

Trends in hours of work since the mid-1970s

Although there has been little change in the average number of hours worked each week since the mid-1970s, the proportion of persons working very long workweeks has risen, and there has been a growing trend toward year-round work among women

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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 1938.¹ After long and hard-fought legal and political battles, the act allowed for a maximum workweek of 44 hours, which then would decline to 40 hours in the third year after enactment. Although employers still could 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 upon 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 work force and shifted their work schedules towards 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.

Two important issues in the 1990s are worker displacement and the quality of jobs, both of which 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 longer workweeks to protect their own positions.

As for the quality of jobs, newly created jobs often have been stereotyped (incorrectly) as part-time, low-wage, poor-quality jobs.²

This article examines trends in hours at work 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 not only by the length of the workweek, but also by the extent to which people work at all, and the number of weeks that they work during the year. Lastly, the appendix provides a discussion of the differences between hours data collected following the redesign of the Current Population Survey (CPS), implemented in January 1994, and those obtained prior to 1994. Because of the effect of those changes on work-hour estimates, trend data in the article are restricted to the period through 1993.³

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 actual hours 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 un-

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Understanding workweek trends. Thus, if the focus is on workers and their work schedules, employer surveys will not suffice.⁴

For those reasons, data obtained from individuals were 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.⁵ Respondents to the survey are queried on their usual and actual hours at work. Additionally, each March, survey respondents are asked about their work experience in the prior year, including their typical work schedule and the number of weeks that they worked.

Average hours at work

In 1995, the average workweek for nonagricultural wage and salary workers⁶ was 39.2 hours. That average varied considerably across worker groups, however. For instance, the average workweek for men was 42.1 hours, compared with 35.8 hours for women; persons aged 25 to 54 typically work more hours than do younger and older workers. (See table 1.) In addition, the length of the workweek varies by marital status. Married men, for example, spent the most time at work each week in 1995, averaging 8 hours per week more than married women.

Reflecting their younger age, men and women who never have been married tend to work the shortest workweeks.⁷

Average hours at work changed little over the period from 1976 to 1993, increasing by just 1.1 hours, on net, to 39.2 hours.⁸ 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, while 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 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 1976.⁹ As the tabulation below shows, after removing the effect of the shifting age distribution, average weekly hours for men showed virtually no change (edging up from 41.0 to 41.2 hours), and the average workweek for women increased by only a single hour:

Table 1. Nonagricultural wage and salary workers at work and their average hours by age, sex, race, and Hispanic origin, 1995 annual averages

[Numbers in thousands]

Characteristic	Total at work	Average hours	
		Total at work	Persons who usually work full time
Age and sex			
Total, 16 years and older	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 older	11,692	36.7	42.3
Men, 16 years and older	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 older	6,250	39.6	43.7
Women, 16 years and older	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 older	5,442	33.3	40.3
Race and Hispanic origin			
White, 16 years and older	90,997	39.3	43.2
Men	49,114	42.4	44.8
Women	41,883	35.6	40.9
Black, 16 years and older	12,162	38.3	41.2
Men	5,826	40.0	42.3
Women	6,336	36.7	40.1
Hispanic origin, 16 years and older	9,645	38.5	41.5
Men	5,688	40.5	42.4
Women	3,956	35.6	39.9

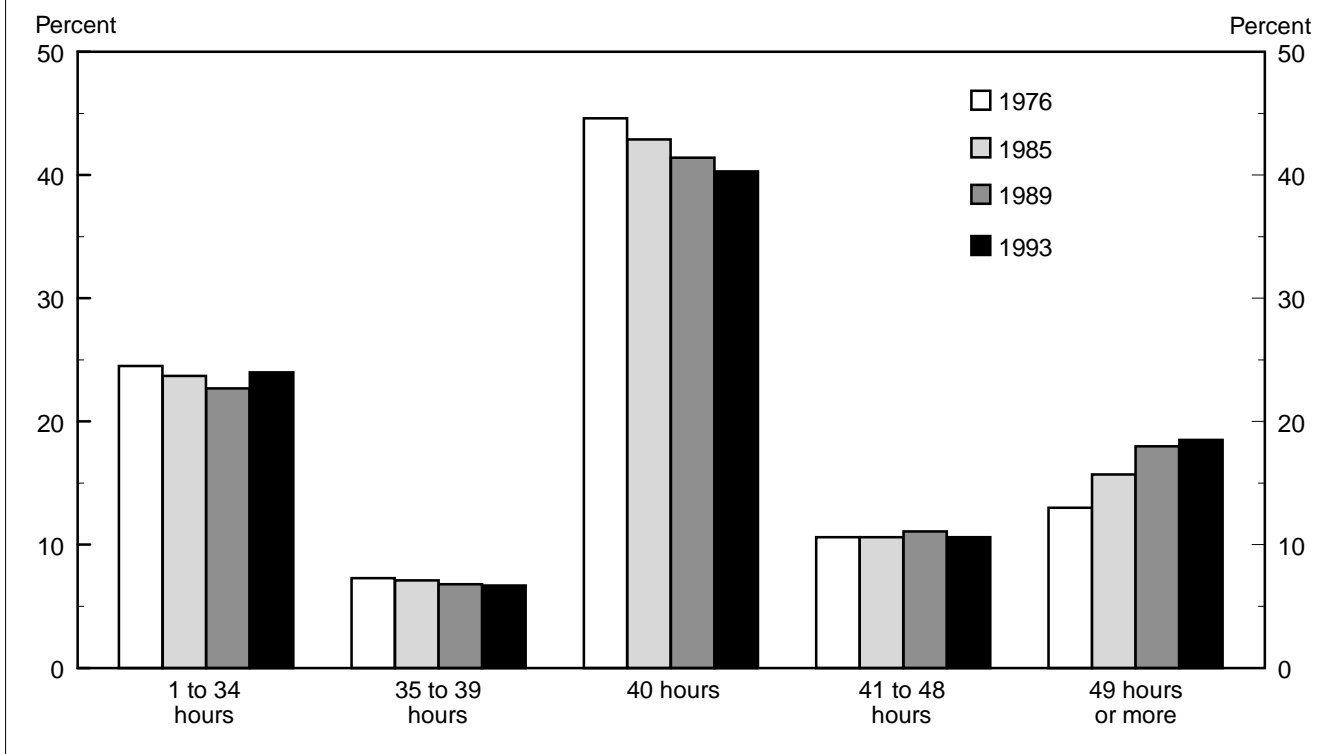
	Average weekly hours		
	Actual		Age-adjusted
	1976	1993	1993
Men, 16 years and older	41.0	42.0	41.2
Women, 16 years and older	34.0	36.0	35.0

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 chart 1, between 1976 and 1993, the proportion of nonagricultural 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 this shift is presented later in the section on long workweeks.) The proportions working fewer than 40 hours and 41 to 48 hours remained fairly stable.

Age and sex

25- to 54-year-olds. Because 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 both were up, on net. The increase was much greater for

Chart 1. Distribution of hours at work of nonagricultural wage and salary workers, annual averages, selected years, 1976-93



women, whose average workweek rose by nearly 2½ hours. (See chart 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, 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. (See table 2.) 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 mostly from the part-time category (1 to 34 hours) and from the 35- to 39-hour group.

Younger workers. In contrast to workers aged 25 to 54, the average workweek for younger workers edged down, on net, between 1976 and 1993. In 1976, 16- to 24-year-olds worked an average of 33.6 hours per 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 the number of hours worked among

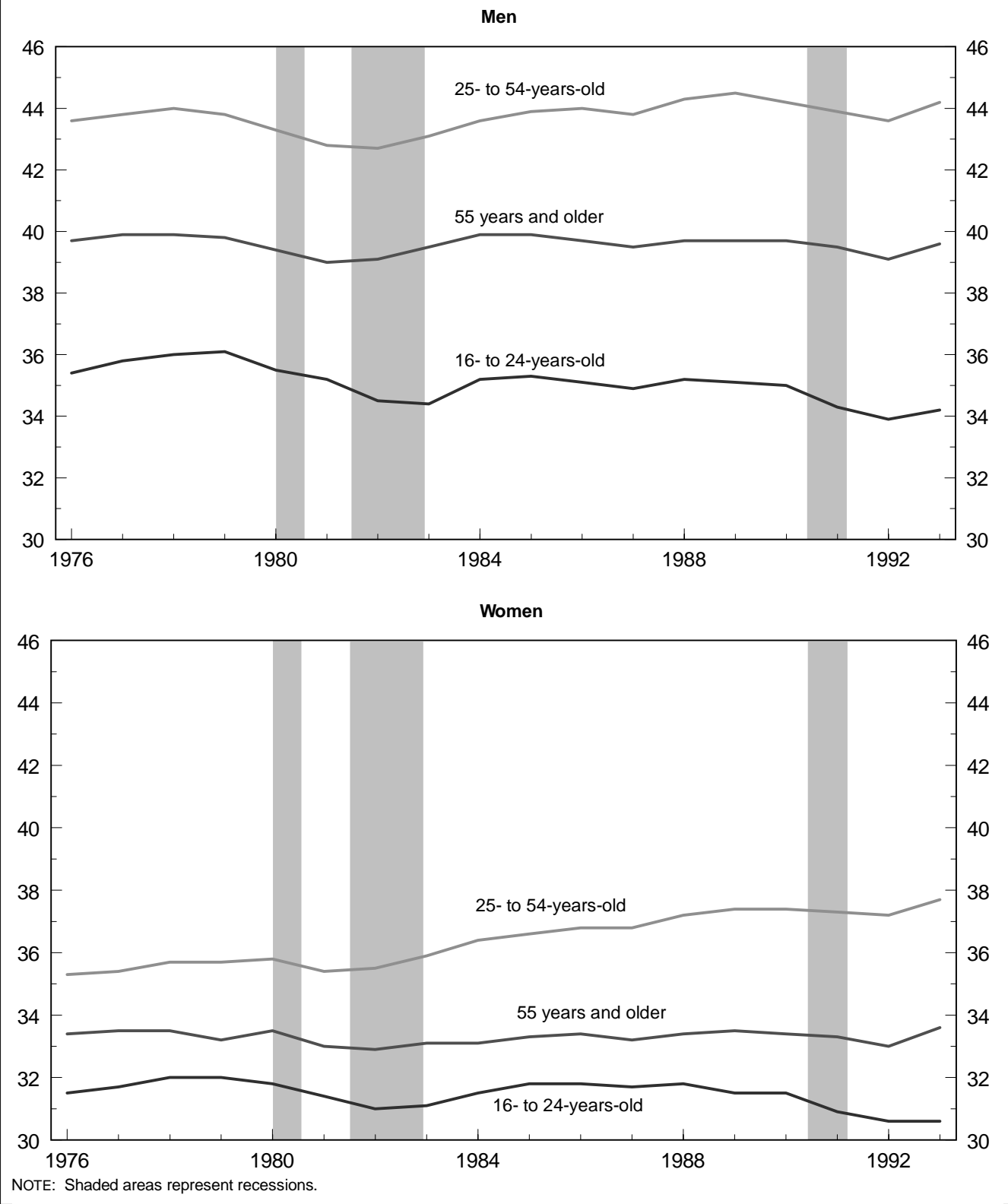
youth partly reflects changes in their school enrollment status. As the tabulation below shows, between 1976 and 1993, the proportion of all 16- to 24-year-olds who were enrolled in either high school or college increased from 44 to 51 percent. The rise in school enrollment occurred among both high school and college-age youth.

	Total	High school	College	
			Part time	Full time
1976	44.0	22.9	3.4	17.7
1993	51.2	24.2	4.6	22.4

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 increase in employment occurred entirely among full-time college students, who worked, on average, about 20 hours per week. Thus, the shift toward shorter workweeks among the young largely reflects their increased tendency to be students, although even among nonstudents, average hours edged down slightly.¹⁰

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 to 34 hours

Chart 2. Average hours worked for wage and salary workers in nonagricultural industries by sex and age, annual averages, 1976-93



per week) has increased since the mid-1970s, while the share of those working 40 hours per week has declined.

Older workers. The average workweek for both men and women aged 55 years and older changed little over the 1976–93 period, and their hours 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. (See table 2.) Apparently, a growing share of those still in their “career jobs” were 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 work-

ers tend to work part time. “Both full- and part-time (less than 35 hours per week) work activity rose among all these groups of retirees [men aged 50 to 64], although a disproportionate share of the increase among those 50 to 61 years was in part-time work.”¹¹

Long workweeks

Who is working longer workweeks? It is a simple arithmetic truth that persons who work longer workweeks earn more per week, 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. (They also may earn an overtime premium.) In addition, data from the CPS clearly show that those with the highest earnings are the most likely to work very long workweeks.¹² (See chart 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 number of hours worked, or is there a more basic difference between jobs that demand (or encourage) long workweeks and those that do not?

Chart 4 shows the share of workers in different occupations who worked 49 hours or more per week in 1985 and 1993. Professionals and managers were 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 that employers often are not required by law to pay overtime premiums to workers in these occupations, as they must do for most hourly paid workers. Workers in these occupations also are among the highest paid: professionals and managers earned \$680 and \$661 per week, respectively, in 1993, compared to the median for all occupations of \$459.¹³

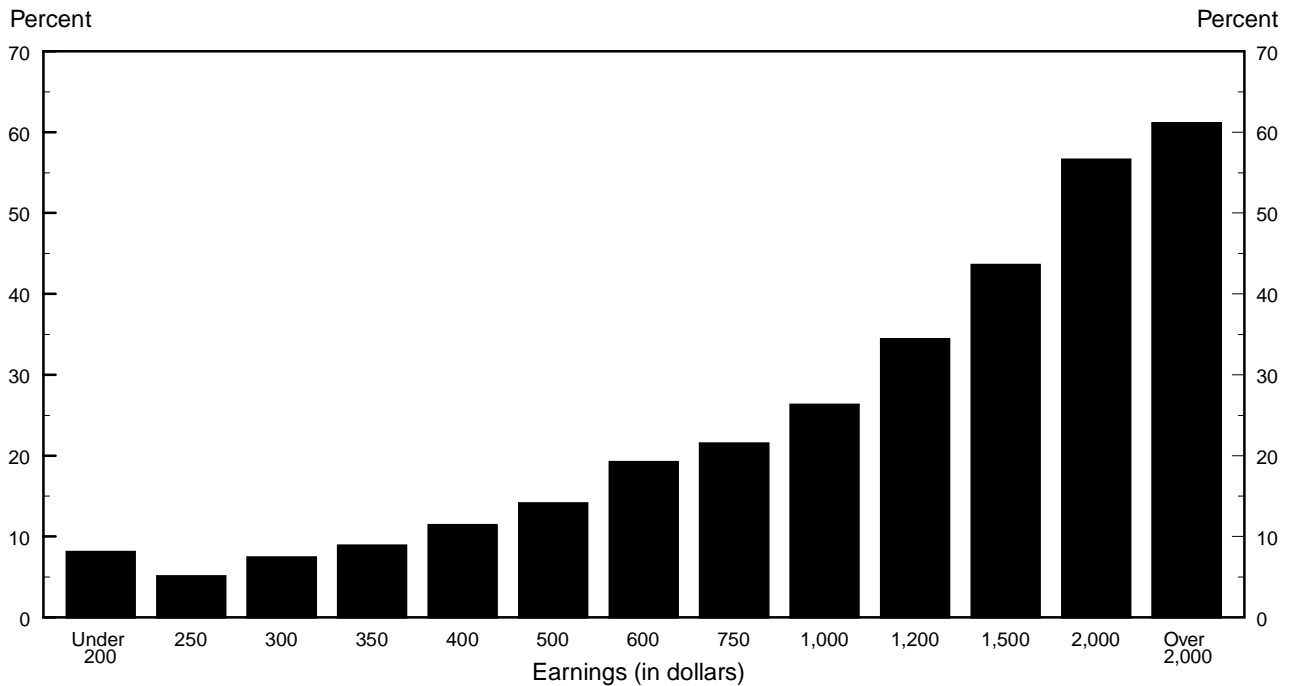
In contrast, sales and transportation workers, who also have long workweeks, are not, on average, highly paid. In these cases, a large proportion of workers may work 49 hours or more per week due to the direct effect of hours on earnings—that is, the more they work, the more they earn. For example, commissioned salesworkers clearly have an incentive to work long workweeks. Indeed, full-time salesworkers employed by motor vehicle and boat dealerships worked nearly 50 hours per week, on average, in 1995. Likewise, transportation workers, both truckdrivers and drivers involved in saleswork, have among the longest workweeks of any occupation, averaging more than 46 hours each. In contrast, full-time salesworkers in apparel stores, occupations in which commissions are a less common form of pay, worked less than 39 hours, on average.

Table 2. Percent distribution of nonagricultural wage and salary workers by sex, age, and hours of work, annual averages, selected years, 1976–93

Characteristic	1976	1985	1989	1993
Men				
16 to 24 years	100.0	100.0	100.0	100.0
1 to 34 hours	34.1	35.9	36.7	40.2
35 to 39 hours	5.1	5.4	5.6	6.2
40 hours	38.5	36.3	35.6	33.0
41 to 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	100.0	100.0	100.0	100.0
1 to 34 hours	10.4	9.8	9.1	10.7
35 to 39 hours	4.3	4.2	4.0	4.1
40 hours	48.9	46.5	43.7	42.7
41 to 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 older	100.0	100.0	100.0	100.0
1 to 34 hours	18.4	19.1	21.4	23.0
35 to 39 hours	4.7	5.0	4.9	4.6
40 hours	50.7	46.6	43.5	41.9
41 to 48 hours	11.5	11.2	10.6	9.9
49 hours or more	14.7	18.1	19.7	20.6
Women				
16 to 24 years	100.0	100.0	100.0	100.0
1 to 34 hours	43.3	44.5	46.1	50.5
35 to 39 hours	9.8	9.1	8.4	8.1
40 hours	37.8	34.1	32.8	29.4
41 to 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	100.0	100.0	100.0	100.0
1 to 34 hours	31.4	28.2	26.1	26.5
35 to 39 hours	11.6	10.5	9.7	9.4
40 hours	43.8	43.5	43.3	42.4
41 to 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 older	100.0	100.0	100.0	100.0
1 to 34 hours	38.4	39.4	39.5	40.4
35 to 39 hours	11.7	11.5	11.4	9.9
40 hours	38.5	37.5	35.3	35.2
41 to 48 hours	6.5	6.0	6.7	6.5
49 hours or more	4.9	5.6	7.1	7.9

NOTE: Detail may not sum to 100.0 due to rounding.

Chart 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.

The 1985–93 occupational shift. Does the increasing share of workers who report that they are at work for 49 hours or more reflect a shift in employment towards long-workweek occupations? For both men and women, the share in every major occupational group that worked such a schedule increased over the 1985–93 period.¹⁴ (See chart 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 period was not consistent among all occupations.

The tabulation below shows the distribution of growth in long-workweek employment across three effects. The *occupational mix effect* is derived by estimating the number of persons who would have worked 49 hours or more 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 long-hour employment over the period is due to changes in the share of workers in each occupation who work 49 hours or more, as shown in chart 4. This measure applies the share who worked such schedules in each occupation in 1985 to the actual occupational employment distribution in 1993. 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-hour-

or-more group its “fair share” of the overall 1985–1993 growth.

	Total	Men	Women
	(In thousands)		
Number at work 49 hours or more:			
1985	16,787	13,006	3,781
1993	21,909	16,093	5,816
1985–93 change	+5,122	+3,087	+2,035
Occupational mix effect	+416	+158	+258
Within-occupational shift effect ..	+2,341	+1,259	+1,082
Employment growth effect	+2,365	+1,670	+695

As the tabulation shows, the number of persons working long work schedules increased considerably (5.1 million) over the 8-year period. Nearly half of this gain (2.4 million for both sexes combined) can be attributed to the overall expansion in employment during 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 for men—12.7 versus 5.1 percent. The rest of the increase was due to the rise in the share of long

Chart 4. Share of workers on full-time schedules working 49 hours or more per week by occupation, 1985 and 1993 annual averages

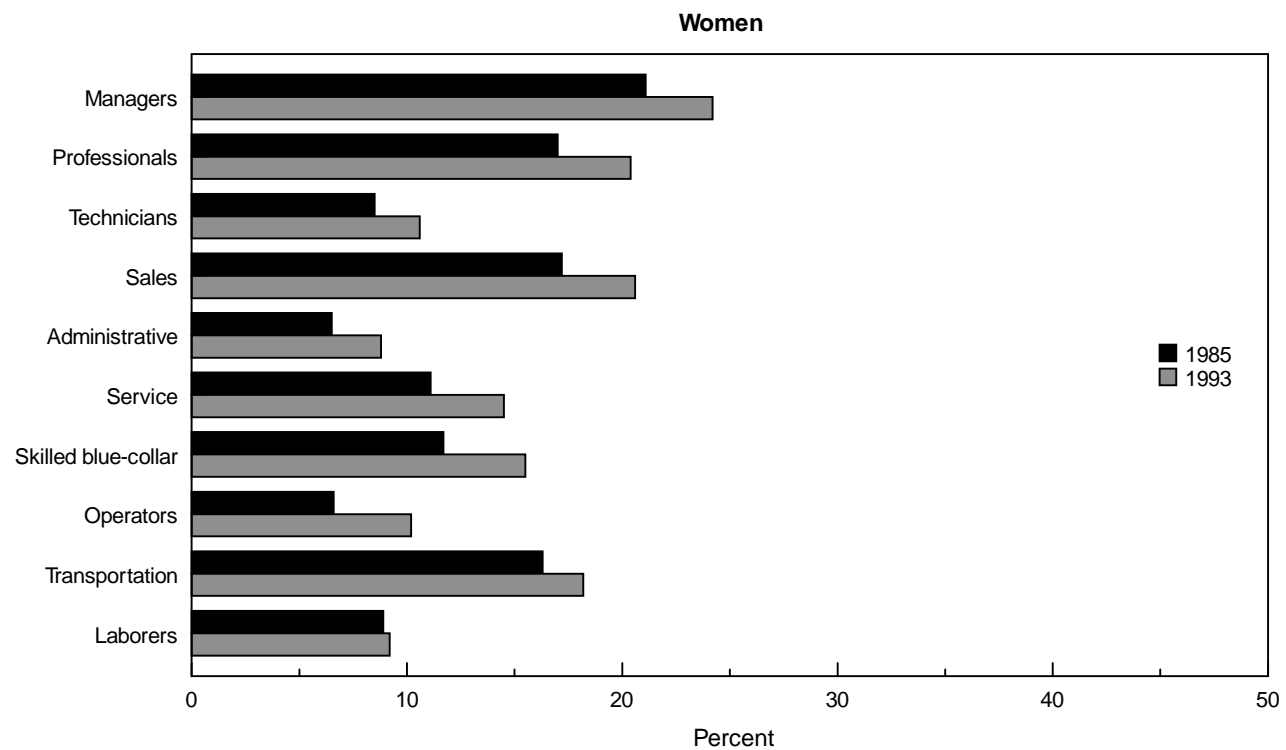
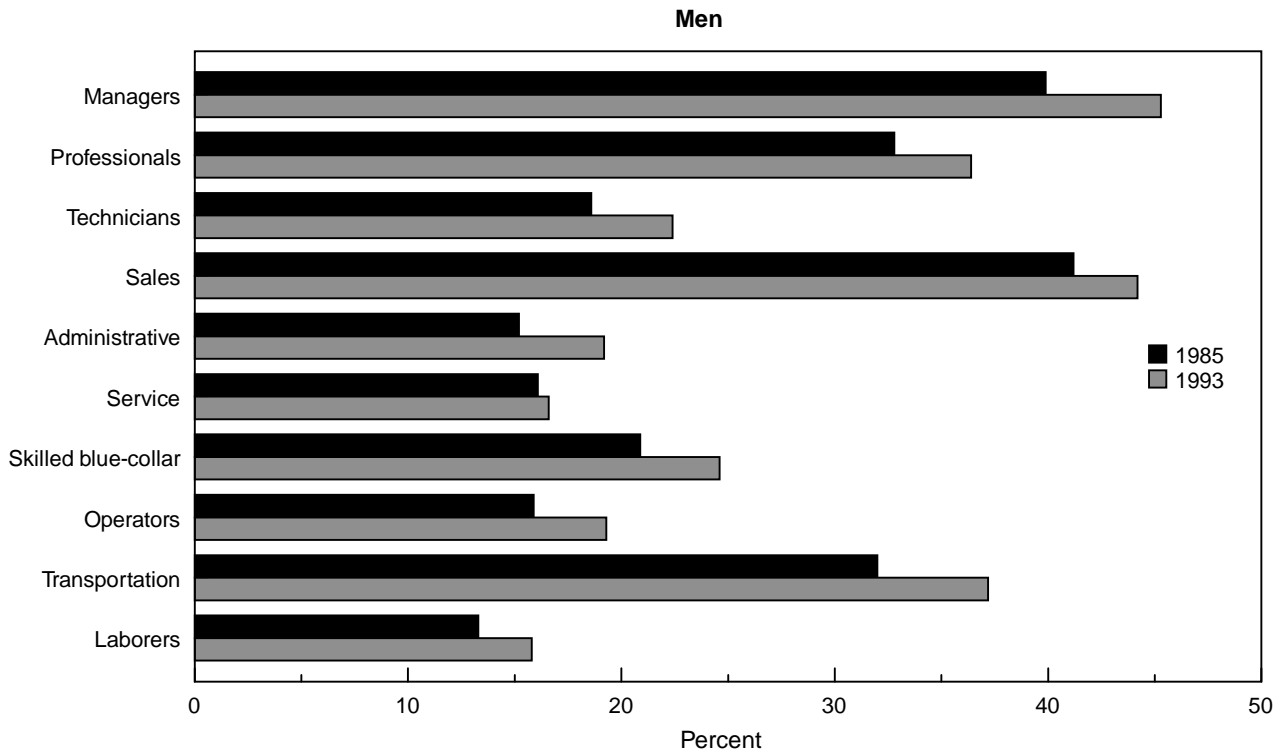


Table 3. Percent distribution of persons at work by class of worker and hours of work, 1976 and 1993 annual averages

Class of worker	Hours of work				
	1 to 34 hours	35 to 39 hours	40 hours	41 to 48 hours	49 hours or more
1976					
Nonagricultural workers ¹ :					
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 ¹ :					
Wage and salary	24.0	6.7	40.3	10.6	18.5
Self-employed	30.9	4.9	23.3	7.0	33.8
Agricultural workers	29.4	4.9	22.3	7.6	35.8

¹ Excludes unpaid family workers.
NOTE: Detail may not sum to 100.0 due to rounding.

workweeks *in every occupation* for both men and women—shown as the within-occupation shift effect.

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 nonagricultural self-employed worked either very short or very long workweeks. (See table 3.) The proportion of the nonagricultural self-employed who worked at least 49 hours per week declined between 1976 and 1993, although it is still nearly double that for nonagricultural wage and salary workers. The share who worked part time (1 to 34 hours per week), on the other hand, rose. Unlike the trend for men, who comprise the majority of the self-employed, the proportion of self-employed women who work longer workweeks has increased since the mid-1970s, and the share working 1 to 34 hours per week has declined. As with the self-employed, agricultural workers are heavily concentrated at both ends of the hours distribution. The share of these workers in the 49-hours-or-more group declined substantially over the 1976–93 period, as the share working exactly 40 hours rose.

Annual work hours

So far in this article, it has been shown that the change in the average length of the workweek has been quite small since the mid-1970s, although a growing proportion of workers are putting in very long workweeks. 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 inter-country comparisons of work hours. This allows for the differences in vacation time allowed and used among, say, Germany, Japan, and the United States to be factored into the work-hour discussion.

In addition to the length of the typical workweek, two other factors that can affect the total number of hours worked per year are the extent to which people worked at all during a particular year, and the total number of weeks that they worked during the year. In the previous calculation of average weekly hours, only persons who had worked were included. If an individual did not work at all, he or she was “out of scope”—that is, the individual was in neither the numerator nor the denominator of the 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. BLS analysts reported that work activity is becoming less seasonal (that is, it is more likely to be year round), and this finding is consistent across industries and demographic groups.¹⁵ Data collected each March in the CPS also show that U.S. workers, particularly women, have increasingly been working year round, as shown in chart 5. Indeed, more dramatic than any shift toward either full- or part-time work has been the trend toward year-round employment.

The following formula may be used to calculate the average number of hours a worker spends on the job during the year:

$$\text{Average annual hours at work} = \text{NAW} * \text{AWH} * 52 / \text{NWY}$$

where *NAW* is the number at work in an average week; *AWH* is average weekly hours at work; and *NWY* is the 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 per week. This product 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.¹⁶ In those questions, survey respondents are asked to recall their work activity during the previous calendar year, including the number of weeks in which they worked, as well as their usual

hours. Thus, aggregate hours worked during all of 1993, for example, obtained from the basic monthly CPS, would be divided by the number of persons who worked at all in 1993, obtained from the March 1994 survey. This produces an excellent measure of average hours worked for each worker during the year. A time series has been constructed from 1976 to 1993 for both men and women. The employment-based series show the effect of changes in the share of the population working and the extent of their work activity during the year on work hours. (See chart 6.)

Annual hours at work rose steadily for women until the late 1980s, when the rate of growth slowed slightly. The lack of sensitivity to business cycles during the early 1980s is somewhat surprising given that women, like men, are subject to cyclical swings in unemployment, a major determinant of the number of weeks worked during the year. As shown in chart 6, men work more hours than women during the year both because men work longer average workweeks, and because they are more likely to work year-round. Since the mid-1970s, however, men's annual hours have risen much less than women's, and appear to be more sensitive to the business cycles.

As shown in the following tabulation, employed women worked an average of nearly 20 percent more in 1993 than in 1976, adding 233 hours to their average work year. But as was shown with the weekly hours data, the age distri-

bution of the working population changed substantially over this period; a much smaller share are now in the older and younger age groups, for which both the length of the workweek and the number of weeks worked tend to be relatively low. Adjusting for this age shift modestly reduces the 1976-93 change. Men's hours, after age-adjustment, were up 3 percent over the period, while women's were up 15 percent.¹⁷

	<u>Men</u>	<u>Women</u>
	<i>(In thousands)</i>	
Average annual work hours:		
1976	1,805	1,293
1993	1,905	1,526
1976-93 change	+100	+233
Age-adjusted change	+62	+193

These calculations still leave one important trend identified earlier unaccounted for: the change in the likelihood that an individual worked at all during the year. Over the 1976-93 period, men became 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. By contrast, women became far more likely to work over the period. (See chart 7.) Hence, using the population as the denominator in an annual hours calculation

Chart 5. Work schedules of women aged 25 to 54, 1976 and 1993 annual averages

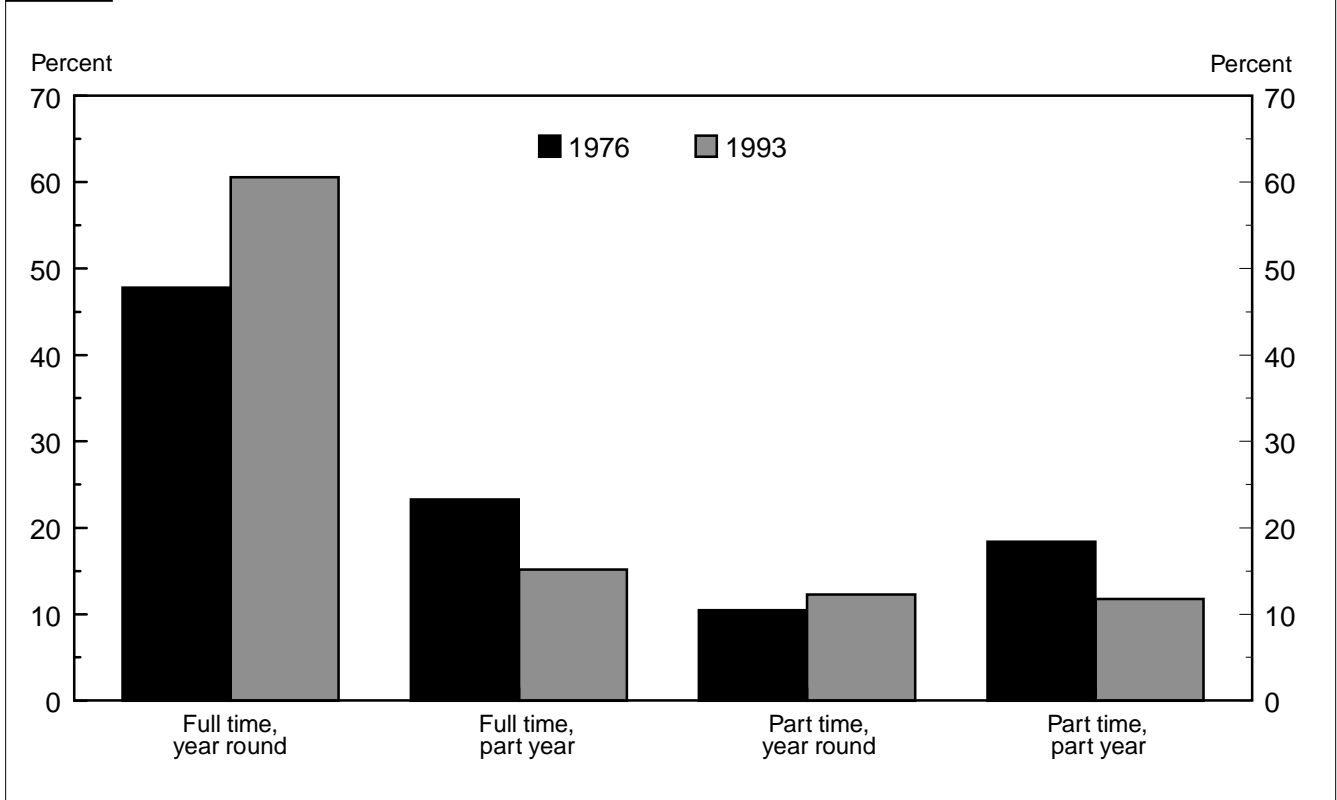
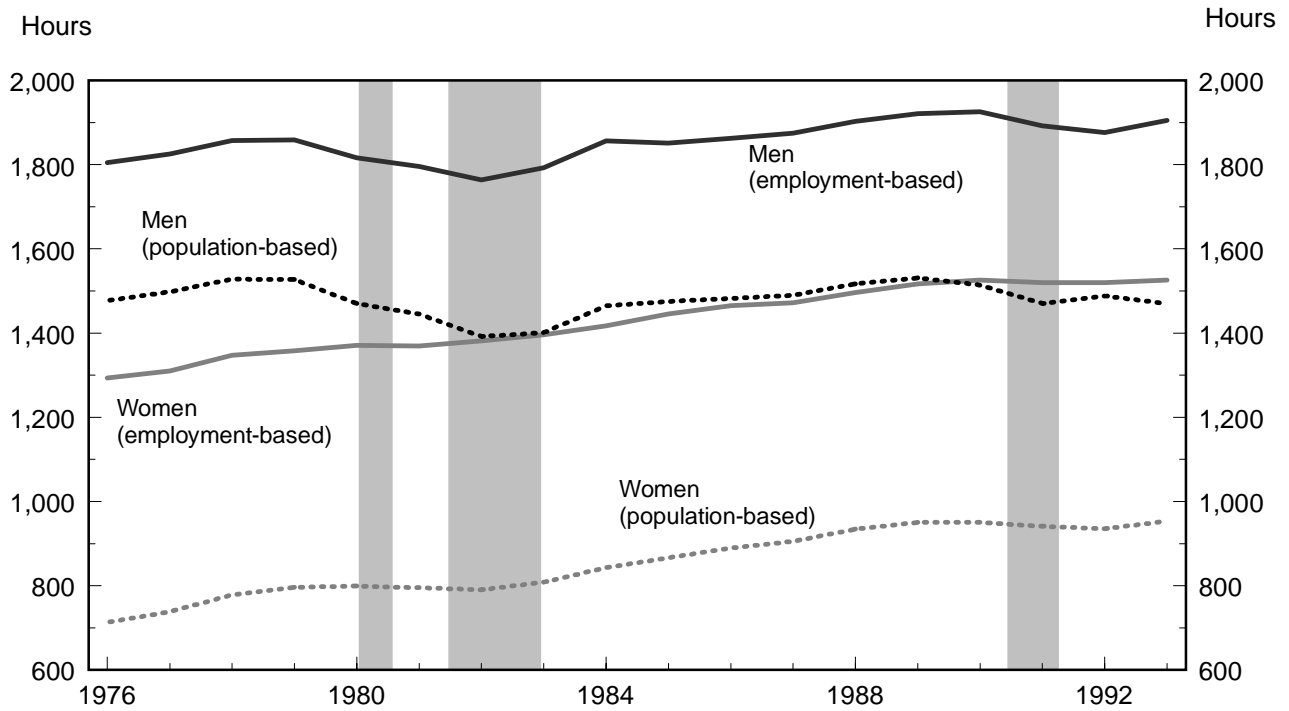
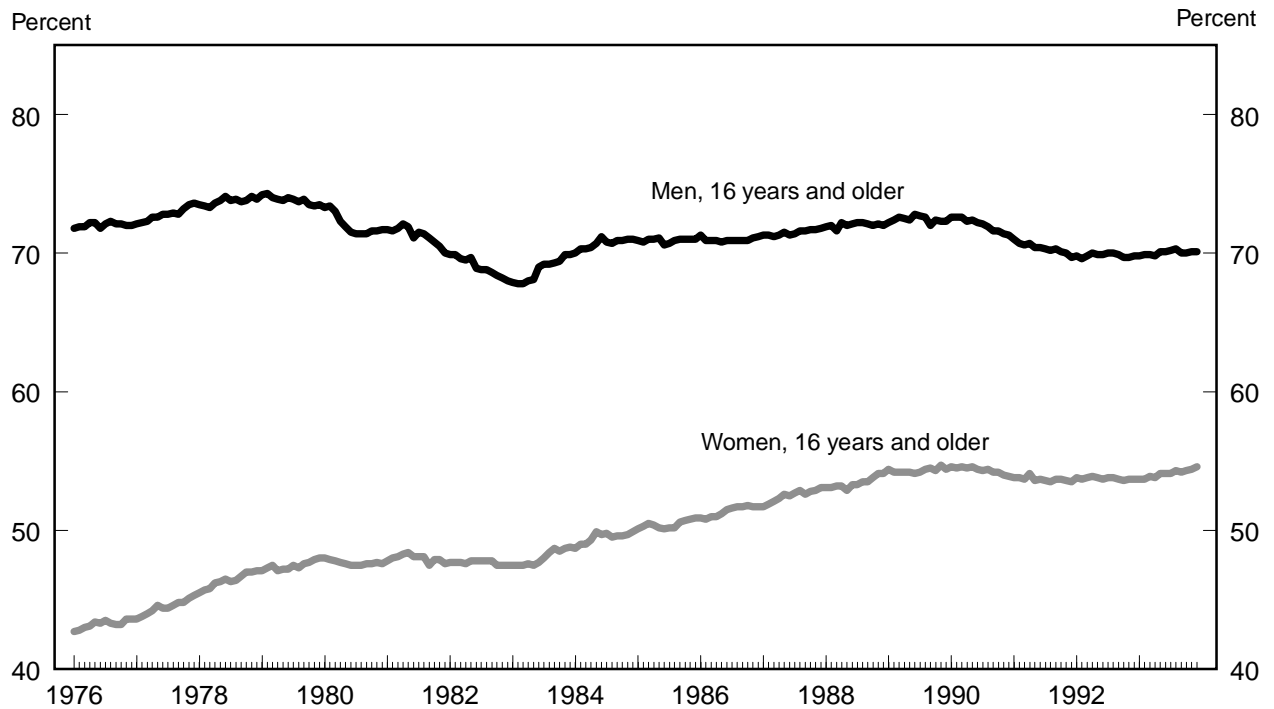


Chart 6. Average annual hours at work for men and women, 1976-93



NOTE: Shaded areas indicate recessions.

Chart 7. Employment-population ratios for men and women, annual averages, 1976-93



tion, rather than the number of persons who worked, should affect the change in hours between 1976 and 1993 considerably.

The population-based estimates shown in chart 6 were computed using the same numerator as in the equation above, but with the civilian noninstitutional population used as the denominator, instead of all those who worked. The population-based series for men showed no net change in annual hours worked since the mid-1970s. In fact, the slope of this line is essentially flat, in contrast to the employment-based series, because men, on average, have become somewhat less likely to work at all over time. For women, the population-based series is at a much lower level than the employment-based series. The increase, though, has been quite large, particularly on a percentage basis. Allocated across the population of women aged 16 and over, each individual worked a third more hours per year 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—the two groups with particularly low annual hours—from the calculation. For women in this age group, average hours per year rose 45 percent over the 1976–93 period, from 888 to 1,290. For men in this group, by contrast, the average was virtually unchanged, at just over 1,900 hours. (See footnote 17.)

Summary

This article examined trends in working hours in the United States between 1976 and 1993 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. A noteworthy difference between the 1970s and the 1990s is the increase in the share of persons who are working very long workweeks—that is, those who are exceeding the “standard” of 40 hours by more than a full 8-hour day. This increase is pervasive across 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 in inter-country comparison. For example, on an annual basis, Americans tend to work more during the year than most Europeans, but less than the Japanese. American women’s increasing likelihood of working at all, and, when they do, to work year round, also has had a notable effect on the number of hours that they work during the course of the year. In contrast, men’s work hours have changed little, on net, since the mid-1970s. □

Footnotes

¹ See Peyton K. Elder and Heidi D. Miller, “The Fair Labor Standards Act: changes of four decades,” *Monthly Labor Review*, July 1979, pp. 10–16.

² See Randy E. Ilg, “The nature of employment growth, 1989–95,” *Monthly Labor Review*, June 1996, pp. 29–36, for a discussion of the industries and occupations that experienced job growth in recent years.

³ 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 than the pre-1994 survey, rendering the data not strictly comparable. See the appendix for a discussion of the effects on hours of changes in the CPS. Data for 1995 are presented, however, in the overall description of between-group differences in work hours.

⁴ An additional limitation of the Current Employment Statistics survey, the Bureau of Labor Statistics employer-based survey most commonly used for average workweek data, is that the universe is restricted to private nonsupervisory workers on nonfarm 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.

⁵ The Current Population Survey 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 worktime comes from time diaries. This approach is discussed in John P. Robinson and Ann Bostrom, “The overestimated workweek? what time diary measures suggest,” *Monthly Labor Review*, August 1994, pp. 11–23.

⁶ This restricted group is presented because those excluded—nonagricultural self-employed and agricultural workers—have very different workweeks. Those differences are discussed later in the paper. 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.

⁷ Marital-status data are for all workers in nonagricultural industries, not just wage and salary workers.

⁸ In 1993, full-time wage and salary workers in nonagricultural industries worked an average of 43.4 hours a week, about 4 hours longer than the average for all nonagricultural 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 cycle.

⁹ 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.

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 Diane E. Herz, “Work after early retirement: an increasing trend among men,” April 1995, *Monthly Labor Review*, pp. 13–20. This article includes a discussion of several possible reasons for the increased work activity among pension recipients.

¹² The data shown in chart 3 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 workers.

¹⁴ 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. The end of each year selected is more than 2 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.

¹⁵ See Leo G. Rydzewski, William G. Deming, and Philip L. Rones, "Seasonal employment falls over the past three decades," *Monthly Labor Review*, July 1993, pp. 3-14.

¹⁶ Such an estimate cannot be derived from the basic monthly cps.

¹⁷ The basic CPS data include a break in the population (and employment) series between 1989 and 1990. 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-year period 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.

Appendix: Changes in the 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 job in the prior week. This appendix describes the differences in the questions asked to obtain hours-at-work data in the old and new surveys. In general, the changes emphasized the importance of precision in recalling the prior week's work activity, but do not alter the concept of hours at work.

In an effort to obtain more precise hours-at-work data, respondents to the new CPS have, since January 1994, first been told that the following questions focus on the exact number of hours they worked in the prior week. They then are 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 also are asked if they worked extra hours at their job that they do not usually work, and if so, how many. It is only after these prompts are completed that respondents are asked how many hours they actually worked at their main jobs, and in addition, for multiple jobholders, how many hours they actually worked at their other jobs.

Prior to 1994, the questions asked to obtain data on actual hours, and their ordering, were slightly different. (See questions, below.)

Data on actual hours were obtained by first asking the number of hours worked at all jobs in the previous week. The respondents then 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 the new and old CPS data suggests that the recall strategy associated with the new questionnaire does provide more accurate data on actual hours. (See table A-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 for both men and women. In fact, this decrease was nearly as great as the cumulative effect of the long-term downward trend between 1976 and 1993. In addition, during the 1976-93 period, the share of survey respondents reporting that they had worked between 35 and 39 hours or 41 and 48 hours was unchanged. In 1994, with the revised questions, the share reporting hours in these two groups rose from the 1993 levels, indicating that respondents now were 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

Lead-in: Now I have some questions about the exact number of hours you worked last week.

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?

(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?

(If yes) How many additional hours did you work?

So, for last week, how many hours did you actually work at your (main) job?

(For multiple jobholders) Last week, how many hours did you actually work at your other job(s)?

Old cps

How many hours did you work last week at all jobs?

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?

Did you work any overtime or at more than one job last week?

(If yes) How many extra hours?

(Interviewers are instructed to correct original answer if lost time was not already deducted or if extra hours were not included.)

Table A-1. Percent distribution of persons at work by sex and hours of work, 1993 and 1994 annual averages

Characteristic	1993	1994	Difference
Men	100.0	100.0	—
1 to 4 hours4	.7	0.3
5 to 14 hours	2.6	2.4	-.2
15 to 29 hours	8.1	8.4	.3
30 to 34 hours	5.7	6.3	.6
35 to 39 hours	4.5	5.3	.8
40 hours	41.1	37.1	-3.9
41 to 48 hours	12.1	14.3	2.2
49 hours or more	25.5	25.5	-.1
Women	100.0	100.0	—
1 to 4 hours8	1.1	.4
5 to 14 hours	5.1	5.4	.3
15 to 29 hours	16.5	17.3	.9
30 to 34 hours	9.8	10.2	.4
35 to 39 hours	9.2	10.2	1.0
40 hours	39.4	35.1	-4.3
41 to 48 hours	8.8	10.3	1.6
49 hours or more	10.5	10.3	-.3

NOTE: Detail may not sum to 100.0 due to rounding.