

Research Summaries



Work-time reduction in the U.S. and Western Europe

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Available data indicate that while the United States once pioneered in providing reduced working time for workers, achieving a 40-hour workweek well in advance of most other industrial nations, Western Europe has now caught up and passed the United States in this respect.

A number of reasons—none completely satisfactory—can be offered for the different work-time patterns in the postwar period. It has often been said that the European taste for leisure is greater than the American. The longer hours of work by Europeans before the war appeared to contradict that stereotype, but this was misleading because Europeans also had much lower incomes than Americans during this period, and high income has been found to be positively related to demand for leisure. In the intervening years, hourly earnings have risen rapidly in Europe, largely eliminating the income gap. A strong preference for leisure would be consistent with the Europeans' taking a large part of their earnings gain in the form of increased leisure.

Some support for the view that American workers are not ready to trade income for reduced hours was provided in a recent survey of employed Americans by the Bureau of Labor Statistics, which found that only 8 percent would be willing to decrease their hours of work if the change were accompanied by a proportionate reduction in earnings.¹

A second plausible explanation emphasizes institutional differences. High marginal tax rate policies in Europe may tend to discourage labor supply there. Other welfare state policies may also have this effect, if less directly. For example, it has been argued that work-time reduction in the United States has been slowed because Americans have instead chosen to increase outlays for education and for pensions, so that they can both enter the labor force later and leave it earlier.² A possible explanation of this is that American workers feel that their ability to provide for either their own retirement or the

education of their children is more significantly dependent on their own earnings. While similar changes in labor force participation rates have also occurred in Western Europe, employees there have not been deterred from also seeking reductions in annual work time. The relatively greater role of the state in Europe in subsidizing education, retirement income, and health care somewhat reduces the pressures on the individual to work for pay.

Another difference is the greater influence of society (in the form of strong, politically oriented trade unions as well as state legislation) in Europe in directly determining work schedules. For example, many European countries, unlike the United States, have laws that provide for minimum vacation time or which set a maximum level for overtime work.

Finally, reduction in hours has, since at least the late 1970's, been regarded by Europeans as a way of sharing scarce employment opportunities, and this social concern has placed work-time reduction at the top of the bargaining agenda in a number of industries in Western European countries.³ Some observers place a major emphasis on this factor. But whatever the reason, it is clear that in one important respect—reduced working time—the United States no longer leads the industrialized world.

U.S. working time

In this article, two sources of hours of work data are used. Hours paid data are collected from the BLS survey of establishments, while data on hours worked are obtained from the Current Population Survey (CPS, the household survey provided by the Bureau of the Census for the BLS). Establishment survey data indicate that hours paid on the average job have continued to decline in the postwar years in the United States. (See table 1.) True, the average workweek in the traditional core has shown very little reduction. The manufacturing workweek has been virtually unchanged, and only small changes have occurred in mining, contract construction, transportation, and public utilities. However, workweeks have been reduced substantially in the service sector, broadly defined. Work time in the wholesale and retail trade industries fell by about 9 hours, from more than 40 to fewer than 32 hours a week. More moderate but still substantial declines are also seen in the other service sector industries: finance, insurance, and real estate, and other services. Moreover, because employment in this service sector grew relative to the industrial core, the lower level of hours in the other ser-

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vices industries also contributed to a decline in the average of all hours.

The difference in hours between the industrial core and the service sector appears to be largely attributable to differences in the use of part-time employees. The establishment data do not distinguish between part- and full-time employment, but other data sources indicate that when those persons working fewer than 35 hours a week are excluded, there is little or no difference between average hours in the two sectors.⁴

However, these employer-based establishment data may both underestimate the number of hours worked by the average employee and exaggerate the decline over time in his or her hours.⁵ This can be seen by a comparison of establishment survey data with CPS data. The CPS indicates that about 6 percent of employees work two jobs.⁶ Hence, data on hours worked at the average job underestimate the number of hours worked by the average employee.

Moreover, the household survey data indicate that measured reductions in the average workweek have reflected large-scale changes in the composition of the work force; as a result, the average workweek does not provide a good measure of changes in the hours of the groups that compose the work force. The household data provide rich detail on the age, sex, student status, and other demographic characteristics of the work force and show wide diversity among groups: Employed adult men work about 7 hours more a week than do employed women, and employed students on average work about 15 fewer hours than does the average woman.⁷ The household data also show how changes in the composition of the labor force have influenced movements over time in the statistical average of hours. Nonstudent men dominated the labor force 40 years ago, but now only account for about one-half. The declining proportion of nonstudent men in the work force has tended to reduce the statistical average of working time, quite apart from any changes that may have occurred in the schedules of any of the groups that

compose the labor force. In fact, as the following tabulation shows, when the hours of work of nonstudent men are isolated, one finds virtually no downward movement in the past four decades: their weekly hours were 42.7 in 1948 and 42.8 in 1986.⁸

Year	Weekly hours of nonstudent men
1948	42.7
1950	42.2
1953	42.5
1956	43.0
1959	42.0
1962	43.1
1966	43.5
1969	43.5
1972	42.8
1975	42.2
1978	42.7
1981	42.2
1984	42.5
1986	42.8

Such changes in the composition of the labor force make it more difficult to assess the implications of reductions in the statistically average workweek for changes in employee work time.⁹ Interpretation was simpler in the century ending in 1950, when the labor force was more homogeneous.

Then, reduction in hours did mean significant increases in time off for the average employee. But when the statistical average of hours is reduced today because of the entry into part-time employment of women and students who may have other types of responsibilities, the effects are more ambiguous. The series on working hours of nonstudent men presented here probably come closest to a measure of changes over time in individual work times because this group has a minimum of other types of responsibilities.¹⁰ And this series has remained stationary.

Table 1. Weekly hours paid in the United States by type of industry, selected years

Year	All private nonagriculture	Manufacturing	Mining	Construction	Trade	Finance, insurance, and real estate	Services	Transportation and public utilities
1947	—	40.4	40.8	38.2	40.5	37.9	—	—
1950	—	40.5	37.9	37.4	40.5	37.7	—	—
1955	—	40.7	40.7	37.1	39.4	37.6	—	—
1960	—	39.7	40.4	36.7	38.6	37.2	—	—
1965	38.8	41.2	42.3	37.4	37.7	37.2	35.9	41.3
1970	37.1	39.8	42.7	37.3	35.3	36.7	34.4	40.5
1975	36.1	39.5	41.9	36.4	33.9	36.5	33.5	39.7
1980	35.3	39.7	43.3	37.0	32.2	35.2	32.6	39.6
1983	35.0	40.1	42.5	37.1	32.0	36.2	32.7	39.0
1986	34.8	40.7	42.2	37.4	31.4	36.4	32.5	39.2

NOTE: Dashes indicate data not available.

Breaks, vacations, and holidays

It can also be argued that all workweek data tend to overestimate work. In the first place, scheduled work time includes break time, and it has been estimated that the average American worker takes 45 minutes a day in coffee and other breaks. Some fragmentary evidence suggests that these breaks may have increased over time.¹¹

In the second place, even the CPS data on weekly hours worked do not properly reflect changes in vacation and holiday time which have grown sharply over the past 40 years. Adjustment of weekly hours data for changes in vacations and holidays provides a more meaningful measure of working time.

Unfortunately, vacation and holiday times are extremely difficult to measure in the United States. The BLS does publish data on vacations and holidays in its nationwide sample of employee benefits in medium and large firms. Data from the benefits survey indicate that high seniority workers receive generous vacation provisions—after 20 years of service, the typical employee obtains about 4 weeks of paid vacation.¹² However, the average employee receives somewhat less paid vacation, because he or she typically has much less seniority—the average worker, as of the time of the BLS survey, had been on his or her job for about 4 years.¹³ The average firm in the survey gives less than 9 days of vacation after 1 year, and 2 weeks after 3 years of service. However, many workers are employed in small firms (which were not included in the survey) and these often offer less vacation and holiday time.

Another measurement problem arises because vacation time provided is not the same as vacation time taken. In the benefits survey, on the one hand, "Sixteen percent of the plan participants were allowed to cash in unused vacation time."¹⁴ On the other hand, some employees may take unpaid vacation time, which is not included in the survey.

Estimates of vacation and holiday time actually taken can be obtained from the CPS. Each month the survey asks about vacation and holiday time taken during the week of the 12th and an annual average of these estimates can be constructed from these data.¹⁵ Unfortunately, this estimate is also imperfect, because the survey week contains no major holidays. As a result, the survey measure of holiday time is a gross underestimate and is not used here. The vacation time estimate is useful, but requires adjustment: in an early study by the BLS, Peter Henle showed that the avoidance of holiday weeks results in an undercount of vacation time because workers often take their vacations in conjunction with major holidays and suggested that this requires that the CPS vacation data be increased by a correction factor of 20 percent.¹⁶

According to these CPS data, the average nonagricultural employee enjoyed 9.5 days of vacation time in

1985.¹⁷ When the Henle correction factor of 20 percent is applied, estimated vacation time rises to 11.4 days.

Estimates of holidays as well as vacations are needed to adjust weekly hours for annual time off. A measure of paid holidays is provided by the BLS survey of medium and large firms: an average of 10.1 holidays per year. This is probably too high an estimate because the survey includes "Extended holiday plans, such as the Christmas-New Year's Day period provided in the auto industry"¹⁸ and some of this extended holiday time may also be counted in the vacation time estimate of the CPS. Hence, it should not be added here as an adjustment to it. Moreover, the exclusion of small firms very likely imposes an upward bias on this measure of holidays. Noting that 35 percent of these medium and large firms offer 9 fewer days off as holidays, a figure of 9 days might be indicated as a more reasonable estimate of annual holiday time. This yields an estimate of about 20 days per year of time taken in vacations and holidays.

This calculation of vacation and holiday time can be confirmed by an alternative method. Here one begins with the BLS hours at work survey of establishments (which does include small as well as medium and large firms). This survey offers data on hours paid for, but not worked.¹⁹ From this estimate, one subtracts an estimate (from another BLS survey) of paid absences for illness, injury, and miscellaneous reasons²⁰ to obtain an estimate of paid time for vacations and holidays. Finally, an estimate of total vacation time can be obtained by using the ratio of total to paid vacation time provided by the CPS data mentioned above. This alternative method also yields an estimate of 20 days of vacations and holidays.

Twenty days of vacation and holiday time clearly represent a major improvement over conditions during the early postwar period. The CPS series on full weeks of vacation taken, available since 1947, shows an increase of 77 percent over a 39-year period. The following tabulation illustrates an index of full-week vacation time of nonagricultural wage and salary employees (1947=100).²¹

<i>Year</i>	<i>Index</i>	<i>Year</i>	<i>Index</i>
1947	100	1970	185
1950	129	1975	202
1955	135	1980	204
1960	153	1983	187
1965	155	1986	177

A similar series on annual holidays is lacking, but if the amount of holidays rose at the same rate as vacation days, then one would say that total vacation and holiday time increased from about 11 days a year in 1947 to about 20 days a year in 1986.

While this indicates a rapid rate of growth, it does not mean that increases in vacations and holidays have been sufficient to offset the effects of the near-leveling off in weekly hours. When translated into hours per week (as-

suming an 8-hour day and a 52-week year), the average vacation time would rise from 1.8 hours per week in 1947 to 3.3 hours in 1986. A change of 1.5 hours—less than 4 percent of a 40-hour week—over a period of four decades does not represent a very impressive gain. This can be seen in the following tabulation, in which the data for weekly hours of work for nonstudent men (text tabulation on page 42) are adjusted for vacations and holidays (text tabulation on page 43).²² Very little net change is observed from 1950 to 1986:

Year	Hours of work
1950.....	39.9
1960.....	39.2
1970.....	39.5
1980.....	38.3
1986.....	39.5

Working times in Western Europe

A comparison of work time changes in Western European nations with those in the United States shows major differences. Work times in Europe continued to decline at a fairly steady rate throughout the postwar period. Forty years ago, the typical European worker had a 6-day workweek of close to 48 hours. He now has a scheduled workweek of 40 hours or, in an increasing number of industries, of less than 40 hours. He also enjoys an annual vacation of more than 1 month. These gains are reflected in the available statistics on work time. The following tabulation gives percentage change in hours of work in manufacturing for nine European countries (weekly hours, adjusted for increases in annual vacations and holidays). Substantial reductions—ranging from 14 to 30 percent—are observed in each of these nine European countries.²³

Country	Percent reduction	
	1950-87	1960-87
Germany.....	-29.6	-21.9
France.....	-16.8	-16.8
United Kingdom.....	-13.7	-12.9
Netherlands.....	-24.5	-25.4
Belgium.....	--	-22.9
Denmark.....	-27.7	-22.4
Sweden.....	-28.9	-24.4
Norway.....	-25.4	-22.5
Italy.....	-18.4	-21.3

Comparable data on annual hours in manufacturing in the United States are not available, but data on average weekly hours paid actually show an increase during this period.²⁴ And, as was noted earlier, downward adjustment for increases in vacations and holidays in the United States would yield only a modest decline in the hours estimate.

West Germany provides more complete data on working times than do most countries. The available data show a sharp decline in the hours paid to industrial wage work-

ers in Germany from the early 1950's, from 49 to 40.5 hours for men and from 48 to 40.2 hours for all workers.²⁵ This reflected a workweek reduction from six 8-hour days to five 8-hour days for most workers.

More detailed data are available since 1960 on all German employees (nonindustrial as well as industrial).²⁶ Between 1960 and 1970, the normal workweek (that is, the agreed upon, or standard, workweek for full-time employees) fell from 5.5 days to 5 days. Further reductions in the 1980's have pushed the standard workweek below the 40-hour level for many Germans. Forty-three percent of German workers on full-time schedules now have a 38.5-hour workweek and 2 percent have less than that.²⁷

The actual workweek was also reduced by decreases in average weekly overtime—from 3.6 hours in 1970 to 1.8 hours in 1985. Increases in vacations and holidays have also played a major role in reducing working time in Germany. By 1960, these stood at more than 25 days per year, but they have since risen further to 43 days per year (about 30 days of scheduled vacation time and 13 annual holidays).²⁸

In fact, the major difference between working time in the United States and Germany today is the longer vacation and holiday benefits enjoyed by German workers. In Germany, not only are generous benefits provided for more seniority workers than would be the case in the United States, but they are offered to new employees as well. As a result, the average German employee now has an annual schedule that is close to being the equivalent of an 8-hour, 4-day week. Indeed, if the employee's 10 sickness days per year are added to 43 vacation and holiday days, we obtain a total of 53 days per year, or approximately one day a week. Given a standard 5-day workweek, this additional time off each year yields the equivalent of a 4-day workweek.²⁹ □

FOOTNOTES

¹See Susan E. Shank, "Preferred hours of work and corresponding earnings," *Monthly Labor Review*, November 1986, pp. 40-44.

²For a summary of this argument and references to earlier work, see John D. Owen, *Working Lives* (Lexington, MA, D.C. Heath and Co., 1986).

³See John D. Owen, *Reduced Working Hours: Cure for Unemployment or Economic Burden?* (Baltimore, Johns Hopkins University Press, 1989, forthcoming).

⁴The data are obtained from the Current Population Survey. A similarity of hours of full-time employees between the service- and goods-producing sectors emerges either from the breakdown by industry or by occupations. (These data are not directly comparable to the establishment data because they include the hours of moonlighters.) Occupational data are found in *Employment and Earnings* (Bureau of Labor Statistics, June 1986), table A-11.

⁵However, these CPS data are also subject to criticism. Though widely used (partly because of the demographic detail that it provides), this data set is generally regarded as somewhat less accurate than the data collected from establishments, partly because respondents to the household survey can be members of the family other than the earner, and such persons may have an inaccurate notion of the earner's hours. These

estimates will be upwardly biased if they underestimate lunch hours or round up to 40 hours a week. (Although it could also be argued that, if the CPS series underestimates moonlighting activity because interviewees are reluctant to discuss work in the underground economy with Government representatives, the series would be biased downward.)

⁶John F. Stinson, "Moonlighting by women jumped to record highs," *Monthly Labor Review*, November 1986, pp. 22-25.

⁷*Employment and Earnings* (Bureau of Labor Statistics, June 1985), table A-31, and unpublished BLS data from October 1985 Current Population Survey.

⁸Methods used here described in John D. Owen, "The Demand for Leisure," *Journal of Political Economy*, 1971, pp. 56-76. Table calculated using CPS data published in *Employment and Earnings*, various issues; *Special Reports on the Labor Force*, various issues; and supplementary data provided by the BLS. Essentially, data for all men in nonagricultural employment and data for male students in nonagricultural employment are used to derive a series for male nonstudents in nonagricultural employment. For example, in 1986, 5.2 percent of males in nonagricultural employment were students, 94.8 percent nonstudents. Hours of work of all male employees in this sector averaged 41.9, and 21.9 for male students. Using the formula $.948(\text{hours of male nonstudents}) + .052(21.9) = 41.9$ and solving for hours of male nonstudents yields 43 hours for that year. Adjusting for the 0.2-hour-per-week difference between all those employed in nonagricultural employment and wage and salary workers in that sector yields 42.8 hours. Further details available on request from author.

⁹See John D. Owen, *Working Hours* (Lexington, MA, D. C. Heath and Co., 1979) and Owen, *Working Lives*, for attempts to deal with this question. Some useful empirical evidence on changes in leisure in the 1965-1975 period is found in F. Thomas Juster and Frank P. Stafford, eds., *Time, Goods, and Well-Being* (Ann Arbor, MI, University of Michigan, Institute for Social Research, 1985).

¹⁰For nonstudent men, changes in their work time may at least reflect changes in leisure time during the workweek. Because this measure excludes proprietors and farmers, and because these persons work longer hours than nonagricultural wage and salary employees, the amount of leisure enjoyed by the average employed male nonstudent is overestimated. Because the fraction of the labor force that is self-employed or in agriculture has declined, changes in this measure underestimate the increase in leisure that has occurred.

¹¹Frank P. Stafford and Greg J. Duncan, "The Use of Time and Technology by Households in the United States," in F. Thomas Juster and Frank P. Stafford, eds., *Time, Goods, and Well-Being*, (Ann Arbor, MI, University of Michigan, Institute for Social Research, 1985).

¹²*Employee Benefits in Medium and Large Firms, 1985*, Bulletin 2262 (Bureau of Labor Statistics, July 1986), table 5, p. 6.

¹³See "Most Occupational Changes Are Voluntary," USDL-452 (Bureau of Labor Statistics, October 1987).

¹⁴*Employee Benefits in Medium and Large Firms, 1985*, p. 4.

¹⁵This requires that data on part-week and full-week vacations be combined.

¹⁶See Peter Henle, "Recent growth of paid leisure for U.S. workers," *Monthly Labor Review*, March 1962. Henle compares a month in which the survey was taken to include a holiday with the same month in adjacent years and concludes that a 20-percent adjustment is needed.

¹⁷Obtained by adding the full-week vacation estimate to the full-week equivalent estimate for part-week vacations. The latter is obtained by taking the ratio of average hours worked by those on part-week vacations for those usually working full time to average full-time hours.

¹⁸*Employee Benefits in Medium and Large Firms*, p. 4.

¹⁹See Kent Kunze, "A new BLS survey measures the ratio of hours worked to hours paid," *Monthly Labor Review*, June 1984, pp. 3-7.

²⁰See Bruce W. Klein, "Missed work and lost hours, May 1985," *Monthly Labor Review*, November 1986, pp. 26-30. The survey of nonagricultural workers showed 1.6 percent of work hours missed for illness and 1.1 percent missed for miscellaneous reasons. The CPS data indicate that 43.7 percent of sickness and 27.9 percent of miscellaneous time not at work was paid. Multiplying the two sets of figures and adding together gives 1 percent. Time off at the employer's discretion, as when he closes a worksite due to bad weather, is not included in the survey of nonagricultural workers. However, BLS data indicate that the last category would account for a very small proportion of total hours (probably much less than $\frac{1}{2}$ percent), and so, no further adjustment is made for it here.

²¹The vacation and holiday data are for all demographic groups, not just male nonstudents. Vacation and holiday data for students are lacking. However, it is likely that students receive less vacation time than do adults. Assuming that students obtain no vacation time at all, one obtains a downward bias in the hours per week adjustment of 0.15 hours. Hence, the bias is between 0 and 0.15 hours per week. Vacation data are available by sex (see *Employment and Earnings*, table 31), and these indicate that women enjoy about 15 percent more vacation time than men. On the assumptions made in the text, this would imply an upward bias in these data as an estimate of male vacation time about equal to that due to including male students. Hence, little net upward bias is found in this measure. See *Employment and Earnings*, various issues; and *Special Reports on the Labor Force*, various issues. Estimates for the tabulation are obtained by taking the ratio of the number of nonagricultural wage and salary employees on vacation (annual basis) to total nonagricultural wage and salary employment. The 1947 ratio was then set equal to 100 and ratios in later years expressed as a percentage of 1947. The 1970 estimates are obtained from all nonagricultural employment data by interpolation of the difference between this series and that for nonagricultural wage and salary employees. The 1947, 1950, and 1955 estimates are obtained by adding a constant to data for all employees equal to the difference in 1958 between this series and that for nonagricultural wage and salary employees.

²²To obtain the 1986 estimate, hours of nonstudent males were multiplied by 0.924. The 1986 vacation and holiday adjustment factor was then extended back in time, using the index in the previous text tabulation. These data differ from those presented in Owen, *Working Hours*. The significant difference between the two series is that the earlier work adjusted weekly hours for the growth in vacations and holidays. (In the historical series presented there, the adjustment was zero for 1940 and earlier years.) The adjusted series presented here takes into account the downward effect on the level of hours of the basic holidays offered even in the earliest period.

²³Percentage changes calculated from data from "International Comparisons of Manufacturing Productivity and Labor Cost Trends, 1987," *News Release* (Bureau of Labor Statistics, July 6, 1988). For the Netherlands and Belgium, the changes are through 1986 for 1987 data.

²⁴Unpublished data from Division of Foreign Labor Statistics, Bureau of Labor Statistics.

²⁵For 1983-1987 data, see *Labor Earnings in Industry* (Wiesbaden, West Germany, Federal Statistics Office, October 1986). For 1953-87 data, see *Labor and Social Statistics*, various issues.

²⁶For a description of the methodology used to obtain these data, see Lutz Reyher, "Draft Report on Hours Worked," submitted to the Organization for Economic Cooperation and Development Working Party on Employment and Unemployment Statistics, 1982. The data are obtained by the BLS from the German research organization, Institut für Arbeit und Berufsforschung.

²⁷*European Report* 289 (London, Incomes Data Service, May 5, 1987).

²⁸*Ibid.*

²⁹In addition, supplementary holiday pay is now received by 94 percent of German employees. For approximately two-thirds of all employees, this amounts to 1 full month's pay. "On average, supplementary holiday and annual bonus combined amounted to 92 percent of a month's pay for each employee per year." *European Report* 289, p. III.