

**BARRINGTON LECTURE 2004/05**

**IRELAND'S RECENT PRODUCTIVITY PERFORMANCE**

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*Abstract:* This paper examines the reasons for the recent divergence in US and European productivity performance. The paper shows that the structure of European industry is ill suited to the challenge of innovation which has to be faced given the rapid development of ICT technology and the fact that the ability to grow economically by imitating US innovation becomes more limited as convergence to US levels of output is approached. Turning to Ireland, the paper will show that while Ireland's productivity growth over the last decade has been impressive, we still compare unfavourably with Europe when adjustment is made for transfer pricing. Much of Ireland's economic success has been through the employment of more resources, not their greatly improved utilisation. Further, the persistent problems of Irish per capita productivity stem from the well-known deficiencies of Irish public services, and the less appreciated failures of ICT-using services, particularly retail sales. Finally, the paper argues that Ireland exhibits greater cultural preference for (voluntary) leisure than our European neighbours.

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*Keywords:* Productivity Performance; Divergence; Irish per capita Productivity.

*JEL Classifications:* O47, O14

## **1. INTRODUCTION**

Europe is currently suffering a serious crisis of confidence. After a long period of post-war convergence in European hourly productivity levels to that of the US, there was a sudden reversal around the mid-1990s, when US productivity accelerated, while Europe's rate of growth slowed down. The debate on the causes of this reversal is currently dominated by Euro-pessimists led by André Sapir (Sapir et al, 2004). They argue that the structure of European industry is ill suited to the challenge of innovation which has to be faced given the rapid development of ICT technology and the fact that the ability to grow economically by imitating US innovation becomes more limited as convergence to US levels of output is approached.

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On the other hand the Euro-optimists, such as Olivier Blanchard (Blanchard, 2004), argue that Europe's relatively low GDP simply reflects a different labour/leisure choice than our American friends. This argument is based on the fact that much of the difference between the two regions GDP can be explained by the number of hours worked per capita. Americans live to work; Europeans work to live, *c'est tout*.

Meanwhile, Irish policy makers have treated the current debate in Europe centred on the so-called Lisbon agenda with a certain mock solemnity. It is felt that Ireland is already pulling its weight economically, and that Europe's economic problems lie elsewhere. This paper asks if there are lessons for Ireland from Europe's agonising self-examination of its productivity failings. It will argue that:

- While Ireland's productivity growth over the last decade has indeed been impressive, we still compare unfavourably with Europe when adjustment is made for transfer pricing. Much of Ireland's economic success has been through the employment of more resources, not their greatly improved utilisation.
- The persistent problems of Irish per capita productivity stem from two sources – the well-known deficiencies of our public services, and the less appreciated failures of ICT-using services, particularly retail sales.
- Contrary to the widespread perception that we are closer to Boston than Berlin in terms of our work practices, I argue that the Irish exhibits greater cultural preference for (voluntary) leisure than our European neighbours.

This paper is structured as follows. Section 2 presents some of the broad stylised facts that frame much of the debate in Europe on this topic, while sections 3 and 4 discuss international differences in hourly productivity and hours worked per capita respectively. Section 5 discusses some policy reform options, while section 6 concludes.

## 2. BACKGROUND

After an initial post-war phase of catch up, European convergence in levels of per capita GDP to that enjoyed in the US came to an end at the beginning of the 1980s and has remained unchanged at around 70% of the US level since then (Sapir, 2003). Behind this stability lies a very divergent economic experience – Europe was experiencing weak employment levels, with a parallel decline in the average hours worked by those in employment. On the other hand, labour productivity was continually catching up with the US. Since 1980, these opposing trends have more or less cancelled each other out. While in 1970 all of the underperformance of the EU versus the US could be explained by lower productivity per hour worked, 20 years later this had changed dramatically. The 30% difference between EU and US levels of GDP today can be broken down into three components of roughly equal magnitude: one third can be explained by lower productivity per hour, one third can be explained by a lower number of hours worked per employee, while one third can be explained by a lower participation rate.

What is particularly worrying for Europeans is that the convergence of the ratio of US to EU productivity which had sustained the transition to lower hours worked for so long seems to have reversed some time around the mid-1990s, as the Americans started to stretch their lead. This has provided the backdrop for the debate within Europe on the Lisbon Agenda – what economic reform can improve labour participation, and increase Europe's rate of productivity growth? Is the poor performance over the last decade a symptom of a more permanent reversal of fortune, or is it a temporary blip, and will convergence to US levels re-emerge in time?

What's worse, it should be recalled that poorly skilled American workers are more likely to be in the labour force than poorly skilled European workers who are unemployed (i.e. who have zero

productivity). This of course has the tendency to actually drag the average US hourly productivity down vis-à-vis Europe. For example, Toys R' Us employs 30% more workers per store in the US compared to their stores in France, where jobs such as bag-packing are unheard of (Lewis 2004).

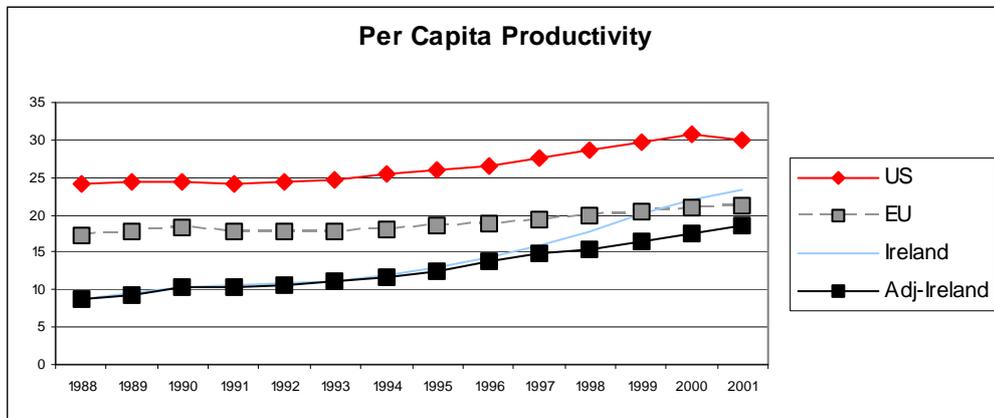
Turning to Ireland, per-capita productivity doubled from 1988 to 2001, overtaking the EU around the turn of the millennium. This incredible performance is illustrated in Figure 1 - from just under €9,000 (1995 Prices) in 1988, it rose almost 3 fold by 2001.

While the published Irish hourly productivity figures do look impressive, there is good reason to be cautious about this measure of the scale of our achievements. Firstly, transfer pricing probably results in productivity gains imbued in patented products and processes originating overseas wrongly being credited to Irish workers. The reality, therefore, was that changes in Irish productivity were solid but unspectacular (Honohan and Walsh, 2002). Our improved per capita productivity performance can be explained instead to the phenomenal performance of the Irish labour market.

Secondly, if inappropriate regulation restricts market entry or there is a delay in market entry, then the lower than optimal supply of a non-tradable commodity will be able to serve a relatively high number of customers. For example, the productivity of the taxi sector in Ireland was never higher than when the false shortage caused by the restrictions on license numbers was at its most acute. Such a sweating of fixed assets in fast growing countries is likely to have artificially inflated Irish productivity figures.

Thirdly, a more serious problem in services productivity, well known among economists, is the difficulty in measuring outputs of non-market activities such as health care. In these cases, output is usually measured as the sum of the value of the inputs.

**Figure 1: Per Capita Productivity 1988-2001**



### 3. DIFFERENCES IN HOURLY PRODUCTIVITY

US productivity growth per hour worked has been substantially higher than the corresponding European figure since the mid-1990s, and this has been the cause of much of the European angst. What is surprising observers at present, however, is the strength of U.S. productivity since the end of the 2001 recession, suggesting that the turn around in performance may be more permanent than transitory.

There are, unfortunately, differences in statistical technique that complicate a simple comparison of international productivity statistics, the most important of which being the treatment of software

investment. However, Ahmad et al (2003) conclude that the measurement problems do not significantly affect the assessment of aggregate productivity patterns in the OECD area – in particular, the assessment of a substantial out-performance by the US remains. These measurement problems do, however, come to the fore in a more detailed sectoral assessment of productivity growth.

If it is not a statistical aberration, then what has caused this? Commenting on productivity growth over a period of less than a decade is dangerous – productivity growth tends to be highly cyclical, depending on the point in the economic cycle. Nonetheless, there is increasing agreement that the earlier adoption and diffusion of information technology in the US has been at the heart of that country’s superior productivity performance in recent years, finally falsifying Solow’s paradox that “computers can be seen everywhere except in productivity figures”. This is not, of course, unanimous – for example see Daveri and Silva (2004).

The argument goes that the impact of computers is making its belated appearance in productivity figures due to both the *miniaturisation* and *networking* of computers’ processing power as the key leap in the development of the technology (Gordon, R.J., 2003). The *miniaturisation* of computers through the development of desktops is analogous to the spread of small electric motors installed in machine tools and other factory equipment in the 1920s. The *networking* of computers, made available thanks to productivity leaps in both hardware and windows type software, was the killer complementary input that optimised the use of the desktop computer.

If information and communication technology (ICT) is the silver bullet explaining the acceleration of US productivity growth, surely we should see a surge in productivity growth when we drill down to the industry level? The answer is yes; we can identify ICT-connected industries as the major source of the recent surge in US productivity growth, though not in the industries you may think of. Using data developed by Mary O’Mahony and Bart van Ark (2003)<sup>1</sup>, we can examine a breakdown based on the nature of each industries use and or production of ICT, rather than the more common, but ultimately unsatisfying indigenous/MNC classification normally employed (for example, see Cerra, Soikkeli, and Saxena, 2003).

In table 1 below the hourly productivity based on the ICT taxonomy is shown. Two sets of figures are shown for Ireland – the first shows the raw unadjusted productivity figures. In the second adjusted set, the recorded Irish hourly productivity for a number of industries dominated by foreign multi-nationals<sup>2</sup> are replaced by the corresponding hourly productivity of US industry (where this is less), in an effort to strip out the effect of transfer pricing.

**Table 1: Hourly Productivity, 2001, Based on ICT Taxonomy**

	Ireland (Unadjtd)	Ireland (Adjusted)	EU	US	Ireland Emp Shr
1 ICT Producing Manufacturing	386	386	58	174	3%
2 ICT Producing Services	88	51	59	55	6%
3 ICT Using Manufacturing	49	21	29	26	5%
4 ICT Using Services	24	24	31	38	21%
5 Non ICT Manufacturing	27	27	29	32	7%
6 Non ICT Services	18	18	28	28	38%
7 Non ICT Other	19	19	25	30	19%

<sup>1</sup> A full breakdown of the ICT taxonomy is contained in the appendix.

<sup>2</sup> The industries that see a fall in productivity as a result are 22: Printing & publishing, 24: Chemicals and 31-313: Other electrical machinery and apparatus nec

There is one striking feature of this table, namely that in two of the largest employers – ICT using services and non-ICT using services, aggregate Irish productivity lags behind the US to a significant extent. The second most important sector (based on numbers employed) is ICT services, and here the US enjoys a substantial productivity lead over Ireland.

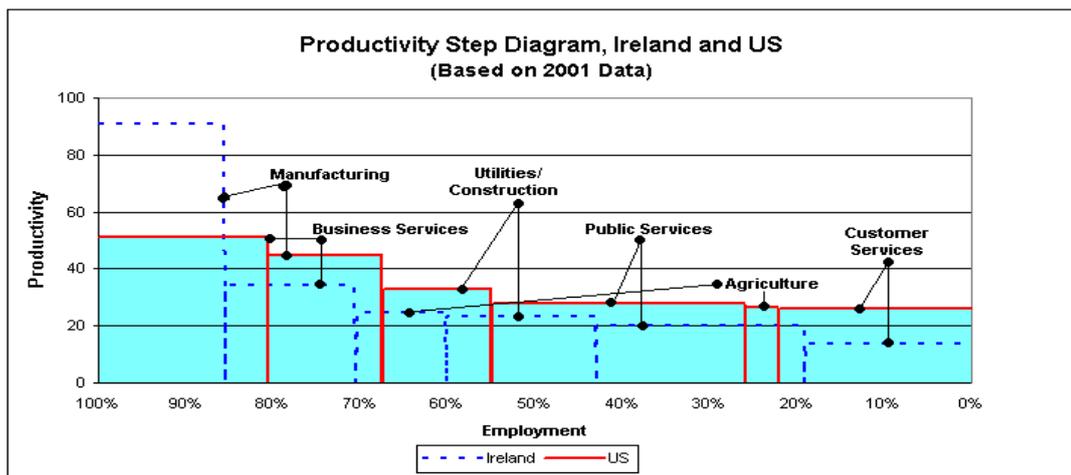
Which services are these? They are, mostly, retail and wholesale trade. In other words, the most important productivity strides made in the US were not through the ICT producing companies (such as Dell, Microsoft etc), but in a revolution in organisational form aided by the exploitation of ICT by companies such as Wal-Mart, Target and Home Depot. This has been achieved as these multiples exploit their sophisticated inventory and logistics techniques and economies of scale, resulting in the displacement of small shop holders. In fact, an Irish retail worker must work for five hours to produce the same output as an American retail worker can in just two.

It also suggests that the single most important policy restraint on Irish productivity growth is the limit on maximum store size. This is, of course, controversial. Should Irish efforts to protect the urban environment be sacrificed on the altar of productivity? On the other hand, has the ban on a single large store been circumvented by the emergence of large, and hugely popular, ‘out-of town’ shopping centres where each individual store complies with the floor space limit?

The other notable result from table 1 is Ireland’s productivity shortfall in non-ICT services. While this might ring true for any Irish reader, given the perception of the state of public services, it probably should be treated with a degree of scientific scepticism given the difficulty in measuring outputs of public services which are a substantial portion of this category.

The importance of services in explaining the US-Ireland productivity gap can be highlighted through a productivity step diagram as in figure 2 below. Based on a broad breakdown into six industry classifications, this charts average labour productivity per industry, starting from the left with the least productive industry. The area under the line for each of the two countries reflects their respective national incomes. This clearly indicates that most Irish workers (almost 85%) work in industries of lower productivity levels than the US. What’s more, this productivity inferiority is in most cases substantial.

**Figure 2: Productivity Steps Diagram, Ireland and the US**



Source: O’Mahony, von Ark (2003)

While Irish manufacturing clearly is substantially more productive than their US counterparts,<sup>3</sup> they clearly fall substantially short in all other sectors. Further, much of the productivity in manufacturing such as currently experienced in Ireland is ‘endogenous productivity’, and it is likely that firms such as Intel could achieve very similar productivity levels elsewhere, but that Ireland could not achieve these productivity levels without Intel. Lewis (2004) gives numerous examples of such similar levels of productivity being achieved in transplanted operations as in the home base.

This is an important point – local conditions do not matter so much for large manufacturing operations with ‘endogenous productivity’, but do matter for local labour intensive industry. This has an important corollary – it is often pointed out that France does very well with regard to attracting foreign direct investment, and this is cited as proof of the limited economic disadvantages of the 35-hour restriction (known as the *loi d’Aubry*). This is true. Last year, France was second only among developed countries in attracting FDI (UNCTAD, 2004).

However, the impact on labour market restrictions such as the *loi d’Aubry* is not felt most in the high tech, capital intensive industries, which rarely require workers to work much longer than 35 hours, and only then at peak periods. It does matter for labour intensive industries such as public or consumer services where the possibility for substituting capital for labour is limited, and the amount of capital per worker is relatively low. It is no surprise, therefore, that the greatest difficulties in introducing the *loi d’Aubry* in France were in introducing it in the public sector. There were not sufficient workers of the specific skills required to compensate for the drop in hours worked by existing employees.

#### 4. HOURS WORKED PER CAPITA

*“The peculiarity of this philosophy of avarice appears to be the ideal of the honest man of recognized credit, and above all the idea of a duty of the individual toward the increase of his capital, which is assumed as an end in itself. Truly what is here preached is not simply a means of making one’s way in the world, but a peculiar ethic. [This] concept ... is the spirit of modern capitalism.”*

##### **Max Weber, *The Spirit of Capitalism***

The main argument of the EU-optimists is that the lower productivity of Europeans is largely explained by lower hours worked. This is because of both a smaller number of people in work (as a percentage of population), as well as a lower average number of hours worked per employee. Americans spend 25% more hours working per head of population than their European neighbours, from a position of parity as recently as 1980.

Does lower European hours worked represent a valid labour-leisure choice, or is it a result of distorted supply and demand in European labour markets? Has (the secularisation of?) Europe progressed to such an extent that it has been able to outgrow Max Weber’s ‘philosophy of avarice’ so central to the spirit of capitalism, and how much of Europe’s lower national income can be explained by this? Further, to what extent has this trend been followed in Ireland? Turning to the raw data first, figure 3 below shows the average hours worked per employee in the US, EU and Ireland since 1979.

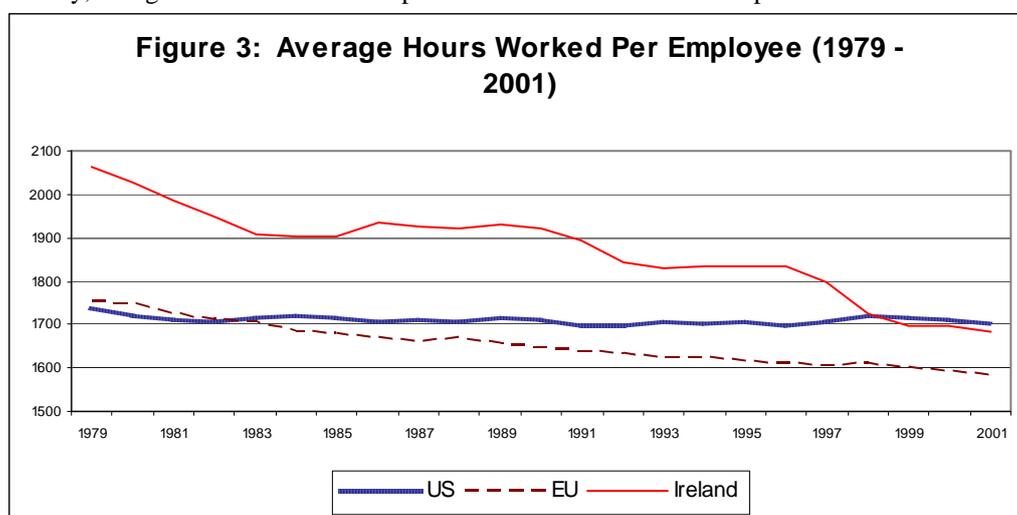
This reveals three striking trends – firstly, the sharp fall in average hours worked in Ireland. This results from a combination of reduced agriculture employment (farmers report extremely long work hours), lower hours worked among full time employees, greater prevalence of part-time work and increased female participation.

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<sup>3</sup> Figures not adjusted for transfer pricing.

Secondly, average hours worked in the US have remained virtually unchanged over the last two decades, and even rose during the recent ICT boom. Could it be, as suggested by Hochschild (1997), that the greater automation of household duties coupled with greater empowerment in the workplace have resulted in Americans preferring their workplaces to their homes? If this is true, then perhaps the US is ahead of the curve in terms of hours worked, and the secular trend towards reduced hours worked may be reversed elsewhere in the coming years.

Finally, the EU has experienced a substantial fall in hours worked per head of population, to an absolute level that is substantially below that of the US. Can it be determined conclusively from this, however, that Europeans *are* actually making a substantial 'cultural' preference for leisure? In other words, how much leisure is due to voluntary choice, and how much is involuntary, being due to labour market distortions? The task of disentangling 'voluntary' from 'involuntary' leisure is clearly an inexact science at best, and is obviously impossible to do with a high degree of accuracy, though a back-of-the-envelope effort at such an exercise is reported below.



An individual's leisure preference can be divided into two choices, namely the choice of the individual as a labour market participant, and the choice of the individual as a voter. The difference between the two is largely temporal. On the one hand, the impact of an individual's labour market decision is felt almost immediately – the choice to work lower hours results almost immediately in a smaller weekly pay cheque. However the full impact of the decision to increase leisure through public means, whether via regulation (e.g. the French legal limit of a 35-hour long work week) or by subsidising leisure (e.g. unfunded early retirement), may only come to be fully realised over a number of years. The question then becomes, have European's built up institutions which unintentionally warp the decision making behaviour of individuals, causing substantial involuntary leisure? This latter point of course has very significant welfare implications if the shadow price of leisure differs greatly on either side of the Atlantic.

To the prosaic economist, all leisure is voluntary in so far as it has been chosen by the individual worker faced with a particular set of prices and wages. For the sake of the back-of-an-envelope calculation presented below, however, it is assumed that where leisure is the direct intention of a public distortion of the private decision whether to work or not to work, then that leisure is taken to be 'voluntary'. For example, the provision of public funds to help people retire early, over and above what would be actuarially justified, is assumed to be 'voluntary' leisure. Where leisure is not directly intended, then that leisure is taken to be 'involuntary'. For example, it is not the direct intention of unemployment benefit to create long-term unemployment, so this is assumed to be 'involuntary' leisure.

This of course only provides an initial guide as to what can be termed voluntary as opposed to involuntary leisure. Take early retirement – to what extent is this a voluntary withdrawal from the labour market, and to what extent is this the disguised unemployment of workers who are frustrated because of the lack of opportunity? One worker might be happy to retire, another not. Further, early retirement in one country might mean something different in another. In India, early retirement is frequently used to side-step onerous redundancy rules by employers, and it might be expected that such early retirement is less ‘voluntary’ than in a society that provides for less stringent employment legislation. Even allocating education as ‘voluntary leisure’ is not without controversy - one person may be happy in further education, another may simply be drifting from one course to the next, because of the absence of a suitable job. In fact, governments frequently create training courses of dubious merit to massage poor unemployment figures. The full sub-division of leisure was determined as follows. In the list of ‘involuntary leisure’, the following are included:

- *Involuntary part-time work:* Many workers only work part-time because of the lack of full time opportunities, creating underemployment. Figures for this are taken from the OECD.
- *Involuntary unemployment:* Defined as being unemployed for more than one month. Unemployment figures by duration taken from the OECD.
- *Demographic profile:* Where a country has a relatively low number of the population of working age, then this is classed as ‘involuntary leisure’. This is calculated based on OECD data as the share of the population in the 15-64 age group.
- *Discouraged Worker:* This is calculated as the residual of non- participation in the labour force after early retirement and full time education are accounted for.
- *Tax Disincentive Effect:* Reducing hours worked because of the disincentive effect of high tax. The importance of the tax disincentive effect is disputed. Prescott (2003) estimates that the lower hours worked by Europeans can be mostly explained by her reaction to higher tax rates. In other words, the supposedly ‘workaholic’ American, if transported into an environment of European tax rates, would work the exact same number of hours as the ‘relaxed’ European. Other estimates (for example Nickell, 2003) calculate that 30% of the lower hours worked can be explained by the disincentive effect of high tax. For the purposes of this paper, it is assumed that 50% of the EU/US hours worked gap for full time workers can be explained by the disincentive of higher labour taxes.

In the list of ‘voluntary leisure’ we include the following:

- *Voluntary part-time work:* Which is calculated as the residual of the ‘involuntary part-time worker’ as calculated above.
- *Job Seeking:* Time to seek a new job, defined as unemployment less than 1month. Unemployment figures by duration taken from the OECD.
- *Shorter hours worked:* Calculated as the residual of shorter hours worked after the disincentive effect of high marginal labour taxation is accounted for.
- *Full time education:* derived from OECD figures.
- *Female non-participation:* Women are assumed to have the same ‘discouraged worker effect’ as men, and low female participation after this is assumed to reflect a cultural preference for non-work/work in the home/work in the community.
- *Early retirement:* Calculated as the sum of non-economically active workers between the ages of 60-64, and half of non-economically active workers between the ages 55-59. The other half of non-economically active workers between the ages 55-59 are assumed to be discouraged workers.

**Table 2: Division of Labour into Voluntary and Involuntary Categories, (2001)**

		EU2 <sup>4</sup>	US	Ireland
	<b>Total Hours Worked</b>			
1	Hours Worked Per Capita	657	873	742
2	Demographic Intercept (US)	565	565	565
1+2	<i>Intercept</i>	1223	1438	1307
	<b>Involuntary Leisure</b>			
3	Involuntary Part-time	9	4	7
4	Involuntary Unemployment	75	35	33
5	Demographic profile	13	0	-19
6	Discouraged Worker <sup>5</sup>	36	63	42
7	Tax Disincentive Effect	52	0	0
8 = $\sum 3 - 7$	<i>Total Involuntary Leisure</i>	184	102	73
	<b>Voluntary Leisure</b>			
9	Voluntary Part-time	28	19	19
10	Job-Seeking	3	16	3
11	Shorter Hours Worked	52	0	9
12	Full-Time Education	57	72	70
13	Female Non-Participation	65	94	223
14	Early Retirement	102	50	61
15 = $\sum 8 - 13$	<i>Voluntary Leisure</i>	308	252	377
16	Tot Hours Per US Employee	1,702	1,702	1,702
17	Employment After 65	5	27	15
=17+16-15-8	Residual	-7	-63	-39
<b>18</b>	<b>Total Leisure <u>minus</u></b>	<b>138</b>	<b>0</b>	<b>96</b>
	<b>US Total Leisure</b>			
19	Involuntary Leisure <u>minus</u>	82	0	-38
	US Involuntary Leisure			
20	Voluntary Leisure <u>minus</u>	56	0	134
	US Voluntary Leisure			

The table should be interpreted as follows. Each of the three regions - EU2 (being Germany and France), Ireland and the US - enjoys various forms of leisure. These in turn reduce the average hours worked per capita in the economy. The table sets out how much each form of leisure does to reduce the hours worked per capita. It starts with the US demographic intercept, i.e. the amount of hours that would have been worked in the US by those who do not work because they are not of working age. This is 565, which is over 10 hours per week. US demographics are used here for each of the three regions to emphasise the impact of an older population on labour force size. Therefore, under the list detailing involuntary leisure, the line 'demographics' indicates that Europe has a slightly older workforce than either the US or Ireland, which penalises them to the tune of 13 hours per annum per head of population. Ireland on the other hand has greater portion of

<sup>4</sup> France and Germany

<sup>5</sup> This includes the prison population, which is much larger in the US than in Europe or Ireland.

its population at working age, which is equivalent to a gain of 19 hours per annum for every member of the population.

The forms of involuntary leisure are listed first. Involuntary part-time work is 'underemployment', and arises because people are unable to find the amount of work they would like. If part-time Europeans who wished to work more were able to, then the economy average number of hours worked would increase by 9 hours per annum, per head of population. The comparable figure for the US and Ireland are 4 and 7 hours respectively. This is followed by the forms of voluntary leisure, such as being in full time education, early retirement or being a part-time worker by choice. Turning now to interpretation, the last three rows of table 2 above reveal some stark conclusions. Firstly, more than half of total European leisure (accounting for 82 hours per head of population) is involuntary. The largest two contributors to involuntary leisure in Europe are relatively high unemployment, unfavourable demographics and the impact that high marginal tax rates has in reducing work effort. The level of discouraged workers is higher in America than Europe, in part due to the much larger prison population in the US, but also due to the fact that workers lose unemployment benefit faster in the US. Europe also has higher voluntary leisure, accounting for 56 hours per head of population in total more than the US. The extent of voluntary part-time work in Europe is more important than in the US or Ireland, accounting for 9 additional hours per head of population. More significantly, early retirement and the relatively low number of hours worked per employee proving of equal importance. There is less voluntary leisure taken in the form of full time education in Europe compared to the US, reflecting in part demographic differences. The Irish, on the other hand, enjoy more leisure than Americans – working 96 hours less every year for each member of the population. What is unusual is that Ireland has less involuntary leisure than the US, which results from more favourable demographics, lower unemployment and a smaller prison population. Therefore, the Irish enjoy a substantial period of voluntary leisure of 134 hours per annum for every member of the population. This is almost entirely accounted for by the lower female participation rate in Ireland.

## 5. FUTURE POLICY

The table above points to areas of greatest potential reform that Europe needs to re-examine in order to maintain its position relative to the US. However one variable that will be very difficult to adjust by political means in table 2 is the demographic variable. This is going to become an increasingly important form of 'involuntary' leisure for Europeans, though projections indicate that American and Irish workers to not face an impending ageing problem to the same extent as our European neighbours.

What of the other variables, which can to a greater or lesser extent be impacted by changes in economic policy? The broad lines of the direction of European reform have been laid down. The first major reform that has been initiated across Europe has been pension reform – i.e. the reduction in the subsidisation of leisure. Along with various technical changes to the administration of pensions, these reform efforts have also included a substantial increase in the retirement age. In Italy, the parliament voted to raise the minimum retirement age from 57 to 60, while France will require that civil servants put in 40 years rather than 37.5 to qualify for a full pension. Germany has postponed a vote on the issue to 2008. Further, individual French and German firms have been voting overwhelmingly to sacrifice leisure rather than real wages in an effort to ensure that they remain competitive. The ball started rolling when workers at the industrial titan Siemens voted to accept a move from a 35 hour work week to a 40 hour work week without additional pay, while DaimlerChrysler managed a similar feat some weeks later. In France, the trend seems to be headed in the same direction, as companies like the automotive parts maker Robert Bosch - which became the first company in France to increase working hours with no extra pay - say longer hours will keep bosses from moving jobs to places like the Czech Republic. Of course, the issue of flexibility to work longer at times of demand is more of interest to companies of this size rather than hours worked – in fact, despite the 35 hour law in France,

aggregate annual inward investment flows remains very impressive. However what matters more for French and German national welfare is the impact of the shorter working week on hours worked in labour intensive industries, not the capital intensive industries that dominate FDI.

Unemployment benefit has also undergone substantial reform in Germany with the introduction of the 'Hartz IV' legislation. The new reform law - set to take effect in 2005 - will bring long-term unemployment benefits down to the amount of welfare payments. Eastern Germans are hit hardest by the reforms because long-term joblessness is especially rife here. While the debate is still ongoing, it is becoming clearer that, when faced with a choice of leisure versus goods (whether public or private), it seems that in their reform programmes Europeans are increasingly voting to sacrifice leisure. This reality has even been reflected at government level - France has introduced much greater flexibility in the 35-hour law which should have the effect of increasing the average hours worked by French employees, or at least arresting the decline. It is notable that in the face of economic reality, French and German society has chosen to at least partially sacrifice its much vaunted leisure choice rather than cut back on public services, such as health or educational services.

What of Ireland? As stated above, one of the main reasons Ireland's productivity per capita falls short of Americas is due to lower employment levels which, in turn, can be mostly explained by the relatively low female participation rate in Ireland. Given that the fiscal incentives faced by Irish and American women are broadly similar, this lower female participation seems to reflect a genuine 'leisure choice', reflecting different cultural attitudes, particularly for the age cohort of Irish women currently in the 50 – 65 age bracket. Therefore, it is difficult to argue that there is a market failure in Ireland's labour market that needs rectifying. On the contrary, the more worthwhile European endeavour from an Irish perspective is not the broad, aspirational Lisbon agenda which has its primary focus on the labour market problems of continental Europe, such as high levels of unemployment or difficulties in relation to the length of the working week. Instead, the analysis outlined above which shows Ireland falling behind in numerous key ICT-using service industries suggests that the market liberalisation promised by a full implementation of the draft Directive on Services in the Internal Market (The Services Directive) is the more pressing industrial policy reform need from an Irish perspective. The draft Services Directive promises to drive an agenda of better regulation and e-government, and to mainstream the concept of the mutual recognition of services within Europe (i.e., the so-called country of origin principle). Unfortunately, Irish needs do not match those on the European continent, for whom labour market reform currently has priority, and for whom the services directive is an unnecessary impediment to the safe passage of the EU constitution.

## **6. CONCLUSION**

Many European optimists, when faced with the reality of Europe's relatively poor economic performance, have taken comfort in the notion that Europeans are simply opting out of the materialistic excesses of the Americans, choosing lifestyles that provide a greater balance between work, leisure and sustainable development. In truth, it is far from clear that just because Europeans work less than Americans that it is correct to imply that the two are divided by an inherent difference in outlook on life. The more obvious interpretation is that the difference is driven by the skewing of the European labour/leisure choice by particular institutional features, and a (fast unravelling) political misconception that it was possible to have both more leisure and more goods.

As for Ireland, instead of the widespread perception that we are closer to Boston than Berlin in terms of our work practices, it could be argued that it is Ireland that has the greater cultural preference for leisure compared to our European neighbours. Ireland's primary failures lie in our productivity, in particular the fact that in many key ICT-using service industries we fall substantially behind our European and US counterparts, and the most fruitful potential reform areas revolve around ways how these deficiencies can be overcome.

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## **APPENDIX: ICT TAXONOMY**

The ICT taxonomy as defined by O'Mahony and Van Ark (2003) is as follows:

**1. ICT Producing - Manufacturing:** Office machinery (30); Insulated wire (313); Electronic valves and tubes (321); Telecommunication equipment (322); Radio and television receivers (323); Scientific instruments (331).

**2. ICT Producing – Services:** Communications (64); Computer & related activities (72).

**3. ICT Using – Manufacturing:** Clothing (18); Printing & publishing (22); Mechanical engineering (29); Other electrical machinery & apparatus (31-313); Other instruments (33-331); Building and repairing of ships and boats (351); Aircraft and spacecraft (353); Railroad equipment and transport equipment nec (352+359); Furniture, miscellaneous manufacturing; recycling (36-37).

**4. ICT Using – Services:** Wholesale trade and commission trade, except of motor vehicles and motorcycles (51); Retail trade, except of motor vehicles and motorcycles; repair of personal and household goods (52); Financial intermediation, except insurance and pension funding (65); Insurance and pension funding, except compulsory social security (66); Activities auxiliary to financial intermediation (67); Renting of machinery & equipment (71); Research & development (73); Legal, technical & advertising (741-3).

**5. Non-ICT Manufacturing:** Food, drink & tobacco (15-16); Textiles (17); Leather and footwear (19); Wood & products of wood and cork (20); Pulp, paper & paper products (21); Mineral oil refining, coke & nuclear fuel (23); Chemicals (24); Rubber & plastics (25); Non-metallic mineral products (26); Basic metals (27); Fabricated metal products (28); Motor vehicles (34).

**6. Non-ICT Services:** Sale, maintenance and repair of motor vehicles and motorcycles; retail sale of automotive fuel (50); Hotels & catering (55); Inland transport (60); Water transport (61); Air transport (62); Supporting and auxiliary transport activities; activities of travel agencies (63); Real estate activities (70); Other business activities, nec (749); Public administration and defence; compulsory social security (75); Education (80); Health and social work (85); Other community, social and personal services (90-93); Private households with employed persons (95); Extra-territorial organizations and bodies (99).

**7. Non-ICT Other:** Agriculture (01); Forestry (02); Fishing (05); Mining and quarrying (10-14); Electricity, gas and water supply (40-41); Construction (45)