.5	38.6	38.5	38.7	38.7
WHOLESALE TRADE	38.3	38.5	38.6	38.5	38.6	38.6	38.6	38.6	38.5	38.3	38.6	38.5	38.6	38.3	38.4
RETAIL TRADE	29.0	28.9	29.1	29.1	29.0	28.8	28.8	29.0	28.8	28.8	28.8	28.8	28.9	28.6	29.1

[P] = preliminary.

NOTE: See "Notes on the data" for a description of the most recent benchmark revision.

14. Average hourly earnings of production or nonsupervisory workers on private nonfarm payrolls, by industry, seasonally adjusted

Industry	Annual average		2000												2001
	1999	2000[P]	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.[P]	Jan.[P]
PRIVATE SECTOR (in current dollars)	$ 13.24	$ 13.74	$13.49	$13.54	$13.58	$13.64	$13.66	$13.70	$13.75	$13.80	$13.83	$13.88	$13.96	$14.02	$14.02
Goods-producing	14.84	15.40	15.13	15.20	15.25	15.30	15.29	15.34	15.40	15.45	15.46	15.57	15.66	15.64	15.71
Mining	17.09	17.14	17.09	17.14	17.27	17.26	17.25	17.24	17.23	17.05	17.09	17.08	17.13	17.10	17.01
Construction	17.18	17.86	17.50	17.60	17.67	17.78	17.75	17.77	17.90	17.93	17.96	18.00	18.20	18.15	18.31
Manufacturing	13.91	14.38	14.15	14.21	14.23	14.28	14.27	14.36	14.39	14.43	14.43	14.56	14.63	14.61	14.60
Excluding overtime	13.18	13.64	13.41	13.45	13.47	13.49	13.53	13.60	13.64	13.69	13.73	13.81	13.90	13.93	13.90
Service-producing	12.73	13.22	12.97	13.01	13.05	13.11	13.15	13.19	13.23	13.28	13.33	13.36	13.44	13.53	13.51
Transportation and public utilities	15.69	16.22	15.92	16.00	16.04	16.12	16.22	16.28	16.17	16.26	16.30	16.38	16.42	16.50	16.46
Wholesale trade	14.58	15.18	14.90	14.89	14.90	15.03	15.02	15.16	15.22	15.24	15.32	15.36	15.46	15.56	15.49
Retail trade	9.08	9.45	9.26	9.32	9.35	9.39	9.39	9.43	9.45	9.49	9.54	9.56	9.60	9.65	9.61
Finance, insurance, and real estate	14.62	15.07	14.86	14.87	14.95	14.98	15.01	15.05	15.03	15.12	15.19	15.18	15.27	15.35	15.39
Services	13.36	13.88	13.61	13.66	13.69	13.74	13.79	13.82	13.89	13.94	13.97	14.00	14.12	14.20	14.22
PRIVATE SECTOR (in constant (1982) dollars)	7.86	7.88	7.88	7.87	7.83	7.87	7.87	7.85	7.86	7.90	7.87	7.89	7.92	7.94	–

– Data not available.

[P] = preliminary.

NOTE: See "Notes on the data" for a description of the most recent benchmark revision.

15. Average hourly earnings of production or nonsupervisory workers on private nonfarm payrolls, by industry

Industry	Annual average		2000												2001
	1999	2000[P]	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.[P]	Jan.[P]
PRIVATE SECTOR	$13.24	$13.74	$13.58	$13.58	$13.59	$13.69	$13.64	$13.62	$13.68	$13.67	$13.88	$13.96	$13.98	$14.03	$14.09
MINING	17.09	17.14	17.30	17.20	17.28	17.29	17.19	17.09	17.13	16.94	17.05	17.02	17.06	17.19	17.22
CONSTRUCTION	17.18	17.86	17.39	17.42	17.54	17.66	17.71	17.74	17.95	18.04	18.16	18.21	18.16	18.22	18.19
MANUFACTURING	13.91	14.38	14.19	14.19	14.22	14.28	14.27	14.34	14.37	14.37	14.50	14.53	14.62	14.69	14.63
Durable goods	14.40	14.93	14.72	14.73	14.76	14.82	14.80	14.90	14.86	14.93	15.07	15.13	15.22	15.26	15.17
Lumber and wood products	11.47	11.80	11.67	11.63	11.62	11.73	11.74	11.82	11.87	11.83	11.88	11.91	11.89	11.96	11.96
Furniture and fixtures	11.23	11.75	11.47	11.51	11.59	11.64	11.69	11.73	11.80	11.82	11.88	11.92	11.94	12.02	12.00
Stone, clay, and glass products	13.87	14.32	13.94	13.96	14.03	14.23	14.28	14.36	14.42	14.41	14.53	14.56	14.51	14.51	14.54
Primary metal industries	15.83	16.50	16.20	16.28	16.34	16.51	16.40	16.52	16.68	16.57	16.65	16.55	16.64	16.66	16.66
Blast furnaces and basic steel products	18.81	19.46	19.16	19.32	19.49	19.72	19.46	19.62	19.78	19.56	19.58	19.28	19.27	19.26	19.50
Fabricated metal products	13.48	13.87	13.71	13.67	13.69	13.75	13.75	13.82	13.82	13.90	14.02	14.03	14.08	14.13	14.12
Industrial machinery and equipment	15.02	15.63	15.39	15.40	15.43	15.42	15.45	15.51	15.61	15.66	15.84	15.88	15.93	16.04	15.97
Electronic and other electrical equipment	13.46	13.80	13.77	13.72	13.70	13.70	13.65	13.72	13.79	13.81	13.84	13.88	13.93	14.03	14.04
Transportation equipment	18.04	19.04	18.57	18.58	18.70	18.82	18.79	19.01	18.66	19.02	19.30	19.52	19.82	19.72	19.30
Motor vehicles and equipment	18.41	19.59	18.99	19.03	19.17	19.36	19.35	19.62	19.07	19.58	19.87	20.19	20.57	20.41	19.85
Instruments and related products	14.17	14.62	14.38	14.41	14.40	14.40	14.44	14.49	14.65	14.65	14.80	14.85	14.91	15.06	15.00
Miscellaneous manufacturing	11.30	11.65	11.52	11.53	11.55	11.58	11.59	11.60	11.65	11.60	11.70	11.77	11.78	11.91	11.93
Nondurable goods	13.16	13.53	13.37	13.36	13.37	13.45	13.43	13.48	13.61	13.52	13.63	13.63	13.71	13.82	13.82
Food and kindred products	12.09	12.41	12.23	12.23	12.27	12.36	12.36	12.39	12.46	12.40	12.50	12.44	12.57	12.67	12.65
Tobacco products	19.07	19.07	17.21	17.48	19.10	19.71	20.40	20.87	21.08	20.95	18.51	17.98	18.40	18.55	18.42
Textile mill products	10.71	10.95	10.84	10.85	10.86	10.94	10.91	10.91	10.97	10.97	11.05	11.01	11.04	11.05	11.10
Apparel and other textile products	8.86	9.09	9.03	9.03	9.05	9.05	9.05	9.07	9.06	9.09	9.16	9.16	9.16	9.23	9.27
Paper and allied products	15.94	16.21	16.02	15.99	16.00	16.15	16.12	16.18	16.29	16.18	16.31	16.36	16.36	16.56	16.53
Printing and publishing	13.84	14.30	14.10	14.13	14.18	14.20	14.15	14.15	14.29	14.29	14.48	14.47	14.52	14.61	14.60
Chemicals and allied products	17.38	17.93	17.70	17.67	17.63	17.77	17.80	17.91	18.17	17.94	18.07	18.09	18.17	18.30	18.17
Petroleum and coal products	21.39	21.46	21.62	22.03	22.24	21.77	21.34	21.19	21.24	21.01	21.14	21.11	21.31	21.54	21.51
Rubber and miscellaneous plastics products	12.36	12.77	12.61	12.57	12.58	12.67	12.65	12.72	12.84	12.81	12.87	12.89	12.95	13.06	13.09
Leather and leather products	9.77	10.12	10.08	9.96	10.01	10.13	10.05	10.08	10.08	10.15	10.25	10.21	10.18	10.26	10.33
TRANSPORTATION AND PUBLIC UTILITIES	15.69	16.22	15.98	16.05	16.02	16.15	16.13	16.17	16.19	16.22	16.31	16.38	16.43	16.52	16.51
WHOLESALE TRADE	14.58	15.18	14.99	14.91	14.83	15.14	14.99	15.04	15.25	15.17	15.32	15.45	15.46	15.58	15.55
RETAIL TRADE	9.08	9.45	9.33	9.35	9.37	9.42	9.39	9.38	9.38	9.40	9.57	9.58	9.60	9.64	9.68
FINANCE, INSURANCE, AND REAL ESTATE	14.62	15.07	14.99	14.93	14.97	15.12	15.02	14.93	15.01	14.99	15.12	15.24	15.25	15.33	15.41
SERVICES	13.36	13.88	13.78	13.77	13.77	13.83	13.76	13.68	13.74	13.70	13.96	14.07	14.17	14.29	14.36

[P] = preliminary.

NOTE: See "Notes on the data" for a description of the most recent benchmark revision.

16. Average weekly earnings of production or nonsupervisory workers on private nonfarm payrolls, by industry

Industry	Annual average		2000												2001
	1999	2000[P]	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.[P]	Jan.[P]
PRIVATE SECTOR															
Current dollars	$456.78	$474.03	$467.15	$464.44	$464.78	$473.67	$467.85	$471.25	$477.43	$474.35	$478.86	$484.41	$478.12	$479.83	$477.65
Seasonally adjusted	–	–	465.41	468.48	468.51	471.94	469.90	472.65	473.00	473.34	475.75	477.47	478.83	478.08	480.89
Constant (1982) dollars	271.25	271.96	273.35	270.34	268.19	273.17	269.50	269.90	273.13	271.52	272.23	275.08	271.04	272.32	269.55
MINING	748.54	769.59	766.39	758.52	758.59	776.32	763.24	770.76	775.99	762.30	784.30	784.62	767.70	768.39	768.01
CONSTRUCTION	671.74	701.90	664.04	674.15	680.55	692.27	701.32	702.50	723.39	725.21	726.40	730.22	697.34	686.89	685.76
MANUFACTURING															
Current dollars	580.05	596.77	590.30	588.89	590.13	595.48	590.78	597.98	590.61	594.92	604.65	604.45	608.19	605.23	595.44
Constant (1982) dollars	344.45	342.38	345.41	342.78	340.53	343.41	340.31	342.49	337.88	340.54	343.75	343.24	344.78	343.49	336.03
Durable goods	607.68	627.06	621.18	620.13	622.87	628.37	623.08	630.27	618.18	625.57	635.95	635.46	639.24	634.82	623.49
Lumber and wood products	472.56	480.26	474.97	469.85	470.61	482.10	480.17	485.80	483.11	483.85	485.89	487.12	482.73	477.20	472.42
Furniture and fixtures	452.57	467.65	459.95	458.10	462.44	464.44	465.26	468.03	462.56	470.44	477.58	475.61	474.02	480.80	465.60
Stone, clay, and glass products	603.35	618.62	591.06	591.90	596.28	614.74	621.18	624.66	631.60	631.16	637.87	637.73	623.93	607.97	599.05
Primary metal industries	699.69	726.00	722.52	722.83	723.86	734.70	721.60	728.53	725.58	720.80	730.94	721.58	730.50	721.38	714.71
Blast furnaces and basic steel products	842.69	869.86	867.95	875.20	875.10	891.34	873.75	882.90	888.12	866.51	871.31	844.46	855.59	837.81	840.45
Fabricated metal products	568.86	585.31	579.93	576.87	577.72	583.00	581.63	587.35	576.29	585.19	594.45	593.47	594.18	589.22	584.57
Industrial machinery and equipment	633.84	661.15	654.08	652.96	654.23	655.35	653.54	659.18	654.06	657.72	666.86	668.55	672.25	676.89	667.55
Electronic and other electrical equipment	557.24	571.32	572.83	569.38	571.29	569.92	561.02	569.38	566.77	566.21	575.74	574.63	578.10	583.65	575.64
Transportation equipment	790.15	826.34	811.51	815.66	819.06	829.96	817.37	836.44	781.85	819.76	839.55	847.17	858.21	828.24	800.95
Motor vehicles and equipment	828.45	865.88	850.75	856.35	860.73	880.88	866.88	888.79	800.94	861.52	880.24	890.38	896.85	847.02	807.90
Instruments and related products	588.06	602.34	595.33	595.13	593.28	594.72	592.04	596.99	600.65	600.65	608.28	610.34	617.27	621.98	613.50
Miscellaneous manufacturing	449.74	459.01	450.43	453.13	456.23	456.25	454.33	458.20	453.19	458.20	464.49	467.27	466.49	469.25	462.88
Nondurable goods	538.24	550.67	544.16	542.42	542.82	548.76	543.92	549.98	549.84	548.91	558.83	556.10	560.74	562.47	555.56
Food and kindred products	505.36	513.77	505.10	500.21	501.84	506.76	506.76	512.95	513.35	517.08	527.50	519.99	525.43	525.81	517.39
Tobacco products	762.80	758.99	672.91	685.22	741.08	782.49	811.92	836.89	832.66	842.19	764.46	719.20	732.32	740.15	703.64
Textile mill products	438.04	450.05	443.36	448.11	450.69	456.20	448.40	451.67	444.29	448.67	454.16	452.51	451.54	453.05	448.44
Apparel and other textile products	332.25	338.15	335.92	339.53	342.09	341.19	336.66	339.22	333.41	336.33	338.00	338.92	338.00	340.59	334.65
Paper and allied products	693.39	693.79	695.27	687.57	686.40	696.07	686.71	692.50	687.44	681.18	701.33	700.21	705.12	707.11	702.53
Printing and publishing	528.69	544.83	534.39	536.94	540.26	542.44	533.46	534.87	540.16	543.02	557.48	555.65	559.02	559.56	550.42
Chemicals and allied products	747.34	767.40	757.56	750.98	749.28	757.00	756.50	768.34	779.49	769.63	778.82	781.49	783.13	790.56	772.23
Petroleum and coal products	921.91	948.53	933.98	956.10	969.66	966.59	919.75	923.88	955.80	926.54	957.64	964.73	961.08	958.53	978.71
Rubber and miscellaneous plastics products	515.41	527.40	523.32	520.40	520.81	528.34	523.71	529.15	522.59	525.21	532.82	529.78	533.54	534.15	532.76
Leather and leather products	369.31	382.54	372.96	375.49	379.38	388.99	384.92	387.07	365.90	383.67	388.48	383.90	389.89	385.78	386.34
TRANSPORTATION AND PUBLIC UTILITIES	607.20	624.47	612.03	611.51	608.76	626.62	616.17	622.55	634.65	627.71	631.20	638.82	632.56	637.67	630.68
WHOLESALE TRADE	558.41	584.43	578.61	568.07	566.51	588.95	575.62	579.04	591.70	581.01	589.82	597.92	595.21	596.71	589.35
RETAIL TRADE	263.32	273.11	265.91	266.48	267.98	272.24	270.43	274.83	279.52	277.30	275.62	276.86	274.56	277.63	272.98
FINANCE, INSURANCE, AND REAL ESTATE	529.24	547.04	551.63	538.97	537.42	554.90	539.22	540.47	550.87	539.64	545.83	557.78	547.48	553.41	554.76
SERVICES	435.54	453.88	450.61	448.90	447.53	453.62	445.82	447.34	453.42	450.73	453.70	461.50	461.94	464.43	463.83

[P] = preliminary.

NOTE: See "Notes on the data" for a description of the most recent benchmark revision. Dash indicates data not available.

17. Diffusion indexes of employment change, seasonally adjusted

[In percent]

Timespan and year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov	Dec.
	Private nonfarm payrolls, 356 industries											
Over 1-month span:												
1998	63.2	56.6	60.5	58.7	58.3	59.7	53.9	58.1	56.2	53.8	59.0	57.4
1999	54.1	58.8	53.9	59.6	52.8	57.9	58.8	53.8	57.3	60.7	60.8	59.0
2000	60.8	54.1	60.7	56.5	45.9	56.2	58.7	51.4	53.7	55.2	50.6	52.9
2001	54.6	–	–	–	–	–	–	–	–	–	–	–
Over 3-month span:												
1998	64.3	66.6	63.2	66.3	63.6	58.0	57.4	57.9	59.7	58.1	58.6	59.4
1999	58.3	57.3	58.4	54.4	57.3	58.8	58.1	60.7	59.6	63.5	64.3	63.1
2000	61.0	62.6	61.9	57.4	56.7	58.3	57.9	58.4	50.8	52.1	53.8	54.1
Over 6-month span:												
1998	69.8	67.4	65.2	61.8	62.9	61.4	59.0	58.4	57.4	59.7	59.3	59.1
1999	60.0	58.0	57.6	58.6	54.4	59.7	60.4	62.1	64.0	62.8	65.2	64.6
2000	65.6	60.8	61.0	61.9	59.3	56.0	54.4	57.2	53.9	52.9	–	–
Over 12-month span:												
1998	69.7	67.3	67.3	65.9	63.9	62.5	61.5	62.1	61.0	59.8	59.8	58.1
1999	60.3	58.3	57.6	59.4	59.6	60.5	61.9	61.0	62.6	62.9	62.5	63.2
2000	64.9	63.8	60.8	59.8	57.9	55.2	55.5	–	–	–	–	–
	Manufacturing payrolls, 139 industries											
Over 1-month span:												
1998	57.9	50.7	53.6	50.7	47.1	50.0	37.8	50.0	45.7	39.9	41.7	43.9
1999	45.0	41.0	42.8	46.4	40.3	46.4	54.7	38.1	46.4	51.8	51.4	50.4
2000	52.2	47.8	51.1	51.1	45.7	51.1	57.6	36.3	38.8	45.7	42.8	41.7
2001	39.2	–	–	–	–	–	–	–	–	–	–	–
Over 3-month span:												
1998	56.8	56.8	52.2	52.2	48.6	41.4	39.2	40.3	43.2	37.1	36.7	40.6
1999	36.7	37.1	37.1	34.5	37.8	43.5	39.9	45.0	42.1	50.4	51.1	50.7
2000	47.8	52.5	49.3	48.9	49.6	53.6	44.2	36.3	28.8	35.3	37.4	33.5
Over 6-month span:												
1998	60.1	54.3	50.4	39.9	43.5	42.1	38.8	36.7	36.0	39.9	34.5	32.7
1999	35.6	33.5	33.5	37.1	32.7	38.8	41.0	45.7	48.2	43.2	48.6	51.1
2000	51.4	47.5	50.4	53.6	45.0	38.1	33.5	35.3	30.6	27.0	–	–
Over 12-month span:												
1998	55.0	51.8	51.8	46.8	40.6	39.9	37.8	38.1	37.1	36.0	34.2	33.5
1999	37.4	32.4	31.7	35.3	36.0	37.1	38.8	39.6	42.4	42.4	42.4	46.0
2000	47.8	44.6	39.2	39.2	34.2	30.6	31.3	–	–	–	–	–

– Data not available.

NOTE: Figures are the percent of industries with employment increasing plus one-half of the industries with unchanged employment, where 50 percent indicates an equal balance between industries with increasing and decreasing employment. Data for the 2 most recent months shown in each span are preliminary. See the "Definitions" in this section. See "Notes on the data" for a description of the most recent benchmark revision.

18. Annual data: Employment status of the population

[Numbers in thousands]

Employment status	1992	1993	1994	1995	1996	1997	1998	1999	2000
Civilian noninstitutional population	192,805	194,838	196,814	198,584	200,591	203,133	205,220	207,753	209,699
Civilian labor force	128,105	129,200	131,056	132,304	133,943	136,297	137,673	139,368	140,863
Labor force participation rate	66.4	66.3	66.6	66.6	66.8	67.1	67.1	67.1	67.2
Employed	118,492	120,259	123,060	124,900	126,708	129,558	131,463	133,488	135,208
Employment-population ratio	61.5	61.7	62.5	62.9	63.2	63.8	64.1	64.3	64.5
Agriculture	3,247	3,115	3,409	3,440	3,443	3,399	3,378	3,281	3,305
Nonagricultural industries	115,245	117,144	119,651	121,460	123,264	126,159	128,085	130,207	131,903
Unemployed	9,613	8,940	7,996	7,404	7,236	6,739	6,210	5,880	5,655
Unemployment rate	7.5	6.9	6.1	5.6	5.4	4.9	4.5	4.2	4.0
Not in the labor force	64,700	65,638	65,758	66,280	66,647	66,837	67,547	68,385	68,836

19. Annual data: Employment levels by industry

[In thousands]

Industry	1992	1993	1994	1995	1996	1997	1998	1999	2000[p]
Total employment	108,601	110,713	114,163	117,191	119,608	122,690	125,865	128,786	131,417
Private sector	89,956	91,872	95,036	97,885	100,189	103,133	106,042	108,616	110,847
Goods-producing	23,231	23,352	23,908	24,265	24,493	24,962	25,414	25,482	25,661
Mining	635	610	601	581	580	596	590	535	538
Construction	4,492	4,668	4,986	5,160	5,418	5,691	6,020	6,404	6,687
Manufacturing	18,104	18,075	18,321	18,524	18,495	18,675	18,805	18,543	18,437
Service-producing	85,370	87,361	90,256	92,925	95,115	97,727	100,451	103,304	105,756
Transportation and public utilities	5,718	5,811	5,984	6,132	6,253	6,408	6,611	6,826	6,993
Wholesale trade	5,997	5,981	6,162	6,378	6,482	6,648	6,800	6,924	7,054
Retail trade	19,356	19,773	20,507	21,187	21,597	21,966	22,295	22,788	23,137
Finance, insurance, and real estate	6,602	6,757	6,896	6,806	6,911	7,109	7,389	7,569	7,618
Services	29,052	30,197	31,579	33,117	34,454	36,040	37,533	39,027	40,384
Government	18,645	18,841	19,128	19,305	19,419	19,557	19,823	20,170	20,570
Federal	2,969	2,915	2,870	2,822	2,757	2,699	2,686	2,669	2,778
State	4,408	4,488	4,576	4,635	4,606	4,582	4,612	4,695	4,746
Local	11,267	11,438	11,682	11,849	12,056	12,276	12,525	12,806	13,047

NOTE: See "Notes on the data" for a description of the most recent benchmark revision.

20. Annual data: Average hours and earnings of production or nonsupervisory workers on nonfarm payrolls, by industry

Industry	1992	1993	1994	1995	1996	1997	1998	1999	2000[P]
Private sector:									
Average weekly hours	34.4	34.5	34.7	34.5	34.4	34.6	34.6	34.5	34.5
Average hourly earnings (in dollars)	10.57	10.83	11.12	11.43	11.82	12.28	12.78	13.24	13.74
Average weekly earnings (in dollars)	363.61	373.64	385.86	394.34	406.61	424.89	442.19	456.78	474.03
Mining:									
Average weekly hours	43.9	44.3	44.8	44.7	45.3	45.4	43.9	43.8	44.9
Average hourly earnings (in dollars)	14.54	14.60	14.88	15.30	15.62	16.15	16.91	17.09	17.14
Average weekly earnings (in dollars)	638.31	646.78	666.62	683.91	707.59	733.21	742.35	748.54	769.59
Construction:									
Average weekly hours	38.0	38.5	38.9	38.9	39.0	39.0	38.9	39.1	39.3
Average hourly earnings (in dollars)	14.15	14.38	14.73	15.09	15.47	16.04	16.61	17.18	17.86
Average weekly earnings (in dollars)	537.70	553.63	573.00	587.00	603.33	625.56	646.13	671.74	701.90
Manufacturing:									
Average weekly hours	41.0	41.4	42.0	41.6	41.6	42.0	41.7	41.7	41.5
Average hourly earnings (in dollars)	11.46	11.74	12.07	12.37	12.77	13.17	13.49	13.91	14.38
Average weekly earnings (in dollars)	469.86	486.04	506.94	514.59	531.23	553.14	562.53	580.05	596.77
Transportation and public utilities:									
Average weekly hours	38.3	39.3	39.7	39.4	39.6	39.7	39.5	38.7	38.5
Average hourly earnings (in dollars)	13.43	13.55	13.78	14.13	14.45	14.92	15.31	15.69	16.22
Average weekly earnings (in dollars)	514.37	532.52	547.07	556.72	572.22	592.32	604.75	607.20	624.47
Wholesale trade:									
Average weekly hours	38.2	38.2	38.4	38.3	38.3	38.4	38.3	38.3	38.5
Average hourly earnings (in dollars)	11.39	11.74	12.06	12.43	12.87	13.45	14.07	14.58	15.18
Average weekly earnings (in dollars)	435.10	448.47	463.10	476.07	492.92	516.48	538.88	558.41	584.43
Retail trade:									
Average weekly hours	28.8	28.8	28.9	28.8	28.8	28.9	29.0	29.0	28.9
Average hourly earnings (in dollars)	7.12	7.29	7.49	7.69	7.99	8.33	8.74	9.08	9.45
Average weekly earnings (in dollars)	205.06	209.95	216.46	221.47	230.11	240.74	253.46	263.32	273.11
Finance, insurance, and real estate:									
Average weekly hours	35.8	35.8	35.8	35.9	35.9	36.1	36.4	36.2	36.3
Average hourly earnings (in dollars)	10.82	11.35	11.83	12.32	12.80	13.34	14.07	14.62	15.07
Average weekly earnings (in dollars)	387.36	406.33	423.51	442.29	459.52	481.57	512.15	529.24	547.04
Services:									
Average weekly hours	32.5	32.5	32.5	32.4	32.4	32.6	32.6	32.6	32.7
Average hourly earnings (in dollars)	10.54	10.78	11.04	11.39	11.79	12.28	12.84	13.36	13.88
Average weekly earnings (in dollars)	342.55	350.35	358.80	369.04	382.00	400.33	418.58	435.54	453.88

21. Employment Cost Index, compensation,[1] by occupation and industry group

[June 1989 = 100]

Series	1998	1999				2000				Percent change	
	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	3 months ended	12 months ended
										Dec. 2000	
Civilian workers[2]	139.8	140.4	141.8	143.3	144.6	146.5	148.0	149.5	150.6	0.7	4.1
Workers, by occupational group:											
White-collar workers	141.4	141.9	143.3	145.0	146.3	148.4	149.9	151.5	152.5	.7	4.2
Professional specialty and technical	141.0	141.3	142.2	143.9	145.3	146.7	148.3	150.0	151.3	.9	4.1
Executive, adminitrative, and managerial	141.8	143.5	145.4	147.3	148.6	150.5	151.9	153.7	154.6	.6	4.0
Administrative support, including clerical	141.3	142.5	143.4	144.7	146.1	148.6	150.1	151.8	152.8	.7	4.6
Blue-collar workers	136.1	137.1	138.3	139.5	140.6	142.7	144.1	145.6	146.5	.6	4.2
Service occupations	140.0	141.3	142.4	143.1	144.8	146.0	147.1	148.5	150.0	1.0	3.6
Workers, by industry division:											
Goods-producing	137.9	139.0	140.0	141.2	142.5	144.9	146.6	148.0	148.8	.5	4.4
Manufacturing	138.9	139.9	140.9	142.1	143.6	146.0	147.5	148.7	149.3	.4	4.0
Service-producing	140.4	140.9	142.4	144.0	145.3	147.1	148.4	150.1	151.1	.7	4.0
Services	141.7	142.3	143.2	145.1	146.5	148.0	149.3	151.2	152.4	.8	4.0
Health services	139.1	140.5	141.4	142.7	144.3	145.9	147.5	149.0	150.7	1.1	4.4
Hospitals	140.2	141.3	142.2	143.4	145.0	146.3	147.7	149.5	151.3	1.2	4.3
Educational services	141.0	141.3	141.7	144.6	145.8	146.5	146.8	149.7	150.6	.6	3.3
Public administration[3]	139.9	140.8	141.5	142.4	144.4	145.7	146.1	146.9	148.3	1.0	2.7
Nonmanufacturing	139.9	140.5	141.9	143.4	144.7	146.6	148.0	149.6	150.7	.7	4.1
Private industry workers	139.8	140.4	142.0	143.3	144.6	146.8	148.5	149.9	150.9	.7	4.4
Excluding sales occupations	139.4	140.5	141.9	143.2	144.5	146.5	148.2	149.8	150.9	.7	4.4
Workers, by occupational group:											
White-collar workers	142.0	142.4	144.1	145.6	146.9	149.3	151.1	152.6	153.6	.7	4.6
Excluding sales occupations	141.9	143.0	144.5	146.0	147.3	149.4	151.3	152.9	154.1	.8	4.6
Professional specialty and technical occupations	142.6	142.9	144.1	145.2	146.7	148.4	150.7	152.2	153.7	1.0	4.8
Executive, adminitrative, and managerial occupations	141.8	143.7	145.8	147.7	149.1	151.1	152.7	154.4	155.3	.6	4.2
Sales occupations	142.6	139.6	142.6	144.1	145.3	148.9	150.3	151.2	151.4	.1	4.2
Administrative support occupations, including clerical	141.4	142.6	143.7	145.0	146.2	149.0	150.6	152.3	153.4	.7	4.9
Blue-collar workers	135.9	136.9	138.2	139.4	140.5	142.6	144.1	145.5	146.4	.6	4.2
Precision production, craft, and repair occupations	136.1	137.2	138.4	139.6	140.6	142.3	144.1	145.8	146.7	.6	4.3
Machine operators, assemblers, and inspectors	136.8	137.3	138.4	139.9	141.4	144.0	145.0	146.0	146.8	.5	3.8
Transportation and material moving occupations	130.7	131.6	133.6	134.4	135.2	137.5	138.6	139.9	141.1	.9	4.4
Handlers, equipment cleaners, helpers, and laborers	139.2	141.0	142.3	143.2	144.4	146.4	148.1	149.4	150.4	.7	4.2
Service occupations	138.0	139.5	140.6	141.0	142.6	143.9	145.4	146.6	148.1	1.0	3.9
Production and nonsupervisory occupations[4]	139.0	139.3	140.8	141.9	143.1	145.3	146.9	148.4	149.5	.7	4.5
Workers, by industry division:											
Goods-producing	137.8	138.9	139.9	141.1	142.5	144.8	146.6	147.9	148.8	.6	4.4
Excluding sales occupations	137.2	138.3	139.3	140.5	141.8	144.2	145.9	147.2	148.2	.7	4.5
White-collar occupations	140.2	141.7	142.7	143.9	145.5	148.1	150.1	151.3	151.9	.4	4.4
Excluding sales occupations	138.8	140.4	141.3	142.5	143.9	146.5	148.4	149.6	150.5	.6	4.6
Blue-collar occupations	136.3	137.1	138.3	139.4	140.7	142.8	144.4	145.8	146.8	.7	4.3
Construction	134.3	135.6	136.9	137.9	138.7	140.8	143.2	145.1	146.7	1.1	5.8
Manufacturing	138.9	139.9	140.9	142.1	143.6	146.0	147.5	148.7	149.3	.4	4.0
White-collar occupations	140.5	141.8	143.0	144.3	145.8	148.2	150.2	151.4	151.5	.1	3.9
Excluding sales occupations	138.7	140.1	141.3	142.5	143.8	146.2	148.2	149.3	149.7	.3	4.1
Blue-collar occupations	137.7	138.5	139.4	140.5	142.1	144.4	145.6	146.7	147.8	.7	4.0
Durables	139.2	139.9	141.0	142.3	144.0	146.5	148.3	149.4	150.1	.5	4.2
Nondurables	138.2	139.6	140.4	141.5	142.8	144.9	146.0	147.5	147.7	.1	3.4
Service-producing	140.5	140.9	142.8	144.1	145.3	147.4	149.1	150.6	151.7	.7	4.4
Excluding sales occupations	140.6	141.7	143.3	144.6	145.9	147.7	149.4	151.1	152.2	.7	4.3
White-collar occupations	142.2	142.3	144.3	145.8	147.0	149.3	151.0	152.6	153.7	.7	4.6
Excluding sales occupations	142.8	143.8	145.5	147.0	148.3	150.3	152.1	153.9	155.1	.8	4.6
Blue-collar occupations	134.8	136.2	137.8	139.1	139.8	141.8	143.1	144.5	145.3	.6	3.9
Service occupations	137.8	139.3	140.5	140.8	142.4	143.6	145.1	146.3	147.9	1.1	3.9
Transportation and public utilities	139.3	139.7	140.9	141.8	142.3	143.9	145.7	147.4	148.3	.6	4.2
Transportation	137.3	136.8	138.1	138.7	139.5	140.4	141.8	142.8	143.9	.8	3.2
Public utilities	141.9	143.4	144.6	145.7	146.1	148.6	150.9	153.5	154.1	.4	5.5
Communications	141.7	143.3	144.9	146.1	146.0	148.4	150.9	153.9	154.7	.5	6.0
Electric, gas, and sanitary services	142.1	143.4	144.2	145.1	146.1	148.9	151.0	152.9	153.4	.3	5.0
Wholesale and retail trade	138.2	138.9	141.1	142.2	143.5	145.6	147.3	148.3	149.4	.7	4.1
Excluding sales occupations	138.8	139.9	141.9	142.8	144.3	146.4	148.1	149.6	150.6	.7	4.4
Wholesale trade	142.8	142.7	144.6	146.3	148.5	150.0	151.8	152.1	154.4	1.5	4.0
Excluding sales occupations	141.2	142.4	144.0	145.8	147.4	149.6	151.1	152.7	154.9	1.4	5.1
Retail trade	135.6	136.8	139.1	140.0	140.7	143.2	144.8	146.2	146.6	.3	4.2
General merchandise stores	134.0	135.0	135.6	137.2	138.3	139.7	141.0	142.2	144.4	1.5	4.4
Food stores	132.7	134.3	135.7	137.0	138.1	140.1	142.5	143.4	144.5	.8	4.6

See footnotes at end of table.

21. Continued—Employment Cost Index, compensation,[1] by occupation and industry group

[June 1989 = 100]

Series	1998	1999				2000				Percent change	
	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	3 months ended	12 months ended
										Dec. 2000	
Finance, insurance, and real estate	142.5	141.5	145.8	147.6	148.3	152.0	153.1	155.2	155.7	0.3	5.0
Excluding sales occupations	143.3	145.6	148.8	151.0	151.6	154.2	155.5	157.4	158.4	.6	4.5
Banking, savings and loan, and other credit agencies	146.7	148.8	155.4	159.3	159.8	162.7	164.2	165.8	166.5	.4	4.2
Insurance	141.7	141.7	144.0	144.5	145.8	149.9	151.3	154.8	155.2	.3	6.4
Services	142.7	143.5	144.6	146.1	147.6	149.4	151.2	152.9	154.1	.8	4.4
Business services	145.9	147.5	148.7	150.7	151.9	154.2	156.3	157.5	158.4	.6	4.3
Health services	139.0	140.5	141.4	142.6	144.2	145.8	147.5	149.0	150.6	1.1	4.4
Hospitals	139.9	141.2	142.1	143.0	144.6	145.8	147.5	149.2	151.1	1.3	4.5
Educational services	147.7	148.3	148.7	152.2	153.0	154.0	154.9	158.8	159.9	.7	4.5
Colleges and universities	148.5	149.2	149.6	152.6	153.3	154.6	155.5	158.6	159.2	.4	3.8
Nonmanufacturing	139.7	140.3	142.0	143.4	144.5	146.7	148.4	150.0	151.1	.7	4.6
White-collar workers	142.0	142.3	144.1	145.6	146.9	149.2	151.0	152.6	153.7	.7	4.6
Excluding sales occupations	142.7	143.7	145.3	146.8	148.1	150.2	152.0	153.8	155.1	.8	4.7
Blue-collar occupations	134.0	135.2	136.8	138.0	138.7	140.6	142.3	143.9	144.8	.6	4.4
Service occupations	137.7	139.2	140.4	140.7	142.3	143.5	145.1	146.3	147.8	1.0	3.9
State and local government workers	139.8	140.5	141.0	143.1	144.6	145.5	145.9	147.8	148.9	.7	3.0
Workers, by occupational group:											
White-collar workers	139.3	139.8	140.2	142.6	144.0	144.9	145.3	147.3	148.3	.7	3.0
Professional specialty and technical	138.5	138.8	139.3	142.0	143.2	144.1	144.5	146.6	147.4	.5	2.9
Executive, administrative, and managerial	141.6	142.6	142.8	144.5	146.1	147.0	147.2	149.2	150.7	1.0	3.1
Administrative support, including clerical	140.3	141.4	141.3	143.0	145.0	145.9	146.5	148.3	149.4	.7	3.0
Blue-collar workers	137.8	138.8	139.5	140.9	142.5	143.7	144.2	145.9	147.2	.9	3.3
Workers, by industry division:											
Services	139.7	140.0	140.5	143.2	144.5	145.2	145.5	148.0	148.9	.6	3.0
Services excluding schools[5]	138.8	139.6	140.3	142.6	143.8	145.2	145.8	147.6	148.8	.8	3.5
Health services	140.7	141.2	142.0	144.2	145.8	147.3	147.9	150.0	151.6	1.1	4.0
Hospitals	141.2	141.7	142.7	144.8	146.3	147.9	148.4	150.7	152.0	.9	3.9
Educational services	139.6	139.9	140.3	143.1	144.4	145.0	145.2	147.9	148.7	.5	3.0
Schools	139.9	140.2	140.6	143.5	144.7	145.3	145.5	148.2	149.0	.5	3.0
Elementary and secondary	139.3	139.6	140.0	142.9	144.1	144.5	144.7	147.3	148.1	.5	2.8
Colleges and universities	141.5	141.7	142.1	144.8	146.5	147.4	147.6	150.5	151.7	.8	3.5
Public administration[3]	139.9	140.8	141.5	142.4	144.4	145.7	146.1	146.9	148.3	1.0	2.7

[1] Cost (cents per hour worked) measured in the Employment Cost Index consists of wages, salaries, and employer cost of employee benefits.

[2] Consists of private industry workers (excluding farm and household workers) and State and local government (excluding Federal Government) workers.

[3] Consists of legislative, judicial, administrative, and regulatory activities.

[4] This series has the same industry and occupational coverage as the Hourly Earnings index, which was discontinued in January 1989.

[5] Includes, for example, library, social, and health services.

22. Employment Cost Index, wages and salaries, by occupation and industry group

[June 1989 = 100]

Series	1998	1999				2000				Percent change	
	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	3 months ended	12 months ended
										Dec. 2000	
Civilian workers[1]	137.7	138.4	139.8	141.3	142.5	144.0	145.4	147.0	147.9	0.6	3.8
Workers, by occupational group:											
White-collar workers	139.7	140.1	141.6	143.3	144.6	146.2	147.6	149.2	150.2	.7	3.9
Professional specialty and technical	139.4	140.1	141.0	142.6	144.0	144.9	146.4	148.3	149.6	.9	3.9
Executive, administrative, and managerial	140.3	141.6	143.8	145.9	147.2	148.6	149.9	151.6	152.4	.5	3.5
Administrative support, including clerical	138.6	140.0	140.9	142.3	143.5	145.5	146.9	148.5	149.6	.7	4.3
Blue-collar workers	133.3	134.5	135.8	137.0	137.9	139.2	140.6	142.0	142.9	.6	3.6
Service occupations	137.0	138.3	139.4	140.1	141.7	143.0	144.0	145.7	147.1	1.0	3.8
Workers, by industry division:											
Goods-producing	135.2	136.3	137.4	138.6	139.7	141.3	143.0	144.3	145.3	.7	4.0
Manufacturing	136.8	137.9	139.0	140.2	141.5	142.9	144.4	145.7	146.5	.5	3.5
Service-producing	138.7	139.2	140.7	142.3	143.5	145.0	146.3	148.0	148.9	.6	3.8
Services	140.5	141.5	142.3	144.1	145.5	146.6	147.9	149.9	151.0	.7	3.8
Health services	137.6	138.8	139.7	140.9	142.5	143.8	145.3	146.7	148.3	1.1	4.1
Hospitals	137.1	138.1	138.8	140.1	141.6	142.6	143.8	145.6	147.3	1.2	4.0
Educational services	140.0	140.2	140.6	143.7	144.7	145.3	145.6	148.9	149.6	.5	3.4
Public administration[2]	135.9	136.9	137.8	139.5	141.5	142.5	142.9	144.6	146.1	1.0	3.3
Nonmanufacturing	137.8	138.4	139.9	141.5	142.6	144.2	145.5	147.2	148.1	.6	3.9
Private industry workers	137.4	138.1	139.7	141.0	142.2	143.9	145.4	146.8	147.7	.6	3.9
Excluding sales occupations	136.9	138.2	139.6	140.8	142.0	143.5	145.1	146.5	147.6	.8	3.9
Workers, by occupational group:											
White-collar workers	139.9	140.3	142.1	143.5	144.8	146.6	148.3	149.7	150.6	.6	4.0
Excluding sales occupations	139.7	141.0	142.5	143.9	145.2	146.7	148.5	149.9	151.1	.8	4.1
Professional specialty and technical occupations	139.7	140.7	141.8	142.6	144.1	145.1	147.3	148.6	150.2	1.1	4.2
Executive, administrative, and managerial occupations	140.5	141.9	144.3	146.4	147.6	149.2	150.7	152.3	153.0	.5	3.7
Sales occupations	141.3	137.3	140.5	142.1	143.3	146.7	147.9	149.0	148.7	–.2	3.8
Administrative support occupations, including clerical	138.9	140.4	141.4	142.7	143.8	146.0	147.5	149.1	150.1	.7	4.4
Blue-collar workers	133.2	134.3	135.6	136.8	137.7	139.1	140.5	141.9	142.8	.6	3.7
Precision production, craft, and repair occupations	133.0	134.3	135.6	136.7	137.5	138.9	140.6	142.0	142.8	.6	3.9
Machine operators, assemblers, and inspectors	134.9	135.7	136.7	138.3	139.5	140.7	141.6	142.9	143.7	.6	3.0
Transportation and material moving occupations	127.8	129.1	131.0	131.9	132.7	134.1	135.2	136.5	137.6	.8	3.7
Handlers, equipment cleaners, helpers, and laborers	135.8	137.3	138.3	139.4	140.4	141.8	143.6	145.0	146.2	.8	4.1
Service occupations	135.3	136.7	137.8	138.0	139.6	141.0	142.5	143.5	144.9	1.0	3.8
Production and nonsupervisory occupations[3]	136.4	136.8	138.2	139.3	140.4	142.1	143.7	145.0	146.0	.7	4.0
Workers, by industry division:											
Goods-producing	135.2	136.3	137.3	138.5	139.7	141.3	143.0	144.3	145.2	.6	3.9
Excluding sales occupations	134.4	135.5	136.6	137.8	138.9	140.5	142.1	143.4	144.6	.8	4.1
White-collar occupations	138.2	139.4	140.5	141.7	143.0	145.0	146.8	147.9	148.7	.5	4.0
Excluding sales occupations	136.4	137.8	138.8	140.1	141.3	143.2	144.9	146.0	147.2	.8	4.2
Blue-collar occupations	133.3	134.3	135.4	136.6	137.6	139.0	140.5	142.0	143.1	.8	4.0
Construction	129.3	130.7	131.9	133.0	133.6	136.0	138.0	139.4	140.7	.9	5.3
Manufacturing	136.8	137.9	139.0	140.2	141.5	142.9	144.4	145.7	146.5	.5	3.5
White-collar occupations	139.0	140.1	141.4	142.7	144.0	145.8	147.7	148.7	149.2	.3	3.6
Excluding sales occupations	137.1	138.3	139.6	140.8	142.0	143.7	145.6	146.6	147.5	.6	3.9
Blue-collar occupations	135.3	136.3	137.2	138.4	139.7	140.8	142.0	143.4	144.6	.8	3.5
Durables	136.9	137.9	139.1	140.4	141.8	143.0	144.7	146.1	147.3	.8	3.9
Nondurables	136.8	138.0	138.7	139.7	140.9	142.7	143.9	145.0	145.4	.3	3.2
Service-producing	138.4	138.9	140.8	142.1	143.3	145.0	146.5	147.9	148.9	.7	3.9
Excluding sales occupations	138.5	139.8	141.4	142.6	143.8	145.3	146.9	148.3	149.4	.7	3.9
White-collar occupations	140.1	140.3	142.3	143.8	145.0	146.9	148.5	150.0	150.9	.6	4.1
Excluding sales occupations	140.7	142.0	143.7	145.1	146.4	147.8	149.6	151.2	152.3	.7	4.0
Blue-collar occupations	132.9	134.4	135.9	137.0	137.8	139.1	140.3	141.6	142.2	.4	3.2
Service occupations	135.2	136.7	137.8	138.0	139.6	141.1	142.5	143.5	144.8	.9	3.7
Transportation and public utilities	135.1	135.4	136.8	137.5	137.9	138.5	140.0	141.3	142.3	.7	3.2
Transportation	132.9	132.3	133.7	134.4	134.9	134.9	136.2	137.4	138.6	.9	2.7
Public utilities	137.8	139.2	140.6	141.5	141.8	143.2	144.9	146.4	147.1	.5	3.7
Communications	138.0	139.4	141.1	141.9	142.2	143.4	145.0	146.7	147.4	.5	3.7
Electric, gas, and sanitary services	137.4	138.9	140.0	140.9	141.3	143.0	144.7	145.9	146.6	.5	3.8
Wholesale and retail trade	137.0	137.7	139.6	140.7	142.0	143.8	145.5	146.4	147.4	.7	3.8
Excluding sales occupations	138.2	139.5	141.1	141.8	143.3	145.2	146.8	148.2	149.0	.5	4.0
Wholesale trade	141.3	140.7	142.3	144.3	146.5	147.4	149.4	149.6	151.6	1.3	3.5
Excluding sales occupations	140.8	141.9	143.0	144.8	146.4	147.9	149.7	151.3	153.2	1.3	4.6
Retail trade	134.8	136.2	138.3	138.9	139.6	142.1	143.5	144.8	145.2	.3	4.0
General merchandise stores	133.0	133.7	134.3	135.6	136.7	137.8	138.5	139.7	142.2	1.8	4.0
Food stores	130.5	131.8	132.8	133.9	134.9	136.7	139.5	140.2	141.6	1.0	5.0

See footnotes at end of table.

22. Continued—Employment Cost Index, wages and salaries, by occupation and industry group

[June 1989 = 100]

Series	1998	1999				2000				Percent change	
	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	3 months ended	12 months ended
										Dec. 2000	
Finance, insurance, and real estate	139.8	137.2	142.4	144.5	145.2	148.7	149.5	151.7	151.7	0.0	4.5
Excluding sales occupations	139.6	141.0	144.8	147.5	148.0	150.2	151.5	153.3	154.1	.5	4.1
Banking, savings and loan, and other credit agencies	144.4	146.1	154.5	159.2	159.6	162.0	163.3	165.0	165.7	.4	3.8
Insurance	138.5	137.4	139.8	140.2	141.5	145.5	146.6	150.7	150.8	.1	6.6
Services	140.8	142.2	143.2	144.5	146.0	147.4	149.1	150.6	151.8	.8	4.0
Business services	144.1	145.4	146.3	148.5	149.8	152.0	154.1	155.3	156.0	.5	4.1
Health services	137.4	138.7	139.6	140.6	142.2	143.5	145.3	146.6	148.1	1.0	4.1
Hospitals	136.5	137.6	138.3	139.3	140.9	141.8	143.3	144.9	146.8	1.3	4.2
Educational services	143.5	143.9	144.2	147.5	148.2	148.9	149.6	153.4	154.3	.6	4.1
Colleges and universities	143.6	144.1	144.4	147.2	147.9	148.9	149.4	152.5	152.9	.3	3.4
Nonmanufacturing	137.4	137.9	139.7	141.0	142.1	143.9	145.5	146.9	147.9	.7	4.1
White-collar workers	139.8	140.1	142.0	143.5	144.7	146.5	148.2	149.6	150.6	.7	4.1
Excluding sales occupations	140.3	141.6	143.2	144.6	145.9	147.4	149.1	150.7	151.9	.8	4.1
Blue-collar occupations	131.1	132.4	134.0	135.1	135.8	137.4	138.9	140.3	140.9	.4	3.8
Service occupations	135.1	136.5	137.7	137.9	139.5	140.9	142.4	143.4	144.7	.9	3.7
State and local government workers	138.5	139.0	139.6	142.2	143.5	144.3	144.7	147.2	148.3	.7	3.3
Workers, by occupational group:											
White-collar workers	138.5	138.9	139.3	142.1	143.4	144.1	144.5	147.1	148.0	.6	3.2
Professional specialty and technical	138.7	138.9	139.4	142.5	143.6	144.3	144.7	147.4	148.2	.5	3.2
Executive, administrative, and managerial	139.3	140.1	140.5	142.7	144.3	144.9	145.1	147.3	148.8	1.0	3.1
Administrative support, including clerical	136.5	137.4	137.5	139.6	141.7	142.4	143.0	145.0	146.2	.8	3.2
Blue-collar workers	136.0	136.9	137.6	139.4	140.7	141.5	142.1	143.9	145.1	.8	3.1
Workers, by industry division:											
Services	139.2	139.5	139.9	142.9	144.0	144.6	144.9	147.9	148.7	.5	3.3
Services excluding schools[4]	138.2	139.0	139.6	142.1	143.2	144.3	144.8	146.7	147.9	.8	3.3
Health services	139.2	139.7	140.4	142.8	144.2	145.3	145.7	147.7	149.3	1.1	3.5
Hospitals	139.1	139.7	140.6	142.8	144.1	145.3	145.6	147.7	149.2	1.0	3.5
Educational services	139.3	139.5	139.8	142.9	144.0	144.5	144.8	148.0	148.7	.5	3.3
Schools	139.5	139.6	140.0	143.1	144.2	144.7	144.9	148.1	148.9	.5	3.3
Elementary and secondary	139.3	139.5	139.9	143.1	144.1	144.5	144.6	147.9	148.5	.4	3.1
Colleges and universities	139.6	139.6	139.8	142.6	144.4	144.9	145.6	148.3	149.5	.8	3.5
Public administration[2]	135.9	136.9	137.8	139.5	141.5	142.5	142.9	144.6	146.1	1.0	3.3

[1] Consists of private industry workers (excluding farm and household workers) and State and local government (excluding Federal Government) workers.

[2] Consists of legislative, judicial, administrative, and regulatory activities.

[3] This series has the same industry and occupational coverage as the Hourly Earnings index, which was discontinued in January 1989.

[4] Includes, for example, library, social, and health services.

23. Employment Cost Index, benefits, private industry workers by occupation and industry group

[June 1989 = 100]

Series	1998	1999				2000				Percent change	
	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	3 months ended	12 months ended
										Dec. 2000	
Private industry workers	145.2	145.8	147.3	148.6	150.2	153.8	155.7	157.5	158.6	0.7	5.6
Workers, by occupational group:											
White-collar workers	147.4	147.9	149.4	151.0	152.5	156.3	158.5	160.4	161.5	.7	5.9
Blue-collar workers	141.6	142.2	143.6	144.8	146.2	150.0	151.6	153.1	154.1	.7	5.4
Workers, by industry division:											
Goods-producing	143.2	144.3	145.2	146.3	148.2	152.3	154.2	155.7	156.2	.3	5.4
Service-producing	145.7	146.1	147.9	149.4	150.7	154.0	156.0	157.9	159.4	.9	5.8
Manufacturing	142.7	143.6	144.5	145.7	147.8	152.3	153.9	154.9	154.8	–.1	4.7
Nonmanufacturing	145.8	146.3	148.0	149.4	150.7	154.0	156.1	158.1	159.7	1.0	6.0

24. Employment Cost Index, private nonfarm workers by bargaining status, region, and area size

[June 1989 = 100]

Series	1998	1999				2000				Percent change	
	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	3 months ended	12 months ended
										Dec. 2000	
COMPENSATION											
Workers, by bargaining status[1]											
Union	137.5	138.0	139.0	140.2	141.2	143.0	144.4	146.1	146.9	0.5	4.0
Goods-producing	136.5	136.8	138.2	139.2	140.8	143.3	144.8	146.8	147.3	.3	4.6
Service-producing	138.5	139.2	139.7	141.0	141.4	142.5	143.9	145.2	146.4	.8	3.5
Manufacturing	136.9	137.0	138.1	139.1	141.0	144.5	145.4	147.1	147.4	.2	4.5
Nonmanufacturing	137.4	138.1	139.2	140.3	140.8	141.7	143.4	145.0	146.2	.8	3.8
Nonunion	140.1	140.8	142.5	143.8	145.2	147.4	149.1	150.6	151.6	.7	4.4
Goods-producing	138.3	139.7	140.5	141.8	143.1	145.4	147.2	148.4	149.3	.6	4.3
Service-producing	140.6	141.1	143.0	144.4	145.7	148.0	149.6	151.2	152.3	.7	4.5
Manufacturing	139.4	140.7	141.7	143.0	144.4	146.5	148.2	149.2	149.9	.5	3.8
Nonmanufacturing	140.0	140.6	142.4	143.8	145.1	147.4	149.1	150.7	151.8	.7	4.6
Workers, by region[1]											
Northeast	139.5	140.5	141.5	143.2	144.3	146.3	147.6	149.3	150.3	.7	4.2
South	138.1	139.1	140.7	141.8	143.0	145.0	146.7	147.6	148.6	.7	3.9
Midwest (formerly North Central)	141.4	141.7	143.6	145.0	146.3	148.9	150.7	152.2	153.3	.7	4.8
West	140.0	140.3	142.1	143.3	144.7	147.0	148.8	150.8	151.8	.7	4.9
Workers, by area size[1]											
Metropolitan areas	139.8	140.4	142.0	143.3	144.7	146.9	148.6	150.1	151.0	.6	4.4
Other areas	139.4	140.5	141.8	143.1	143.6	146.0	147.7	148.8	150.3	1.0	4.7
WAGES AND SALARIES											
Workers, by bargaining status[1]											
Union	133.1	133.6	134.7	135.7	136.5	137.2	138.5	140.0	141.2	.9	3.4
Goods-producing	131.7	132.3	133.8	134.9	136.1	137.2	138.4	140.2	141.3	.8	3.8
Service-producing	134.8	135.4	135.8	136.8	137.2	137.6	138.9	140.1	141.5	1.0	3.1
Manufacturing	133.0	133.6	134.7	135.8	137.5	138.8	139.7	141.4	142.6	.8	3.7
Nonmanufacturing	133.1	133.7	134.6	135.6	135.9	136.4	137.8	139.2	140.4	.9	3.3
Nonunion	138.3	139.0	140.7	142.0	143.3	145.1	146.7	148.1	149.0	.6	4.0
Goods-producing	136.5	137.8	138.8	140.0	141.1	142.9	144.7	145.8	146.8	.7	4.0
Service-producing	138.8	139.3	141.3	142.6	143.9	145.8	147.3	148.7	149.6	.6	4.0
Manufacturing	138.2	139.4	140.5	141.7	142.9	144.4	146.1	147.2	148.0	.5	3.6
Nonmanufacturing	138.0	138.6	140.5	141.8	143.0	145.0	146.6	148.0	148.9	.6	4.1
Workers, by region[1]											
Northeast	136.4	137.1	138.2	139.9	140.9	142.3	143.7	145.3	146.0	.5	3.6
South	136.7	137.9	139.4	140.2	141.5	143.0	144.6	145.3	146.3	.7	3.4
Midwest (formerly North Central)	138.0	138.9	141.0	142.4	143.6	145.3	147.1	148.6	149.6	.7	4.2
West	138.4	138.2	140.2	141.3	142.6	144.7	146.3	148.2	149.2	.7	4.6
Workers, by area size[1]											
Metropolitan areas	137.7	138.3	139.9	141.2	142.5	144.1	145.7	147.1	148.0	.6	3.9
Other areas	136.0	137.1	138.4	139.8	140.2	142.2	143.7	144.7	146.0	.9	4.1

[1] The indexes are calculated differently from those for the occupation and industry groups. For a detailed description of the index calculation, see the *Monthly Labor Review* Technical Note, "Estimation procedures for the Employment Cost Index," May 1982.

25. Percent of full-time employees participating in employer-provided benefit plans, and in selected features within plans, medium and large private establishments, selected years, 1980–97

Item	1980	1982	1984	1986	1988	1989	1991	1993	1995	1997
Scope of survey (in 000's)	21,352	21,043	21,013	21,303	31,059	32,428	31,163	28,728	33,374	38,409
Number of employees (in 000's):										
With medical care	20,711	20,412	20,383	20,238	27,953	29,834	25,865	23,519	25,546	29,340
With life insurance	20,498	20,201	20,172	20,451	28,574	30,482	29,293	26,175	29,078	33,495
With defined benefit plan	17,936	17,676	17,231	16,190	19,567	20,430	18,386	16,015	17,417	19,202
Time-off plans										
Participants with:										
Paid lunch time	10	9	9	10	11	10	8	9	–	–
Average minutes per day	–	25	26	27	29	26	30	29	–	–
Paid rest time	75	76	73	72	72	71	67	68	–	–
Average minutes per day	–	25	26	26	26	26	28	26	–	–
Paid funeral leave	–	–	–	88	85	84	80	83	80	81
Average days per occurrence	–	–	–	3.2	3.2	3.3	3.3	3.0	3.3	3.7
Paid holidays	99	99	99	99	96	97	92	91	89	89
Average days per year	10.1	10.0	9.8	10.0	9.4	9.2	10.2	9.4	9.1	9.3
Paid personal leave	20	24	23	25	24	22	21	21	22	20
Average days per year	–	3.8	3.6	3.7	3.3	3.1	3.3	3.1	3.3	3.5
Paid vacations	100	99	99	100	98	97	96	97	96	95
Paid sick leave [1]	62	67	67	70	69	68	67	65	58	56
Unpaid maternity leave	–	–	–	–	33	37	37	60	–	–
Unpaid paternity leave	–	–	–	–	16	18	26	53	–	–
Unpaid family leave	–	–	–	–	–	–	–	–	84	93
Insurance plans										
Participants in medical care plans	97	97	97	95	90	92	83	82	77	76
Percent of participants with coverage for:										
Home health care	–	–	46	66	76	75	81	86	78	85
Extended care facilities	58	62	62	70	79	80	80	82	73	78
Physical exam	–	–	8	18	28	28	30	42	56	63
Percent of participants with employee contribution required for:										
Self coverage	26	27	36	43	44	47	51	61	67	69
Average monthly contribution	–	–	$11.93	$12.80	$19.29	$25.31	$26.60	$31.55	$33.92	$39.14
Family coverage	46	51	58	63	64	66	69	76	78	80
Average monthly contribution	–	–	$35.93	$41.40	$60.07	$72.10	$96.97	$107.42	$118.33	$130.07
Participants in life insurance plans	96	96	96	96	92	94	94	91	87	87
Percent of participants with:										
Accidental death and dismemberment insurance	69	72	74	72	78	71	71	76	77	74
Survivor income benefits	–	–	–	10	8	7	6	5	7	6
Retiree protection available	–	64	64	59	49	42	44	41	37	33
Participants in long-term disability insurance plans	40	43	47	48	42	45	40	41	42	43
Participants in sickness and accident insurance plans	54	51	51	49	46	43	45	44	–	–
Participants in short-term disability plans [1]	–	–	–	–	–	–	–	–	53	55
Retirement plans										
Participants in defined benefit pension plans	84	84	82	76	63	63	59	56	52	50
Percent of participants with:										
Normal retirement prior to age 65	55	58	63	64	59	62	55	52	52	52
Early retirement available	98	97	97	98	98	97	98	95	96	95
Ad hoc pension increase in last 5 years	–	–	47	35	26	22	7	6	4	10
Terminal earnings formula	53	52	54	57	55	64	56	61	58	56
Benefit coordinated with Social Security	45	45	56	62	62	63	54	48	51	49
Participants in defined contribution plans	–	–	–	60	45	48	48	49	55	57
Participants in plans with tax-deferred savings arrangements	–	–	–	33	36	41	44	43	54	55
Other benefits										
Employees eligible for:										
Flexible benefits plans	–	–	–	2	5	9	10	12	12	13
Reimbursement accounts [2]	–	–	–	5	12	23	36	52	38	32
Premium conversion plans	–	–	–	–	–	–	–	–	5	7

[1] The definitions for paid sick leave and short-term disability (previously sickness and accident insurance) were changed for the 1995 survey. Paid sick leave now includes only plans that specify either a maximum number of days per year or unlimited days. Short-terms disability now includes all insured, self-insured, and State-mandated plans available on a per-disability basis, as well as the unfunded per-disability plans previously reported as sick leave. Sickness and accident insurance, reported in years prior to this survey, included only insured, self-insured, and State-mandated plans providing per-disability benefits at less than full pay.

[2] Prior to 1995, reimbursement accounts included premium conversion plans, which specifically allow medical plan participants to pay required plan premiums with pretax dollars. Also, reimbursement accounts that were part of flexible benefit plans were tabulated separately.

NOTE: Dash indicates data not available.

26. Percent of full-time employees participating in employer-provided benefit plans, and in selected features within plans, small private establishments and State and local governments, 1987, 1990, 1992, 1994, and 1996

Item	Small private establishments				State and local governments			
	1990	1992	1994	1996	1987	1990	1992	1994
Scope of survey (in 000's)	32,466	34,360	35,910	39,816	10,321	12,972	12,466	12,907
Number of employees (in 000's):								
With medical care	22,402	24,396	23,536	25,599	9,599	12,064	11,219	11,192
With life insurance	20,778	21,990	21,955	24,635	8,773	11,415	11,095	11,194
With defined benefit plan	6,493	7,559	5,480	5,883	9,599	11,675	10,845	11,708
Time-off plans								
Participants with:								
Paid lunch time	8	9	–	–	17	11	10	–
Average minutes per day	37	37	–	–	34	36	34	–
Paid rest time	48	49	–	–	58	56	53	–
Average minutes per day	27	26	–	–	29	29	29	–
Paid funeral leave	47	50	50	51	56	63	65	62
Average days per occurrence	2.9	3.0	3.1	3.0	3.7	3.7	3.7	3.7
Paid holidays	84	82	82	80	81	74	75	73
Average days per year[1]	9.5	9.2	7.5	7.6	10.9	13.6	14.2	11.5
Paid personal leave	11	12	13	14	38	39	38	38
Average days per year	2.8	2.6	2.6	3.0	2.7	2.9	2.9	3.0
Paid vacations	88	88	88	86	72	67	67	66
Paid sick leave [2]	47	53	50	50	97	95	95	94
Unpaid leave	17	18	–	–	57	51	59	–
Unpaid paternity leave	8	7	–	–	30	33	44	–
Unpaid family leave	–	–	47	48	–	–	–	93
Insurance plans								
Participants in medical care plans	69	71	66	64	93	93	90	87
Percent of participants with coverage for:								
Home health care	79	80	–	–	76	82	87	84
Extended care facilities	83	84	–	–	78	79	84	81
Physical exam	26	28	–	–	36	36	47	55
Percent of participants with employee contribution required for:								
Self coverage	42	47	52	52	35	38	43	47
Average monthly contribution	$25.13	$36.51	$40.97	$42.63	$15.74	$25.53	$28.97	$30.20
Family coverage	67	73	76	75	71	65	72	71
Average monthly contribution	$109.34	$150.54	$159.63	$181.53	$71.89	$117.59	$139.23	$149.70
Participants in life insurance plans	64	64	61	62	85	88	89	87
Percent of participants with:								
Accidental death and dismemberment insurance	78	76	79	77	67	67	74	64
Survivor income benefits	1	1	2	1	1	1	1	2
Retiree protection available	19	25	20	13	55	45	46	46
Participants in long-term disability insurance plans	19	23	20	22	31	27	28	30
Participants in sickness and accident insurance plans	6	26	26	–	14	21	22	21
Participants in short-term disability plans [2]	–	–	–	29	–	–	–	–
Retirement plans								
Participants in defined benefit pension plans	20	22	15	15	93	90	87	91
Percent of participants with:								
Normal retirement prior to age 65	54	50	–	47	92	89	92	92
Early retirement available	95	95	–	92	90	88	89	87
Ad hoc pension increase in last 5 years	7	4	–	–	33	16	10	13
Terminal earnings formula	58	54	–	53	100	100	100	99
Benefit coordinated with Social Security	49	46	–	44	18	8	10	49
Participants in defined contribution plans	31	33	34	38	9	9	9	9
Participants in plans with tax-deferred savings arrangements	17	24	23	28	28	45	45	24
Other benefits								
Employees eligible for:								
Flexible benefits plans	1	2	3	4	5	5	5	5
Reimbursement accounts [3]	8	14	19	12	5	31	50	64
Premium conversion plans	–	–	–	7	–	–	–	–

[1] Methods used to calculate the average number of paid holidays were revised in 1994 to count partial days more precisely. Average holidays for 1994 are not comparable with those reported in 1990 and 1992.

[2] The definitions for paid sick leave and short-term disability (previously sickness and accident insurance) were changed for the 1996 survey. Paid sick leave now includes only plans that specify either a maximum number of days per year or unlimited days. Short-term disability now includes all insured, self-insured, and State-mandated plans available on a per-disability basis, as well as the unfunded per-disability plans previously reported as sick leave. Sickness and accident insurance, reported in years prior to this survey, included only insured, self-insured, and State-mandated plans providing per-disability benefits at less than full pay.

[3] Prior to 1996, reimbursement accounts included premium conversion plans, which specifically allow medical plan participants to pay required plan premiums with pretax dollars. Also, reimbursement accounts that were part of flexible benefit plans were tabulated separately.

NOTE: Dash indicates data not available.

27. Work stoppages involving 1,000 workers or more

Measure	Annual totals		1999						2000						
	1998	1999	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.[p]	Feb.[p]	Mar.[p]	Apr.[p]	May[p]	June[p]	July[p]
Number of stoppages:															
Beginning in period	34	17	1	1	2	0	1	0	0	1	2	6	2	5	3
In effect during period	34	21	6	3	5	2	2	1	1	2	4	7	4	8	6
Workers involved:															
Beginning in period (in thousands)	387	73	1.7	11.0	19.1	.0	2.0	.0	.0	17.0	5.7	26.7	136.9	11.4	7.0
In effect during period (in thousands)	387	80	16.3	15.4	34.5	10.1	5.0	3.0	3.0	20.0	25.7	29.7	141.3	150.8	146.9
Days idle:															
Number (in thousands)	5,116	1,995	266.4	118.8	176.2	67.1	63.6	63.0	60.0	298.0	327.6	272.2	3,095.3	3,134.0	2,804.4
Percent of estimated working time[1]	.02	.01	.01	([2])	.01	([2])	([2])	([2])	([2])	.01	.01	.01	.10	.10	.10

[1] Agricultural and government employees are included in the total employed and total working time; private household, forestry, and fishery employees are excluded. An explanation of the measurement of idleness as a percentage of the total time worked is found in " 'Total economy' measures of strike idleness," *Monthly Labor Review*, October 1968, pp. 54–56.

[2] Less than 0.005.

[p] = preliminary.

28. Consumer Price Indexes for All Urban Consumers and for Urban Wage Earners and Clerical Workers: U.S. city average, by expenditure category and commodity or service group

[1982–84 = 100, unless otherwise indicated]

Series	Annual average		2000												2001
	1999	2000	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.
CONSUMER PRICE INDEX FOR ALL URBAN CONSUMERS															
All items	166.6	172.2	168.8	169.8	171.2	171.3	171.5	172.4	172.8	172.8	173.7	174.0	174.1	174.0	175.1
All items (1967 = 100)	499.0	515.8	505.8	508.7	512.8	513.2	513.6	516.5	517.5	517.6	520.3	521.2	521.5	521.1	524.5
Food and beverages	164.6	168.4	166.6	166.8	167.1	167.2	167.8	167.9	168.7	169.2	169.4	169.6	169.5	170.5	171.4
Food	164.1	167.8	166.1	166.3	166.5	166.6	167.3	167.3	168.1	168.7	168.9	169.1	168.9	170.0	170.9
Food at home	164.2	167.9	166.3	166.3	166.4	166.5	167.5	167.3	168.3	168.9	169.0	169.1	168.8	170.2	171.3
Cereals and bakery products	185.0	188.3	185.6	186.0	186.1	187.2	188.6	187.7	189.6	189.9	188.6	190.1	189.0	190.7	191.1
Meats, poultry, fish, and eggs	147.9	154.5	150.2	151.3	152.4	152.9	153.9	154.9	155.8	156.8	156.9	156.8	155.5	156.6	158.0
Dairy and related products[1]	159.6	160.7	160.4	160.9	159.1	160.6	159.6	159.5	160.5	161.0	161.6	161.9	161.4	161.5	163.6
Fruits and vegetables	203.1	204.6	208.4	203.0	201.7	201.6	204.3	199.9	201.0	202.5	204.6	206.2	207.3	215.1	212.6
Nonalcoholic beverages and beverage materials	134.3	137.8	137.1	138.4	138.5	137.6	137.3	137.5	138.5	138.2	138.0	137.4	137.9	136.7	139.4
Other foods at home	153.5	155.6	154.3	154.4	155.1	154.0	155.4	156.2	156.6	156.9	156.7	155.8	156.0	156.3	157.8
Sugar and sweets	152.3	154.0	154.8	154.4	154.6	152.4	153.7	154.0	154.1	154.6	154.6	153.9	153.0	153.5	155.7
Fats and oils	148.3	147.4	147.0	145.6	145.9	144.8	147.0	146.6	148.1	148.9	148.7	149.7	146.5	150.2	153.0
Other foods	168.9	172.2	169.8	170.5	171.6	170.7	172.1	173.4	173.5	173.7	173.4	172.0	173.3	172.7	173.8
Other miscellaneous foods[1,2]	104.9	107.5	104.3	106.4	107.0	105.2	106.4	108.4	108.8	109.5	107.7	106.8	110.0	108.9	109.0
Food away from home[1]	165.1	169.0	167.2	167.6	167.9	168.1	168.3	168.6	169.1	169.5	170.0	170.3	170.4	170.8	171.4
Other food away from home[1,2]	105.2	109.0	107.5	107.9	107.9	108.0	108.1	108.1	108.7	109.3	110.0	110.5	111.0	111.1	111.3
Alcoholic beverages	169.7	174.7	172.4	173.0	173.5	173.6	173.8	174.4	175.2	175.6	175.5	175.9	176.4	176.5	177.2
Housing	163.9	169.6	166.0	167.1	167.8	167.9	168.1	169.6	170.6	170.9	171.4	171.7	171.6	171.9	174.1
Shelter	187.3	193.4	190.1	191.0	192.2	192.3	192.4	193.3	194.1	194.7	194.6	195.2	195.2	195.1	196.4
Rent of primary residence	177.5	183.9	181.1	181.5	182.0	182.3	182.7	183.2	183.9	184.6	185.3	186.1	186.8	187.6	188.2
Lodging away from home	112.3	117.5	111.3	115.1	120.9	119.4	117.5	120.5	122.8	123.0	118.1	118.5	113.9	108.8	144.1
Owners' equivalent rent of primary residence[3]	192.9	198.7	196.2	196.6	196.9	197.2	197.6	198.2	198.6	199.2	199.9	200.5	201.2	201.8	202.4
Tenants' and household insurance[1,2]	101.3	103.7	102.4	102.4	102.6	103.1	103.8	103.9	104.2	104.0	104.2	104.2	104.5	104.7	105.0
Fuels and utilities	128.8	137.9	129.9	132.9	131.8	131.7	132.4	138.9	141.3	140.9	143.8	143.1	142.7	145.3	153.8
Fuels	113.5	122.8	114.3	117.6	116.3	116.1	116.8	124.0	126.5	125.9	129.1	128.3	127.7	130.6	139.8
Fuel oil and other fuels	91.4	129.7	114.4	147.2	130.1	123.7	121.6	120.9	120.8	120.8	133.7	137.6	140.3	144.9	149.1
Gas (piped) and electricity	120.9	128.0	119.8	120.6	120.7	121.0	122.0	130.2	133.0	132.4	134.8	133.6	132.7	135.6	145.7
Household furnishings and operations	126.7	128.2	127.0	127.2	127.9	128.2	128.1	128.1	128.6	128.6	129.0	128.7	128.9	128.6	128.8
Apparel	131.3	129.6	126.8	129.2	132.5	133.3	132.2	128.3	124.5	125.3	130.4	132.8	131.8	127.8	125.4
Men's and boys' apparel	131.1	129.7	129.2	130.0	131.5	131.6	132.6	129.4	126.4	126.8	129.1	130.4	131.3	128.0	125.5
Women's and girls' apparel	123.3	121.5	116.0	120.0	125.9	126.7	124.4	119.2	113.9	115.6	124.2	127.9	124.8	119.7	115.5
Infants' and toddlers' apparel[1]	129.0	130.6	133.3	133.1	133.9	132.3	131.7	130.5	128.1	126.7	127.4	130.8	130.7	128.2	127.4
Footwear	125.7	123.8	121.6	122.1	124.7	126.7	126.1	123.9	120.3	120.7	124.9	125.3	125.4	123.8	121.4
Transportation	144.4	153.3	148.3	149.7	153.4	152.9	153.1	155.7	155.0	153.2	154.7	154.4	155.2	154.4	154.4
Private transportation	140.5	149.1	144.4	145.6	149.2	148.7	148.8	151.4	150.6	148.6	150.4	150.4	151.1	150.3	150.3
New and used motor vehicles[2]	100.1	100.8	100.8	100.3	100.4	100.8	101.0	100.8	100.6	100.4	100.4	100.8	101.5	102.1	102.3
New vehicles	142.9	142.8	143.3	143.0	143.3	143.5	143.3	142.9	142.5	141.9	141.4	141.6	142.7	143.6	143.7
Used cars and trucks[1]	152.0	155.8	153.9	153.0	153.0	154.0	155.4	155.7	155.3	155.2	156.2	157.9	159.3	160.2	160.4
Motor fuel	100.7	129.3	112.6	118.1	131.7	128.7	128.3	139.0	136.1	128.4	135.2	133.1	133.0	127.8	126.6
Gasoline (all types)	100.1	128.6	111.9	117.3	130.9	127.9	127.6	138.3	135.4	127.7	134.3	132.3	132.2	127.0	125.8
Motor vehicle parts and equipment	100.5	101.5	100.8	100.9	101.4	101.0	101.1	101.2	101.5	101.5	101.7	101.7	102.5	103.1	103.6
Motor vehicle maintenance and repair	171.9	177.3	174.6	175.2	175.7	175.9	176.3	176.8	177.2	178.2	178.7	179.4	179.9	179.9	180.6
Public transportation	197.7	209.6	199.5	204.2	209.8	209.2	210.4	212.6	213.7	215.7	213.0	208.0	209.1	209.5	210.2
Medical care	250.6	260.8	255.5	257.0	258.1	258.8	259.4	260.5	261.4	262.6	263.1	263.7	264.1	264.8	267.1
Medical care commodities	230.7	238.1	235.2	235.5	236.3	237.0	237.5	238.2	238.6	239.2	239.4	239.6	240.0	241.1	242.3
Medical care services	255.1	266.0	260.1	262.0	263.2	263.9	264.4	265.6	266.7	268.0	268.7	269.4	269.8	270.4	273.0
Professional services	229.2	137.7	233.1	234.9	236.1	236.6	237.1	237.9	238.3	238.9	239.3	239.7	239.8	240.3	242.6
Hospital and related services	299.5	317.3	308.4	310.5	311.5	312.7	313.5	315.6	318.1	321.3	322.5	323.6	324.7	325.3	328.5
Recreation[2]	102.1	103.3	102.3	102.5	102.9	102.9	103.1	103.4	103.7	103.9	103.8	103.8	103.7	103.7	104.1
Video and audio[1,2]	100.7	101.0	100.5	100.8	100.9	100.3	101.3	101.5	101.3	101.6	101.5	101.0	100.9	100.7	101.2
Education and communication[2]	101.2	102.5	102.7	102.2	102.0	101.8	101.8	101.5	102.0	102.8	102.9	103.6	103.2	103.6	103.9
Education[2]	107.0	112.5	110.2	110.6	110.6	110.7	110.9	111.5	111.8	113.0	114.9	115.3	115.4	115.5	115.8
Educational books and supplies	261.7	279.9	273.9	278.3	276.9	276.7	276.8	277.5	278.1	280.2	284.8	285.2	284.8	285.4	289.2
Tuition, other school fees, and child care	308.4	324.0	317.3	318.0	318.3	318.7	319.2	320.9	321.7	325.4	330.8	332.1	332.5	332.7	333.3
Communication[1,2]	96.0	93.6	96.0	94.7	94.3	93.8	93.7	92.6	93.3	93.7	92.1	93.1	92.3	93.0	93.3
Information and information processing[1,2]	95.5	92.8	95.5	94.1	93.6	93.1	93.0	91.8	92.5	93.0	91.3	92.3	91.5	92.2	92.4
Telephone services[1,2]	100.1	98.5	100.9	99.4	98.9	98.6	98.5	97.2	98.2	98.9	97.0	98.3	97.5	98.4	98.8
Information and information processing other than telephone services[1,4]	30.5	25.9	28.0	27.6	27.2	26.7	26.6	26.0	25.7	25.2	25.0	24.7	24.2	23.8	23.2
Personal computers and peripheral equipment[1,2]	53.5	41.1	46.4	45.1	44.2	42.7	42.4	41.2	40.3	39.5	38.9	38.3	37.3	36.5	35.0
Other goods and services	258.3	271.1	264.7	266.7	268.0	271.9	270.2	269.6	272.2	271.6	274.7	273.0	276.2	274.0	275.9
Tobacco and smoking products	355.8	394.9	375.1	383.0	387.3	404.4	393.5	388.5	400.7	394.1	408.0	396.7	411.0	396.6	404.3
Personal care[1]	161.1	165.6	163.4	163.8	164.3	164.8	165.1	165.4	165.7	166.2	166.6	167.0	167.4	167.8	168.2
Personal care products[1]	151.8	153.7	152.8	152.6	153.5	153.4	153.0	153.6	153.7	154.3	154.3	153.4	153.9	155.5	155.3
Personal care services[1]	171.4	178.1	174.9	175.6	176.2	176.2	177.3	177.9	178.2	179.3	179.9	180.3	180.6	181.3	181.6

28. Continued—Consumer Price Indexes for All Urban Consumers and for Urban Wage Earners and Clerical Workers: U.S. city average, by expenditure category and commodity or service group

[1982–84 = 100, unless otherwise indicated]

Series	Annual average		2000												2001
	1999	2000	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.
Miscellaneous personal services	243.0	252.3	247.6	248.9	249.4	250.9	251.7	252.0	252.9	253.6	254.0	255.1	255.7	255.7	257.3
Commodity and service group:															
Commodities	144.4	149.2	146.2	147.4	149.2	149.3	149.2	149.7	149.3	148.6	150.3	150.4	150.6	150.0	150.0
Food and beverages	164.6	168.4	166.6	166.8	167.1	167.2	167.8	167.9	169.4	169.2	169.4	169.6	169.5	170.5	171.4
Commodities less food and beverages	132.5	137.7	134.0	135.7	138.4	138.4	138.0	138.6	137.7	136.4	138.8	138.9	139.3	137.8	137.4
Nondurables less food and beverages	137.5	147.4	140.5	143.9	148.5	148.5	147.6	149.1	147.5	145.6	149.9	149.9	150.2	147.2	146.4
Apparel	131.3	129.6	126.8	129.2	132.5	133.3	132.2	128.3	124.5	125.3	130.4	132.8	131.8	127.8	125.4
Nondurables less food, beverages, and apparel	146.0	162.5	153.1	157.2	162.7	162.3	161.5	165.8	165.4	162.0	165.9	164.7	165.7	163.1	163.2
Durables	126.0	125.4	125.7	125.3	125.6	125.6	125.8	125.4	125.2	124.7	124.8	125.0	125.5	125.9	125.9
Services	188.8	195.3	191.6	192.4	193.3	193.5	193.8	195.3	196.3	197.0	197.2	197.6	197.6	198.0	200.2
Rent of shelter[3]	195.0	201.3	198.0	198.9	200.1	200.2	200.3	201.2	202.1	202.7	202.6	203.3	203.2	203.1	204.5
Transporatation services	190.7	196.1	193.0	193.7	195.0	195.2	195.7	196.1	196.5	197.4	197.2	197.0	198.0	198.3	199.1
Other services	223.1	229.9	227.4	227.4	227.8	228.0	228.4	228.7	229.9	231.3	231.5	232.6	232.4	233.0	234.1
Special indexes:															
All items less food	167.0	173.0	169.3	170.5	172.0	172.2	172.2	173.3	173.6	173.5	174.6	174.9	175.0	174.7	175.9
All items less shelter	160.2	165.7	162.3	163.3	164.8	164.9	165.1	166.0	166.2	166.0	167.4	167.5	167.7	167.5	168.6
All items less medical care	162.0	167.3	164.1	165.0	166.4	166.5	166.6	167.6	167.9	167.9	168.8	169.1	169.2	169.0	170.1
Commodities less food	134.0	139.2	135.6	137.2	139.9	139.9	139.4	140.1	139.2	138.0	140.3	140.4	140.8	139.3	139.0
Nondurables less food	139.4	149.1	142.4	145.7	150.1	150.1	149.3	150.7	149.3	147.5	151.5	151.6	151.8	149.0	148.3
Nondurables less food and apparel	147.5	162.9	154.2	158.0	163.0	162.7	161.9	166.0	165.7	162.6	166.2	165.1	166.0	163.6	163.9
Nondurables	151.2	158.2	153.7	155.6	158.1	158.2	158.0	158.8	158.4	157.6	160.0	160.1	160.2	159.1	159.1
Services less rent of shelter[3]	195.8	202.9	198.6	199.2	199.9	200.2	200.9	202.9	204.2	205.0	205.7	205.8	205.9	206.9	210.0
Services less medical care services	182.7	188.9	185.3	186.0	186.9	187.1	187.4	188.9	189.9	190.5	190.7	191.1	191.1	191.5	193.6
Energy	106.6	124.6	112.5	116.7	122.2	120.7	121.0	129.6	129.7	125.9	130.6	129.3	129.0	128.1	132.5
All items less energy	174.4	178.6	176.3	176.9	177.8	178.1	178.2	178.3	178.7	179.1	179.6	180.1	180.3	180.2	181.0
All items less food and energy	177.0	181.3	178.8	179.5	180.5	180.9	180.9	181.0	181.3	181.7	182.3	182.8	183.0	182.8	183.5
Commodities less food and energy	144.1	144.9	143.6	144.2	145.3	145.9	145.5	144.5	143.8	143.7	145.1	145.6	146.0	145.1	144.8
Energy commodities	100.0	129.5	112.8	120.6	131.7	128.4	127.9	137.6	135.0	127.9	135.2	133.6	133.8	129.3	128.6
Services less energy	195.7	202.1	198.9	199.7	200.7	200.9	201.2	201.9	202.7	203.5	203.5	204.1	204.2	204.4	205.7
CONSUMER PRICE INDEX FOR URBAN WAGE EARNERS AND CLERICAL WORKERS															
All items	163.2	168.9	165.6	166.5	167.9	168.0	168.2	169.2	169.4	169.3	170.4	170.6	170.9	170.7	171.7
All items (1967 = 100)	486.2	503.1	493.2	495.9	500.0	500.4	501.1	504.1	504.7	504.2	507.6	508.2	509.0	508.5	511.6
Food and beverages	163.8	167.7	165.9	166.1	166.4	166.5	167.2	167.3	168.0	168.6	168.8	169.0	168.8	169.8	170.8
Food	163.4	167.2	165.4	165.6	165.9	166.0	166.7	166.8	167.6	189.9	168.3	168.5	168.3	169.3	170.3
Food at home	163.0	166.8	165.1	165.1	165.3	165.4	166.4	166.3	167.3	156.8	168.1	168.1	167.8	169.1	170.3
Cereals and bakery products	184.7	188.0	185.5	185.8	185.9	186.9	188.4	187.3	189.2	161.0	188.4	189.9	188.6	190.4	190.9
Meats, poultry, fish, and eggs	147.6	154.1	149.8	150.8	152.0	152.5	153.5	154.6	155.4	202.5	156.6	156.4	155.3	156.3	157.9
Dairy and related products[1]	159.4	160.5	159.9	160.4	158.7	160.2	159.3	159.4	160.5	138.2	161.6	161.9	161.4	161.5	163.8
Fruits and vegetables	201.8	203.4	207.0	201.7	200.5	200.5	203.1	198.9	200.0	201.5	203.6	204.7	205.8	213.3	210.9
Nonalcoholic beverages and beverage materials	133.2	136.9	136.0	137.6	137.8	136.7	136.4	136.7	137.5	137.4	137.1	136.6	137.1	135.8	138.7
Other foods at home	152.8	155.1	153.7	153.8	154.5	153.4	154.9	155.6	156.0	156.2	156.1	155.3	155.4	155.8	157.3
Sugar and sweets	152.2	153.9	154.8	154.3	154.5	152.3	153.6	153.9	154.2	154.4	154.4	153.8	152.7	153.3	155.4
Fats and oils	147.9	147.2	146.8	145.2	145.7	144.5	146.9	146.4	147.9	148.6	148.5	149.4	146.3	149.9	152.8
Other foods	168.8	172.3	169.8	170.5	171.6	170.7	172.2	173.4	173.5	173.6	173.5	172.0	173.4	173.0	174.0
Other miscellaneous foods[1,2]	104.6	107.1	103.9	106.2	106.7	104.7	106.1	108.0	108.4	109.0	107.5	106.3	109.6	108.6	108.5
Food away from home[1]	165.0	169.0	167.1	167.6	167.9	168.1	168.3	168.6	169.1	169.5	170.0	170.3	170.5	170.8	171.4
Other food away from home[1,2]	105.1	109.2	107.4	107.8	107.8	108.3	108.5	108.4	108.8	109.6	110.4	110.9	111.2	111.4	111.5
Alcoholic beverages	168.8	173.8	171.6	172.2	172.8	172.9	172.9	173.6	174.4	174.7	174.4	174.8	175.6	175.8	176.5
Housing	160.0	165.4	162.0	162.9	163.4	163.6	163.9	165.5	166.4	166.6	167.3	167.5	167.6	168.1	170.2
Shelter	181.6	187.4	184.5	185.2	186.0	186.2	186.5	187.2	187.9	188.4	188.7	189.3	189.5	189.6	190.6
Rent of primary residence	177.1	183.4	180.7	181.1	181.5	181.8	182.2	182.7	183.4	184.1	184.8	185.6	186.2	187.0	187.7
Lodging away from home[2]	122.2	117.3	110.8	114.5	119.9	118.7	117.8	120.9	123.1	122.5	118.3	118.6	113.9	108.7	113.8
Owners' equivalent rent of primary residence[3]	175.7	180.8	178.6	179.0	179.2	179.6	179.9	180.4	180.8	181.3	181.9	182.4	183.0	183.5	184.1
Tenants' and household insurance[1,2]	101.6	103.9	102.6	102.6	102.8	103.3	104.0	104.1	104.4	104.2	104.4	104.4	104.7	104.9	105.2
Fuels and utilities	128.7	137.4	129.5	132.0	131.2	131.1	131.9	138.7	141.0	140.4	143.4	142.5	142.0	144.6	153.2
Fuels	113.0	121.8	113.6	116.3	115.4	115.2	116.0	123.3	125.7	125.0	128.2	127.2	126.5	129.3	138.6
Fuel oil and other fuels	91.7	128.8	114.0	144.5	129.6	123.0	120.9	120.2	120.1	120.1	133.1	136.7	139.3	144.1	150.1
Gas (piped) and electricity	120.4	127.5	119.4	120.1	120.2	120.5	121.6	129.9	132.5	131.8	134.4	133.0	132.1	134.8	144.8
Household furnishings and operations	124.7	125.5	124.5	124.6	125.3	125.6	125.5	125.3	125.7	125.7	126.1	125.8	126.0	125.6	125.7
Apparel	130.1	128.3	125.9	127.9	131.0	131.8	130.9	127.3	123.6	124.0	128.7	131.3	130.5	126.6	124.1
Men's and boys' apparel	131.2	129.7	129.3	129.9	131.5	131.5	132.7	129.5	126.6	126.8	128.8	130.3	131.3	128.0	125.8
Women's and girls' apparel	121.3	119.3	114.2	118.0	123.5	124.3	122.1	117.4	112.2	113.2	121.5	125.5	122.6	117.5	113.2
Infants' and toddlers' apparel[1]	130.3	132.3	134.9	134.7	135.7	134.1	133.4	132.0	129.8	128.4	129.0	132.6	132.7	130.0	129.0
Footwear	126.2	124.2	122.3	122.6	124.7	127.1	126.6	124.6	120.9	121.5	124.8	125.5	125.7	124.0	121.5
Transportation	143.4	152.8	147.7	149.1	152.9	152.2	152.5	155.5	154.4	152.3	154.2	154.0	154.9	153.9	154.0
Private transportation	140.7	150.1	145.1	146.4	150.1	149.5	149.7	152.8	151.6	149.3	151.4	151.3	152.2	151.2	151.2
New and used motor vehicles[2]	100.4	101.4	101.2	100.7	100.8	101.2	101.5	101.4	101.1	100.9	101.0	101.4	102.2	102.8	102.9

28. Continued—Consumer Price Indexes for All Urban Consumers and for Urban Wage Earners and Clerical Workers: U.S. city average, by expenditure category and commodity or service group

[1982–84 = 100, unless otherwise indicated]

Series	Annual average		2000												2001
	1999	2000	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.
New vehicles	144.0	143.9	144.5	144.2	144.5	144.7	144.5	144.1	143.7	143.1	142.5	142.7	143.7	144.6	144.8
Used cars and trucks[1]	153.3	157.1	155.3	154.4	154.4	155.4	156.8	157.1	156.6	156.5	157.5	159.3	160.7	161.6	161.7
Motor fuel	100.8	129.5	112.9	118.6	132.0	128.5	128.5	140.1	136.2	128.0	135.3	133.1	133.2	127.7	126.9
Gasoline (all types)	100.2	128.8	112.3	117.9	131.2	127.8	127.9	139.4	135.5	127.3	134.6	132.3	132.4	126.9	126.2
Motor vehicle parts and equipment	100.0	100.9	100.3	100.5	100.9	100.6	100.5	100.5	100.8	100.7	100.9	101.0	101.8	102.3	103.0
Motor vehicle maintenance and repair	173.3	178.8	176.1	176.6	177.2	177.4	177.8	178.3	178.7	179.6	180.2	180.9	181.4	181.5	182.1
Public transportation	193.1	203.4	194.8	198.8	203.4	202.9	203.9	205.5	206.9	208.7	206.4	202.4	203.2	203.7	204.3
Medical care	249.7	259.9	254.5	256.2	257.3	258.0	258.5	259.7	260.6	261.7	262.2	262.8	263.1	263.8	266.3
Medical care commodities	226.8	233.6	230.7	231.0	231.8	232.4	232.9	233.7	234.2	234.6	235.0	235.2	235.5	236.5	237.8
Medical care services	254.9	265.9	259.9	261.9	263.1	263.8	264.4	265.6	266.6	267.9	268.5	269.2	269.4	270.1	272.8
Professional services	230.8	239.6	234.8	236.7	238.0	238.6	239.0	239.9	240.3	240.9	241.3	241.8	241.7	242.3	244.9
Hospital and related services	295.5	313.2	304.1	306.4	307.5	308.7	309.5	311.7	314.2	317.1	318.2	319.2	320.3	320.9	323.9
Recreation[2]	101.3	102.4	101.4	101.6	102.0	102.0	102.3	102.5	102.7	102.9	102.8	102.8	102.7	102.6	103.0
Video and audio[1,2]	100.5	100.7	100.2	100.4	100.6	100.0	101.0	101.2	100.9	101.3	101.1	100.7	100.6	100.3	100.8
Education and communication[2]	101.5	102.7	103.0	102.5	102.2	102.1	102.1	101.7	102.2	103.0	102.9	103.7	103.2	103.7	104.0
Education[2]	107.2	112.8	110.5	110.9	111.0	111.1	111.3	111.8	112.1	113.2	115.1	115.4	115.6	115.7	116.0
Educational books and supplies	264.1	283.3	276.6	281.3	280.0	279.9	280.0	280.9	281.5	283.6	288.6	289.0	288.6	289.2	292.9
Tuition, other school fees, and child care	302.8	318.2	311.7	312.7	312.8	313.4	313.8	315.4	316.2	319.2	324.7	325.7	326.3	326.5	327.0
Communication[1,2]	96.9	94.6	97.1	95.7	95.3	94.8	94.7	93.6	94.3	94.8	93.1	94.2	93.3	94.1	94.4
Information and information processing[1,2]	96.5	94.1	96.7	95.3	94.8	94.4	94.3	93.0	93.9	94.4	92.6	93.8	92.8	93.6	93.8
Telephone services[1,2]	100.2	98.7	101.1	99.6	99.1	98.8	98.7	97.4	98.4	99.1	97.1	98.6	97.6	98.6	99.0
Information and information processing other than telephone services[1,4]	31.6	26.8	28.9	28.6	28.2	27.6	27.5	27.0	26.6	26.1	25.9	25.5	25.1	24.6	24.0
Personal computers and peripheral equipment[1,2]	53.1	40.5	45.7	44.5	43.6	42.0	41.8	40.7	39.8	39.1	38.5	37.8	36.7	35.9	34.3
Other goods and services	261.9	276.5	269.3	271.7	273.3	278.0	275.4	274.5	277.9	276.8	280.9	278.2	282.3	279.2	281.5
Tobacco and smoking products	356.2	395.2	375.7	383.6	387.8	404.9	393.7	388.7	400.9	394.2	408.2	397.0	411.3	396.9	404.6
Personal care[1]	161.3	165.5	163.5	163.9	164.3	164.6	164.9	165.3	165.5	166.1	166.5	166.8	167.1	167.7	168.1
Personal care products[1]	152.5	154.2	153.4	153.2	154.1	153.9	153.4	154.0	154.1	155.0	155.1	153.9	154.2	155.8	155.7
Personal care services[1]	171.7	178.6	175.3	176.1	176.6	176.6	177.7	178.3	178.6	179.7	180.3	180.8	181.1	181.7	182.1
Miscellaneous personal services	243.1	251.9	247.6	248.9	249.4	250.4	251.2	251.4	252.2	253.0	253.4	254.5	255.1	255.3	257.0
Commodity and service group:															
Commodities	144.7	149.8	146.6	147.8	149.8	149.9	149.9	150.6	150.1	149.3	151.0	151.0	151.4	150.6	150.8
Food and beverages	163.8	167.7	165.9	166.1	166.4	166.5	167.2	167.3	168.0	168.6	168.8	169.0	168.8	169.8	170.8
Commodities less food and beverages	133.2	139.0	135.1	136.8	139.6	139.6	139.3	140.3	139.2	137.7	140.2	140.2	140.8	139.1	138.8
Nondurables less food and beverages	138.1	149.1	141.7	145.1	150.2	150.2	149.4	151.5	149.7	147.2	151.8	151.6	152.1	148.6	148.1
Apparel	130.1	128.3	125.9	127.9	131.0	131.8	130.9	127.3	123.6	124.0	128.7	131.3	130.5	126.6	124.1
Nondurables less food, beverages, and apparel	147.2	165.3	155.0	159.3	165.7	165.2	164.4	169.6	168.7	164.6	169.3	167.6	168.8	165.5	166.0
Durables	126.0	125.8	126.0	125.6	125.8	126.0	126.2	125.9	125.6	125.2	125.3	125.6	126.2	126.6	126.6
Services	185.3	191.6	187.9	188.5	189.2	189.4	189.8	191.2	192.2	193.0	193.4	193.9	194.0	194.5	196.6
Rent of shelter[3]	174.9	180.5	177.7	178.4	179.1	179.3	179.6	180.3	181.0	181.5	181.7	182.3	182.5	182.6	183.6
Transporatation services	187.9	192.9	190.2	190.8	191.8	192.0	192.4	192.6	193.0	193.8	193.7	193.9	195.0	195.2	196.0
Other services	219.6	225.9	223.8	223.7	224.0	224.2	224.6	224.7	225.9	227.3	227.3	228.4	228.1	228.9	229.9
Special indexes:															
All items less food	163.1	169.1	165.4	166.4	168.0	168.2	168.3	169.5	169.6	169.4	170.7	170.9	171.3	170.9	171.9
All items less shelter	158.1	163.8	160.3	161.3	162.8	163.0	163.1	164.3	164.3	163.9	165.4	165.5	165.7	165.5	166.5
All items less medical care	159.2	164.7	161.4	162.3	163.6	163.8	164.0	165.0	165.1	165.0	166.2	166.4	166.6	166.4	167.4
Commodities less food	134.6	140.4	136.5	138.2	141.0	141.0	140.7	141.7	140.6	139.1	141.6	141.6	142.2	140.6	140.3
Nondurables less food	140.0	150.7	143.6	146.8	151.7	151.7	150.9	152.9	151.2	148.9	153.3	153.1	153.6	150.3	149.9
Nondurables less food and apparel	148.4	165.4	155.8	159.8	165.7	165.3	164.5	169.4	168.7	164.9	169.2	167.7	168.8	165.8	166.3
Nondurables	151.3	158.9	154.2	156.0	158.8	158.9	158.8	159.9	159.4	158.3	160.8	160.8	161.0	159.7	159.9
Services less rent of shelter[3]	174.1	180.1	176.4	176.9	177.4	177.7	178.2	180.2	181.3	181.9	182.5	182.7	182.8	183.7	186.6
Services less medical care services	179.5	185.4	181.9	182.4	183.1	183.3	183.7	185.1	186.0	186.6	187.2	187.6	187.7	188.3	190.3
Energy	106.1	124.8	112.5	116.7	122.9	121.0	121.5	130.9	130.1	125.7	130.9	129.3	129.0	127.6	131.8
All items less energy	171.1	175.1	172.8	173.3	174.1	174.5	174.6	174.6	174.9	175.3	176.0	176.5	176.8	176.8	177.4
All items less food and energy	173.1	177.1	174.8	175.3	176.2	176.7	176.7	176.6	176.8	177.2	178.0	178.6	179.0	178.7	179.3
Commodities less food and energy	144.3	145.4	144.1	144.6	145.6	146.4	146.0	145.0	144.5	144.2	145.7	146.1	146.7	145.8	145.5
Energy commodities	100.3	129.7	113.1	120.4	132.0	128.3	128.3	139.1	135.4	127.7	135.4	133.5	133.8	128.9	128.5
Services less energy	192.6	198.7	195.5	196.2	196.9	197.1	197.5	198.0	198.8	199.5	200.0	200.6	200.8	201.1	202.2

[1] Not seasonally adjusted.

[2] Indexes on a December 1997 = 100 base.

[3] Indexes on a December 1982 = 100 base.

[4] Indexes on a December 1988 = 100 base.

– Data not available.

NOTE: Index applies to a month as a whole, not to any specific date.

29. Consumer Price Index: U.S. city average and available local area data: all items

[1982–84 = 100, unless otherwise indicated]

Area	Pricing schedule[1]	All Urban Consumers							Urban Wage Earners						
		1999	2000					2001	1999	2000					2001
		Dec.	Jan.	Sept.	Oct.	Nov.	Dec.	Jan.	Dec.	Jan.	Sept.	Oct.	Nov.	Dec.	Jan.
U.S. city average	M	168.3	168.8	173.7	174.0	174.1	174.0	175.1	165.1	165.6	170.4	170.6	170.9	170.7	171.7
Region and area size[2]															
Northeast urban	M	175.5	176.2	180.7	181.2	181.5	181.3	182.2	172.6	173.1	177.6	178.0	178.4	178.3	179.0
Size A—More than 1,500,000	M	176.3	177.0	181.7	182.1	182.4	182.3	183.0	172.4	172.9	177.7	178.0	178.3	178.2	178.8
Size B/C—50,000 to 1,500,000[3]	M	105.4	105.9	108.3	108.8	108.9	108.8	109.6	105.2	105.6	107.9	108.4	108.6	108.6	109.2
Midwest urban[4]	M	164.4	164.9	170.0	170.1	170.3	170.2	171.9	160.7	161.3	166.4	166.4	166.8	166.5	168.2
Size A—More than 1,500,000	M	165.5	166.3	171.5	171.5	171.7	171.6	173.5	161.1	161.7	167.0	166.9	167.2	167.0	168.8
Size B/C—50,000 to 1,500,000[3]	M	105.3	105.6	108.6	108.8	108.9	108.7	109.6	105.3	105.6	108.7	108.7	109.1	108.8	109.7
Size D—Nonmetropolitan (less than 50,000)	M	158.9	159.1	164.5	164.9	165.0	164.9	167.2	157.3	157.6	163.0	163.4	163.7	163.5	165.8
South urban	M	163.6	164.1	168.5	168.5	168.6	168.4	169.3	162.0	162.3	166.8	166.8	166.9	166.7	167.5
Size A—More than 1,500,000	M	163.0	163.5	168.4	168.6	168.5	168.4	169.3	160.9	161.3	166.1	166.3	166.2	166.2	166.9
Size B/C—50,000 to 1,500,000[3]	M	105.2	105.4	108.1	108.1	108.2	108.1	108.6	105.0	105.2	107.9	107.9	108.1	108.0	108.4
Size D—Nonmetropolitan (less than 50,000)	M	163.5	164.5	168.2	167.6	167.3	167.1	168.2	164.6	165.2	169.2	168.8	168.6	168.4	169.4
West urban	M	170.5	171.0	176.6	177.2	177.2	177.1	178.3	166.4	166.7	172.1	172.7	172.8	172.8	173.7
Size A—More than 1,500,000	M	171.7	172.3	178.4	179.0	178.8	179.0	180.1	165.8	166.3	172.1	172.7	172.7	172.9	173.8
Size B/C—50,000 to 1,500,000[3]	M	105.7	105.7	108.8	109.0	109.2	108.9	109.8	105.5	105.5	108.6	108.9	109.1	108.7	109.5
Size classes:															
A[5]	M	152.5	153.1	157.8	158.1	158.2	158.1	159.2	151.2	151.7	156.4	156.6	156.8	156.8	157.7
B/C[3]	M	105.3	105.6	108.3	108.5	108.7	108.5	109.2	105.2	105.4	108.2	108.3	108.6	108.4	109.0
D	M	163.7	164.4	168.7	168.7	168.6	168.5	169.8	163.1	163.6	167.9	168.1	168.1	167.9	169.2
Selected local areas[6]															
Chicago–Gary–Kenosha, IL–IN–WI	M	169.2	170.2	174.8	175.4	176.0	175.8	178.1	163.7	164.6	169.2	169.8	170.4	170.3	172.6
Los Angeles–Riverside–Orange County, CA	M	167.3	167.9	173.3	173.8	173.5	173.5	174.2	160.9	161.3	166.3	166.9	166.6	166.7	167.3
New York, NY–Northern NJ–Long Island, NY–NJ–CT–PA	M	178.6	179.2	184.4	184.6	184.6	184.2	184.9	174.3	174.7	179.9	180.2	180.1	180.0	180.6
Boston–Brockton–Nashua, MA–NH–ME–CT	1	–	180.2	184.3	–	187.4	–	189.0	–	178.6	183.2	–	186.2	–	187.4
Cleveland–Akron, OH	1	–	164.5	170.5	–	169.4	–	171.3	–	156.9	162.8	–	161.6	–	163.3
Dallas–Ft Worth, TX	1	–	160.4	166.9	–	166.8	–	167.3	–	160.3	166.8	–	166.6	–	166.8
Washington–Baltimore, DC–MD–VA–WV[7]	1	–	105.4	108.7	–	108.5	–	108.9	–	105.3	108.7	–	108.4	–	108.6
Atlanta, GA	2	167.0	–	–	171.9	–	171.9	–	164.6	–	–	169.6	–	169.7	–
Detroit–Ann Arbor–Flint, MI	2	165.6	–	–	171.9	–	171.7	–	160.4	–	–	166.5	–	166.2	–
Houston–Galveston–Brazoria, TX	2	150.3	–	–	157.1	–	156.2	–	149.2	–	–	155.4	–	154.9	–
Miami–Ft. Lauderdale, FL	2	164.8	–	–	169.6	–	169.5	–	162.7	–	–	167.1	–	167.2	–
Philadelphia–Wilmington–Atlantic City, PA–NJ–DE–MD	2	172.9	–	–	177.9	–	177.5	–	172.8	–	–	177.2	–	177.0	–
San Francisco–Oakland–San Jose, CA	2	174.5	–	–	183.4	–	184.1	–	170.9	–	–	179.3	–	180.2	–
Seattle–Tacoma–Bremerton, WA	2	174.4	–	–	182.1	–	181.5	–	170.1	–	–	177.5	–	177.0	–

[1] Foods, fuels, and several other items priced every month in all areas; most other goods and services priced as indicated:
M—Every month.
1—January, March, May, July, September, and November.
2—February, April, June, August, October, and December.

[2] Regions defined as the four Census regions.

[3] Indexes on a December 1996 = 100 base.

[4] The "North Central" region has been renamed the "Midwest" region by the Census Bureau. It is composed of the same geographic entities.

[5] Indexes on a December 1986 = 100 base.

[6] In addition, the following metropolitan areas are published semiannually and appear in tables 34 and 39 of the January and July issues of the *CPI Detailed Report*: Anchorage, AK; Cincinnati–Hamilton, OH–KY–IN; Denver–Boulder–Greeley, CO; Honolulu, HI; Kansas City, MO–KS; Milwaukee–Racine, WI; Minneapolis–St. Paul, MN–WI; Pittsburgh, PA; Portland–Salem, OR–WA; St Louis, MO–IL; San Diego, CA; Tampa–St. Petersburg–Clearwater, FL.

[7] Indexes on a November 1996 = 100 base.

– Data not available.

NOTE: Local area CPI indexes are byproducts of the national CPI program. Each local index has a smaller sample size and is, therefore, subject to substantially more sampling and other measurement error. As a result, local area indexes show greater volatility than the national index, although their long-term trends are similar. Therefore, the Bureau of Labor Statistics strongly urges users to consider adopting the national average CPI for use in their escalator clauses. Index applies to a month as a whole, not to any specific date.

30. Annual data: Consumer Price Index, U.S. city average, all items and major groups

[1982–84 = 100]

Series	1992	1993	1994	1995	1996	1997	1998	1999	2000
Consumer Price Index for All Urban Consumers:									
All items:									
Index	140.3	144.5	148.2	152.4	156.9	160.5	163.0	166.6	172.2
Percent change	3.0	3.0	2.6	2.8	3.0	2.3	1.6	2.2	3.4
Food and beverages:									
Index	138.7	141.6	144.9	148.9	153.7	157.7	161.1	164.6	168.4
Percent change	1.4	2.1	2.3	2.8	3.2	2.6	2.2	2.2	2.3
Housing:									
Index	137.5	141.2	144.8	148.5	152.8	156.8	160.4	163.9	169.6
Percent change	2.9	2.7	2.5	2.6	2.9	2.6	2.3	2.2	3.5
Apparel:									
Index	131.9	133.7	133.4	132.0	131.7	132.9	133.0	131.3	129.6
Percent change	2.5	1.4	–.2	–1.0	–.2	.9	.1	–1.3	–1.3
Transportation:									
Index	126.5	130.4	134.3	139.1	143.0	144.3	141.6	144.4	153.3
Percent change	2.2	3.1	3.0	3.6	2.8	0.9	–1.9	2.0	6.2
Medical care:									
Index	190.1	201.4	211.0	220.5	228.2	234.6	242.1	250.6	260.8
Percent change	7.4	5.9	4.8	4.5	3.5	2.8	3.2	3.5	4.1
Other goods and services:									
Index	183.3	192.9	198.5	206.9	215.4	224.8	237.7	258.3	271.1
Percent change	6.8	5.2	2.9	4.2	4.1	4.4	5.7	8.7	5.0
Consumer Price Index for Urban Wage Earners and Clerical Workers:									
All items:									
Index	138.2	142.1	145.6	149.8	154.1	157.6	159.7	163.2	168.9
Percent change	2.9	2.8	2.5	2.9	2.9	2.3	1.3	2.2	3.5

31. Producer Price Indexes, by stage of processing

[1982 = 100]

Grouping	Annual average		2000												2001
	1999	2000[p]	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.
Finished goods	133.0	138.0	134.7	136.0	136.8	136.7	137.3	138.6	138.6	138.2	139.4	140.0	139.9	139.7	141.2
Finished consumer goods	132.0	138.1	133.9	135.7	136.7	136.5	137.4	139.1	139.0	138.6	140.1	140.5	140.4	140.1	141.9
Finished consumer foods	135.1	137.1	135.0	136.0	136.0	137.3	138.2	137.6	137.5	137.2	137.4	137.8	138.1	137.9	138.4
Finshed consumer goods excluding foods	130.5	138.4	133.3	135.4	136.8	136.0	136.9	139.6	139.5	139.0	141.1	141.5	141.2	140.8	143.3
Nondurable goods less food	127.9	138.6	131.4	134.3	136.4	135.3	136.5	140.5	140.5	140.0	143.0	142.4	142.1	141.5	144.9
Durable goods	133.0	133.9	134.1	133.9	133.8	133.9	133.8	133.4	133.1	132.7	132.5	135.1	135.0	135.3	135.2
Capital equipment	137.6	138.8	138.4	138.5	138.5	138.5	138.6	138.5	138.6	138.5	138.6	139.8	139.8	139.9	140.2
Intermediate materials, supplies, and components	123.2	129.1	125.9	126.9	127.8	128.0	128.3	129.8	130.3	129.9	131.1	130.8	130.5	130.6	131.5
Materials and components for manufacturing	124.6	128.1	126.4	127.0	127.6	128.2	128.5	128.6	128.9	128.6	128.5	128.5	128.1	128.1	128.6
Materials for food manufacturing	120.8	119.2	117.6	117.5	118.1	119.6	120.5	120.6	120.5	119.4	119.0	119.1	118.8	119.8	120.4
Materials for nondurable manufacturing	124.9	132.7	128.6	129.7	131.3	132.3	133.3	133.7	134.5	133.9	133.6	133.8	133.7	133.5	135.0
Materials for durable manufacturing	125.1	129.1	128.6	129.6	129.7	130.0	129.6	129.4	129.4	129.0	129.3	129.2	127.7	128.0	127.2
Components for manufacturing	125.7	126.2	125.9	125.9	126.0	126.1	126.0	126.2	126.3	126.3	126.4	126.2	126.2	126.1	126.4
Materials and components for construction	148.9	150.7	150.4	150.8	151.3	151.6	151.0	151.2	150.8	150.4	150.3	150.2	149.9	149.9	149.6
Processed fuels and lubricants	84.6	102.0	91.5	94.8	97.4	95.7	96.5	103.3	105.0	104.5	110.5	108.9	108.3	108.3	111.4
Containers	142.5	151.6	147.2	147.2	148.1	151.6	152.7	153.3	153.3	153.0	153.3	153.4	153.2	153.0	153.0
Supplies	134.2	136.8	135.2	135.6	136.0	136.4	136.7	137.1	137.3	137.0	137.4	137.6	137.6	138.1	138.9
Crude materials for further processing	98.2	119.8	105.8	110.3	112.9	111.3	115.9	125.6	122.7	118.3	126.0	128.3	125.5	136.2	155.0
Foodstuffs and feedstuffs	98.7	100.2	96.5	97.6	101.4	103.4	104.9	101.9	99.3	95.5	97.6	99,5	100.5	103.9	105.3
Crude nonfood materials	94.3	129.0	108.3	115.1	116.7	112.7	119.3	137.3	134.4	129.7	141.0	143.5	138.2	153.5	183.5
Special groupings:															
Finished goods, excluding foods	132.3	138.1	134.5	135.9	136.9	136.4	137.0	138.8	138.8	138.4	139.9	140.5	140.3	140.1	141.9
Finished energy goods	78.8	94.2	83.8	87.5	90.9	89.2	90.9	97.7	97.3	95.9	100.6	99.7	99.3	97.9	101.9
Finished goods less energy	143.0	144.8	143.6	144.3	144.3	144.6	145.0	144.7	144.7	144.7	144.8	145.8	145.9	145.9	146.7
Finished consumer goods less energy	145.2	147.3	145.8	146.7	146.7	147.2	147.6	147.3	147.3	147.3	147.5	148.3	148.4	148.5	149.4
Finished goods less food and energy	146.1	147.9	147.0	147.5	147.5	147.5	147.7	147.5	147.6	147.7	147.8	149.0	148.9	149.1	150.0
Finished consumer goods less food and energy	151.7	153.9	152.8	153.6	153.6	153.5	153.7	153.6	153.5	153.8	154.0	155.1	155.0	155.3	156.5
Consumer nondurable goods less food and energy	166.3	169.7	167.3	169.0	169.1	168.9	169.3	169.4	169.6	170.4	170.9	170.8	170.7	171.0	173.2
Intermediate materials less foods and feeds	123.9	130.1	126.8	127.8	128.8	128.9	129.2	130.7	131.2	131.0	132.2	131.8	131.5	131.5	132.4
Intermediate foods and feeds	111.1	111.7	109.3	110.0	111.0	111.9	113.4	113.4	112.7	110.6	111.1	111.6	111.6	113.5	115.1
Intermediate energy goods	84.3	101.7	91.2	94.5	97.1	95.4	96.3	103.0	104.6	104.2	110.1	108.5	107.9	107.9	110.9
Intermediate goods less energy	131.7	135.0	133.5	133.9	134.5	135.1	135.3	135.5	135.7	135.3	135.4	135.4	135.2	135.3	135.8
Intermediate materials less foods and energy	133.1	136.5	135.1	135.5	136.1	136.6	136.7	137.0	137.2	137.0	137.0	137.0	136.7	136.8	137.1
Crude energy materials	78.5	120.3	92.0	100.2	102.5	97.9	106.5	130.6	127.6	122.4	136.7	140.5	134.8	154.7	193.4
Crude materials less energy	107.9	111.7	110.2	111.5	114.1	115.1	116.1	113.4	110.8	107.4	109.2	110.1	109.9	112.4	113.7
Crude nonfood materials less energy	135.2	145.2	149.8	151.3	150.9	149.2	148.8	146.7	144.3	141.9	142.9	141.2	137.7	137.5	138.7

32. Producer Price Indexes for the net output of major industry groups

[December 1984 = 100, unless otherwise indicated]

SIC	Industry	Annual average		2000												2001
		1999	2000[P]	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.
–	**Total mining industries**	78.0	112.2	89.5	95.8	98.9	95.7	100.6	118.4	118.1	113.8	124.7	128.7	124.6	139.6	170.8
10	Metal mining	70.3	73.5	73.9	75.3	73.3	71.8	72.6	73.7	73.9	73.4	75.2	74.7	72.5	73.5	73.5
12	Coal mining (12/85 = 100)	87.3	84.7	85.3	84.7	84.8	85.9	86.1	85.1	85.6	83.3	83.9	83.9	83.1	84.8	83.6
13	Oil and gas extraction (12/85 = 100)	78.5	125.0	94.2	102.6	107.0	102.7	109.1	133.1	132.8	127.4	141.9	147.3	142.3	162.0	204.4
14	Mining and quarrying of nonmetallic minerals, except fuels	134.0	137.1	135.0	135.3	135.7	136.7	137.2	137.2	137.6	137.8	138.0	138.1	138.1	138.2	139.3
–	**Total manufacturing industries**	128.3	133.5	130.8	132.2	132.9	132.6	133.1	134.2	133.9	133.5	134.7	134.8	134.9	134.4	134.7
20	Food and kindred products	126.3	128.5	126.7	127.2	127.4	128.1	129.3	129.4	129.4	128.7	128.5	128.6	128.8	129.6	130.1
21	Tobacco manufactures	325.7	345.8	329.4	348.6	347.3	341.8	341.7	342.2	342.3	350.4	351.1	351.6	351.6	351.8	372.4
22	Textile mill products	116.3	116.7	116.2	116.4	116.5	116.5	116.5	116.6	116.7	116.9	116.6	116.6	117.0	117.5	117.4
23	Apparel and other finished products made from fabrics and similar materials	125.3	125.7	125.2	125.2	125.6	125.7	125.6	125.6	125.9	125.9	125.9	125.9	125.9	125.9	125.7
24	Lumber and wood products, except furniture	161.8	158.1	161.4	161.6	162.1	161.7	159.1	158.7	157.6	155.7	155.3	155.3	154.3	154.2	153.2
25	Furniture and fixtures	141.3	143.3	142.4	142.5	143.0	143.2	143.4	143.5	143.5	143.6	143.5	143.6	143.8	143.8	144.2
26	Paper and allied products	136.4	145.8	141.0	141.5	143.2	145.4	146.9	147.3	147.3	147.3	147.7	147.6	147.3	147.0	147.4
27	Printing, publishing, and allied industries	177.6	182.8	180.4	180.8	181.1	182.0	182.0	183.1	183.2	183.6	183.6	184.0	184.8	185.1	186.8
28	Chemicals and allied products	149.7	156.8	153.6	154.5	155.2	155.5	156.4	156.5	157.4	157.5	158.3	159.3	158.5	159.0	160.4
29	Petroleum refining and related products	76.8	112.9	94.0	104.1	111.0	105.6	109.0	119.9	115.7	112.6	125.1	121.3	122.5	114.4	112.5
30	Rubber and miscellaneous plastics products	122.2	124.3	123.5	123.5	123.5	123.7	123.6	124.4	125.0	124.7	125.4	124.6	124.8	124.8	126.0
31	Leather and leather products	136.5	137.8	137.5	137.5	137.4	137.6	137.4	137.2	137.5	137.8	138.4	138.2	138.2	138.9	139.1
32	Stone, clay, glass, and concrete products	132.6	134.6	134.4	134.6	134.7	135.0	135.1	135.1	134.8	134.5	134.8	134.4	134.1	134.1	134.4
33	Primary metal industries	115.8	119.9	118.6	119.5	120.0	120.3	120.5	120.2	120.3	120.4	120.5	120.4	119.2	119.2	118.5
34	Fabricated metal products, except machinery and transportation transportation equipment	129.1	130.3	129.9	130.0	130.3	130.4	130.2	130.3	130.3	130.4	130.5	130.5	130.5	130.5	130.6
35	Machinery, except electrical	117.3	117.5	117.1	117.3	117.4	117.4	117.4	117.5	117.6	117.6	117.6	117.6	117.7	117.7	117.7
36	Electrical and electronic machinery, equipment, and supplies	109.5	108.3	108.7	108.6	108.6	108.6	108.4	108.5	108.5	108.1	108.1	108.1	107.8	107.7	107.7
37	Transportation	134.5	136.7	136.3	136.5	136.4	136.5	136.5	136.0	136.1	135.7	135.7	138.4	138.2	138.4	138.7
38	Measuring and controlling instruments; photographic, medical, and optical goods; watches and clocks	125.7	126.2	126.0	126.2	126.0	126.0	126.3	126.2	126.2	126.2	126.3	126.4	126.3	126.4	126.9
39	Miscellaneous manufacturing industries industries (12/85 = 100)	130.3	130.9	130.7	131.1	130.8	130.9	130.5	130.7	130.9	131.0	131.0	131.0	131.2	131.3	131.7
	Service industries:															
42	Motor freight transportation and warehousing (06/93 = 100)	114.8	119.3	116.5	117.0	118.1	118.2	118.6	119.0	118.9	120.1	121.2	121.4	121.6	121.5	121.9
43	U.S. Postal Service (06/89 = 100)	135.3	135.2	135.2	135.2	135.2	135.2	135.2	135.2	135.2	135.2	135.2	135.2	135.2	135.2	141.3
44	Water transportation (12/92 = 100)	113.0	123.0	116.4	117.0	117.8	118.6	123.8	124.1	125.2	126.1	127.0	126.5	127.8	126.1	125.8
45	Transportation by air (12/92 = 100)	130.8	147.6	141.0	141.6	144.3	145.4	146.0	147.2	147.6	147.9	151.5	151.2	153.1	154.2	154.7
46	Pipelines, except natural gas (12/92 = 100)	98.3	102.3	102.1	101.9	101.9	101.9	102.0	102.1	102.5	102.5	102.4	102.7	102.7	102.7	109.1

33. Annual data: Producer Price Indexes, by stage of processing

[1982 = 100]

Index	1992	1993	1994	1995	1996	1997	1998	1999	2000[P]
Finished goods									
Total	123.2	124.7	125.5	127.9	131.3	131.8	130.7	133.0	138.0
Foods	123.3	125.7	126.8	129.0	133.6	134.5	134.3	135.1	137.1
Energy	77.8	78.0	77.0	78.1	83.2	83.4	75.1	78.8	94.2
Other	134.2	135.8	137.1	140.0	142.0	142.4	143.7	146.1	147.9
Intermediate materials, supplies, and components									
Total	114.7	116.2	118.5	124.9	125.7	125.6	123.0	123.2	129.1
Foods	113.9	115.6	118.5	119.5	125.3	123.2	123.2	120.8	119.2
Energy	84.3	84.6	83.0	84.1	89.8	89.0	80.8	84.3	101.7
Other	122.0	123.8	127.1	135.2	134.0	134.2	133.5	133.1	136.5
Crude materials for further processing									
Total	100.4	102.4	101.8	102.7	113.8	111.1	96.8	98.2	119.8
Foods	105.1	108.4	106.5	105.8	121.5	112.2	103.9	98.7	100.2
Energy	78.8	76.7	72.1	69.4	85.0	87.3	68.6	78.5	120.3
Other	94.2	94.1	97.0	105.8	105.7	103.5	84.5	91.1	118.2

34. U.S. export price indexes by Standard International Trade Classification

[1995 = 100]

SITC Rev. 3	Industry	2000												2001
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.
0	**Food and live animals**	86.3	86.9	86.8	87.5	88.3	87.4	85.8	83.6	85.9	87.1	88.5	88.7	89.7
01	Meat and meat preparations	100.1	98.0	99.4	102.2	105.1	109.3	108.2	103.7	105.2	107.4	107.6	105.9	105.4
04	Cereals and cereal preparations	71.0	74.1	74.4	74.0	75.0	71.6	66.9	64.0	67.8	70.8	74.0	75.8	78.8
05	Vegetables, fruit, and nuts, prepared fresh or dry	90.9	89.0	88.6	90.6	90.1	87.8	91.3	88.6	91.9	88.7	89.8	88.9	86.9
2	**Crude materials, inedible, except fuels**	80.0	82.2	83.2	84.2	85.2	84.4	82.9	82.9	83.7	83.5	82.2	82.6	82.0
21	Hides, skins, and furskins, raw	91.1	89.5	87.7	85.5	86.5	86.7	89.7	95.4	100.5	104.7	102.1	103.3	105.6
22	Oilseeds and oleaginous fruits	80.5	84.8	86.0	88.3	89.1	86.3	80.3	78.0	83.8	81.3	79.3	85.0	83.9
24	Cork and wood	86.4	86.5	87.2	87.4	86.7	86.7	86.5	88.4	86.9	87.2	86.5	85.9	85.0
25	Pulp and waste paper	84.3	88.3	90.0	93.8	99.0	97.6	95.9	91.7	90.7	89.8	88.6	85.9	85.3
26	Textile fibers and their waste	61.2	65.7	68.6	68.9	69.0	69.6	67.7	70.7	72.2	72.0	72.2	73.2	70.4
27	Crude fertilizers and crude minerals	94.3	94.0	93.5	93.0	93.0	93.3	93.3	93.1	91.5	90.7	90.6	90.6	90.9
28	Metalliferous ores and metal scrap	80.0	80.7	80.9	80.4	79.6	78.2	78.0	78.7	78.7	79.5	76.2	74.7	74.4
3	**Mineral fuels, lubricants, and related products**	129.5	138.5	152.1	137.2	142.3	144.9	151.2	147.6	166.3	157.2	162.1	157.4	155.9
32	Coal, coke, and briquettes	96.1	96.1	96.1	94.7	94.5	93.8	93.8	93.1	93.1	93.3	93.1	93.0	93.1
33	Petroleum, petroleum products, and related materials	143.6	159.6	179.2	152.0	163.0	168.2	178.3	172.3	203.3	189.0	193.4	183.6	181.1
4	**Animal and vegetable oils, fats, and waxes**	75.8	74.3	70.8	71.6	70.1	67.1	64.6	63.2	61.7	60.0	59.0	58.7	61.0
5	**Chemicals and related products, n.e.s.**	93.8	94.2	94.4	95.8	95.8	95.5	94.7	94.9	94.4	94.9	94.1	93.5	94.1
54	Medicinal and pharmaceutical products	100.2	100.4	100.2	99.9	100.0	99.7	100.5	100.3	100.2	100.4	100.2	100.1	100.0
55	Essential oils; polishing and cleaning preparations	103.4	103.3	103.0	103.2	103.1	102.8	103.3	103.3	103.4	103.4	103.3	103.2	103.0
57	Plastics in primary forms	94.8	94.8	95.5	97.7	98.4	98.1	97.0	95.4	92.8	92.3	91.2	90.0	90.0
58	Plastics in nonprimary forms	97.8	98.6	100.1	100.2	99.8	99.3	99.4	99.4	99.3	98.9	98.3	98.3	96.5
59	Chemical materials and products, n.e.s.	99.2	99.9	99.6	99.4	99.3	99.1	99.3	99.2	99.2	99.2	99.1	99.7	99.0
6	**Manufactured goods classified chiefly by materials**	98.3	99.0	99.7	99.9	100.1	100.3	100.7	100.9	101.1	100.8	100.5	100.4	100.6
62	Rubber manufactures, n.e.s.	104.7	103.7	103.6	103.7	104.6	104.4	104.8	104.7	104.7	104.6	104.1	103.8	104.3
64	Paper, paperboard, and articles of paper, pulp, and paperboard	87.6	87.8	88.4	89.1	90.5	89.8	90.4	90.3	90.0	89.9	89.6	89.1	88.6
66	Nonmetallic mineral manufactures, n.e.s.	105.8	106.0	106.2	106.4	106.4	106.5	106.3	106.3	106.1	105.8	105.9	105.6	106.2
68	Nonferrous metals	93.4	98.8	101.9	100.3	98.1	100.1	103.0	105.1	105.0	104.9	103.4	104.9	109.1
7	**Machinery and transport equipment**	97.4	97.3	97.3	97.3	97.4	97.3	97.3	97.3	97.4	97.3	97.4	97.5	97.6
71	Power generating machinery and equipment	111.8	111.8	111.8	111.9	112.0	112.0	112.4	112.3	112.4	112.4	113.7	113.7	114.7
72	Machinery specialized for particular industries	106.2	106.3	106.1	106.2	106.2	106.5	106.4	106.5	106.3	106.3	106.6	106.9	107.0
74	General industrial machines and parts, n.e.s., and machine parts	107.5	107.6	108.0	108.2	108.2	108.2	108.3	108.1	108.2	108.3	108.4	108.5	108.8
75	Computer equipment and office machines	70.1	68.7	68.7	68.5	68.5	68.2	68.3	67.8	67.8	67.7	67.8	67.6	67.5
76	Telecommunications and sound recording and reproducing apparatus and equipment	96.4	97.0	96.6	96.4	97.0	96.9	96.7	96.8	96.8	96.6	96.5	96.3	96.3
77	Electrical machinery and equipment	86.4	86.6	86.3	86.4	86.3	85.7	85.7	85.8	85.8	85.4	85.3	85.4	85.2
78	Road vehicles	103.5	103.6	104.0	103.9	103.9	103.9	103.9	103.9	104.1	104.0	103.9	104.0	104.0
87	**Professional, scientific, and controlling instruments and apparatus**	105.2	105.4	105.7	105.7	105.7	105.8	106.4	106.4	106.5	106.9	106.9	106.6	106.9

35. U.S. import price indexes by Standard International Trade Classification

[1995 = 100]

SITC Rev. 3	Industry	2000												2001
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.
0	**Food and live animals**	93.7	93.6	93.1	94.0	92.3	91.3	91.5	91.7	91.2	91.5	90.2	92.3	92.5
01	Meat and meat preparations	97.8	98.2	99.1	100.2	100.2	99.1	98.1	98.9	99.0	95.5	95.7	97.3	95.5
03	Fish and crustaceans, mollusks, and other aquatic invertebrates	106.8	107.9	108.0	111.0	109.6	109.1	110.7	113.5	112.6	110.7	109.3	109.1	107.1
05	Vegetables, fruit, and nuts, prepared fresh or dry	102.0	102.1	101.2	100.7	96.8	95.7	97.2	97.6	97.8	100.9	96.8	104.1	105.6
07	Coffee, tea, cocoa, spices, and manufactures thereof	67.2	64.7	61.0	61.1	59.8	59.5	56.8	55.8	54.5	54.1	51.9	50.7	49.8
1	**Beverages and tobacco**	111.2	111.4	111.7	111.9	112.4	113.0	112.5	112.9	113.6	113.5	113.3	113.2	113.2
11	Beverages	107.9	108.2	108.5	108.7	109.4	110.1	109.4	109.9	110.7	110.6	110.7	110.6	110.4
2	**Crude materials, inedible, except fuels**	93.6	94.7	94.3	93.8	91.9	90.7	90.7	89.6	88.9	89.8	87.7	88.5	87.5
24	Cork and wood	117.7	117.0	118.6	117.6	112.9	110.1	107.0	102.2	99.7	101.6	97.7	101.7	95.5
25	Pulp and waste paper	70.5	72.0	72.4	75.1	77.0	80.1	80.7	81.4	82.0	83.4	83.4	83.4	84.3
28	Metalliferous ores and metal scrap	101.4	105.7	104.0	101.7	99.6	100.7	101.2	102.1	101.6	102.3	100.1	99.3	101.1
29	Crude animal and vegetable materials, n.e.s.	121.1	124.3	111.9	110.1	106.7	92.7	101.8	101.3	103.0	104.3	99.1	97.1	102.2
3	**Mineral fuels, lubricants, and related products**	145.2	165.7	165.4	148.5	154.3	172.0	170.6	172.1	189.0	186.3	188.4	177.9	171.3
33	Petroleum, petroleum products, and related materials	146.1	167.9	166.6	147.1	154.2	171.0	168.5	169.9	187.6	181.8	183.4	162.5	152.9
34	Gas, natural and manufactured	147.8	161.4	170.5	171.5	167.5	195.4	202.9	205.4	218.1	242.6	248.0	321.9	338.4
5	**Chemicals and related products, n.e.s.**	92.2	92.7	92.8	93.4	94.3	94.1	95.5	95.9	95.4	95.1	94.7	94.9	95.3
52	Inorganic chemicals	88.3	89.0	88.8	89.8	90.7	91.5	92.5	92.6	92.5	93.1	93.7	94.2	96.6
53	Dying, tanning, and coloring materials	88.9	89.3	88.4	88.0	87.4	86.1	87.6	88.6	87.9	87.0	86.9	86.9	88.8
54	Medicinal and pharmaceutical products	98.2	98.2	97.3	97.3	97.3	96.8	97.5	97.3	96.7	96.0	95.7	95.7	94.6
55	Essential oils; polishing and cleaning preparations	89.6	89.6	89.7	89.4	89.9	89.6	89.9	89.4	88.8	87.6	87.2	86.9	87.4
57	Plastics in primary forms	93.7	93.0	93.9	93.9	94.0	94.3	95.5	95.4	95.3	96.0	95.9	95.8	95.5
58	Plastics in nonprimary forms	79.3	79.0	80.4	80.3	80.8	80.8	81.5	80.9	80.8	80.0	79.5	78.6	80.4
59	Chemical materials and products, n.e.s.	100.0	101.6	100.6	100.0	100.9	99.7	100.2	100.0	101.1	100.4	100.4	100.5	101.6
6	**Manufactured goods classified chiefly by materials**	94.5	95.5	98.0	97.5	97.1	97.6	98.0	98.8	97.9	97.6	97.3	97.3	98.3
62	Rubber manufactures, n.e.s.	92.7	92.8	92.3	92.4	92.5	91.8	92.1	91.9	91.7	91.6	91.5	91.6	91.6
64	Paper, paperboard, and articles of paper, pulp, and paperboard	86.6	86.9	87.1	88.8	89.6	89.1	89.5	89.4	91.4	91.6	91.9	92.2	92.0
66	Nonmetallic mineral manufactures, n.e.s.	100.8	101.2	100.8	100.9	100.7	100.5	100.9	100.9	100.8	100.2	100.2	100.2	100.7
68	Nonferrous metals	98.9	104.4	115.1	110.3	106.9	110.7	112.5	118.7	114.4	115.7	114.3	114.4	121.0
69	Manufactures of metals, n.e.s.	95.7	96.1	96.1	95.9	95.9	95.7	95.8	95.4	95.4	95.2	94.9	95.1	95.5
7	**Machinery and transport equipment**	89.8	89.8	89.6	89.7	89.8	89.6	89.6	89.5	89.3	89.2	89.1	89.0	88.9
72	Machinery specialized for particular industries	97.7	97.9	97.3	97.1	97.0	96.1	96.7	96.5	95.9	95.7	95.4	95.3	95.9
74	General industrial machines and parts, n.e.s., and machine parts	97.0	96.7	97.0	96.9	96.7	96.2	96.7	96.4	96.1	95.5	95.3	95.4	95.8
75	Computer equipment and office machines	61.5	61.4	61.0	60.5	60.2	60.0	59.9	59.9	59.8	58.8	58.8	58.7	58.3
76	Telecommunications and sound recording and reproducing apparatus and equipment	85.2	85.2	84.9	84.5	84.7	84.6	84.3	84.2	84.1	83.9	83.7	83.6	82.9
77	Electrical machinery and equipment	82.4	82.2	82.2	83.0	83.5	83.3	82.8	82.7	82.6	82.7	82.5	82.2	82.0
78	Road vehicles	102.4	102.6	102.6	102.7	102.7	102.8	102.8	102.7	102.6	102.9	102.9	102.8	102.8
85	Footwear	100.8	100.9	100.7	100.5	100.7	100.3	100.9	101.0	100.9	100.8	100.7	100.6	100.9
88	Photographic apparatus, equipment, and supplies, and optical goods, n.e.s.	92.2	91.7	91.8	91.8	91.9	91.6	92.5	92.1	91.4	91.4	91.0	90.7	91.2

36. U.S. export price indexes by end-use category

[1995 = 100]

Category	2000												2001
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.
ALL COMMODITIES	95.4	95.8	96.3	96.2	96.4	96.3	96.2	96.0	96.6	96.5	96.5	96.4	96.6
Foods, feeds, and beverages	86.3	87.2	87.1	87.8	88.3	87.1	85.1	82.8	85.3	85.8	86.7	87.3	88.1
Agricultural foods, feeds, and beverages	85.4	86.0	86.2	87.1	87.7	86.2	84.0	81.3	84.3	84.6	85.7	86.7	87.3
Nonagricultural (fish, beverages) food products	98.3	100.9	97.8	97.0	96.6	98.1	97.9	99.7	97.9	99.5	98.2	95.7	98.3
Industrial supplies and materials	92.1	93.6	95.2	94.6	95.2	95.2	95.5	95.4	96.6	96.2	95.8	95.1	95.3
Agricultural industrial supplies and materials	75.2	76.9	77.7	78.2	78.2	78.2	77.9	80.3	81.9	82.3	82.0	82.9	82.6
Fuels and lubricants	122.7	131.3	143.6	127.8	132.9	135.6	141.1	137.9	155.0	146.9	150.7	146.2	144.8
Nonagricultural supplies and materials, excluding fuel and building materials	89.7	90.4	91.0	91.9	92.1	91.9	91.7	91.7	91.4	91.6	90.8	90.3	90.7
Selected building materials	89.2	89.5	90.1	90.4	90.0	89.9	89.6	90.5	89.4	89.8	89.0	89.0	88.7
Capital goods	96.1	96.0	96.0	96.1	96.1	96.1	96.1	96.1	96.2	96.1	96.2	96.3	96.5
Electric and electrical generating equipment	98.3	98.8	98.8	98.7	98.9	99.2	99.1	99.7	99.9	99.5	99.6	99.7	100.0
Nonelectrical machinery	92.1	91.9	91.8	91.9	91.9	91.7	91.6	91.6	91.5	91.5	91.5	91.5	91.5
Automotive vehicles, parts, and engines	103.9	103.8	104.2	104.2	104.2	104.1	104.4	104.4	104.5	104.5	104.4	104.4	104.4
Consumer goods, excluding automotive	102.4	102.5	102.3	102.4	102.4	102.3	102.5	102.4	102.2	102.3	102.2	102.0	102.0
Nondurables, manufactured	102.8	102.6	102.4	102.3	102.4	102.1	102.4	102.4	102.2	102.4	102.2	102.0	101.8
Durables, manufactured	101.0	101.4	101.0	101.3	101.3	101.3	101.5	101.4	101.3	101.2	101.2	101.1	101.3
Agricultural commodities	83.2	84.0	84.4	85.1	85.6	84.4	82.6	80.9	83.5	83.9	84.7	85.7	86.1
Nonagricultural commodities	96.8	97.2	97.6	97.4	97.7	97.6	97.8	97.7	98.0	97.9	97.8	97.6	97.8

37. U.S. import price indexes by end-use category

[1995 = 100]

Category	2000												2001
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.
ALL COMMODITIES	97.2	99.2	99.3	97.9	98.3	99.6	99.7	99.9	101.0	100.6	100.6	99.8	99.4
Foods, feeds, and beverages	93.6	93.3	92.5	93.3	91.9	91.1	91.1	91.3	90.7	90.7	89.4	90.9	90.5
Agricultural foods, feeds, and beverages	88.4	87.6	86.6	86.7	85.2	84.1	83.7	83.2	82.5	83.0	81.9	84.1	84.0
Nonagricultural (fish, beverages) food products	107.2	108.1	108.3	110.8	109.8	109.7	110.5	112.9	112.5	111.2	109.5	109.1	107.7
Industrial supplies and materials	111.0	118.6	119.8	114.3	115.9	121.8	121.8	122.8	127.6	126.6	126.9	123.7	122.3
Fuels and lubricants	144.2	164.7	163.7	147.7	153.3	170.6	169.2	170.9	187.4	184.5	186.7	176.2	170.7
Petroleum and petroleum products	145.8	167.5	166.2	147.4	154.0	170.4	168.0	169.5	187.1	181.9	183.5	163.6	155.5
Paper and paper base stocks	82.1	82.8	83.1	85.6	86.8	87.0	87.5	87.6	89.8	90.4	90.6	91.0	91.0
Materials associated with nondurable supplies and materials	89.2	89.7	90.4	91.2	92.1	91.7	92.7	93.4	92.8	92.8	92.6	93.3	93.8
Selected building materials	110.5	110.1	112.1	111.9	109.1	105.0	103.4	100.2	98.7	99.3	97.2	99.1	95.4
Unfinished metals associated with durable goods	97.4	100.3	107.1	104.3	102.0	105.0	106.5	109.5	105.9	105.6	104.1	103.8	107.3
Nonmetals associated with durable goods	87.2	88.0	87.6	87.8	87.8	87.0	87.7	87.6	87.2	87.3	87.1	86.9	87.7
Capital goods	81.7	81.6	81.3	81.4	81.2	80.9	80.9	80.7	80.6	80.2	80.1	80.0	79.9
Electric and electrical generating equipment	91.8	91.8	92.1	93.9	94.2	94.3	94.1	93.7	93.5	93.4	93.1	93.1	92.9
Nonelectrical machinery	78.3	78.2	77.9	77.7	77.5	77.1	77.1	77.0	76.8	76.4	76.3	76.1	76.0
Automotive vehicles, parts, and engines	102.1	102.2	102.2	102.3	102.6	102.7	102.8	102.7	102.5	102.6	102.7	102.7	102.7
Consumer goods, excluding automotive	97.5	97.4	97.1	97.1	97.0	96.5	96.8	96.8	96.6	96.6	96.5	96.4	96.5
Nondurables, manufactured	100.4	100.4	100.3	100.3	100.1	99.5	99.8	100.0	99.8	99.8	99.8	99.6	99.8
Durables, manufactured	94.1	93.8	93.5	93.4	93.4	93.2	93.4	93.2	93.0	92.8	92.8	92.8	92.8
Nonmanufactured consumer goods	101.5	102.0	100.1	100.3	99.7	98.0	99.5	99.2	99.6	99.8	99.1	98.8	99.5

38. U.S. international price indexes for selected categories of services

[1995 = 100]

Category	1999				2000			
	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.
Air freight (inbound)	88.0	86.2	87.9	90.7	88.9	88.4	88.5	87.4
Air freight (outbound)	92.7	92.8	92.7	91.7	91.7	92.8	92.6	92.6
Air passenger fares (U.S. carriers)	104.5	112.3	114.2	106.8	107.3	113.3	115.5	111.9
Air passenger fares (foreign carriers)	98.9	106.3	108.6	102.2	102.6	107.9	109.1	103.2
Ocean liner freight (inbound)	102.6	133.7	148.0	139.4	136.3	143.0	142.8	142.8

39. Indexes of productivity, hourly compensation, and unit costs, quarterly data seasonally adjusted

[1992 = 100]

Item	Quarterly indexes												
	1997	1998				1999				2000			
	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
Business													
Output per hour of all persons	108.7	110.0	110.3	110.8	111.8	112.5	112.7	114.0	116.1	116.6	118.6	119.3	120.2
Compensation per hour	115.6	117.4	118.9	120.3	121.6	123.0	124.3	125.9	127.1	128.2	130.4	132.2	134.6
Real compensation per hour	101.8	103.2	104.1	105.0	105.7	106.4	106.8	107.4	107.6	107.5	108.6	109.1	110.3
Unit labor costs	106.3	106.7	107.8	108.6	108.8	109:3	110.4	110.5	109.5	110.0	110.0	110.8	112.0
Unit nonlabor payments	116.7	116.3	115.1	114.5	114.6	115.1	114.2	114.4	116.9	118.2	120.0	119.5	118.7
Implicit price deflator	110.2	110.3	110.5	110.7	110.9	111.4	111.8	111.9	112.2	113.0	113.7	114.0	114.5
Nonfarm business													
Output per hour of all persons	108.4	109.6	110.1	110.5	111.4	111.9	112.0	113.4	115.6	116.2	118.0	118.8	119.5
Compensation per hour	115.0	116.8	118.3	119.8	120.9	122.1	123.4	125.0	126.3	127.6	129.4	131.4	133.5
Real compensation per hour	101.3	102.6	103.6	104.5	105.1	105.6	106.0	106.6	107.0	107.0	107.8	108.5	109.4
Unit labor costs	106.1	106.5	107.5	108.4	108.6	109.0	110.2	110.2	109.3	109.8	109.7	110.6	111.8
Unit nonlabor payments	117.8	117.4	116.2	115.7	115.8	116.7	115.8	116.1	118.6	120.1	121.8	121.4	120.6
Implicit price deflator	110.4	110.5	110.7	111.0	111.2	111.8	112.2	112.4	112.7	113.6	114.1	114.5	115.0
Nonfinancial corporations													
Output per hour of all employees	109.6	110.6	111.7	113.1	113.7	114.6	115.3	116.6	118.3	119.2	120.8	122.1	–
Compensation per hour	111.9	113.7	115.2	116.7	117.8	119.0	120.3	121.8	123.0	123.9	125.8	127.7	–
Real compensation per hour	98.5	99.9	100.9	101.8	102.4	103.0	103.3	103.9	104.2	103.9	104.8	105.4	–
Total unit costs	101.7	102.3	102.6	102.5	103.2	103.2	103.7	104.0	103.9	104.0	104.3	104.8	–
Unit labor costs	102.1	102.8	103.1	103.2	103.6	103.9	104.3	104.5	104.0	104.0	104.2	104.5	–
Unit nonlabor costs	100.6	100.7	101.2	100.7	102.1	101.3	102.2	102.9	103.4	104.2	104.9	105.5	–
Unit profits	156.8	150.8	147.7	152.0	145.3	150.6	148.6	144.4	147.0	152.2	156.3	153.0	–
Unit nonlabor payments	114.9	113.5	113.0	113.8	113.1	113.9	114.0	113.5	114.5	116.4	118.0	117.6	–
Implicit price deflator	106.3	106.4	106.4	106.7	106.8	107.2	107.5	107.5	107.5	108.1	108.8	108.9	–
Manufacturing													
Output per hour of all persons	119.8	121.7	123.2	125.7	126.8	128.9	130.2	131.9	135.0	137.7	139.8	142.1	144.0
Compensation per hour	113.4	115.4	116.8	118.0	119.0	119.9	121.2	122.8	124.1	125.7	127.0	129.1	131.8
Real compensation per hour	99.8	101.4	102.2	103.0	103.4	103.7	104.1	104.7	105.2	105.4	105.7	106.6	108.0
Unit labor costs	94.7	94.9	94.8	93.9	93.9	93.0	93.1	93.1	91.9	91.2	90.8	90.9	91.5

NOTE: Dash indicates data not available.

40. Annual indexes of multifactor productivity and related measures, selected years

[1996 = 100, unless otherwise indicated]

Item	1960	1970	1980	1990	1991	1992	1993	1994	1995	1996	1997	1998
Private business												
Productivity:												
Output per hour of all persons	45.6	63.0	75.8	90.2	91.3	94.8	95.4	96.6	97.3	100.0	102.0	104.8
Output per unit of capital services	110.4	111.1	101.5	99.3	96.1	97.7	98.5	100.3	99.7	100.0	100.5	100.1
Multifactor productivity	65.2	80.0	88.3	95.3	94.4	96.6	97.1	98.1	98.4	100.0	101.1	102.6
Output	27.5	42.0	59.4	83.6	82.6	85.7	88.5	92.8	95.8	100.0	105.2	110.6
Inputs:												
Labor input	54.0	61.0	71.9	89.4	88.3	89.3	91.8	95.6	98.0	100.0	103.7	106.4
Capital services	24.9	37.8	58.6	84.2	86.0	87.7	89.8	92.6	96.0	100.0	104.7	110.4
Combined units of labor and capital input	42.3	52.4	67.3	87.7	87.5	88.8	91.1	94.6	97.3	100.0	104.0	107.7
Capital per hour of all persons	41.3	56.7	74.7	90.8	95.0	97.0	96.8	96.3	97.6	100.0	101.5	104.7
Private nonfarm business												
Productivity:												
Output per hour of all persons	48.7	64.9	77.3	90.3	91.4	94.8	95.3	96.5	97.5	100.0	101.7	104.5
Output per unit of capital services	120.1	118.3	105.7	100.0	96.6	97.9	98.8	100.3	99.9	100.0	100.2	99.8
Multifactor productivity	69.1	82.6	90.5	95.6	94.7	96.6	97.1	98.1	98.6	100.0	100.9	102.4
Output	27.2	41.9	59.6	83.5	82.5	85.5	88.4	92.6	95.8	100.0	105.1	110.6
Inputs:												
Labor input	50.1	59.3	70.7	89.2	88.0	89.0	91.8	95.4	97.8	100.0	103.8	106.6
Capital services	22.6	35.5	56.4	83.5	85.4	87.3	89.5	92.3	95.9	100.0	104.9	110.8
Combined units of labor and capital input	39.3	50.7	65.9	87.3	87.1	88.4	91.0	94.4	97.2	100.0	104.2	108.0
Capital per hour of all persons	40.5	54.8	73.1	90.3	94.7	96.8	96.5	96.3	97.6	100.0	101.5	104.7
Manufacturing (1992 = 100)												
Productivity:												
Output per hour of all persons	41.8	54.2	70.1	92.8	95.0	100.0	101.9	105.0	109.0	112.8	117.1	124.3
Output per unit of capital services	124.3	116.5	100.9	101.6	97.5	100.0	101.1	104.0	105.0	104.5	105.6	106.5
Multifactor productivity	72.7	84.4	86.6	99.3	98.3	100.0	100.4	102.6	105.0	106.1	109.8	113.2
Output	38.5	56.5	75.3	97.3	95.4	100.0	103.3	108.7	113.4	116.9	123.5	130.7
Inputs:												
Hours of all persons	92.0	104.2	107.5	104.8	100.4	100.0	101.4	103.6	104.0	103.7	105.5	105.2
Capital services	30.9	48.5	74.7	95.8	97.9	100.0	102.2	104.5	108.0	111.9	116.9	122.8
Energy	51.3	85.4	92.5	99.9	100.1	100.0	103.7	107.3	109.5	107.0	103.9	109.2
Nonenergy materials	38.2	44.8	75.0	92.5	93.6	100.0	105.7	111.3	112.8	120.4	120.4	127.2
Purchased business services	28.2	48.8	73.7	92.5	92.1	100.0	103.0	105.1	110.0	108.9	114.2	116.8
Combined units of all factor inputs	52.9	67.0	87.0	98.0	97.0	100.0	102.9	106.0	107.9	110.2	112.5	115.5

41. Annual indexes of productivity, hourly compensation, unit costs, and prices, selected years

[1992 = 100]

Item	1960	1970	1980	1990	1991	1993	1994	1995	1996	1997	1998	1999	2000
Business													
Output per hour of all persons	48.8	67.0	80.4	95.2	96.3	100.5	101.9	102.6	105.4	107.8	110.8	113.8	118.6
Compensation per hour	13.7	23.5	54.2	90.7	95.0	102.5	104.5	106.7	110.1	113.5	119.6	125.1	131.4
Real compensation per hour	60.0	78.9	89.4	96.5	97.5	99.9	99.7	99.3	99.7	100.6	104.6	107.1	109.0
Unit labor costs	28.0	35.1	67.4	95.3	98.7	101.9	102.6	104.1	104.5	105.3	108.0	109.9	110.7
Unit nonlabor payments	25.2	31.6	61.5	93.9	97.0	102.5	106.4	109.4	113.3	117.1	115.1	115.1	119.1
Implicit price deflator	27.0	33.9	65.2	94.8	98.1	102.2	104.0	106.0	107.7	109.7	110.6	111.8	113.8
Nonfarm business													
Output per hour of all persons	51.9	68.9	82.0	95.3	96.4	100.5	101.8	102.8	105.4	107.5	110.4	113.2	118.1
Compensation per hour	14.3	23.7	54.6	90.5	95.0	102.2	104.3	106.6	109.8	113.1	119.0	124.2	130.5
Real compensation per hour	62.8	79.5	90.0	96.3	97.5	99.6	99.5	99.2	99.4	100.2	104.0	106.4	108.2
Unit labor costs	27.5	34.4	66.5	95.0	98.5	101.7	102.5	103.7	104.2	105.2	107.7	109.7	110.5
Unit nonlabor payments	24.6	31.3	60.5	93.6	97.1	103.0	106.9	110.4	113.5	118.0	116.3	116.8	121.0
Implicit price deflator	26.5	33.3	64.3	94.5	98.0	102.2	104.1	106.1	107.6	109.8	110.8	112.3	114.3
Nonfinancial corporations													
Output per hour of all employees	55.4	70.4	81.1	95.4	97.7	100.7	103.1	104.2	107.5	108.4	112.3	116.2	–
Compensation per hour	15.6	25.3	56.4	90.8	95.3	102.0	104.2	106.2	109.0	110.3	115.9	121.1	–
Real compensation per hour	68.3	84.7	93.1	96.7	97.8	99.5	99.4	98.8	98.7	97.8	101.3	103.7	–
Total unit costs	26.8	34.8	68.4	95.9	98.8	101.0	101.1	102.0	101.2	101.5	102.6	103.7	–
Unit labor costs	28.1	35.9	69.6	95.2	97.5	101.3	101.0	101.9	101.4	101.8	103.2	104.2	–
Unit nonlabor costs	23.3	31.9	65.1	98.0	102.1	100.2	101.3	102.2	100.6	100.9	101.2	102.5	–
Unit profits	50.2	44.4	68.8	94.3	93.0	113.2	131.7	139.0	152.2	156.9	148.9	147.6	–
Unit nonlabor payments	30.2	35.1	66.0	97.1	99.7	103.5	109.0	111.6	113.8	115.2	113.4	114.0	–
Implicit price deflator	28.8	35.6	68.4	95.8	98.3	102.1	103.7	105.1	105.5	106.2	106.6	107.4	–
Manufacturing													
Output per hour of all persons	41.8	54.2	70.1	92.8	95.0	101.9	105.0	109.0	112.8	117.1	124.3	131.5	140.9
Compensation per hour	14.9	23.7	55.6	90.8	95.6	102.7	105.6	107.9	109.3	111.4	117.3	122.0	128.4
Real compensation per hour	65.2	79.5	91.7	96.6	98.1	100.2	100.8	100.4	99.0	98.8	102.6	104.5	106.5
Unit labor costs	35.6	43.8	79.3	97.8	100.6	100.8	100.7	99.0	96.9	95.1	94.4	92.8	91.1
Unit nonlabor payments	26.8	29.3	80.2	99.7	99.0	100.9	102.8	106.9	109.9	109.6	104.4	–	–
Implicit price deflator	30.2	34.9	79.8	99.0	99.6	100.9	102.0	103.9	104.9	104.0	100.5	–	–

Dash indicates data not available.

42. Annual indexes of output per hour for selected 3-digit SIC industries

[1987 = 100]

Industry	SIC	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Mining												
Gold and silver ores	104	101.5	113.3	122.3	127.4	141.6	159.8	160.8	144.2	138.3	159.0	186.3
Bituminous coal and lignite mining	122	111.7	117.3	118.7	122.4	133.0	141.2	148.1	155.9	168.0	176.6	187.3
Crude petroleum and natural gas	131	101.0	98.0	97.0	97.9	102.1	105.9	112.4	119.4	123.9	125.2	128.7
Crushed and broken stone	142	101.3	98.7	102.2	99.8	105.0	103.6	108.7	105.4	107.2	114.0	111.9
Manufacturing												
Meat products	201	100.1	99.2	97.1	99.6	104.6	104.3	101.2	102.3	97.4	103.2	102.8
Dairy products	202	108.4	107.7	107.3	108.3	111.4	109.6	111.8	116.4	116.0	119.5	119.7
Preserved fruits and vegetables	203	97.0	97.8	95.6	99.2	100.5	106.8	107.6	109.1	109.1	111.7	116.5
Grain mill products	204	101.3	107.6	105.4	104.9	107.8	109.2	108.4	115.4	108.0	118.7	128.7
Bakery products	205	96.8	96.1	92.7	90.6	93.8	94.4	96.4	97.3	95.6	99.3	102.1
Sugar and confectionery products	206	99.5	101.8	103.2	102.0	99.8	104.5	106.2	108.3	113.8	117.1	123.2
Fats and oils	207	108.9	116.4	118.1	120.1	114.1	112.6	111.8	120.3	110.1	120.0	138.3
Beverages	208	105.6	112.2	117.0	120.0	127.1	126.4	130.1	133.5	135.0	135.5	137.4
Miscellaneous food and kindred products	209	107.0	99.1	99.2	101.7	101.5	105.2	100.9	102.9	109.1	103.9	113.2
Cigarettes	211	101.2	109.0	113.2	107.6	111.6	106.5	126.6	142.9	147.2	147.2	152.2
Broadwoven fabric mills, cotton	221	99.6	99.8	103.1	111.2	110.3	117.8	122.1	134.0	137.3	130.9	135.1
Broadwoven fabric mills, manmade	222	99.2	106.3	111.3	116.2	126.2	131.7	142.5	145.3	147.6	161.9	167.3
Narrow fabric mills	224	108.4	92.7	96.5	99.6	112.9	111.4	120.1	118.9	126.3	107.7	114.1
Knitting mills	225	96.6	108.0	107.5	114.0	119.3	127.9	134.1	138.3	150.3	149.9	149.9
Textile finishing, except wool	226	90.3	88.7	83.4	79.9	78.6	79.3	81.2	78.5	79.2	94.0	100.5
Carpets and rugs	227	98.6	97.8	93.2	89.2	96.1	97.1	93.3	95.8	100.2	100.3	103.0
Yarn and thread mills	228	102.1	104.2	110.2	111.4	119.6	126.6	130.7	137.4	147.4	150.1	154.2
Miscellaneous textile goods	229	101.6	109.1	109.2	104.6	106.5	110.4	118.5	123.7	123.1	117.9	120.3
Men's and boys' furnishings	232	100.1	100.1	102.1	108.4	109.1	108.4	111.7	123.4	134.7	152.4	166.9
Women's and misses' outerwear	233	101.4	96.8	104.1	104.3	109.4	121.8	127.4	135.5	141.6	151.5	153.1
Women's and children's undergarments	234	105.4	94.6	102.1	113.6	117.4	124.5	138.0	161.3	174.5	196.3	215.2
Hats, caps, and millinery	235	99.0	96.4	89.2	91.1	93.6	87.2	77.7	84.3	82.2	83.5	99.4
Miscellaneous apparel and accessories	238	101.3	88.4	90.6	91.8	91.3	94.0	105.5	116.8	120.1	105.2	109.8
Miscellaneous fabricated textile products	239	96.6	95.7	99.9	100.7	107.5	108.5	107.8	109.2	105.6	117.0	118.0
Sawmills and planing mills	242	100.7	99.6	99.8	102.6	108.1	101.9	103.3	110.2	115.6	117.5	120.4
Millwork, plywood, and structural members	243	98.8	97.1	98.0	98.0	99.9	97.0	94.5	92.7	92.4	89.9	92.5
Wood containers	244	103.1	108.8	111.2	113.1	109.4	100.1	100.9	106.1	106.7	106.6	107.0
Wood buildings and mobile homes	245	97.8	98.8	103.1	103.0	103.1	103.8	98.3	97.0	96.7	101.1	99.7
Miscellaneous wood products	249	95.9	102.4	107.7	110.5	114.2	115.3	111.8	115.4	114.4	123.1	132.3
Household furniture	251	99.4	102.0	104.5	107.1	110.5	110.6	112.5	116.9	121.6	121.8	127.5
Office furniture	252	94.3	97.5	95.0	94.1	102.5	103.2	100.5	101.1	106.4	117.9	113.8
Public building and related furniture	253	109.6	113.7	119.8	120.2	140.6	161.0	157.4	173.3	181.5	186.5	205.3
Partitions and fixtures	254	95.7	92.4	95.6	93.0	102.7	107.4	98.9	101.2	97.5	121.4	127.7
Miscellaneous furniture and fixtures	259	103.6	101.9	103.5	102.1	99.5	103.6	104.7	110.0	113.2	102.2	123.1
Pulp mills	261	99.6	107.4	116.7	128.3	137.3	122.5	128.9	131.9	132.6	104.4	108.9
Paper mills	262	103.9	103.6	102.3	99.2	103.3	102.4	110.2	118.6	111.6	107.0	110.8
Paperboard mills	263	105.5	101.9	100.6	101.4	104.4	108.4	114.9	119.5	118.0	124.2	127.6
Paperboard containers and boxes	265	99.7	101.5	101.3	103.4	105.2	107.9	108.4	105.1	106.3	110.1	114.4
Miscellaneous converted paper products	267	101.1	101.6	101.4	105.3	105.5	107.9	110.6	113.3	113.6	121.7	124.8
Newspapers	271	96.9	95.2	90.6	85.8	81.5	79.4	79.9	79.0	77.4	79.0	83.0
Periodicals	272	97.9	98.3	93.9	89.5	92.9	89.5	81.9	87.8	89.1	100.1	97.6
Books	273	99.1	94.1	96.6	100.8	97.7	103.5	103.0	101.6	99.3	102.2	97.1
Miscellaneous publishing	274	96.7	89.0	92.2	95.9	105.8	104.5	97.5	94.8	93.6	114.5	114.2
Commercial printing	275	100.0	101.1	102.5	102.0	108.0	106.9	106.5	107.2	108.3	109.2	110.7
Manifold business forms	276	98.7	89.7	93.0	89.1	94.5	91.1	82.0	76.9	75.2	78.9	76.4
Greeting cards	277	100.1	109.1	100.6	92.7	96.7	91.4	89.0	92.5	90.8	92.2	104.5
Blankbooks and bookbinding	278	95.6	94.2	99.4	96.1	103.6	98.7	105.4	108.7	114.5	115.3	124.7
Printing trade services	279	99.9	94.3	99.3	100.6	112.0	115.3	111.0	116.7	126.2	124.2	127.6
Industrial inorganic chemicals	281	105.7	104.3	106.8	109.7	109.7	105.6	102.3	109.3	110.1	116.1	145.7
Plastics materials and synthetics	282	98.8	99.7	100.9	100.0	107.5	112.0	125.3	128.3	125.3	133.8	142.6
Drugs	283	101.0	102.8	103.8	104.5	99.5	99.9	104.9	108.7	112.1	112.6	105.3
Soaps, cleaners, and toilet goods	284	102.0	100.6	103.8	105.3	104.4	108.7	111.2	118.6	120.9	130.4	129.2
Paints and allied products	285	101.4	103.3	106.3	104.3	102.9	108.8	116.7	118.0	125.6	127.2	128.8
Industrial organic chemicals	286	109.9	110.4	101.4	95.8	94.6	92.2	99.9	98.6	99.0	112.9	111.3
Agricultural chemicals	287	103.7	104.3	104.7	99.5	99.5	103.8	105.0	108.5	110.0	120.4	117.0

See footnotes at end of table.

42. Continued--Annual indexes of output per hour for selected 3-digit SIC industries

[1987 = 100]

Industry	SIC	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Miscellaneous chemical products	289	95.4	95.2	97.3	96.1	101.8	107.1	105.7	107.8	110.1	120.2	120.9
Petroleum refining	291	105.3	109.6	109.2	106.6	111.3	120.1	123.8	132.3	142.0	149.2	155.8
Asphalt paving and roofing materials	295	98.3	95.3	98.0	94.1	100.4	108.0	104.9	111.2	113.1	120.8	129.5
Miscellaneous petroleum and coal products	299	98.4	101.9	94.8	90.6	101.5	104.2	96.3	87.4	87.1	97.2	100.7
Tires and inner tubes	301	102.9	103.8	103.0	102.4	107.8	116.5	124.1	131.1	138.8	148.5	145.2
Hose and belting and gaskets and packing	305	103.7	96.3	96.1	92.4	97.8	99.7	102.7	104.6	107.4	112.4	111.7
Fabricated rubber products, n.e.c.	306	104.2	105.5	109.0	109.9	115.2	123.1	119.1	121.5	121.0	125.5	133.2
Miscellaneous plastics products, n.e.c.	308	100.5	101.8	105.7	108.3	114.4	116.7	120.8	121.0	124.7	130.2	134.6
Footwear, except rubber	314	101.3	101.1	101.1	94.4	104.2	105.2	113.0	117.1	126.1	129.4	111.6
Flat glass	321	91.9	90.7	84.5	83.6	92.7	97.7	97.6	99.6	101.5	107.6	114.0
Glass and glassware, pressed or blown	322	100.6	100.2	104.8	102.3	108.9	108.7	112.9	115.7	121.4	128.2	135.1
Products of purchased glass	323	95.9	90.1	92.6	97.7	101.5	106.2	105.9	106.1	122.0	125.3	120.0
Cement, hydraulic	324	103.2	110.2	112.4	108.3	115.1	119.9	125.6	124.3	128.7	133.1	134.1
Structural clay products	325	98.8	103.1	109.6	109.8	111.4	106.8	114.0	112.6	119.6	116.1	115.4
Pottery and related products	326	99.6	97.1	98.6	95.8	99.5	100.3	108.4	109.3	119.3	116.1	127.6
Concrete, gypsum, and plaster products	327	100.8	102.4	102.3	101.2	102.5	104.6	101.5	104.5	107.3	109.2	113.4
Miscellaneous nonmetallic mineral products	329	103.0	95.5	95.4	94.0	104.3	104.5	106.3	107.8	110.4	112.7	117.1
Blast furnace and basic steel products	331	112.6	108.1	109.7	107.8	117.0	133.6	142.4	142.6	147.5	155.0	152.3
Iron and steel foundries	332	104.0	105.4	106.1	104.5	107.2	112.1	113.0	112.7	116.2	121.7	121.7
Primary nonferrous metals	333	107.8	106.1	102.3	110.7	101.9	107.9	105.3	111.0	110.8	116.0	125.0
Nonferrous rolling and drawing	335	95.5	93.6	92.7	91.0	96.0	98.3	101.2	99.2	104.0	112.3	115.0
Nonferrous foundries (castings)	336	102.6	105.1	104.0	103.6	103.6	108.5	112.1	117.8	122.3	126.4	131.1
Miscellaneous primary metal products	339	106.6	105.0	113.7	109.1	114.5	111.3	134.5	152.2	149.6	140.9	139.7
Metal cans and shipping containers	341	106.5	108.5	117.6	122.9	127.8	132.3	140.9	144.2	155.2	160.8	155.8
Cutlery, handtools, and hardware	342	97.8	101.7	97.3	96.8	100.1	104.0	109.2	111.3	118.2	113.1	115.2
Plumbing and heating, except electric	343	103.7	101.5	102.6	102.0	98.4	102.0	109.1	109.2	118.6	127.2	131.3
Fabricated structural metal products	344	100.4	96.9	98.8	100.0	103.9	104.8	107.7	105.8	106.5	110.0	112.5
Metal forgings and stampings	346	101.5	99.8	95.6	92.9	103.7	108.7	108.5	109.3	113.6	120.2	125.9
Metal services, n.e.c.	347	108.3	102.4	104.7	99.4	111.6	120.6	123.0	127.7	128.4	123.5	128.5
Ordnance and accessories, n.e.c.	348	97.7	89.8	82.1	81.5	88.6	84.6	83.6	87.6	87.5	100.5	94.6
Miscellaneous fabricated metal products	349	101.4	95.9	97.5	97.4	101.1	102.0	103.2	106.6	108.3	106.2	112.4
Engines and turbines	351	106.8	110.7	106.5	105.8	103.3	109.2	122.3	122.7	136.6	134.2	142.8
Farm and garden machinery	352	106.3	110.7	116.5	112.9	113.9	118.6	125.0	134.7	137.2	141.0	148.7
Construction and related machinery	353	106.5	108.3	107.0	99.1	102.0	108.2	117.7	122.1	123.3	131.8	137.1
Metalworking machinery	354	101.0	103.5	101.1	96.4	104.3	107.4	109.9	114.8	114.9	118.6	120.2
Special industry machinery	355	104.6	108.3	107.5	108.3	106.0	113.6	121.2	132.3	134.0	130.1	125.9
General industrial machinery	356	105.9	101.5	101.5	101.6	101.6	104.8	106.7	109.0	109.4	110.1	112.4
Computer and office equipment	357	121.4	124.2	138.1	149.6	195.7	258.6	328.6	469.4	681.3	937.0	1345.8
Refrigeration and service machinery	358	102.1	106.0	103.6	100.7	104.9	108.6	110.7	112.7	114.7	114.8	121.3
Industrial machinery, n.e.c.	359	106.5	107.1	107.3	109.0	117.0	118.5	127.4	138.8	141.4	129.7	127.6
Electric distribution equipment	361	105.4	105.0	106.3	106.5	119.6	122.2	131.8	143.0	143.9	143.9	147.8
Electrical industrial apparatus	362	104.6	107.4	107.7	107.1	117.1	132.9	134.9	150.8	154.3	163.9	162.6
Household appliances	363	103.0	104.7	105.8	106.5	115.0	123.4	131.4	127.3	127.4	138.1	151.7
Electric lighting and wiring equipment	364	101.9	100.2	99.9	97.5	105.7	107.8	113.4	113.7	116.9	121.4	129.3
Communications equipment	366	110.5	107.2	121.4	124.5	146.7	150.3	166.0	170.9	190.3	221.0	228.4
Electronic components and accessories	367	109.0	119.8	133.4	154.7	189.3	217.9	274.1	401.5	514.9	610.5	764.4
Miscellaneous electrical equipment & supplies	369	102.8	99.6	90.6	98.6	101.3	108.2	110.5	114.1	123.1	124.6	130.5
Motor vehicles and equipment	371	103.2	103.3	102.4	96.6	104.2	106.2	108.8	106.7	107.2	116.5	125.7
Aircraft and parts	372	100.6	98.2	98.9	108.2	112.3	115.2	109.6	107.9	113.0	114.1	140.4
Ship and boat building and repairing	373	99.4	97.6	103.7	96.3	102.7	106.2	103.8	98.0	99.2	104.3	101.6
Railroad equipment	374	113.5	135.3	141.1	146.9	147.9	151.0	152.5	150.0	148.3	183.2	191.7
Motorcycles, bicycles, and parts	375	92.6	94.6	93.8	99.8	108.4	130.9	125.1	120.3	125.5	120.6	127.8
Guided missiles, space vehicles, parts	376	104.1	110.6	116.5	110.5	110.5	122.1	118.9	121.0	129.4	126.6	132.1
Search and navigation equipment	381	104.8	105.8	112.7	118.9	122.1	129.1	132.1	149.5	142.2	148.9	148.8
Measuring and controlling devices	382	103.7	101.7	106.4	113.1	119.9	124.0	133.8	146.4	150.5	143.0	147.3
Medical instruments and supplies	384	105.2	107.9	116.9	118.7	123.5	127.3	126.7	131.5	139.8	146.3	159.4
Ophthalmic goods	385	112.6	123.3	121.2	125.1	144.5	157.8	160.6	167.2	188.2	202.6	211.7
Photographic equipment & supplies	386	105.6	113.0	107.8	110.2	116.4	126.9	132.7	129.5	128.7	121.6	125.9
Jewelry, silverware, and plated ware	391	100.1	102.9	99.3	95.8	96.7	96.7	99.5	100.2	102.6	117.2	111.7
Musical instruments	393	101.8	96.1	97.1	96.9	96.0	95.6	88.7	86.9	78.8	83.9	83.5

See footnotes at end of table.

42. Continued--Annual indexes of output per hour for selected 3-digit SIC industries

[1987 = 100]

Industry	SIC	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Toys and sporting goods	394	104.8	106.0	108.1	109.7	104.9	114.2	109.7	113.6	119.9	125.1	134.8
Pens, pencils, office, and art supplies	395	108.3	112.9	118.2	116.8	111.3	111.6	129.9	135.2	144.1	127.9	147.6
Costume jewelry and notions	396	102.0	93.8	105.3	106.7	110.8	115.8	129.0	143.7	142.2	116.1	122.9
Miscellaneous manufactures	399	102.1	100.9	106.5	109.2	109.5	107.7	106.1	108.1	112.8	109.3	109.5
Transportation												
Railroad transportation	4011	108.4	114.6	118.5	127.8	139.6	145.4	150.3	156.2	167.0	170.1	–
Trucking, except local [1]	4213	105.2	109.3	111.1	116.9	123.4	126.6	129.5	125.4	130.9	132.4	130.1
U.S. postal service [2]	431	99.9	99.7	104.0	103.7	104.5	107.1	106.6	106.5	104.7	108.3	109.5
Air transportation [1]	4512,13,22 (pts.)	99.5	95.8	92.9	92.5	96.9	100.2	105.7	108.6	111.1	111.6	108.5
Utitlities												
Telephone communications	481	106.2	111.6	113.3	119.8	127.7	135.5	142.2	148.1	159.5	160.9	171.2
Radio and television broadcasting	483	103.1	106.2	104.9	106.1	108.3	106.7	110.1	109.6	105.8	101.1	100.8
Cable and other pay TV services	484	102.0	99.7	92.5	87.5	88.3	86.7	85.6	86.7	84.4	87.6	88.0
Electric utilities	491,3 (pt.)	104.9	107.7	110.1	113.4	115.2	120.6	126.8	135.0	146.5	150.5	157.2
Gas utilities	492,3 (pt.)	108.3	111.2	105.8	109.6	111.1	121.8	125.6	137.1	145.9	158.6	153.4
Trade												
Lumber and other building materials dealers	521	101.0	99.1	103.6	101.3	105.4	110.5	118.3	117.6	121.7	122.2	133.0
Paint, glass, and wallpaper stores	523	102.8	101.7	106.0	99.4	106.5	114.7	130.2	135.3	140.2	143.8	166.0
Hardware stores	525	108.6	115.2	110.5	102.5	107.2	105.8	112.7	108.5	112.1	111.2	125.3
Retail nurseries, lawn and garden supply stores	526	106.7	103.4	83.9	88.5	100.4	106.6	116.6	117.2	136.6	128.1	136.1
Department stores	531	99.2	97.0	94.2	98.2	100.9	105.7	108.6	110.9	118.4	123.5	129.4
Variety stores	533	101.9	124.4	151.2	154.2	167.7	184.7	190.1	203.2	229.2	247.6	262.5
Miscellaneous general merchandise stores	539	100.8	109.8	116.4	121.8	136.1	159.7	160.9	163.9	164.9	168.2	189.9
Grocery stores	541	98.9	95.4	94.6	93.7	93.3	92.8	92.5	91.2	89.4	89.2	90.2
Meat and fish (seafood) markets	542	99.0	97.6	96.8	88.4	95.8	93.7	91.1	89.1	81.1	84.7	89.9
Retail bakeries	546	89.8	83.3	89.7	94.7	94.0	86.5	87.2	86.8	81.7	75.4	65.0
New and used car dealers	551	103.4	102.5	106.1	104.1	106.5	107.6	108.7	107.1	108.2	107.8	108.0
Auto and home supply stores	553	103.2	101.6	102.7	99.0	100.0	98.7	102.6	105.7	104.6	104.2	107.0
Gasoline service stations	554	103.0	105.2	102.6	104.3	109.7	115.2	120.4	126.3	125.1	125.0	130.6
Men's and boy's wear stores	561	106.0	109.6	113.7	119.2	118.2	115.5	117.9	117.5	125.7	132.2	145.5
Women's clothing stores	562	97.8	99.5	101.5	103.0	112.2	118.4	119.3	128.5	142.3	145.8	154.8
Family clothing stores	565	102.0	104.9	104.5	106.4	111.7	114.5	120.4	133.8	138.8	142.1	145.6
Shoe stores	566	102.7	107.2	106.1	105.1	111.5	113.2	126.3	134.5	146.9	143.5	136.4
Furniture and homefurnishings stores	571	98.6	100.9	101.8	101.5	108.4	107.6	108.8	112.0	118.6	119.4	121.6
Household appliance stores	572	98.5	103.5	102.8	105.2	113.9	117.0	121.2	138.7	141.8	155.5	184.5
Radio, television, computer, and music stores	573	118.6	114.6	119.6	128.3	137.8	152.7	177.0	196.7	204.6	215.1	258.9
Eating and drinking places	581	102.8	102.2	104.0	103.1	102.5	102.8	101.1	100.9	99.5	100.5	101.1
Drug and proprietary stores	591	101.9	102.5	103.6	104.7	103.6	105.4	105.7	106.9	109.6	115.4	117.7
Liquor stores	592	98.2	101.1	105.2	105.9	108.4	100.7	99.1	103.7	112.8	108.9	113.9
Used merchandise stores	593	105.3	104.9	100.3	98.6	110.4	112.1	115.4	117.3	129.8	138.0	158.4
Miscellaneous shopping goods stores	594	100.7	104.2	104.2	105.0	102.7	106.5	111.9	117.8	120.0	123.7	131.5
Nonstore retailers	596	105.6	110.8	108.8	109.3	122.1	127.5	143.3	146.1	165.5	177.2	193.5
Fuel dealers	598	95.6	92.0	84.4	85.3	84.4	92.7	100.7	114.2	115.8	113.4	112.0
Retail stores, n.e.c.	599	105.9	103.1	113.7	103.2	111.6	117.3	125.0	126.2	139.5	147.3	157.6
Finance and services												
Commercial banks	602	102.8	104.8	107.7	110.1	111.0	118.5	121.7	126.4	129.7	133.0	133.0
Hotels and motels	701	97.6	95.0	96.1	99.1	107.8	106.2	109.6	110.1	109.7	107.9	108.8
Laundry, cleaning, and garment services	721	97.2	99.7	101.8	99.2	98.3	98.9	104.0	105.5	108.7	108.0	113.5
Photographic studios, portrait	722	100.1	94.9	96.6	92.8	97.7	105.9	117.4	129.3	126.6	133.7	153.4
Beauty shops	723	95.1	99.6	96.8	94.8	99.6	95.7	99.8	103.5	106.3	107.5	108.4
Barber shops	724	108.8	111.6	100.2	94.1	112.1	120.8	117.7	114.6	127.6	149.0	153.0
Funeral services and crematories	726	102.5	97.9	90.9	89.5	103.2	98.2	103.8	99.7	97.1	101.3	107.0
Automotive repair shops	753	105.7	108.1	106.9	98.7	103.3	104.0	112.3	119.5	114.1	115.2	121.2
Motion picture theaters	783	107.1	114.3	115.8	116.0	110.8	109.8	106.5	101.4	100.5	99.8	101.3

[1] Refers to output per employee.

[2] Refers to ouput per full-time equivalent employee year on fiscal basis.

n.e.c. = not elsewhere classified

43. Unemployment rates, approximating U.S. concepts, in nine countries, quarterly data seasonally adjusted

Country	Annual average		1999				2000			
	1999	2000	I	II	III	IV	I	II	III	IV
United States	4.2	4.0	4.3	4.3	4.2	4.1	4.1	4.0	4.0	4.0
Canada	6.8	5.8	7.1	7.1	6.8	6.2	6.0	5.8	5.8	5.7
Australia	7.2	6.6	7.5	7.4	7.1	7.0	6.8	6.7	6.3	6.5
Japan[1]	4.7	4.8	4.7	4.8	4.8	4.7	4.8	4.7	4.7	4.8
France[1]	11.2	9.7	11.4	11.3	11.2	10.8	10.2	9.7	9.6	9.2
Germany[1]	8.7	8.3	8.8	8.8	8.8	8.7	8.4	8.3	8.2	8.1
Italy[1,2]	11.5	10.7	11.8	11.7	11.5	11.2	11.3	10.8	10.6	10.1
Sweden[1]	7.1	5.9	7.1	7.0	7.1	7.1	6.7	6.0	5.6	5.2
United Kingdom[1]	6.1	–	6.2	6.1	5.9	5.9	5.8	5.5	5.4	–

[1] Preliminary for 2000 for Japan, France, Germany (unified), Italy, and Sweden and for 1999 onward for the United Kingdom.

[2] Quarterly rates are for the first month of the quarter.

NOTE: Quarterly figures for France and Germany are calculated by applying annual adjustment factors to current published data, and therefore should be viewed as less precise indicators of unemployment under U.S. concepts than the annual figures. See "Notes on the data" for information on breaks in series. For further qualifications and historical data, see *Comparative Civilian Labor Force Statistics, Ten Countries, 1959–2000* (Bureau of Labor Statistics, Mar. 16, 2001).

Dash indicates data not available.

44. Annual data: Employment status of the working-age population, approximating U.S. concepts, 10 countries

[Numbers in thousands]

Employment status and country	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Civilian labor force										
United States[1]	126,346	128,105	129,200	131,056	132,304	133,943	136,297	137,673	139,368	140,863
Canada	14,128	14,168	14,299	14,387	14,500	14,650	14,936	15,216	15,513	15,745
Australia	8,490	8,562	8,619	8,776	9,001	9,127	9,221	9,347	9,470	9,682
Japan	64,280	65,040	65,470	65,780	65,990	66,450	67,200	67,240	67,090	66,990[p]
France	24,470	24,570	24,640	24,780	24,830	25,090	25,210	25,540	25,860	–
Germany[2]	39,130	39,040	39,140	39,210	39,100	39,180	39,480	39,520	39,630	–
Italy	22,940	22,910	22,570	22,450	22,460	22,570	22,680	22,960	23,130	–
Netherlands	6,780	6,940	7,050	7,200	7,230	7,440	7,510	7,670	7,750	–
Sweden	4,591	4,520	4,443	4,418	4,460	4,459	4,418	4,402	4,430	–
United Kingdom	28,610	28,410	28,310	28,280	28,480	28,620	28,760	28,870	29,090[p]	–
Participation rate[3]										
United States[1]	66.2	66.4	66.3	66.6	66.6	66.8	67.1	67.1	67.1	67.2
Canada	66.7	65.9	65.5	65.2	64.9	64.7	65.0	65.4	65.8	65.9
Australia	64.1	63.9	63.6	63.9	64.6	64.6	64.3	64.4	64.2	64.7
Japan	63.2	63.4	63.3	63.1	62.9	63.0	63.2	62.8	62.4	62.0[p]
France	55.9	55.8	55.6	55.5	55.3	55.5	55.3	55.7	56.0	–
Germany[2]	58.9	58.3	58.0	57.6	57.3	57.4	57.7	57.7	57.9[p]	–
Italy	47.7	47.5	47.9	47.3	47.1	47.1	47.2	47.6	47.8	–
Netherlands	56.8	57.7	58.2	59.0	58.9	60.3	60.6	61.4	61.5	–
Sweden	67.0	65.7	64.5	63.7	64.1	64.0	63.3	62.8	63.2[p]	–
United Kingdom	63.7	63.1	62.8	62.5	62.7	62.7	62.8	62.7	62.9[p]	–
Employed										
United States[1]	117,718	118,492	120,259	123,060	124,900	126,708	129,558	131,463	133,488	135,208
Canada	12,747	12,672	12,770	13,027	13,271	13,380	13,705	14,068	14,456	14,827
Australia	7,676	7,637	7,680	7,921	8,235	8,344	8,429	8,597	8,785	9,043
Japan	62,920	63,620	63,810	63,860	63,890	64,200	64,900	64,450	63,920	63,790[p]
France	22,120	22,020	21,740	21,730	21,910	21,960	22,090	22,520	22,970	–
Germany[2]	36,920	36,420	36,030	35,890	35,900	35,680	35,570	35,830	36,170	–
Italy	21,360	21,230	20,270	19,940	19,820	19,920	19,990	20,210	20,460	–
Netherlands	6,380	6,540	6,590	6,680	6,730	6,970	7,110	7,360	7,490	–
Sweden	4,447	4,265	4,028	3,992	4,056	4,019	3,973	4,034	4,117	–
United Kingdom	26,090	25,530	25,340	25,550	26,000	26,280	26,740	27,050	27,330[p]	–
Employment-population ratio[4]										
United States[1]	61.7	61.5	61.7	62.5	62.9	63.2	63.8	64.1	64.3	64.5
Canada	60.2	58.9	58.5	59.0	59.4	59.1	59.7	60.4	61.3	62.1
Australia	57.9	57.0	56.6	57.7	59.1	59.1	58.8	59.2	59.6	60.4
Japan	61.8	62.0	61.7	61.3	60.9	60.9	61.0	60.2	59.4	59.0[p]
France	50.6	50.0	49.0	48.7	48.8	48.5	48.5	49.1	49.8	–
Germany[2]	55.5	54.4	53.4	52.8	52.6	52.2	52.0	52.3	52.8[p]	–
Italy	44.5	44.0	43.0	42.0	41.5	41.6	41.6	41.9	42.3	–
Netherlands	53.4	54.4	54.4	54.8	54.9	56.5	57.4	58.9	59.4	–
Sweden	64.9	62.0	58.5	57.6	58.3	57.7	56.9	57.6	58.7[p]	–
United Kingdom	58.0	56.7	56.2	56.5	57.2	57.6	58.3	58.7	59.1[p]	–
Unemployed										
United States[1]	8,628	9,613	8,940	7,996	7,404	7,236	6,739	6,210	5,880	5,665
Canada	1,381	1,496	1,530	1,359	1,229	1,271	1,230	1,148	1,058	918
Australia	814	925	939	856	766	783	791	750	685	638
Japan	1,360	1,420	1,660	1,920	2,100	2,250	2,300	2,790	3,170	3,200[p]
France	2,350	2,550	2,900	3,060	2,920	3,130	3,130	3,020	2,890	–
Germany[2]	2,210	2,620	3,110	3,320	3,200	3,500	3,910	3,690	3,460	–
Italy	1,580	1,680	2,300	2,510	2,640	2,650	2,690	2,750	2,670	–
Netherlands	400	390	460	520	510	470	400	310	260	–
Sweden	144	255	415	426	404	440	445	368	313	–
United Kingdom	2,520	2,880	2,970	2,730	2,480	2,340	2,020	1,820	1,760[p]	–
Unemployment rate										
United States[1]	6.8	7.5	6.9	6.1	5.6	5.4	4.9	4.5	4.2	4.0
Canada	9.8	10.6	10.7	9.4	8.5	8.7	8.2	7.5	6.8	5.8
Australia	9.6	10.8	10.9	9.7	8.5	8.6	8.6	8.0	7.2	6.6
Japan	2.1	2.2	2.5	2.9	3.2	3.4	3.4	4.1	4.7	4.8[p]
France	9.6	10.4	11.8	12.3	11.8	12.5	12.4	11.8	11.2	9.7[p]
Germany[2]	5.6	6.7	7.9	8.5	8.2	8.9	9.9	9.3	8.7	8.3[p]
Italy	6.9	7.3	10.2	11.2	11.8	11.7	11.9	12.0	11.5	10.7[p]
Netherlands	5.9	5.6	6.5	7.2	7.1	6.3	5.3	4.0	3.4	–
Sweden	3.1	5.6	9.3	9.6	9.1	9.9	10.1	8.4	7.1	5.9[p]
United Kingdom	8.8	10.1	10.5	9.7	8.7	8.2	7.0	6.3	6.1[p]	–

[1] Data for 1994 are not directly comparable with data for 1993 and earlier years. For additional information, see the box note under "Employment and Unemployment Data" in the notes to this section.

[2] Data from 1991 onward refer to unified Germany. See *Comparative Civilian Labor Force Statistics, Ten Countries, 1959–2000*, Mar. 16, 2001, on the Internet at **http://stats.bls.gov/flsdata.htm**.

[3] Labor force as a percent of the working-age population..

[4] Employment as a percent of the working-age population.

NOTE: See Notes on the data for information on breaks in series for the United States, France, Germany, Italy, the Netherlands, and Sweden. Dash indicates data are not available. p = preliminary.

45. Annual indexes of manufacturing productivity and related measures, 12 countries

[1992 = 100]

Item and country	1960	1970	1980	1988	1989	1990	1991	1993	1994	1995	1996	1997	1998	1999
Output per hour														
United States	–	–	70.5	96.9	95.7	96.9	97.8	102.1	107.3	113.8	117.0	121.1	127.0	134.8
Canada	38.7	56.6	75.1	90.9	93.7	95.7	95.3	104.5	109.9	111.0	109.5	112.8	112.5	115.2
Japan	14.0	38.0	63.9	84.8	89.5	95.4	99.4	100.5	101.8	109.3	115.8	121.4	120.4	124.1
Belgium	18.0	32.9	65.4	92.0	96.9	96.8	99.1	102.5	108.4	113.2	115.5	122.4	123.6	124.5
Denmark	29.9	52.7	90.3	94.1	99.6	99.1	99.6	104.5	–	–	–	–	–	–
France	21.8	43.0	66.5	87.5	91.9	93.5	96.9	100.6	108.5	114.5	115.0	122.6	124.0	128.9
Germany	29.2	52.0	77.2	91.5	94.6	99.0	99.0	101.6	110.1	113.2	116.8	122.4	126.7	128.5
Italy	20.2	37.9	65.9	86.7	89.4	92.5	95.2	102.9	105.6	109.3	109.5	111.5	111.1	112.9
Netherlands	18.6	38.1	69.2	93.7	97.1	98.6	99.6	101.4	112.7	117.7	119.7	125.7	127.8	–
Norway	36.7	57.8	76.7	92.1	94.6	96.6	97.5	100.6	101.4	102.0	102.0	103.0	103.9	103.9
Sweden	27.3	52.2	73.1	90.5	93.2	94.6	95.5	107.3	119.4	121.9	124.5	133.0	135.6	139.5
United Kingdom	31.2	44.7	56.1	82.3	86.2	88.3	92.2	104.0	106.8	104.8	103.2	104.0	104.6	109.2
Output														
United States	–	–	75.8	103.2	102.4	101.6	98.3	103.5	111.1	118.4	121.3	127.7	133.5	139.3
Canada	34.2	60.6	86.0	110.1	112.6	108.6	99.0	104.6	113.2	118.1	119.8	128.1	133.1	141.3
Japan	10.7	38.8	59.9	84.6	90.2	96.3	101.4	96.0	95.4	100.6	106.7	111.1	103.6	103.9
Belgium	30.7	57.6	78.2	93.3	99.1	101.0	100.7	97.0	101.4	104.2	105.1	109.9	111.8	113.8
Denmark	40.8	68.0	91.3	100.8	104.3	102.7	101.7	99.0	109.3	114.7	109.7	112.6	115.3	111.5
France	31.0	64.1	88.7	92.2	97.2	99.1	99.8	95.7	100.3	104.9	104.6	109.7	111.5	114.2
Germany	41.5	70.9	85.3	90.9	94.0	99.1	102.3	92.5	95.2	95.3	93.5	96.3	100.9	102.2
Italy	21.9	45.8	80.4	94.5	98.1	99.6	99.2	96.4	102.2	107.2	105.6	108.3	110.3	111.4
Netherlands	31.7	59.5	77.4	92.8	96.9	100.1	100.6	98.2	104.2	107.8	108.4	114.1	116.6	–
Norway	56.5	89.1	103.6	105.3	101.3	100.2	98.3	102.7	106.7	109.0	110.1	115.7	117.6	114.0
Sweden	45.9	80.7	90.7	109.8	110.9	110.1	104.1	101.9	117.1	128.4	131.1	138.6	144.6	150.7
United Kingdom	67.7	90.3	87.2	101.4	105.4	105.3	100.0	101.4	106.1	107.8	108.2	109.6	109.9	109.7
Total hours														
United States	92.1	104.4	107.5	106.6	107.1	104.8	100.4	101.4	103.6	104.0	103.7	105.5	105.2	103.3
Canada	88.3	107.1	114.6	121.2	120.2	113.5	103.9	100.1	103.0	106.4	109.4	113.5	118.3	122.7
Japan	76.3	102.3	93.8	99.8	100.8	100.9	102.0	95.6	93.7	92.0	92.2	91.5	86.1	83.8
Belgium	170.7	174.7	119.7	101.5	102.3	104.3	101.5	94.7	93.6	92.0	91.0	89.8	90.5	91.5
Denmark	136.5	129.0	101.1	107.2	104.7	103.7	102.1	94.8	–	–	–	–	–	–
France	142.3	149.0	133.3	105.4	105.8	105.9	103.0	95.1	92.4	91.6	91.0	89.5	89.9	88.6
Germany	142.3	136.3	110.5	99.3	99.3	100.1	103.3	91.0	86.5	84.2	80.1	78.7	79.6	79.5
Italy	108.7	120.9	122.0	108.9	109.7	107.7	104.2	93.6	96.7	98.0	96.5	97.1	99.3	98.6
Netherlands	170.6	156.2	111.8	99.0	99.8	101.5	101.0	96.9	92.4	91.6	90.5	90.8	91.2	–
Norway	154.0	154.3	135.0	114.3	107.1	103.7	100.8	102.1	105.2	106.9	107.9	112.3	113.2	109.8
Sweden	168.3	154.7	124.0	121.4	119.0	116.4	109.0	94.9	98.1	105.3	105.3	104.2	106.6	108.0
United Kingdom	217.3	202.1	155.3	123.2	122.3	119.2	108.5	97.5	99.4	102.9	104.8	105.4	105.0	100.5
Compensation per hour														
United States	14.9	23.7	55.6	84.0	86.6	90.8	95.6	102.7	105.6	107.9	109.3	111.4	117.3	123.2
Canada	9.9	17.0	47.7	77.8	82.5	89.5	94.7	99.6	100.4	103.6	102.8	106.7	110.8	110.8
Japan	4.3	16.5	58.6	79.2	84.2	90.7	95.9	104.6	106.7	109.5	110.9	113.9	115.8	117.7
Belgium	5.4	13.7	52.5	81.1	85.9	90.1	97.3	104.8	106.1	109.2	112.0	115.2	116.0	116.0
Denmark	4.6	13.3	49.6	82.9	87.7	92.7	95.9	104.6	–	–	–	–	–	–
France	4.3	10.3	40.8	81.6	86.0	90.6	96.2	103.0	105.6	108.4	110.2	113.0	114.9	119.3
Germany	8.1	20.7	53.6	79.1	83.2	89.4	92.1	106.1	112.3	118.5	125.2	128.0	128.9	130.8
Italy	1.6	4.7	28.4	69.3	75.9	84.4	93.6	107.5	107.8	112.8	120.3	125.4	123.0	126.5
Netherlands	6.4	20.2	64.4	87.7	88.5	90.8	95.2	103.7	108.2	110.6	113.2	115.8	118.3	–
Norway	4.7	11.8	39.0	83.3	87.2	92.3	97.5	101.5	104.4	109.2	113.6	118.7	126.2	133.4
Sweden	4.1	10.7	37.3	71.8	79.4	87.8	95.5	97.2	99.8	106.3	114.2	119.7	123.3	127.4
United Kingdom	3.1	6.3	33.2	67.7	72.9	80.9	90.5	104.3	106.5	107.4	108.2	111.4	117.0	122.6
Unit labor costs: National currency basis														
United States	–	–	78.8	86.7	90.5	93.7	97.7	100.6	98.5	94.8	93.5	92.0	92.4	91.4
Canada	25.6	30.1	63.2	85.2	88.0	92.3	99.7	97.6	94.3	95.5	95.9	95.9	98.8	98.1
Japan	30.9	43.3	91.7	93.4	94.0	95.0	96.5	104.1	104.9	100.1	95.8	93.8	96.2	94.9
Belgium	30.1	41.7	80.3	88.1	88.7	93.0	98.1	102.3	97.9	96.4	95.6	93.3	93.7	93.4
Denmark	15.4	25.2	55.0	88.2	88.1	93.6	96.3	100.1	93.0	93.8	100.9	102.0	102.8	108.9
France	19.5	24.0	61.3	93.3	93.6	96.8	99.3	102.4	97.3	94.7	95.9	92.2	92.7	92.6
Germany	27.8	39.8	69.4	86.5	87.9	90.3	93.1	104.5	102.0	104.7	107.2	104.6	101.8	101.8
Italy	7.9	12.4	43.1	79.9	84.9	91.3	98.4	104.4	102.1	103.2	109.9	112.4	110.8	112.0
Netherlands	34.4	52.9	93.0	93.6	91.1	92.1	95.5	102.3	96.0	94.0	94.6	92.2	92.5	–
Norway	12.9	20.4	50.8	90.4	92.2	95.6	100.0	100.9	102.9	107.1	111.4	115.2	121.5	128.5
Sweden	15.0	20.6	51.0	79.4	85.1	92.8	100.0	90.6	83.6	87.2	91.7	90.0	90.9	91.3
United Kingdom	9.8	14.1	59.1	82.2	84.6	91.6	98.2	100.3	99.7	102.5	104.8	107.1	111.9	112.3
Unit labor costs: U.S. dollar basis														
United States	–	–	78.8	86.7	90.5	93.7	97.7	100.6	98.5	94.8	93.5	92.0	92.4	91.4
Canada	32.0	34.8	65.3	83.6	89.8	95.6	105.1	91.4	83.4	84.1	85.0	83.6	80.5	79.8
Japan	10.9	15.3	51.3	92.4	86.3	83.1	90.9	118.8	130.1	135.1	111.7	98.3	93.1	105.7
Belgium	19.4	27.0	88.3	77.0	72.3	89.5	92.3	95.1	94.2	105.2	99.3	83.7	83.0	79.3
Denmark	13.5	20.3	58.9	79.0	72.6	91.3	90.8	93.2	88.3	101.1	105.0	93.1	92.6	94.1
France	21.1	23.0	76.8	82.9	77.6	94.1	93.1	95.6	92.9	100.6	99.2	83.6	83.2	79.6
Germany	10.4	17.1	59.6	76.9	73.0	87.3	87.5	98.6	98.2	114.1	111.3	94.1	90.3	86.6
Italy	15.6	24.4	62.0	75.6	76.2	93.8	97.6	81.8	78.1	78.0	87.8	81.3	78.6	75.9
Netherlands	16.0	25.7	82.3	83.2	75.5	88.9	89.8	96.8	92.8	103.0	98.6	83.0	82.0	–
Norway	11.3	17.8	63.9	86.1	82.9	95.0	95.7	88.3	90.7	105.0	107.1	101.1	100.0	102.2
Sweden	16.9	23.1	70.3	75.4	76.8	91.3	96.3	67.7	63.1	71.2	79.7	68.6	66.6	64.3
United Kingdom	15.6	19.2	77.8	82.9	78.5	92.5	98.2	85.3	86.5	91.6	92.6	99.3	105.0	102.8

– Data not available.

NOTE: Data for Germany for years before 1992 are for the former West Germany. Data for 1992 onward are for unified Germany.

46. Occupational injury and illness rates by industry,[1] United States

Industry and type of case[2]	Incidence rates per 100 full-time workers[3]											
	1988	1989[1]	1990	1991	1992	1993[4]	1994[4]	1995[4]	1996[4]	1997[4]	1998[4]	1999[4]
PRIVATE SECTOR[5]												
Total cases	8.6	8.6	8.8	8.4	8.9	8.5	8.4	8.1	7.4	7.1	6.7	6.3
Lost workday cases	4.0	4.0	4.1	3.9	3.9	3.8	3.8	3.6	3.4	3.3	3.1	3.0
Lost workdays	76.1	78.7	84.0	86.5	93.8	–	–	–	–	–	–	–
Agriculture, forestry, and fishing[5]												
Total cases	10.9	10.9	11.6	10.8	11.6	11.2	10.0	9.7	8.7	8.4	7.9	7.3
Lost workday cases	5.6	5.7	5.9	5.4	5.4	5.0	4.7	4.3	3.9	4.1	3.9	3.4
Lost workdays	101.8	100.9	112.2	108.3	126.9	–	–	–	–	–	–	–
Mining												
Total cases	8.8	8.5	8.3	7.4	7.3	6.8	6.3	6.2	5.4	5.9	4.9	4.4
Lost workday cases	5.1	4.8	5.0	4.5	4.1	3.9	3.9	3.9	3.2	3.7	2.9	2.7
Lost workdays	152.1	137.2	119.5	129.6	204.7	–	–	–	–	–	–	–
Construction												
Total cases	14.6	14.3	14.2	13.0	13.1	12.2	11.8	10.6	9.9	9.5	8.8	8.6
Lost workday cases	6.8	6.8	6.7	6.1	5.8	5.5	5.5	4.9	4.5	4.4	4.0	4.2
Lost workdays	142.2	143.3	147.9	148.1	161.9	–	–	–	–	–	–	–
General building contractors:												
Total cases	14.0	13.9	13.4	12.0	12.2	11.5	10.9	9.8	9.0	8.5	8.4	8.0
Lost workday cases	6.4	6.5	6.4	5.5	5.4	5.1	5.1	4.4	4.0	3.7	3.9	3.7
Lost workdays	132.2	137.3	137.6	132.0	142.7	–	–	–	–	–	–	–
Heavy construction, except building:												
Total cases	15.1	13.8	13.8	12.8	12.1	11.1	10.2	9.9	9.0	8.7	8.2	7.8
Lost workday cases	7.0	6.5	6.3	6.0	5.4	5.1	5.0	4.8	4.3	4.3	4.1	3.8
Lost workdays	162.3	147.1	144.6	160.1	165.8	–	–	–	–	–	–	–
Special trades contractors:												
Total cases	14.7	14.6	14.7	13.5	13.8	12.8	12.5	11.1	10.4	10.0	9.1	8.9
Lost workday cases	7.0	6.9	6.9	6.3	6.1	5.8	5.8	5.0	4.8	4.7	4.1	4.4
Lost workdays	141.1	144.9	153.1	151.3	168.3	–	–	–	–	–	–	–
Manufacturing												
Total cases	13.1	13.1	13.2	12.7	12.5	12.1	12.2	11.6	10.6	10.3	9.7	9.2
Lost workday cases	5.7	5.8	5.8	5.6	5.4	5.3	5.5	5.3	4.9	4.8	4.7	4.6
Lost workdays	107.4	113.0	120.7	121.5	124.6	–	–	–	–	–	–	–
Durable goods:												
Total cases	14.2	14.1	14.2	13.6	13.4	13.1	13.5	12.8	11.6	11.3	10.7	10.1
Lost workday cases	5.9	6.0	6.0	5.7	5.5	5.4	5.7	5.6	5.1	5.1	5.0	4.8
Lost workdays	111.1	116.5	123.3	122.9	126.7	–	–	–	–	–	–	–
Lumber and wood products:												
Total cases	19.5	18.4	18.1	16.8	16.3	15.9	15.7	14.9	14.2	13.5	13.2	13.0
Lost workday cases	10.0	9.4	8.8	8.3	7.6	7.6	7.7	7.0	6.8	6.5	6.8	6.7
Lost workdays	189.1	177.5	172.5	172.0	165.8	–	–	–	–	–	–	–
Furniture and fixtures:												
Total cases	16.6	16.1	16.9	15.9	14.8	14.6	15.0	13.9	12.2	12.0	11.4	11.5
Lost workday cases	7.3	7.2	7.8	7.2	6.6	6.5	7.0	6.4	5.4	5.8	5.7	5.9
Lost workdays	115.7	–	–	–	128.4	–	–	–	–	–	–	–
Stone, clay, and glass products:												
Total cases	16.0	15.5	15.4	14.8	13.6	13.8	13.2	12.3	12.4	11.8	11.8	10.7
Lost workday cases	7.5	7.4	7.3	6.8	6.1	6.3	6.5	5.7	6.0	5.7	6.0	5.4
Lost workdays	141.0	149.8	160.5	156.0	152.2	–	–	–	–	–	–	–
Primary metal industries:												
Total cases	19.4	18.7	19.0	17.7	17.5	17.0	16.8	16.5	15.0	15.0	14.0	12.9
Lost workday cases	8.2	8.1	8.1	7.4	7.1	7.3	7.2	7.2	6.8	7.2	7.0	6.3
Lost workdays	161.3	168.3	180.2	169.1	175.5	–	–	–	–	–	–	–
Fabricated metal products:												
Total cases	18.8	18.5	18.7	17.4	16.8	16.2	16.4	15.8	14.4	14.2	13.9	12.6
Lost workday cases	8.0	7.9	7.9	7.1	6.6	6.7	6.7	6.9	6.2	6.4	6.5	6.0
Lost workdays	138.8	147.6	155.7	146.6	144.0	–	–	–	–	–	–	–
Industrial machinery and equipment:												
Total cases	12.1	12.1	12.0	11.2	11.1	11.1	11.6	11.2	9.9	10.0	9.5	8.5
Lost workday cases	4.7	4.8	4.7	4.4	4.2	4.2	4.4	4.4	4.0	4.1	4.0	3.7
Lost workdays	82.8	86.8	88.9	86.6	87.7	–	–	–	–	–	–	–
Electronic and other electrical equipment:												
Total cases	8.0	9.1	9.1	8.6	8.4	8.3	8.3	7.6	6.8	6.6	5.9	5.7
Lost workday cases	3.3	3.9	3.8	3.7	3.6	3.5	3.6	3.3	3.1	3.1	2.8	2.8
Lost workdays	64.6	77.5	79.4	83.0	81.2	–	–	–	–	–	–	–
Transportation equipment:												
Total cases	17.7	17.7	17.8	18.3	18.7	18.5	19.6	18.6	16.3	15.4	14.6	13.7
Lost workday cases	6.6	6.8	6.9	7.0	7.1	7.1	7.8	7.9	7.0	6.6	6.6	6.4
Lost workdays	134.2	138.6	153.7	166.1	186.6	–	–	–	–	–	–	–
Instruments and related products:												
Total cases	6.1	5.6	5.9	6.0	5.9	5.6	5.9	5.3	5.1	4.8	4.0	4.0
Lost workday cases	2.6	2.5	2.7	2.7	2.7	2.5	2.7	2.4	2.3	2.3	1.9	1.8
Lost workdays	51.5	55.4	57.8	64.4	65.3	–	–	–	–	–	–	–
Miscellaneous manufacturing industries:												
Total cases	11.3	11.1	11.3	11.3	10.7	10.0	9.9	9.1	9.5	8.9	8.1	8.4
Lost workday cases	5.1	5.1	5.1	5.1	5.0	4.6	4.5	4.3	4.4	4.2	3.9	4.0
Lost workdays	91.0	97.6	113.1	104.0	108.2	–	–	–	–	–	–	–

See footnotes at end of table.

46. Continued—Occupational injury and illness rates by industry,[1] United States

Industry and type of case[2]	1988	1989[1]	1990	1991	1992	1993[4]	1994[4]	1995[4]	1996[4]	1997[4]	1998[4]	1999[4]
Nondurable goods:												
Total cases	11.4	11.6	11.7	11.5	11.3	10.7	10.5	9.9	9.2	8.8	8.2	7.8
Lost workday cases	5.4	5.5	5.6	5.5	5.3	5.0	5.1	4.9	4.6	4.4	4.3	4.2
Lost workdays	101.7	107.8	116.9	119.7	121.8	–	–	–	–	–	–	–
Food and kindred products:												
Total cases	18.5	18.5	20.0	19.5	18.8	17.6	17.1	16.3	15.0	14.5	13.6	12.7
Lost workday cases	9.2	9.3	9.9	9.9	9.5	8.9	9.2	8.7	8.0	8.0	7.5	7.3
Lost workdays	169.7	174.7	202.6	207.2	211.9	–	–	–	–	–	–	–
Tobacco products:												
Total cases	9.3	8.7	7.7	6.4	6.0	5.8	5.3	5.6	6.7	5.9	6.4	5.5
Lost workday cases	2.9	3.4	3.2	2.8	2.4	2.3	2.4	2.6	2.8	2.7	3.4	2.2
Lost workdays	53.0	64.2	62.3	52.0	42.9	–	–	–	–	–	–	–
Textile mill products:												
Total cases	9.6	10.3	9.6	10.1	9.9	9.7	8.7	8.2	7.8	6.7	7.4	6.4
Lost workday cases	4.0	4.2	4.0	4.4	4.2	4.1	4.0	4.1	3.6	3.1	3.4	3.2
Lost workdays	78.8	81.4	85.1	88.3	87.1	–	–	–	–	–	–	–
Apparel and other textile products:												
Total cases	8.1	8.6	8.8	9.2	9.5	9.0	8.9	8.2	7.4	7.0	6.2	5.8
Lost workday cases	3.5	3.8	3.9	4.2	4.0	3.8	3.9	3.6	3.3	3.1	2.6	2.8
Lost workdays	68.2	80.5	92.1	99.9	104.6	–	–	–	–	–	–	–
Paper and allied products:												
Total cases	13.1	12.7	12.1	11.2	11.0	9.9	9.6	8.5	7.9	7.3	7.1	7.0
Lost workday cases	5.9	5.8	5.5	5.0	5.0	4.6	4.5	4.2	3.8	3.7	3.7	3.7
Lost workdays	124.3	132.9	124.8	122.7	125.9	–	–	–	–	–	–	–
Printing and publishing:												
Total cases	6.6	6.9	6.9	6.7	7.3	6.9	6.7	6.4	6.0	5.7	5.4	5.0
Lost workday cases	3.2	3.3	3.3	3.2	3.2	3.1	3.0	3.0	2.8	2.7	2.8	2.6
Lost workdays	59.8	63.8	69.8	74.5	74.8	–	–	–	–	–	–	–
Chemicals and allied products:												
Total cases	7.0	7.0	6.5	6.4	6.0	5.9	5.7	5.5	4.8	4.8	4.2	4.4
Lost workday cases	3.3	3.2	3.1	3.1	2.8	2.7	2.8	2.7	2.4	2.3	2.1	2.3
Lost workdays	59.0	63.4	61.6	62.4	64.2	–	–	–	–	–	–	–
Petroleum and coal products:												
Total cases	7.0	6.6	6.6	6.2	5.9	5.2	4.7	4.8	4.6	4.3	3.9	4.1
Lost workday cases	3.2	3.3	3.1	2.9	2.8	2.5	2.3	2.4	2.5	2.2	1.8	1.8
Lost workdays	68.4	68.1	77.3	68.2	71.2	–	–	–	–	–	–	–
Rubber and miscellaneous plastics products:												
Total cases	16.3	16.2	16.2	15.1	14.5	13.9	14.0	12.9	12.3	11.9	11.2	10.1
Lost workday cases	8.1	8.0	7.8	7.2	6.8	6.5	6.7	6.5	6.3	5.8	5.8	5.5
Lost workdays	142.9	147.2	151.3	150.9	153.3	–	–	–	–	–	–	–
Leather and leather products:												
Total cases	11.4	13.6	12.1	12.5	12.1	12.1	12.0	11.4	10.7	10.6	9.8	10.3
Lost workday cases	5.6	6.5	5.9	5.9	5.4	5.5	5.3	4.8	4.5	4.3	4.5	5.0
Lost workdays	128.2	130.4	152.3	140.8	128.5	–	–	–	–	–	–	–
Transportation and public utilities												
Total cases	8.9	9.2	9.6	9.3	9.1	9.5	9.3	9.1	8.7	8.2	7.3	7.3
Lost workday cases	5.1	5.3	5.5	5.4	5.1	5.4	5.5	5.2	5.1	4.8	4.3	4.4
Lost workdays	118.6	121.5	134.1	140.0	144.0	–	–	–	–	–	–	–
Wholesale and retail trade												
Total cases	7.8	8.0	7.9	7.6	8.4	8.1	7.9	7.5	6.8	6.7	6.5	6.1
Lost workday cases	3.5	3.6	3.5	3.4	3.5	3.4	3.4	3.2	2.9	3.0	2.8	2.7
Lost workdays	60.9	63.5	65.6	72.0	80.1	–	–	–	–	–	–	–
Wholesale trade:												
Total cases	7.6	7.7	7.4	7.2	7.6	7.8	7.7	7.5	6.6	6.5	6.5	6.3
Lost workday cases	3.8	4.0	3.7	3.7	3.6	3.7	3.8	3.6	3.4	3.2	3.3	3.3
Lost workdays	69.2	71.9	71.5	79.2	82.4	–	–	–	–	–	–	–
Retail trade:												
Total cases	7.9	8.1	8.1	7.7	8.7	8.2	7.9	7.5	6.9	6.8	6.5	6.1
Lost workday cases	3.4	3.4	3.4	3.3	3.4	3.3	3.3	3.0	2.8	2.9	2.7	2.5
Lost workdays	57.6	60.0	63.2	69.1	79.2	–	–	–	–	–	–	–
Finance, insurance, and real estate												
Total cases	2.0	2.0	2.4	2.4	2.9	2.9	2.7	2.6	2.4	2.2	.7	1.8
Lost workday cases	.9	.9	1.1	1.1	1.2	1.2	1.1	1.0	.9	.9	.5	.8
Lost workdays	17.2	17.6	27.3	24.1	32.9	–	–	–	–	–	–	–
Services												
Total cases	5.4	5.5	6.0	6.2	7.1	6.7	6.5	6.4	6.0	5.6	5.2	4.9
Lost workday cases	2.6	2.7	2.8	2.8	3.0	2.8	2.8	2.8	2.6	2.5	2.4	2.2
Lost workdays	47.7	51.2	56.4	60.0	68.6	–	–	–	–	–	–	–

[1] Data for 1989 and subsequent years are based on the *Standard Industrial Classification Manual*, 1987 Edition. For this reason, they are not strictly comparable with data for the years 1985–88, which were based on the *Standard Industrial Classification Manual*, 1972 Edition, 1977 Supplement.

[2] Beginning with the 1992 survey, the annual survey measures only nonfatal injuries and illnesses, while past surveys covered both fatal and nonfatal incidents. To better address fatalities, a basic element of workplace safety, BLS implemented the Census of Fatal Occupational Injuries.

[3] The incidence rates represent the number of injuries and illnesses or lost workdays per 100 full-time workers and were calculated as (N/EH) X 200,000, where:
N = number of injuries and illnesses or lost workdays;
EH = total hours worked by all employees during the calendar year; and
200,000 = base for 100 full-time equivalent workers (working 40 hours per week, 50 weeks per year).

[4] Beginning with the 1993 survey, lost workday estimates will not be generated. As of 1992, BLS began generating percent distributions and the median number of days away from work by industry and for groups of workers sustaining similar work disabilities.

[5] Excludes farms with fewer than 11 employees since 1976.

Dash indicates data not available.

47. Fatal occupational injuries by event or exposure, 1993–98

Event or exposure[1]	Fatalities			
	1993–97	1997[2]	1998	
	Average	Number	Number	Percent
Total	6,335	6,238	6,026	100
Transportation incidents	2,611	2,605	2,630	44
Highway incident	1,334	1,393	1,431	24
Collision between vehicles, mobile equipment	652	640	701	12
Moving in same direction	109	103	118	2
Moving in opposite directions, oncoming	234	230	271	4
Moving in intersection	132	142	142	2
Vehicle struck stationary object or equipment	249	282	306	5
Noncollision incident	360	387	373	6
Jackknifed or overturned—no collision	267	298	300	5
Nonhighway (farm, industrial premises) incident	388	377	384	6
Overturned	214	216	216	4
Aircraft	315	261	223	4
Worker struck by a vehicle	373	367	413	7
Water vehicle incident	106	109	112	2
Railway	83	93	60	1
Assaults and violent acts	1,241	1,111	960	16
Homicides	995	860	709	12
Shooting	810	708	569	9
Stabbing	75	73	61	1
Other, including bombing	110	79	79	1
Self-inflicted injuries	215	216	223	4
Contact with objects and equipment	1,005	1,035	941	16
Struck by object	573	579	517	9
Struck by falling object	369	384	317	5
Struck by flying object	65	54	58	1
Caught in or compressed by equipment or objects	290	320	266	4
Caught in running equipment or machinery	153	189	129	2
Caught in or crushed in collapsing materials	124	118	140	2
Falls	668	716	702	12
Fall to lower level	591	653	623	10
Fall from ladder	94	116	111	2
Fall from roof	139	154	156	3
Fall from scaffold, staging	83	87	97	2
Fall on same level	52	44	51	1
Exposure to harmful substances or environments	586	554	572	9
Contact with electric current	320	298	334	6
Contact with overhead power lines	128	138	153	3
Contact with temperature extremes	43	40	46	1
Exposure to caustic, noxious, or allergenic substances	120	123	104	2
Inhalation of substances	70	59	48	1
Oxygen deficiency	101	90	87	1
Drowning, submersion	80	72	75	1
Fires and explosions	199	196	205	3
Other events or exposures[3]	26	21	16	–

[1] Based on the 1992 BLS Occupational Injury and Illness Classification Structures.

[2] The BLS news release issued August 12, 1998, reported a total of 6,218 fatal work injuries for calendar year 1997. Since then, an additional 20 job-related fatalities were identified, bringing the total job-related fatality count for 1997 to 6,238.

[3] Includes the category "Bodily reaction and exertion."

NOTE: Totals for major categories may include subcategories not shown separately. Percentages may not add to totals because of rounding. Dash indicates less than 0.5 percent.

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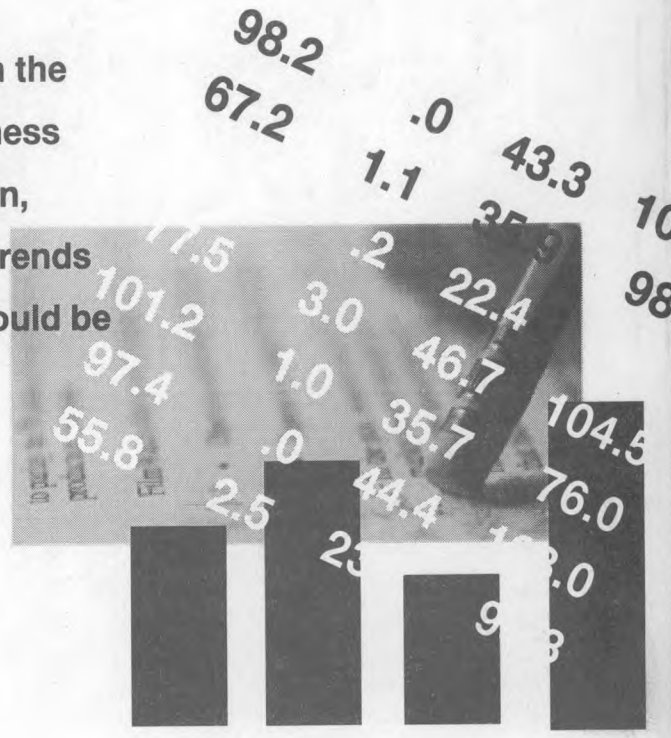

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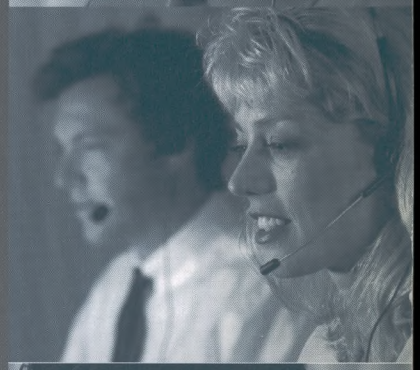

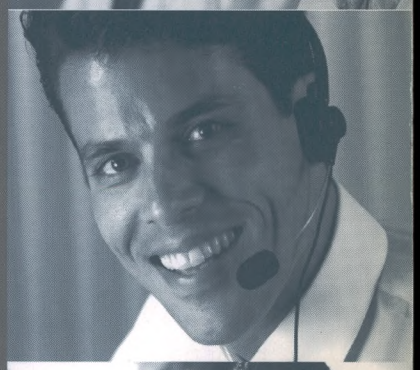

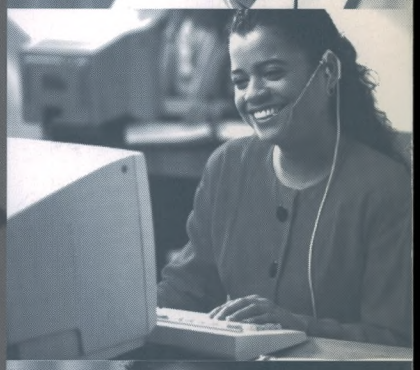

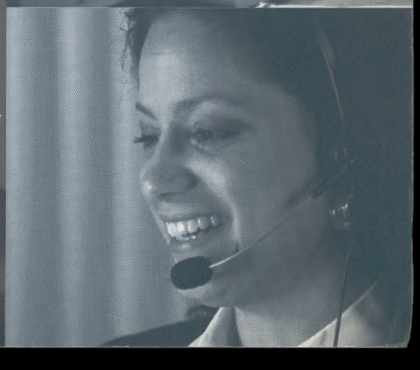

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