

Why Do Americans Work More than Europeans?

Differences in Career Prospects

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A widening gap in working time

The aggregate amount of hours worked in the US and in Continental Europe has evolved quite differently over the last 35 years. In the 1970s, the average number of working hours per capita was slightly larger in European countries such as France and Germany than in the US. Today Americans work around 30% more than Europeans. The emerging gap is partly due to the evolution of the participation rate (which has increased more in the US) and the unemployment rate (which has increased just in Europe). But another substantial part has to do with the number of hours worked per worker, whose dynamics explain between one third and one half of the differences, depending on whether we focus on all workers or on men only (see Table 1).

Working hours do matter

Differences in working time explain almost all existing US-Europe differences in GDP per capita: GDP per capita is today 30% higher in the US than in France or Germany, while GDP per hour worked is roughly equal. This means that Americans are today richer than Europeans simply because they work more, not because they are more productive. In practice, although individuals cannot always choose whether to work – unemployment is by definition an involuntary

state – they can choose how many hours to work once in the job. So why do we now prefer to work fewer hours in Europe than in the US?

Why work longer hours?

The standard approach (the competitive labour market model) views workers as interested only in today's take-home pay. The choice of hours is what equates the marginal utility of leisure to the marginal value of the current market wage. Hours worked result into a purely intra-temporal decision unaffected by aggregate labour market conditions.

In our [CEPR Discussion Paper No. 6314](#), we argue that workers view working hours as an investment as well as a source of current income. By working longer hours, they acquire greater skills, get promoted more frequently or switch to better jobs. The greater the expected career gains, the greater the incentive to work longer hours. There is nothing intrinsically different about Europeans and Americans, they only face different incentives during their working lives.

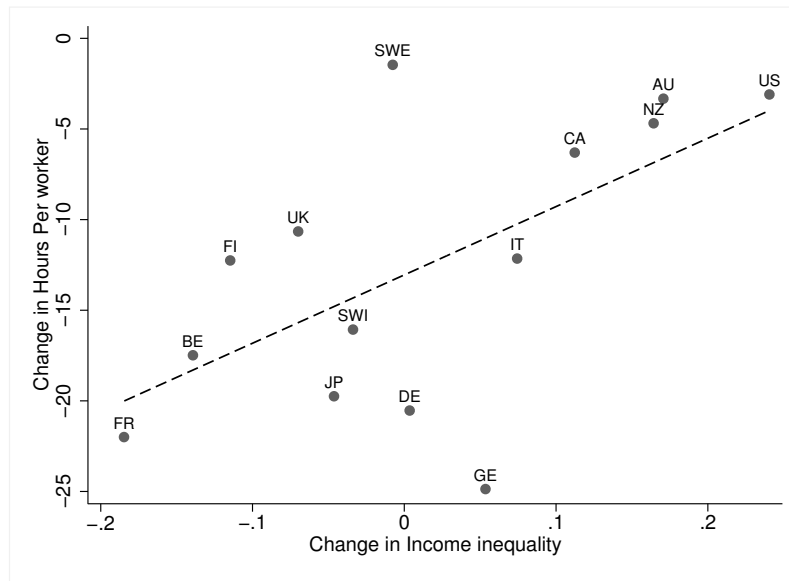
We formalise the view that career prospects matter for working time decisions by adding two ingredients to an otherwise standard labour market model. First, we recognise that working time is a means of accumulating human capital. By working longer hours, workers accu-

Table 1 Changes in hours worked, 1970-2002

	All workers				Male workers			
	Hrs per capita	Hrs per worker	One minus unemploy. rate	Participation rate	Hrs per capita	Hrs per worker	One minus unemploy. rate	Participation rate
Absolute % change								
US	8	-5	0	13	-5	0.5	-0.5	-5
France	-26	-23	-6	3	-28	-10	-5	-13
Germany	-29	-26	-7	4	-32	-11	-5	-16
% change relative to US								
France	-34	-17	-6	-10	-23	-10.5	-4.5	-8
Germany	-37	-21	-7	-9	-27	-11.5	-4.5	-11

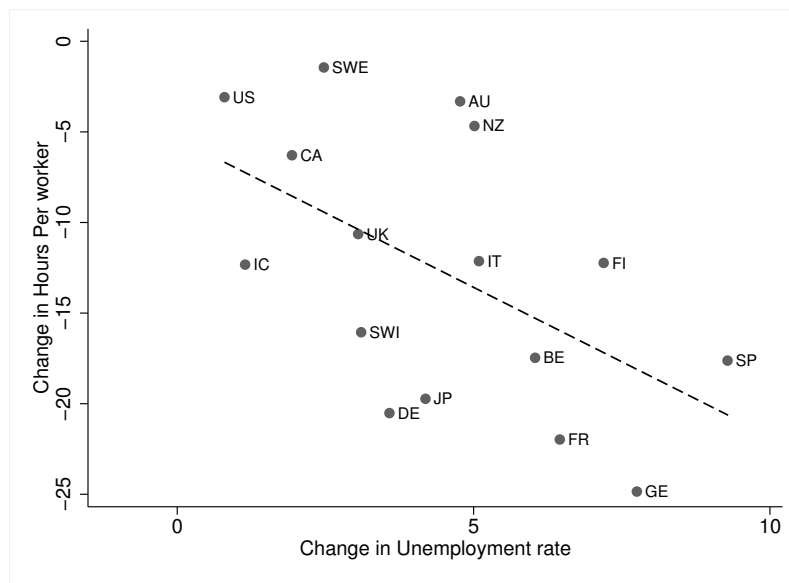
Notes: Source OECD data and ILO. Percentage changes over the 1970-2002 period. The panel on the left deals with total population, the panel of the right with the male only population.

Figure 1 Changes in hours worked and changes in income inequality, 1970-2002



Notes: Changes over the 1970-2002 period. Source OECD. Changes in Hours per Worker are percentage changes in the average annual hours worked per employee in the 1970-2002 period. Changes in income inequality are calculated as variations in the log difference of the ninth and the first deciles of the distribution of gross earnings in main job of full-time workers; the sample period used differs because of data availability.

Figure 2 Changes in hours worked and changes in unemployment, 1970-2002



Notes: Changes over the 1970-2002 period. Source OECD. Changes in Hours per Worker are percentage changes in the average annual hours worked per employee in the 1970-2002 period. Changes in the unemployment rate are level variations over the same period.

accumulate knowledge and experience that increase their productivity. Second, we acknowledge the existence of search frictions in the labour market. Finding jobs suitable for a worker is time-consuming and getting a job requires proving that you are the best candidate among those available. In this world, human capital not only enhances worker productivity in the current job but also increases the chances of obtaining better jobs.

Our theory has some novel predictions about the determinants of working time. First, individuals work longer hours in tighter labour markets. This is because a higher unemployment rate reduces the rate of use of human capital, thereby discouraging its accumulation. Moreover, when there are less job vacancies, obtaining

better jobs is more difficult, which again discourages individuals from working longer hours. Second, individuals also work longer hours when the dispersion in job offers, which causes higher wage inequality, is greater. This is because workers have greater incentives to work longer hours to obtain better jobs: in the land of opportunities the expected return to working longer hours is greater.

Some micro predictions of the theory

The theory yields several predictions at the micro level that find strong empirical support:

- *The return to hours worked is partly inter-temporal.* By working longer hours, individuals increase

Table 2 Predicted hours worked

	Average hours per worker	Difference to (1) %	US-Europe difference %
(1) US in 1970	0.400	-	-
(2) US in 2000	0.413	3.25	-
(3) Europe in 2000	0.344	-14.00	17.2

future as well as current income. Using data from the Panel Study of Income Dynamics (PSID) for the US, and the German Socio-Economic Panel (GSOEP) for Germany, we show that individuals who work longer hours obtain higher future wages.

- *Worker skills increase job offer probabilities.* Indeed there is evidence that more skilled workers receive more job offers and have lower unemployment rates.¹ Using data from the PSID for the US and the GSOEP for Germany, we also show that individuals who work longer hours are more likely to obtain better jobs in the future.
- *The hours profile along the life-cycle is hump-shaped.* Increasing human capital gives easier access to better jobs only when it gives the worker a competitive edge over a substantial mass of workers. Thus the return from working longer hours is higher when workers have a human capital close to the average in the population. Since workers progressively accumulate human capital during their working life, this is typically the case at middle age.
- *Individuals work longer hours when wage inequality is higher.* Both in the National Longitudinal Survey of Youth (NLSY) for the US and in the GSOEP for Germany, there is evidence that individuals work longer hours in occupations with larger wage inequality.²

Implications for the US-Europe experience

The previous results provide a natural explanation for the diverging evolution of hours per worker in the US and in Europe. Since the 1970s, labour market conditions have evolved quite differently in Europe and in the US. First, and as documented in Table 1, the unemployment rate in Europe has increased substantially whereas it has remained roughly unchanged in the US. Second, the market return to observed skills has increased substantially in the US but little in Europe. And third, the component of wage inequality unexplained by observed worker characteristics (known as 'within skill wage inequality') has increased substantially in the US but little in Europe. As discussed above, these changes imply that hours per worker should have fallen in Europe, while they should have increased in the US, relatively to their trend of secular decline.

1 See David Blau and Philip Robins (1990): "Job Search Outcomes for the Employed and Unemployed," *Journal of Political Economy*, 98(3), 637-655.
 2 See Linda Bell and Richard Freeman (2001): "The Incentive for Working Hard: Explaining Hours Worked Differences in the US and Germany," *Labor Economics*, 8(2), 181-202.

These implications find some empirical support in cross-country data. In Figures 1 and 2 we plot the percentage change in hours per worker for some OECD countries in the last 30 years against changes in earnings inequality and in unemployment rate. Earnings inequality is measured as the log difference between the ninth and the first deciles of the distribution of gross earnings of full-time workers in their main job. This evidence indicates that countries that have experienced a larger increase in labour income inequality and a lower increase in unemployment have also experienced smaller reductions in hours per worker.

The mechanism is quantitatively relevant

In order to quantify how much unemployment and wage inequality can explain of the different evolution of hours per worker in the US and Europe, we use a dynamic model of job search. We take the US as the benchmark economy against which to measure the effects of aggregate changes on hours worked. The idea is to evaluate how US workers would have behaved if they had been subject to the same labour market conditions as the Europeans had. We first calibrate the model to match observed labour market flows and wage dynamics in the US during the 1970s. Then, we analyse the effects of increasing the return to skill and within-skill wage inequality in order to match the rise in wage inequality experienced by the US since the 1970s. We also analyse the effects of reducing job offer probabilities in order to reproduce the raise in European unemployment over the last 30 years.

The model predicts a 3.25 percentage increase in hours per worker in the US. This is mainly explained by the sharp increase in within skill wage inequality. The change in the market return to skill plays instead a minor role. The model also predicts a 14% fall in hours per worker in Europe. This is in line with the observed falls of 10 and 11% in France and Germany, respectively. Overall hours per worker fall by 17.2% in Europe relative to the US. The actual fall for the all workers population has been 17% in France and 21% in Germany, whereas for male workers it has been around 11%.

Further predictions on the US-Europe experience

The view that hours per worker have diverged in Europe and the US because of differences in unemployment and wage inequality also explains why:

- *The inter-temporal (gross) return to working time has increased in the US but not in Europe.* This is because wage inequality increases the return to working longer hours, while unemployment may reduce it. In our work we show that the inter-temporal return to working time has indeed

increased in the US between the 1970s and the 2000s while it has changed little in Germany.

- *The fraction of prime age male workers working very long hours has increased substantially in the US.* This change has been widely documented in the US.³ In our theory this is a side effect of the higher inter-temporal return to hours worked caused by the increase in wage inequality. Typically, theories that focus just on Europe to explain the widening of the gap in working time have a hard time in accounting for this fact.
- *A substantial mass of European workers have become discouraged.* In the 2000s, there has emerged a substantial mass of European workers who work about 30 hours per week.⁴ In our model, these are workers who have experienced a long spell of unemployment, and who enter employment with a human capital level that is significantly lower than the average in the population. These workers feel discouraged from working longer hours, since marginal increases in human capital will improve little their productivity ranking among workers in the economy.

3 See Dora Costa, (2000): "The Wage and the Length of the Work Day: from 1890s to 1991," *Journal of Labor Economics*, 18, 156-181 and Peter Kuhn and Fernando Lozano (2005): "The Expanding workweek? Understanding Trends in Long Work Hours among U.S. Men, 1979-2004," NBER Working Paper 11895.

4 See OECD (1998, 2004): *Employment Outlook*.

Conclusions

The decision on how many hours to work once employed is, for many workers, voluntary. Of course there are exceptions, in some countries and for some jobs existing legislations restrict the maximum amount of hours worked, but rules are not always binding or not always enforced. Differences between actual and desired working time are indeed small for European workers and they have even decreased over the last decades.⁵ So some have argued we should not worry too much about the diverging evolution of hours per worker in the US and Europe that has emerged over the last 30 years. Today, Europeans simply devote less time to working time activities because they have started to enjoy leisure more. But is it really the case that Americans and Europeans have become intrinsically different? It may be. Yet, it is also true that today they face quite different incentives during their working life. In the US, unemployment risk is smaller than in Europe, obtaining better jobs is easier and there are greater chances to progress over the career ladder and getting employed in highly paid jobs. While the pursuit of the American dream makes Americans work hard, the sluggish economic performance of Europe discourages European workers from working longer hours.

5 See for example OECD (1998): *Employment Outlook*.

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