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## 2

# Trends in Hours of Work in the United States

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Efforts to shorten and standardize the length of the workweek were at the forefront of labor market issues in the first four decades of this century, culminating in the enactment of the Fair Labor Standards Act of 1938. After long and hard-fought legal and political battles, the act allowed for a maximum workweek of 44 hours, to decline to 40 hours in the third year after enactment (Elder and Miller 1979). Although employers could still demand longer workweeks, hours worked beyond the legal maximum would require time-and-a-half pay.

While workweek issues have fallen from the fore in recent decades, they still touch many key labor market topics and trends. For example, arguably the two most dominant trends in the post–World War II work world have been the influx of women, particularly mothers, into the job market, and the steady decline in the retirement age. Women have increased their numbers in the workforce, and they have also shifted their work schedules toward year-round, full-time employment. In addition, as work activity among older men was declining, those left working were increasingly likely to work part time.

The key labor issues of the day in the 1990s were most likely worker displacement and the quality of jobs. These issues, too, have workweek components. Even as the overall U.S. employment numbers have risen substantially, millions of jobs have been lost each year to corporate and government restructuring. A common perception is that those spared such job loss, particularly those in managerial and professional jobs, have been compelled to work even harder—longer—to protect their jobs. As for the quality of jobs, new jobs created often are stereotyped as part-time, low-wage, poor-quality jobs.<sup>1</sup>

This chapter examines work-hour trends from two perspectives. First, trends in the average workweek and changes in the distribution of hours worked since the mid 1970s are examined. Then, the focus is expanded to estimate annual work hours. This figure is affected by the extent to which people work at all and the number of weeks they work during the year, in addition to the length of the workweek. Lastly, the appendix provides a discussion of the differences in hours data collected following the redesign of the Current Population Survey (CPS), which was implemented in January 1994, from those obtained prior to 1994. Because of the effect of those changes on work-hour estimates, trend data in the chapter are restricted to the period through 1993.<sup>2</sup>

## MEASURING HOURS OF WORK

Estimates of the length of the workweek can be obtained from workers themselves or from their employers. Employer-based surveys count the total number of jobs held by workers, so average hours calculated from those data are reported per job, not per worker. Workers, of course, can work at more than one job. Also, workweek estimates from employers generally are for hours paid (including paid annual and sick leave) rather than hours actually worked. Another shortfall of employer-based surveys for this analysis is that they typically lack demographic information—such as age, gender, and education—that are critical to understanding workweek trends. Thus, if the focus is on workers and their work schedules, employer surveys will not suffice.<sup>3</sup>

For those reasons, data obtained from individuals will be used in this analysis. The CPS provides comprehensive and consistent hours-at-work and employment time-series data that can be obtained for many demographic characteristics.<sup>4</sup> Respondents to the survey are queried on their usual and actual hours at work. Additionally, respondents surveyed in March are asked about their work experiences in the prior year, including their typical work schedules and the number of weeks worked. The analysis generally is limited to nonagricultural wage and salary workers.<sup>5</sup>

## AVERAGE HOURS AT WORK

In 1995, the average workweek for nonagricultural wage and salary workers was 39.2 hours. That average varies considerably across worker groups, however. For instance, the average workweek for men was 42.1 hours compared to 35.8 hours for women, and persons aged 25 to 54 typically work longer than do younger and older workers (Table 1). In addition, the length of the workweek varies by marital status. Married men have the longest workweek and, in 1995, worked an average of eight hours per week more than married women. Reflecting their younger age, both men and women who were never married worked the shortest workweek.<sup>6</sup>

Average hours at work changed little over the period from 1976 to 1993, only increasing by 1.1 hours, on net, to 39.2 hours.<sup>7</sup> But during this period, the age distribution of the U.S. working population changed substantially and in a way that influenced the length of the average workweek. By 1993, the baby boomers—those born between 1946 and 1964—all had moved into the central working ages of 25 to 54. Meanwhile, workers in the younger and older age groups, which include many students and retirees, comprised a declining share of employment. Workweeks typically are the longest for workers aged 25 to 54, and part-time (and part-year) employment is most common among younger and older workers. These shifts in the age distribution, then, would tend to increase the length of the average workweek, all other things being equal.

To determine the effect of the shifting age distribution of the employed on the change in the average workweek for men and women, it is necessary to calculate average hours in 1993 assuming that the age distribution of those at work had remained unchanged since 1976.<sup>8</sup> As Table 2 shows, after removing the effect of the shifting age distribution, men had virtually no rise in their average weekly hours (edging up from 41.0 to 41.2 hours), and women's average workweeks rose by only an hour.

The small changes in the length of the workweek, whether on an age-adjusted or unadjusted basis, reflect (and mask) offsetting increases and decreases in the hours-at-work distribution. As shown in Figure 1, between 1976 and 1993, the proportion of nonagricultural

**Table 1 Nonagricultural Wage and Salary Workers at Work and Their Average Hours, by Age, Sex, Race, and Hispanic Origin, 1995 Averages**

Characteristic	Total at work (000)	Average hours	
		Total at work	Persons who usually work full time
<b>Age and sex</b>			
Total	107,656	39.2	43.0
16 to 24 years	17,282	32.6	41.3
25 to 54 years	78,682	41.0	43.3
55 years and over	11,692	36.7	42.3
Men, 16 years and over	57,362	42.1	44.5
16 to 24 years	8,989	34.7	42.3
25 to 54 years	42,124	44.1	44.9
55 years and over	6,250	39.6	43.7
Women, 16 years and over	50,294	35.8	40.8
16 to 24 years	8,293	30.4	40.0
25 to 54 years	36,558	37.4	41.0
55 years and over	5,442	33.3	40.3
<b>Race and Hispanic origin</b>			
White, 16 years and over	90,997	39.3	43.2
Men	49,114	42.4	44.8
Women	41,883	35.6	40.9
Black, 16 years and over	12,162	38.3	41.2
Men	5,826	40.0	42.3
Women	6,336	36.7	40.1
<b>Hispanic origin, 16 years and over</b>			
Men	5,688	40.5	42.4
Women	3,956	35.6	39.9

**Table 2 Average Weekly Hours of Work for Men and Women, 1976 and 1993**

	Average hours		Age-adjusted hours
	1976	1993	1993
Men, 16+ years	41.0	42.0	41.2
Women, 16+ years	34.0	36.0	35.0

wage and salary workers who reported that they were at work exactly 40 hours per week declined, while the share working 49 hours or more rose. (A more detailed discussion of the shift among workers into the long-hours worked category is presented later in the section “Long Workweeks.”) The proportions working fewer than 40 hours and 41–48 hours remained fairly stable.

### Age and Sex

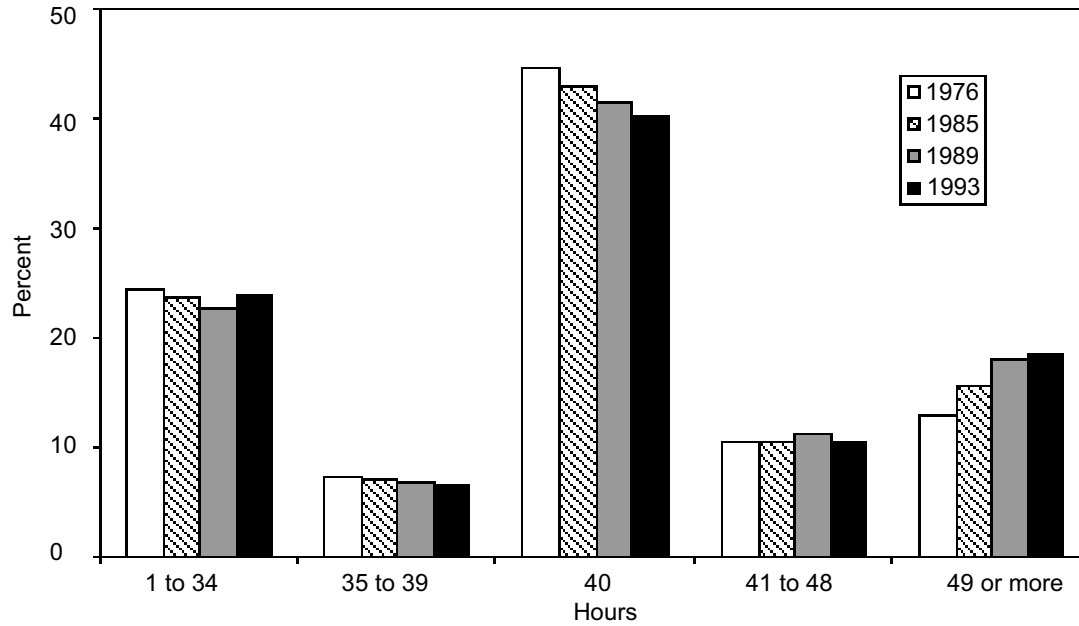
Since the changing age distribution affects workweek trends, it is useful to look at more homogeneous groups of workers over time. Between 1976 and 1993, the average workweek for 25- to 54-year-old men and women were both up on net. The increase was much greater for women, whose average workweek rose by nearly two-and-a-half hours (Figure 2). During that 17-year period, however, the workweek fluctuated substantially with the business cycle. Men’s hours were curtailed more severely in conjunction with the downturn of the early 1990s, and, even by 1993, they had not yet regained their prerecession peak. Adult women, in contrast, experienced only a small dip in their average workweek, and that series quickly returned to its upward trend.

The slight increase in average hours worked between 1976 and 1993 reflects the greater share of both men and women who worked 49 hours or more per week (Table 3). For men, there was a corresponding decline in the share who worked exactly 40 hours per week, while among women the shift into the longer workweek occurred from the part-time category (1–34 hours) and from the 35- to 39-hour group.

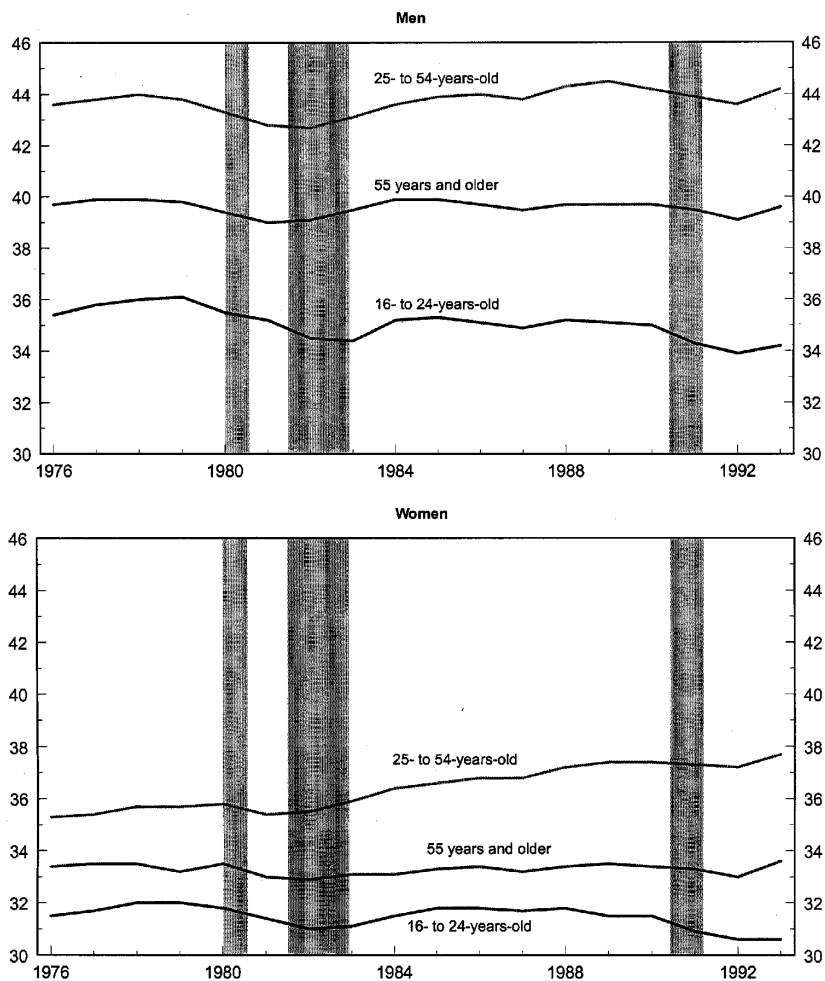
### Younger Workers

In contrast to workers aged 25 to 54, the average workweek for those who are younger edged down, on net, between 1976 and 1993.

**Figure 1 Distribution of Hours at Work of Nonagricultural Wage and Salary Workers, Annual Averages, Selected**



**Figure 2 Average Hours Worked for Wage and Salary Workers in Nonagricultural Industries, by Sex and Age, Annual Averages, 1976–1993**



NOTE: Shaded areas represent recessions.



**Table 3 Percent Distribution of Nonagricultural Wage and Salary Workers, by Sex, Age, and Hours of Work, Annual Averages, Selected Years, 1976–1993<sup>a</sup>**

Characteristic	1976	1985	1989	1993
<b>Men</b>				
16 to 24 years				
1–34 hours	34.1	35.9	36.7	40.2
35–39 hours	5.1	5.4	5.6	6.2
40 hours	38.5	36.3	35.6	33.0
41–48 hours	11.3	9.9	9.3	8.2
49 hours or more	11.1	12.6	12.8	12.4
25 to 54 years				
1–34 hours	10.4	9.8	9.1	10.7
35–39 hours	4.3	4.2	4.0	4.1
40 hours	48.9	46.6	43.7	42.7
41–48 hours	14.2	13.8	14.2	13.3
49 hours or more	22.2	25.7	29.0	29.2
55 years and over				
1–34 hours	18.3	19.1	21.4	23.0
35–39 hours	4.7	5.0	4.9	4.6
40 hours	50.7	46.6	43.5	41.9
41–48 hours	11.5	11.2	10.6	9.9
49 hours or more	14.7	18.1	19.7	20.6
<b>Women</b>				
16 to 24 years				
1–34 hours	43.3	44.5	46.1	50.5
35–39 hours	9.8	9.1	8.4	8.1
40 hours	37.8	34.1	32.8	29.4
41–48 hours	5.9	6.9	6.7	5.9
49 hours or more	3.2	5.3	6.0	6.0
25 to 54 years				
1–34 hours	31.4	28.2	26.1	26.5
35–39 hours	11.6	10.5	9.7	9.4

Characteristic	1976	1985	1989	1993
40 hours	43.8	43.5	43.3	42.4
41–48 hours	7.5	8.9	9.9	9.8
49 hours or more	5.7	8.9	11.0	12.0
55 years and over				
1–34 hours	38.4	39.4	39.5	40.4
35–39 hours	11.8	11.5	11.4	9.9
40 hours	38.5	37.5	35.3	35.2
41–48 hours	6.5	6.0	6.7	6.5
49 hours or more	4.9	5.6	7.1	7.9

<sup>a</sup> Detail may not sum to 100.0 due to rounding.

In 1976, 16- to 24-year-olds worked an average of 33.6 hours a week compared to 32.5 hours in 1993. While average hours at work were higher for young men than for young women (34.2 and 30.8, respectively, in 1993), the cyclical and long-term trends were nearly identical.

The overall decline in hours worked among youth partly reflected changes in their school enrollment status. As shown in Table 4, between 1976 and 1993, the proportion of all 16- to 24-year-olds who were attending school—either high school or college—increased from 45 percent to 50 percent. The rise in school enrollment occurred among both high school and college-aged youth.<sup>9</sup>

In addition to rising enrollment rates among the college-age population, more college students were working in 1993 than in 1976—53 versus 45 percent. This rise in employment occurred entirely among full-time college students, who averaged about 20 hours a week. Thus, the shift toward shorter workweeks among the young largely reflects their increased tendencies to be students. However, even among non-students, average hours edged down slightly.<sup>10</sup>

**Table 4 School Enrollment of 16- to 24-Year-Olds in the United States (%)**

Year	Total	High School	College	
			Part time	Full time
1976	45.2	24.9	3.0	17.3
1993	50.0	23.7	4.4	21.9

Hours distribution data reinforce the contention that the decline noted in the average workweek among younger workers is due, in part, to an increase in school activity. The proportion of younger workers who work part time (1–34 hours per week) has increased since the mid 1970s, while the share of those working 40 hours per week declined.

### **Older Workers**

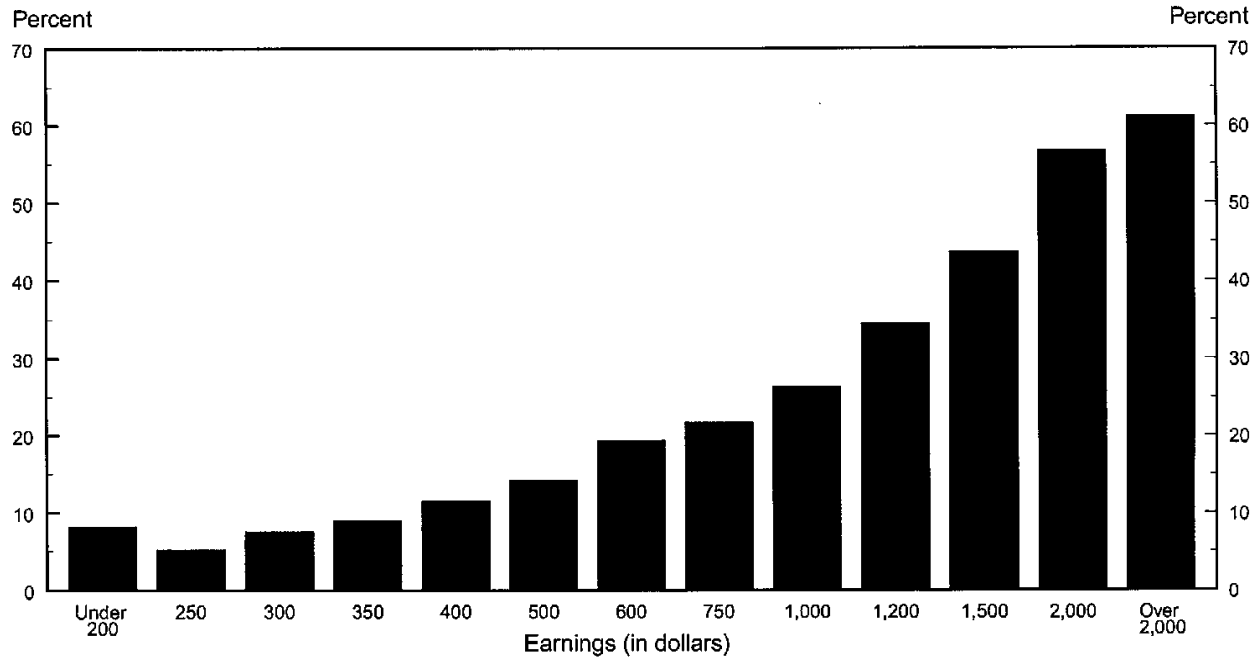
As with workers aged 25 to 54, men aged 55 and over work an average of about six hours more per week than their female counterparts. The average workweek for both men and women 55 years and older changed little between 1976 and 1993, and their averages seem to have been less affected by the business cycle than were those for other age groups. For older men in particular, the unchanged average workweek, on net, reflects increases in employment at both ends of the hours distribution (Table 3). Apparently, a growing share of those still in their “career jobs” are working very long workweeks, as was the case for workers aged 25 to 54. At the other end of the hours distribution, work activity among retirees (those receiving pensions) is on the rise, and these workers tend to work part time.<sup>11</sup> In fact, between 1984 and 1993, the proportion of pension recipients who worked rose from 31 to 39 percent.

## **LONG WORKWEEKS**

### **Who Is Working Longer Workweeks?**

It is a simple arithmetic truth that persons who work longer workweeks earn more, on average, at equivalent hourly pay, than those who work shorter workweeks. For example, persons working 48 hours per week at \$10 per hour would earn \$80 more, before taxes, than those working 40 hours per week at the same hourly rate. In addition, survey data from the CPS clearly show those with the highest earnings are quite likely to work very long hours<sup>12</sup> (Figure 3). What is not obvious from mathematical computations and survey data is which comes first: do the high earnings associated with longer workweeks simply reflect the greater hours worked, or is there a more basic difference between

**Figure 3 Proportion of Full-Time Men in Each Earnings Category Who Work 49 Hours or More Per Week, 1995 Annual Averages**



NOTE: Intervals reflect the upper bounds of the earnings categories.

jobs that demand (or encourage) long workweeks and those that do not?

Figure 4 shows the share of workers in different occupations who work 49 hours or more per week in 1985 and 1993. Professionals and managers are among those most likely to work very long workweeks. This may reflect the considerable responsibilities associated with many of these types of jobs, but also the fact that employers often are not required by law to pay them overtime premiums, as they must do for most hourly paid workers. Workers in these occupations also are among the highest paid: professionals earned \$682 per week and managers \$675 in 1993, compared with the median for all occupations of \$463.<sup>13</sup>

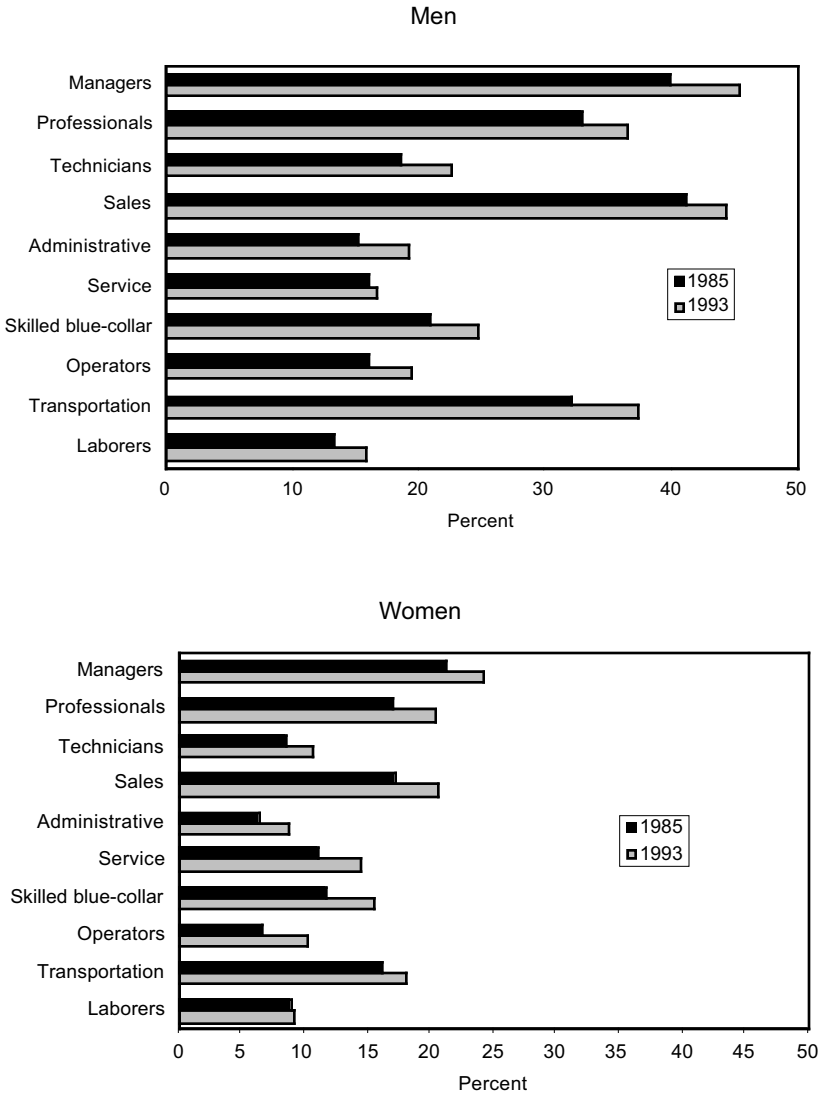
In contrast, sales and transportation workers also have long workweeks, but they are not, on average, highly paid. In these cases, a large percent of workers may work 49 hours or more a week due to the direct effect on earnings—that is, the more they work, the more they earn. For example, commissioned sales workers clearly have an incentive to work long workweeks. Indeed, full-time workers employed by motor vehicle dealerships averaged nearly 47 hours per week in 1995. In contrast, workers in department stores, where commissions are a less common form of pay, worked less than 41 hours.<sup>14</sup> Likewise, in the transportation industry, both trucking and taxicab services have among the longest workweeks of any industry, averaging more than 47 hours each.

To better understand the link between hours, occupations, and earnings, data for more specific occupations need to be examined. For example, even within the occupational groups where the overall share of workers employed 49 hours or more is small, there may be some types of jobs in which such schedules are common. Such an analysis, however, is outside the scope of this overview. The discussion presented here suggests that there are several factors that distinguish occupations with long workweeks, and that these jobs may be intrinsically different from other types of jobs.

### **1985–1993 Occupational Shift**

Does the increasing share of workers who report that they are at work for more than 48 hours reflect a shift in employment toward high-hour occupations? For both men and women, the share in every major

**Figure 4 Share of Workers on Full-Time Schedules Working 49 Hours or More Per Week, by Occupation, 1985 and 1993 Annual Averages**



occupational group that worked such a schedule increased between 1985 and 1993<sup>15</sup> (Figure 4). As stated above, the prevalence of long workweeks varies considerably by occupation. Such schedules are more highly concentrated in the managerial, professional, sales, and transportation occupations, and the rate of increase during the 1985–1993 period was not consistent among all occupations. The following tabulation shows the distribution of growth in long-workweek employment across the occupational mix effect, the within-occupation shift effect, and the employment growth effect.<sup>16</sup>

As Table 5 shows, the number of persons working long work schedules increased considerably (5.1 million) over the eight-year period. Nearly half of this gain (2.4 million for both sexes combined) can be attributed to the overall expansion in employment over the period—the employment growth effect. The shift into occupations in which long workweeks are the most prevalent—such as managers, professionals, sales, and transportation—accounted for about 400,000, or 8.1 percent, of the gain for men and women combined. This occupational mix effect, however, was much larger for women than men, 12.7 versus 5.1 percent. The rest of the increase is due to the rise in the share of long workweeks in every occupation for both men and women, shown as the within-occupation shift effect.

**Table 5 Growth in Employment of Persons Working 49+ Hours per Week, by Reason**

	Total (000)	Men (000)	Women (000)
Number at work 49 hours or more			
1985	16,787	13,006	3,781
1993	21,909	16,093	5,816
1985–1993 change	+5,122	+3,087	+2,033
Occupational mix effect	+416	+158	+258
Within-occupational shift effect	+2,341	+1,259	+1,082
Employment growth effect	+2,365	+1,670	+695

## NONAGRICULTURAL SELF-EMPLOYED AND AGRICULTURAL WORKERS

Although a growing share of nonagricultural wage and salary workers have long workweeks, most still have a workweek that is fairly close to 40 hours. In contrast, the majority of the self-employed have either very short or very long workweeks (Table 6). The proportion of the self-employed who work at least 49 hours per week declined between 1976 and 1993—although it is still nearly double that for nonagricultural wage and salary workers—while the share who worked part time (1–34 hours per week) rose. In contrast to the trend for men, who comprise the majority of the self-employed, the proportion of women who work a longer workweek increased since the mid 1970s, and the share working 1–34 hours per week declined. As with the self-employed, agricultural workers are heavily concentrated at both ends of the hours distribution and their share of workers in the 49+ hours

**Table 6 Percent Distribution of Persons at Work, by Class of Worker and Hours of Work, 1976 and 1993 Annual Averages<sup>a</sup>**

Class of worker	Hours of work				
	1–34	35–39	40	41–48	49 or more
1976					
Nonagricultural workers <sup>b</sup>					
Wage and salary	24.5	7.3	44.6	10.6	13.0
Self-employed	27.4	4.4	22.8	9.0	36.4
Agricultural workers	30.7	4.8	14.4	8.2	42.0
1993					
Nonagricultural workers <sup>b</sup>					
Wage and salary	24.0	6.7	40.3	10.6	18.5
Self-employed	31.0	4.9	23.3	7.0	33.9
Agricultural workers	29.3	4.8	22.1	7.6	36.2

<sup>a</sup> Detail may not sum to 100.0 due to rounding.

<sup>b</sup> Excludes unpaid family workers.



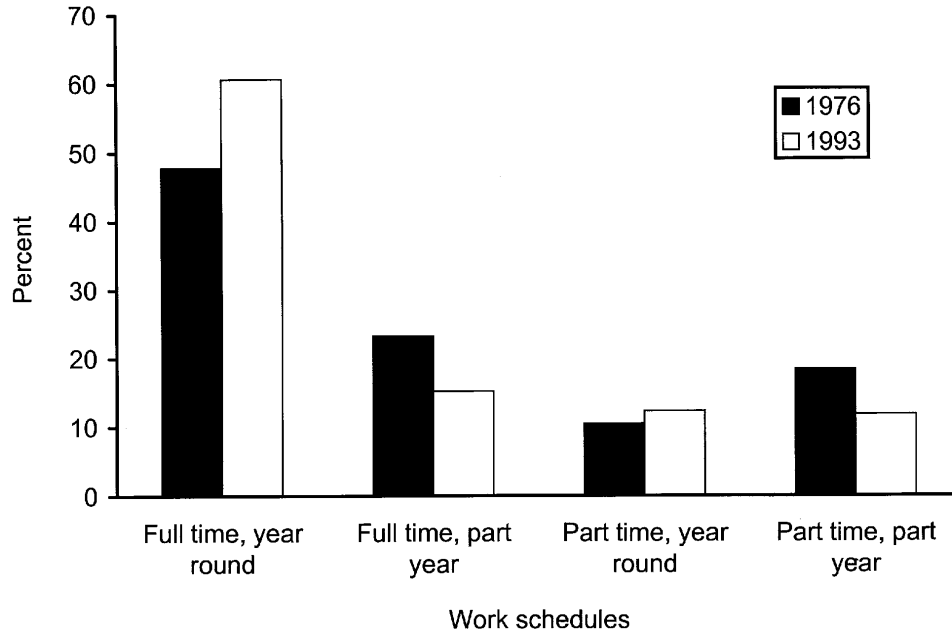
group declined substantially between 1976 and 1993, as the share working exactly 40 hours rose.

## **ANNUAL WORK HOURS**

We have seen that the change in the average length of the workweek has been quite small since the mid 1970s, although a shift toward a growing share of workers putting in very long workweeks has been noteworthy. But rephrasing the question from, “What has been the trend in the length of the workweek?” to the broader, “What has been the trend in hours at work over an entire year?” brings in additional variables that may identify more dramatic shifts. Indeed, data on annual work hours, rather than the average workweek, most often are used in intercountry comparisons of work hours. This allows for the differences in vacation time allowed and used between, say, Germany, Japan, and the United States to be factored into the work-hours discussion.

Two factors other than the length of the typical workweek can affect the total amount of time people spend working: the extent to which people work at all during any particular year and the number of weeks that people work during the year. In the previous calculation of average weekly hours, workers are only included when they worked; they were “out of scope” when they did not work at all; that is, they are in neither the numerator nor the denominator of an average weekly hours calculation. Yet we know that changes have taken place in the amount of time during the year that workers are spending on the job. Bureau of Labor Statistics analysts recently reported that work activity is becoming less and less seasonal (more year round), and that finding is consistent across industries and demographic groups (see Rydzewski, Deming, and Rones 1993). Data collected each March in the CPS also show that U.S. workers, particularly women, have increasingly been working year round, as shown in Figure 5. Indeed, more dramatic than any shift toward either full- or part-time work is the trend toward year-round employment. The following shows the effect of changes in the share of the population working and the extent of their work activity during the year on work hours.

**Figure 5 Work Schedules of Women Aged 25 to 54, 1976 and 1993 Annual Averages**



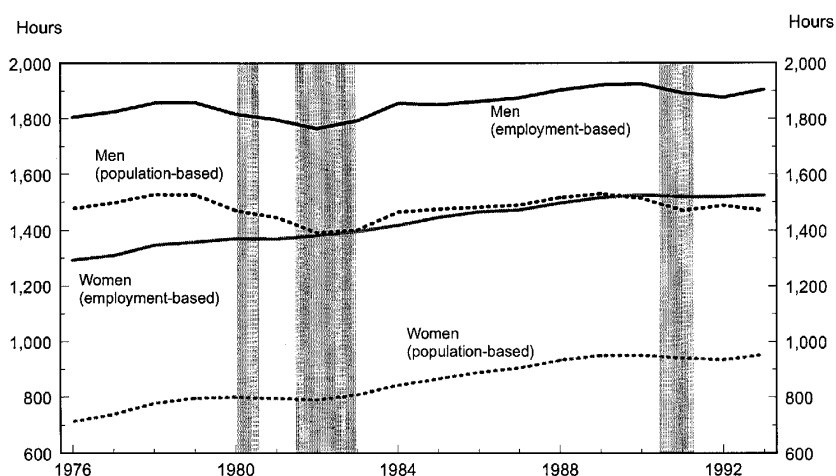
The average number of hours the average worker is at work during the year is calculated using the following formula:

$$\text{Average annual hours at work} = \frac{\text{Number at work in an average week} \times \text{Average weekly hours at work} \times 52 \text{ weeks}}{\text{Number at work during the year}}$$

The aggregate number of hours worked during a week is the product of the number of persons at work in an average week (an annual average) and their average hours at work. That number is then multiplied by 52 weeks to obtain an estimate of the aggregate number of hours worked during the year. The divisor—the number at work at any time during the year—was obtained from the “work experience” questions asked each March in the CPS supplement.<sup>17</sup> In those questions, CPS respondents are asked to recall their work activity during the previous calendar year, including the number of weeks in which they worked and their usual hours. Thus, aggregate hours worked during the year 1993, for example, obtained from the basic monthly CPS, are divided by the number of persons who worked at all in 1993 (that number is obtained from the March 1994 survey). This produces an excellent measure of average hours worked for each worker during the year and a long time series for comparisons. Results for men and women are shown in Figure 6.

The annual hours estimate rose steadily for women until the late 1980s and has grown more slowly since then. The lack of sensitivity to the business cycle is somewhat surprising given the fact that women, like men, are subject to cyclical swings in unemployment, which is a major determinant of the number of weeks worked during the year. The hours series for men is higher than that for women both because men work longer average workweeks and they are more likely to work year round. Men’s annual hours have risen much less than women’s and appear to be more sensitive to the business cycle.

As shown in Table 7, working women worked an average of nearly 20 percent more in 1993 than in 1976, adding 233 hours to their average workweeks. But, as shown with the weekly hours data, the age distribution of the working population has changed substantially over this period; a much smaller share are now in the older and younger ages,

**Figure 6 Average Annual Hours at Work for Men and Women, 1976–1993**

NOTE: Shaded areas indicate recessions.

where both workweek length and weeks of work tend to be relatively low. Adjusting for this age shift reduces modestly the 1976–1993 change. Men's hours, after age-adjustment, were up 3 percent over the period; women's, up 15 percent.<sup>18</sup>

These calculations still leave one important trend identified earlier unaccounted for: the change in the likelihood of an individual to work at all during the year. Men have become less likely to work, largely due to earlier retirements, expansion of the Social Security disability program, increased school enrollments, and an increase in wives' employment. Women, alternatively, have become dramatically more

**Table 7 Average Annual Work Hours for Men and Women, 1976 and 1993**

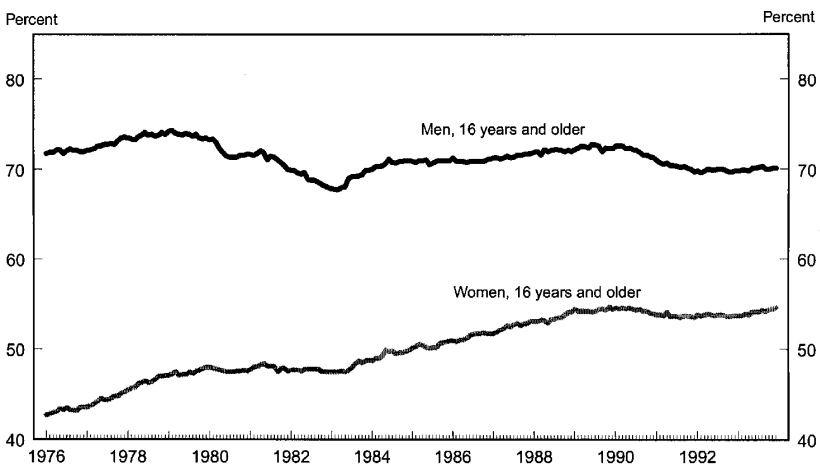
Year	Men	Women
1976	1,805	1,293
1993	1,905	1,526
1976–1993 change	+100	+233
Age-adjusted change	+62	+193

likely to work (Figure 7). Hence, using the population as the denominator in an annual hours calculation, rather than those who worked, should considerably affect the change in hours between 1976 and 1993.

The population-based estimate duplicates the numerator in the equation above but uses the civilian noninstitutional population as the denominator, not those who worked. As shown in Figure 6, the series for men did not change at all. In fact, the line is flatter than the employment-based series since men, on average, have become somewhat less likely to work at all over time. The population-based series for women is at a much lower level than is the employment-based series. The increases, though, have been quite large, particularly on a percentage basis. Allocated across the population of women aged 16 and older, each individual worked one-third longer in 1993 than in 1976.

Looking at the more homogeneous (in terms of work schedules) group of 25- to 54-year-olds has two advantages: it avoids the need to age-adjust the data, and it eliminates the younger and older workers from the calculation, the two groups with particularly low annual hours. For that group, between 1976 and 1993, average hours per woman per year rose 45 percent, from 888 to 1,290. The average for men was virtually unchanged at just over 1,900 hours (see note 18).

**Figure 7 Employment-Population Ratios for Men and Women, Annual Averages, 1976–1993**



## SUMMARY

This chapter attempted to track the course of working hours in the United States using the Current Population Survey, a large, representative national sample of households from which comparable data can be obtained for a long period of time. The survey estimates suggest that the average length of the workweek for most groups has changed little since the mid 1970s, although the distribution of work hours has changed. The most noteworthy difference between the 1970s and the 1990s is in the increase in the share of persons who are working very long hours—those who are exceeding the old “standard” workweek of 40 hours by more than a full eight-hour day. This increase is pervasive among occupations, and the long workweek itself seems to be associated with high earnings and certain types of occupations.

More dramatic has been the increase in the work year, a measure more commonly used to compare different countries (Americans tend to work more during the year than most Europeans but less than the Japanese, for example). Women’s increasing likelihood of working at all and, when they do work, of working year round, has had a noteworthy effect on the number of hours that women work during the course of the year. In order to analyze trends in either weekly or annual work hours over an extended period of time, it is important to allow for changes in the overall measures that occurred solely because of changes in the age distribution of the population. Alternatively, the analyst can examine trends for specific population groups separately.

## Notes

1. See Ilg (1996) for a discussion of the industries and occupations that experienced job growth in recent years.
2. This trend analysis ends in 1993 due to the introduction of a redesigned Current Population Survey (CPS) in January 1994. The new CPS asked different questions to obtain average hours data from the pre-1994 survey, rendering the data not strictly comparable. See the appendix for a discussion of changes in the CPS and its effect on work hours. Data for 1995 are presented, however, in the overall description of between-group differences in work hours.
3. An additional limitation of the Current Employment Statistics survey, the Bureau of Labor Statistics’ survey most commonly used for average workweek data, is that the universe is restricted to private nonsupervisory workers on nonagricul-

tural payrolls. The excluded groups—agricultural workers, the self-employed, and many supervisory and professional workers—tend to have very different levels of work hours than do those who are covered.

4. The CPS is a monthly survey of 50,000 (at present) households conducted by the Bureau of the Census for the Bureau of Labor Statistics. Another source of data on work time comes from time diaries. This approach is discussed in Robinson and Bostrom (1994).
5. The restricted group is presented because those excluded—nonagricultural self-employed and agricultural workers—have very different workweeks. Those differences are discussed later in the chapter. In addition, the workweek decisions are conceptually very different for the self-employed than they are for “employees,” who must match their own preferences with those of employers.
6. Marital-status data are for all workers in nonagricultural industries, not just wage and salary.
7. In 1995, full-time workers aged 25 to 54 worked an averaged of 44.1 hours a week, about three hours longer than the average for all workers that age. The long-term trend in the workweek for full-time workers is similar to that for all workers; that is, fluctuating with the business.
8. To “age-adjust” the length of the workweek, first the age distributions of men and women at work in 1976 were applied to the 1993 employment total for each gender to generate a new 1993 distribution. Aggregate hours then were computed by multiplying the new employment figures for each age by the average hours worked in 1993. The aggregate hours for the age groups were then summed individually by sex to get total aggregate hours for men and women. These totals were then divided by male and female employment in 1993 to obtain an age-adjusted workweek that uses the age distribution of 1976 and the age-specific hours worked in 1993.
9. The share of 16- to 24-year-olds who are enrolled in high school appears to have fallen, according to the tabulation. That is so only because this population group has shifted substantially toward the college ages over that period. In 1976, 51 percent of 16- to 24-year-olds were teenagers; by 1993, that share was only 43 percent. In fact, the enrollment rate for 16- to 19-year-olds in high school was 48 percent in 1976 compared to 55 percent in 1993.
10. Hours data for nonstudents were available only for 20- to 24-year olds. In 1979, their average workweek was 40.4 hours compared to 39.7 hours in 1993.
11. See Herz (1995) for a discussion of several possible reasons for the increased work activity of pension recipients.
12. The data shown are for men but the relationship applies to women as well.
13. Earnings data presented are for full-time (35 hours or more a week), wage and salary workers. Earnings data are not available for self-employed sales workers or for those earning commission.
14. These data are for industries, not occupation; data on hours at work by detailed occupation are not produced regularly by the Bureau of Labor Statistics.

15. These dates were selected because the occupational classification system used prior to the early 1980s was quite different from the one put into place in the CPS in 1983. Data beyond 1993 were affected by the redesign of the CPS introduced in January 1994. Each year selected is more than two years after the end of the prior recession, so estimates of change should not be influenced by the business cycle. These data do include the self-employed.
16. The *employment growth effect* is a measure of the change that would have occurred simply as a result of the overall growth in employment. Thus, it gives the 49+ group its “fair share” of the overall 1985–1993 growth. The *occupational mix effect* is derived by estimating the number of persons who would have worked 49+ hours in 1993 if the occupational mix had been the same as it was in 1985. The *within-occupation shift effect* reflects the extent to which the change in 49+ employment over the period are due to the changes in the share in each occupation who work 49+ hours, as shown in Table 4. It applies the share in each occupation who worked such schedules in 1985 to the actual occupational employment distribution in 1993.
17. Such an estimate cannot be derived from the basic monthly CPS.
18. The basic CPS data include a break in the population (and employment) series between 1990 and 1991. Data from 1990 forward have been adjusted to 1990 census estimates, adjusted for the undercount. March work-experience data, however, have not been so revised. Thus, a slight inconsistency exists between the numerator and denominator in the average annual hours calculation when pre- and post-1990 data are used. The effect on the data is minimal, particularly when long-term comparisons such as the 17 years used here are made. See Robert J. McIntire, “Revisions in Household Survey Data Effective February 1996,” *Employment and Earnings*, March 1996, pp. 8–14, for a discussion of the revisions to the population series.

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## **Appendix: Changes in CPS Questionnaire Concerning Hours Worked**

Current Population Survey (CPS) data for January 1994 and forward are not strictly comparable with data for earlier years because of the introduction of a major redesign of the questionnaire and collection methodology. The principal reasons for the redesign were to obtain more accurate information on the labor market in general, and to expand the use of computer technology in the data collection process. Among the questionnaire changes were alterations to the questions on the number of hours actually worked during the reference week. The questions were modified to help respondents recall the exact number of hours they worked on their main jobs in the prior week. This appendix describes the differences in the questions asked to obtain hours-at-work data in the pre- and post-1994 surveys. In general, the changes emphasized the importance of precision in recalling the prior week's work activity, but they do not alter the concept of hours at work.

In an effort to obtain more precise hours-at-work data, beginning in 1994, respondents to the new CPS are first told that the following questions focus on the exact number of hours they worked in the prior week. They are then asked if they lost or took off any hours from their jobs for any reason in the prior week. If yes, they are queried about the number of hours. Respondents are also asked if they worked extra hours at their jobs that they do not usually work and, if so, how many. It is not until these prompts are completed that respondents are asked how many hours they actually worked at their jobs, and, in addition, for multiple jobholders, how many hours they actually worked at their other jobs.

Prior to 1994, the questions pertaining to actual hours were slightly different, as was the ordering of those questions (see questions below). Data on actual hours were obtained by first asking the number of hours worked at all jobs last week. Then questions were asked about taking time off and working extra hours. The onus was placed on the interviewer to correct the original answer of hours worked, if necessary, based on responses to these questions. Also, nothing in the interview communicated the importance of precision to the respondent. In the pre-1994 survey, hours data were collected for all jobs combined.

Comparing pre- and post-1994 data suggests that the implicit recall strategy associated with the new questionnaire does provide more accurate data on actual hours (see Appendix Table 1). For instance, the proportion of persons who reported working exactly 40 hours per week—a common, almost reflex, response—declined substantially between 1993 and 1994. In fact, this decrease

was greater than the cumulative effect of the long-term downward trend between 1973 and 1993. In addition, during the 1973–1993 period, the share of survey respondents reporting that they worked between 35 and 39 hours or 41 and 48 hours had decreased. In 1994, with the revised questions, this trend was reversed, indicating that respondents now are giving different, and apparently more precise, answers to the questions on hours actually worked.

The following questions were used to obtain data on actual hours worked in the new and old CPS:

New CPS	Old CPS
Lead-in: Now I have some questions about the exact number of hours you worked last week.	How many hours did you work last week at all jobs?
Last week, did you lose or take off any hours from (work/your main job), for any reason such as illness, slack work, vacation, or holiday?	Did you lose any time or take any time off last week for any reason such as illness, holiday, or slack work?
(If yes) How many hours did you take off?	(If yes) How many hours did you take off?
Last week, did you work any overtime or extra hours (at your main job) that you do not usually work?	Did you work any overtime or at more than one job last week?
(If yes) How many additional hours did you work?	(If yes) How many extra hours?
So, for last week, how many hours did you actually work at your (main) job?	Interviewers are instructed to correct original answer if lost time was not already deducted or if extra hours were not included.
(For multiple jobholders) Last week, how many hours did you actually work at your other job(s)?	

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**Table A1 Percent Distribution of Persons at Work, by Sex and Hours of Work, 1993 and 1994 Annual Averages<sup>a</sup>**

Characteristic	1993	1994	Difference
Men (hours)			
1-4	0.4	0.7	0.3
5-14	2.6	2.4	-0.2
15-29	8.1	8.4	0.3
30-34	5.7	6.3	0.6
35-39	4.5	5.3	0.8
40	41.1	37.1	-3.9
41-48	12.1	14.3	2.2
49 or more	25.5	25.5	-0.1
Women (hours)			
1-4	0.8	1.1	0.4
5-14	5.1	5.4	0.3
15-29	16.5	17.3	0.9
30-34	9.8	10.2	0.4
35-39	9.2	10.2	1.0
40	39.4	35.1	-4.3
41-48	8.8	10.3	1.6
49 or more	10.5	10.3	-0.3

<sup>a</sup> Detail may not sum to 100.0 due to rounding.

# **Working Time in Comparative Perspective**

## **Volume I**

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and  
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