

# Why do Americans work so hard?<sup>1</sup>

Work and leisure in the USA



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Academics and policymakers have recently focused on the decline in work hours in Europe. Both groups are interested in the causes and consequences of this phenomenon and the degree to which the decline in European hours worked is causing a slowdown in growth. However, this paper is *not* about the cause of the

differential in growth between the US and Europe, or whether hours worked is fully responsible for it. Instead, our goal is to understand the evolution of working hours.

So, why do western Europeans work so much less than Americans? There are two dominant theories used to answer this question. The first is

**Table 1: Hours Per Person Per Week and Employment Ratios By Country**

E/P, Weeks per Year, Usual Hours use OECD data. Hours per person per week is calculated as the product of E/P\*weeks/52\*usual hours. OECD data on weeks and usual hours provided by the Secretariat and use same sources as OECD Employment Outlook 2004. OECD data on E/P are from <http://www1.oecd.org/scripts/cde>. US data on usual hours and weeks worked are from Luxembourg Income Study. We use usual hours and weeks worked for **\*\*all employed\*\*** including part time.

Country	Weekly Hours Per Person	Employment/Pop	Weeks per Year (Employed)	Usual Weekly Hours (Employed)
Belgium	17.92	0.643	40.0	36.29
Denmark	20.63	0.761	38.9	36.27
Finland	19.73	0.688	38.5	38.75
France	17.95	0.636	40.5	36.21
Germany	18.68	0.656	40.6	36.48
Greece	20.10	0.576	44.6	40.71
Ireland	20.10	0.659	43.7	36.29
Italy 1	6.68	0.565	41.0	37.42
Netherlands	17.25	0.734	38.4	31.79
Norway	19.94	0.774	36.0	37.25
Portugal	16.98	0.523	41.8	40.37
Spain	18.14	0.576	42.2	38.85
Sweden	19.06	0.735	35.4	38.10
United Kingdom	21.42	0.721	40.5	38.19
United States	25.13	0.719	46.2	39.39

1 This essay is an abridged version of "Why do Americans Work so Hard?" by Alberto Alesina, Edward Glaeser and Bruce Sacerdote which appears in the *NBER Macro Annual for 2005*, published by MIT Press.

that the differences in working hours are a result of higher tax rates in Europe. The second is that they can be explained by European “culture”. We argue that neither theory convincingly answers the question and attempt to outline a more credible explanation (Alesina, Glaeser and Sacerdote, 2005).

**The Data**

Americans of working age average 25.1 working hours per person per week, Italians 16.7, French 18.0 and German 18.7. The UK has the second highest value with 21.4 hours, and Ireland the fourth with 20.1. The average employed American works 46.2 weeks per year, the average French person 40.5 and the average Swede 35.4 (see Table 1).

Mechanically, differences in working hours per person can result from three sources: participation in the labour force and unemployment rates; the number of days vacation; and the number of hours worked in a normal week, where a reduction in hours may arise because full time workers work less or the share of part time workers increases. The US has by far the longest number of weeks of work per year, is second after Greece for numbers of hours worked in the normal week and it is sixth in terms of employment over population. This shows how important vacation time is to US exceptionalism.

Comparing the US with Germany or France shows that roughly one quarter of the difference is explained by differences in working hours in a normal week (Alesina et al, table 2, 2005). Part of the reduction in hours worked is explained by an increase in part time work, a point raised by Bell and Freeman (1995) and Hunt (1998). Hunt reports that between the early 1970s and the mid 1990s part time workers increased as a share of all workers from 5.9 per cent to 9.6 per cent in France and from 10.1 to 12.6 per cent in Germany. The remaining difference is explained

**Table 2: Hours Differences Between US, France, Germany, United Kingdom**

The first panel shows the total hours worked per week per person aged 15-64. The next panels decompose the total differences into the differences in labor force participation, weeks worked, and usual weekly hours. The fraction explained column uses the accounting identity that total hours= $lfp \times weeks \text{ worked} \times hours \text{ per week}$ . Total hours worked and employment data use OECD data. Usual hours are from the Luxembourg Income Study. Weeks worked is calculated as the residual.

**A: Total Hours Per Week Per Person**  
**B: Fraction of Hours Difference Explained**

	A	B
US	25.13	
France	17.95	
Germany	18.68	
Italy	16.68	
US-France	7.18	1.00
US-Germany	6.45	1.00
US-Italy	8.45	1.00
Employment/Pop 15-64		
US	0.72	
France	0.64	
Germany	0.66	
Italy	0.57	
US-France	0.08	0.36
US-Germany	0.06	0.31
US-Italy	0.15	0.59
Weeks Worked Per Year		
US	46.16	
France	40.54	
Germany	40.57	
Italy	40.99	
US-France	5.62	0.39
US-Germany	5.59	0.44
US-Italy	5.17	0.29
Usual Weekly Hours per Worker		
US	39.39	
France	36.21	
Germany	36.48	
Italy	37.42	
US-France	3.18	0.25
US-Germany	2.91	0.26
US-Italy	1.97	0.13

by a lower number of weeks worked and labour force participation. The former is slightly more important in both France and Germany where, overall, the picture looks pretty similar. Italy is different, with more than half of the difference explained by employment rates, one third by vacation time and only just over 10 per cent by hours worked in a normal week. This is also explained by the relatively small fraction of part time work in Italy.

Germany and Italy have the two highest number of vacation weeks with 7.8 and 7.9 respectively (OECD Employment Outlook 2004). The UK has 6.6 and the US 3.9: according to OECD data the US has twenty fewer days of vacation and holiday than Italy and Germany and fifteen fewer than France. The increase in mandatory vacation time in Europe relative to the US is a major factor in explaining work hours: the US has no statutory minimum, whereas in France both statutory and contractually agreed are twenty five days and in Germany there are twenty statutory and almost thirty agreed.

Comparisons of labour force participation for men and women since the early 1970s in the US, Germany, France and Italy show that men's participation dropped in all countries but less so in the US (Alesina et al, Figs 3 and 4, 2005). Female participation increased tremendously in the US, significantly less so in Germany and France and less so in Italy. In the US, participation rates of older workers, aged 55 to 64, today are pretty similar to what they were in 1970 (Alesina et al, Fig 5, 2005). Participation rates are much lower in France and Italy where generous pension systems and early retirement age play a key role. The effect is less marked for Germany as the participation rate for this age group was already quite low in the 1970s.

#### ***The tax impact***

Given that hours worked fell so much from 1970 onward in Europe but not in the US, the

explanation is likely to do with some large change that occurred in Europe and not in the US. An obvious candidate is the large increase in the income tax rate in Europe compared with a much smaller increase in the US. There is little doubt that increasing marginal tax rates have reduced hours worked, especially through an effect on female participation in the labour force. The question is whether this is enough to explain the current very large difference between Europe and US both for sexes.

Edward Prescott has argued that "virtually all of the large differences between US labour supply and those of Germany and France are due to differences in tax systems" (Prescott, 2004). Indeed, the marginal income tax rate differences between the US and Europe were much smaller in the 1970s, when labour supply differences were much smaller. Prescott evaluates what elasticity of labour supply would be needed to explain the entire difference between hours worked in the G7 countries. The core element of his model is that it delivers a high labour supply elasticity with respect to the tax rate which, if true, implies that reducing taxes in Europe would lead to large gains in hours worked. Prescott uses this evidence to also suggest that the elasticity of the labour supply must be much higher than normally thought.

Prescott's argument relies critically on assumptions that ensure an elasticity of labour supply that is hard to reconcile with most standard estimates. While for women, estimated labour supply elasticities are much closer to those he used, in the case of male labour, we are not aware of within-country estimates of labour supply elasticities that are even in the same ballpark. The reduction of hours worked in Europe is by no means a women-only phenomenon and female labour force participation shows an increasing trend in most European countries since 1973. The US shows even faster growth of female

participation and in this case, the effect of marginal tax rates may indeed be important.

Prescott himself acknowledged the discrepancy between the traditionally estimated labour supply elasticities from micro evidence and the macro elasticity needed for his calibration. But he offers little explanation of why those micro estimates are wrong. We have examined two hypotheses for this mismatch. Both offer alternative theories to explain the difference in hours worked in Europe and the US.

### *The income effect*

The first hypothesis we tested is that the macro estimates are right and the micro estimates, while statistically correct, are misleading. A possible explanation is that by only including the direct impact of high taxation, micro estimates significantly underestimate its indirect impact on income and work hours. If taxes are spent on commodities that are highly valued by consumers, then compensated labour supply elasticities are appropriate as taxes only have a price and not an income effect. However, if government spending is wasteful, then uncompensated demand elasticities are appropriate as higher taxes impact on both prices and income. However, the indirect impact of higher taxation on income effects and work hours would have to be significant to deliver the income elasticities Prescott assumes. The empirical literature on labour supply elasticities suggests three things. First, for men uncompensated labour supply elasticities are close to zero. Second, given reasonable estimates of labour supply elasticities with respect to income, compensated labour supply elasticities are also relatively modest. Reasonable elasticity estimates suggest that at best one-half of the hours worked difference between the US and Europe can be explained by differences in tax rates. Third, labour supply elasticities are much higher for women

and as a result, tax rate differences can potentially explain all of the differences in hours worked between American and European married women.

### *Cross country evidence*

Looking at within country microeconomic evidence on the individual labour supply, one does not come even close to explaining the US versus Europe differences in hours worked. However, using cross country evidence the correlation between aggregate hours worked and tax rates is strong and if taken as a causal relationship explains a good portion (roughly one third to one half) of the difference in working hours per person. However, time series evidence is more mixed. As Davis and Henrekson (2004) point out the decline of hours worked in Europe is pretty much monotonic from the mid 1970s to today, while the increase in marginal tax rates were concentrated almost exclusively in the first part of the period, say up to the late 1980s.

There are roughly two explanations for the divergence between within country and across country estimates of the labour supply estimates. One explanation (emphasised also by Davis and Herenkson, 2004) stresses omitted variables. High marginal labour tax rates are correlated with generous welfare systems, workplace regulations, unemployment compensation programs, powerful unions, generous pay-as-you-go social security systems and so on. All of the above may depress working hours. Therefore using macro regressions significantly overstates the true impact of taxes. The second explanation is that within country and across country effects of taxes are different because of a social multiplier where the marginal productivity of work (or leisure) increases with the number of compatriots who are also working or relaxing.

*Culture and the social multiplier*

Some have suggested that differences in hours of works reflect the difference between a European culture of leisure and American workaholicism. A variant of this view is that these differences reflect long-standing cultural differences, which are perhaps rooted in America's puritan Calvinist heritage. It is certainly true that New England's Puritan settlers avidly struck long-standing religious holidays off the calendar. We tested whether cultural measures (being Protestant) were important within the US and showed that this does not influence hours worked, while being a union member does. Data from Germany gave us similar results.

Up to the First World War work hours per employee were actually lower in the US than in most European countries including France and Germany. Work hours per employee started to fall a bit more rapidly in Europe than in the US but up until the late 1960s work hours per employee were about the same in the US, and Europe including Germany and France (Huberman, 2003). Working Saturdays was more common in Europe, and even long summer vacations were not particularly more common in Europe than in the US. So, why did "culture" start diverging in the early 1970s so dramatically?

The social multiplier effect is one way of making sense of this change. Blanchard (2004) and others have noted that Europeans seem to have taken a good portion of their secular increase in income in less work while Americans have instead taken it in more consumption. A more convincing story is that as hours worked started to decline in Europe (perhaps because of taxation), people's utility from leisure increased and the social multiplier reinforced the decline, creating a "desire" for Europeans to vacation en masse. The question then arises as to whether the available evidence on the magnitude of the social multiplier in the context of labour supply could

explain the discrepancy between micro and macro estimates of labour supply. We examined two forms of evidence: first, anecdotal evidence on social interactions in leisure and, second, the limited evidence on the actual size of the social multiplier in labour supply.

While it is a mistake to think that Europe/US labour supply variations simply reflect long-standing cultural differences, there may be some truth to those who argue for the importance of a culture of leisure in Europe. The essence of this view is that because everyone takes long vacations in Europe, it is more pleasurable to take those vacations. Because one's friends and relatives are also off work vacations are more enjoyable. Europe may also have developed better leisure infrastructure for enjoying a month-long holiday. These arguments are variants on the social multiplier view: that one person's leisure increases the returns to other people's leisure. There is a great deal of anecdotal evidence supporting the idea that there are positive complementarities across people in the enjoyment of leisure time.

We considered three examples which support the idea of a significant social multiplier: the weekend and work timing more generally, the literature on agglomeration economies and labour force participation decisions among subgroups of the population. One of the strongest pieces of evidence in favour of complementarities across either leisure or work is the extent to which an overwhelming share of the population takes its two days of leisure during Saturday and Sunday. There are extremely good reasons – saving commuting for example or spreading capital over more workers – why there would be advantages from staggering work so different people take different days off. Nonetheless, in both Europe and the US there is a remarkable consensus on taking Saturday and Sunday off. While taking Sunday off may be seen as part of a long-standing Christian religious

observance, as rising incomes lead to more leisure time, it was not obvious what the second day would be and for a while it seemed just as likely that Monday would represent the second day of vacation (Rybczynski 1992). There was a strong convergence to a common two day weekend despite the many disadvantages of crowding commutes and infrastructure usage more generally during five days and leaving this infrastructure underused the other two days.

In European countries with small amounts of religious observance, it is hard to think that Sunday remains as a leisure day except for its role as a focal point, and it would not have power as a focus unless there were complementarities in leisure (or work) across individuals. Similar comments could be made about work hours and vacation days more generally. The share of the population that works between nine and five in the US is extremely high relative to the benefits that would be gained from staggering commuting more evenly over the day. Likewise, people tend to group holiday times together both during the winter and summer holidays.

A second form of evidence is the work that has been done on agglomeration economies in productivity (eg. Ciccone and Hall, 1996). This work has tried to show that productivity increases when people are surrounded by others who are productive.

A third piece of evidence is the remarkable difference on labour force participation rates across demographic subgroups within areas. The differences across these populations are quite striking. Among young males aged twenty to thirty, the labour force participation rate ranges from .37 per cent in Belgium to .72 per cent in the Netherlands and UK. Among adult females aged thirty to fifty, the labour force participation rate ranges from .48 per cent in Italy to .77 per cent in Sweden. Tax rates and labour market regulations explain some of these differences, but another

possible reason is the complementarities across work or leisure within these subgroups. One fact that suggests that labour market regulation is not the only explanation of these differences is the lack of correlation across subgroups. For example, the correlation between labour force participation rates of young men and adult women is only 74 per cent. Leisure complementarities are also a plausible explanation: it is less unpleasant to be an unemployed youth, if your friends are unemployed. Adult women working outside the formal labour market find it easier to function if they have peers who are in a similar situation (see Glaeser, Sacerdote and Scheinkman, 1996).

Thus, there is a small body of evidence that shows that there may well be social multipliers in the context of taxes. However, the cross-national evidence given above still suggests elasticities that are too small to explain the US/Europe differences.

### *Unionisation and regulation*

Here, we turn to our second hypothesis: that the cross sectional relationship between taxes and hours worked is just the result of omitted variables that correlate with the tax rate and impact work hours, in particular, unionisation and labour market regulations.

Europe is far more unionised than the US with the share of the labour force covered by collective bargaining agreements ranging from less than 20 per cent in the US to more than 80 per cent in Sweden, France and Germany (Alesina et al, Table 16, 2005). Prescott (2004) emphasizes that the timing of tax rate changes in Europe seems to correspond with the relative decline in hours worked. However, the same can be said for changes in unionisation and changes in labour market regulation. Union strength reached a peak in most European countries in the late 1970s and early 1980s, precisely when the reduction in hours worked took off.

These large differences in unionisation rates reflect political differences. Alesina and Glaeser (2004) argue that American racial fractionalisation and European political instability, ultimately the result of two world wars, has meant that the US system is far less friendly to the politics of the left. Proportional representation favoured the growth of parties of the left that championed unions and there is a strong positive correlation between proportional representation and the share of the labour force that is covered by collective bargaining agreements (Alesina et al, Fig 12, 2005). By contrast, American federalism, a majoritarian system which makes it very hard for third parties to enter, and the separation of powers, have all limited the strength of private sector unions.

Most classical models of unions and wage setting suggest that unions will artificially restrict labour supply in order to raise wages and might expect unions to impact labour supply in two ways. First, labour unions may keep wages artificially high and restrict employment and, second, they might actively pursue policies of reduction in hours worked. However, under reasonable parameter values, the impact of a sectoral shock on hours worked can be completely opposite in unionised and non-unionised economies. In a non-unionised economy, a sectoral shock that helps one sector and hurts another equally will generally lead to higher average productivity and greater hours worked. In a unionised economy, where labour movements across sectors are much more limited, a sectoral shock can easily lead to a decrease in hours worked because the negative impact on the hurt sector is greater than the positive impact on the strong sector.

There is a strong negative correlation between hours worked and the percentage of the labour force that is covered by collective bargaining agreements (Alesina et al, Fig 7, 2005). The

correlation is at least as strong as the one described above for marginal tax rates, and in fact the two variables, marginal tax rates and unionisation, are highly correlated. This supports the contention that the aggregate estimates of tax rate may be overestimating the true effect of tax rates because of omitted variables problems. Cross country analysis shows that once factors such as union density and measures of employment protection are taken into account, the impact of the tax variable becomes less significant (Alesina et al, 2005). In addition, cross state evidence from the US points to unionisation having a greater impact on the number of weeks of vacation reported than the marginal tax rate (Alesina et al, Figs 8 and 9, 2005).

#### *Institutional history*

In France, up to the early 1970s, hours worked of employed people were regulated by law and not subject to negotiation between employers organisations and labour unions. From the Second World War until the mid 1960s the relatively weak unions focused on improving labour conditions. Starting in the mid 1960s and especially from the mid 1970s onward the reinforced union movement focused heavily on reduction of hours worked. In the late 1970s lengthy rounds of negotiation on hours reduction between unions and, in 1981 employers' organisations finally came to an agreement that reduced the working week to thirty nine hours. Until then the government had been relatively neutral but the new socialist government in 1982 took up the unions' side. In a series of laws, the government issued regulations that either forced or created strong incentives for employers to reduce working hours. The pressure for a thirty five hour week was mounting and this was indeed introduced in 2000.

In Germany the reduction in hours worked started right after the Second World War and

continued with a pretty stable trend. Hours worked fell from 2315 per person in 1950 to about 1750 in 1975 (Bosch, 1993). The starting point was higher than in France, and in Germany the 1938 statutory law fixed at forty eight the maximum number of weekly hours. Until 1975 the reduction in working hours was accompanied by rapid increase in productivity per hour but this changed with the first oil shock in 1973. At the time of the large increase in unemployment which followed the first oil crisis, unions pursued a policy of "work less, work all," that is a policy of reduced work hours at the same total wage or even higher wage per hour to compensate for lower total hours worked (Hunt, 1998, 1999).

Hunt (1998) reviews in detail the labour literature that calculates the effect of a reduction of standard hours on actual working hours and concludes that the effect was basically one for one in Germany and France, that is the reduction in standard hours did not translate in more overtime.

In Italy the working hours regulations that lead to an increase in vacation days were the result of negotiation between Confindustria (the association of manufacturers), the unions and the government in an active role of mediator. Following the *Autunno Caldo* (hot fall) of 1969, unions were galvanized and reached their maximum strength in the post war period. A surge in the vote share of socialist and communist parties lead to a shift of the political balance and the fifteen years that followed 1969 saw a constant reduction of working time through a series of labour agreements (Garonna and Reboni, 1993).

Contrary to these European experiences, no significant regulations in the US dictate anything about work hours for individuals older than sixteen and the percentage of the labour force covered by collective bargaining agreements is much less than in Europe.

The effect of unions goes above and beyond the direct negotiations on the work week and vacations. In Europe, labour unions have a major political role in promoting and defending the welfare state in general and public pension systems in particular (Alesina and Glaeser, 2004). The large influence of older workers in the union movements played a key role in promoting more generous pensions schemes from the 1960s onward. More recently unions have strenuously defended the pension systems against reform geared toward re-establishing fiscal balance. In 1995 in both France and Italy, union opposition to pension reforms lead to a withdrawal of the reform in the former and the collapse of the government in the latter. France recently went through a month of heavy social unrest in opposition to a relatively minor pension reform geared toward eliminating privileges for public employees. There is a strong correlation between welfare spending in general and pension spending as a share of GDP and measure of union density (Boeri et al, 2001). In many European countries unions are directly involved in the management of pension systems and unemployment compensation schemes. As the UK has recently encountered on the issue of public sector retirement age, this role often creates obstacles to policy reform.

The generosity of the retirement system affects labour participation of the elderly, which is one factor that explains lower work hours per person on the two sides of the Atlantic. A related factor is unions' tendency to favour pre retirement schemes to avoid unemployment.

Bell and Freeman (1995) argue that Americans work more because wages are less compressed in the US than Europe and therefore the incentives to work harder and be promoted are stronger. Union policies are a key explanation for different degrees of wage compression. More generally Bell and Freeman

(1995, 1999) highlight the role of inequality as an explanation of work hours.

Hours worked have fallen especially in continental Europe where there are strong unions, extensive welfare coverage, high taxation and a prevalence of social democratic governments, all factors that also reduce inequality (see Alesina and Glaeser, 2004). Hours worked have not fallen in the US and (to a lesser extent in the UK and Ireland) because these are countries with less extensive welfare, less intrusive regulations, less powerful union movements and more inequality.

### **But why?**

Why did unions in Europe choose to fight for lower work hours? Faced with sectoral shocks, unions that are interested in maintaining their membership will cut hours worked. The heart of this explanation is that unions either care about maintaining size because this drives their political power, or because union dues are a function of the number of workers, or because unions are under political pressure from members not to let individual members get laid off. This fits well with the openly stated policy of work sharing. In a period of reduction of employment, the idea of “work less, work all” was everywhere in union pamphlets and on union marches. Had the unions accepted a constant hourly wage that might have worked, but union members tried to have their cake and eat it too (Hunt 1998, 1999).

There are other explanations for the unions’ policies. One is that union members pressed for lower work hours in response to the increase in marginal tax rates, an argument in line with Prescott (2004). In the union rhetoric it is hard to find any reference to taxes as a motivation for a reduction in hours worked. But, increases in taxes and reduction of take home pay may affect wage demands (Alesina and Perotti, 1997; Daveri and Tabellini, 1997; Boeri et al., 2001) leading to higher pre tax wages and lower employment levels.

Another explanation is that unions helped coordinate a demand for lower hours due to an income effect, an argument in line with Blanchard (2004): the unions simply responded to the increasing income level of their members who demanded more leisure. In this sense the unions served the purpose of overcoming the transaction costs associated with individual bargaining and provided a voice for workers (Freeman and Medoff, 1984). This makes sense particularly if there are positive complementarities in the enjoyment of leisure activity where private decisions about work and leisure will lead to too much work.

A final explanation is that in a period of inflation – the 1970s and 1980s – and increasing unemployment, demands for increases in real wages might have been politically unpalatable. Given the heavy government intervention and politically salient nature of union negotiations in Europe, political packaging of union demands is very important. Asking for higher hourly wages by holding constant total wages and reducing hours worked may have been more politically feasible than asking for large wage increases (Booth and Schiantarelli, 1986).

### **Aren’t Vacations a Good Thing?**

The vast empirical labour supply literature suggests that tax rates can explain only a small amount of the differences in between the US and Europe. Europeans today work much less than Americans because of labour market regulations advocated by unions in the 1970s, 1980s and part of the 1990s. Marginal tax rates may have also played a role, especially for women’s labour force participation, but our view is that in a hypothetical competitive labour market without unions and with limited regulation, these tax increases would not have affected hours worked as much.

A much harder question to answer is whether unions and labour regulation introduce

distortions into the market that reduce welfare or whether they are a way of coordinating on a more desirable balance between in work and out of work life. As economists, we tend to view departure from perfect competition as producing inferior balance in the economy. Should we argue therefore that unions have infringed on people's ability to work more and have created inefficient economies that fail to use the optimal amount of work hours available? Or is it possible that regulations on time worked serve to achieve a low work hour's equilibrium that is desirable because of its wider social impact?

There is some evidence to suggest that there is a negative relationship between hours worked across countries and life satisfaction. This could imply that unions increased happiness by helping societies coordinate on a lower hours worked equilibrium. Europeans seem to be happy to work less. But the evidence is far from conclusive and we anticipate this debate to continue for a long time to come.

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