No. 8

Irish CONGRESS of Trade Unions

Spring 2006

BRIEFING PAPER

Coming Challenges On Productivity

"The recent decline in what were very rapid increases in Ireland's productivity is not a national disaster, but an opportunity to shift the fundamental direction of economic policy from one of solving an unemployment crisis which no longer exists to one of sustainable economic development. This means greater focus on the redistribution of the benefits of growth to many more people in our society. A more equitable society….will generate a more dynamic economy."

CONTENTS

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Introduction

Ireland had very rapid growth in productivity in recent decades but the growth rate has been slowing. This is a challenge as productivity is extremely important in improving living standards. Yet the progress on productivity growth levels and the levels attained are striking. Congress believes in working with the other Social Partners to continue to improve productivity. However, we have a different perspective on addressing the slowing rate of productivity and on the headlong rush for economic growth, which this Briefing will set out.

The exceptionally high rates of productivity growth in Ireland of recent years could not be sustained indefinitely. Ireland was catching up on the rest of Europe, the shift from manufacturing to services employment and the huge 'transfer pricing'[1] activities of multinationals for many years means that the high rates were bound to slow. It appears that some economists and commentators believed that the very high growth in productivity could and should be sustained indefinitely and that the decline is unexpected. Yet there has been a growing recognition that the rate of productivity has been exaggerated for many years by transfer pricing by many multinational companies who locate 'profits' here to avail of our low corporation tax rate. This has distorted both our economic growth and our productivity figures. It has also been recognised that the high growth rates were part of the catch-up with Europe and that the shift to services would adversely affect the rates.

The *level* of Irish GDP per worker is second only to Luxembourg in the Union, though it is average in terms of GNP per worker. As Irish workers work longer hours, we are a little below the European average of GNP per hour per worker. This means that there is room for further improvement and the prospects for achieving this are good, though we need to reappraise policy. Productivity is the key to economic growth, but a shift from the strong emphasis on economic *growth* to economic *development* means a change in how we achieve productivity increases.

The shift from manufacturing to services where the rate of productivity is generally lower, also means that productivity has to slow. This structural shift in the economy has been underway for many years and it is no surprise. Ireland bucked the international trend for some years when employment actually increased in manufacturing. Yet the shift to services is not bad economic news and it will be seen that some services have high productivity (financial services, insurance, ICT etc).

Congress believes that the growth in productivity in services is underestimated in Ireland and further, that it can and will grow substantially in certain service sectors, with the greater input of a) ICT, b) training and c) better management of all resources, especially labour.

This Briefing Paper analyses a number of issues and some paradoxes around productivity and assesses what each means for the Irish economy and for Irish workers. In particular, it examines the impact on the economy when Irish productivity growth falls to the level in most European states and sets out the case for shifting economic policy from the pursuit of economic growth at any cost, to one of sustainable development under the new regime. It suggests what can be done to optimise productivity in the forthcoming new era of lower growth.

There is a misconception that the very high increases in productivity can be maintained forever. Rapid growth in productivity in the last decade was associated with catching-up with Europe, from a low base. The views expressed by some economists and employers that the decline in productivity, which was expected, is a major problem, contributes little light to an important debate. It is the view of Congress that in the new era of slower productivity growth, which appears to have already begun, Ireland should shift policy to achieving more sustainable economic growth. This change in economic policy is one which swims with the tide. At the same time, Congress believes that productivity should be optimised albeit at

[1] Transfer pricing or transfer price-fixing is where multinational companies transfer profit to countries with low company taxes by inflating the prices of materials or other inputs in high tax countries and reducing them artificially in the low tax countries. It exaggerates the true level of economic activity in a country. In the case of Ireland, total factor payments, which include transfer pricing (and other payments), are very large –18 percent of GNP or €27bn in 2006 and this is why GNP and GDP diverge. Haughton says "a case can be made that as much as a fifth of the rise in GDP per capita ….is largely due to transfer pricing." (2005, p 125).

lower growth levels than in the boom years. Congress will work with government and employers to ensure that productivity continues to grow in all areas, including services. Congress also argues that manufacturing is very important in the modern economy, as a key contributor to productivity and that it should not be neglected by policy, even if it is not creating net new jobs.

Productivity growth in the US has outpaced Europe since 1995, though many European countries, including Ireland have as high, or higher productivity per hour. It will be seen that all the of the gains from rising US productivity have been appropriated by the very richest in that society. Little or nothing has gone to the bottom 90 per cent of the US population. It will be argued that if, in the knowledge society, the only beneficiaries of rising productivity are the very rich, then Ireland and Europe must alter its economic model away from that achieved by the US in the last decade.

In addition to the issue of the slowdown of Irish productivity, there are four other issues around productivity which should be addressed. First, there is a paradox around productivity within Irish manufacturing - where some industries have very high productivity and others which have low productivity, but the overall level has been very high. The dual nature of Irish manufacturing, the first productivity paradox, has been a major feature of the Irish economy for some decades and it has also been a policy issue.

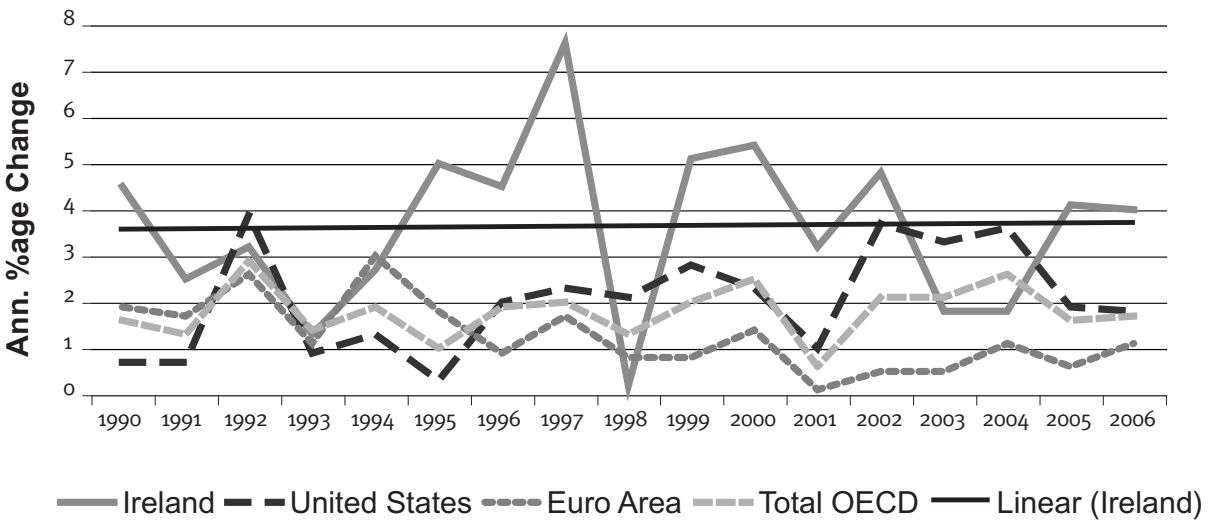
Another productivity issue, unique to Ireland, but closely related to the first, is that while Ireland has a high technological intensity of output, there is low R&D spending. This means that many sophisticated products are made here, but the innovations or R&D within them is imported from the parent companies. Foreign firms have high productivity, but their R&D investment in Ireland is low by international standards. Much of the gains of Irish productivity have been generated by foreign multinationals.

The third productivity issue in all modern economies is that there is a shift from manufacturing to services and this tends to lead to a further slowdown in productivity. The fourth productivity paradox is that the huge investment in Information and Communications Technology (ICT) has not driven the level of productivity which the investment might have expected - in Ireland and most European countries. This is also examined. It is especially important with the shift to services, where ICT investment could be expected to generate some productivity gains in the ICT-using sectors, but this has not occurred, yet.

Productivity is the relationship between the output of goods and services and the inputs of the resources which are used to produce them. It is usually measured by ratios of the changes in the inputs to the changes in the outputs. In international comparisons, movements in labour productivity are usually measured by changes in real GDP per person employed. In the US the main measure is output per man-hour in the non-farm business sector. Total factor productivity tries to capture the efficiency with which inputs of capital as well as labour are used. When workers are given better machines and equipment, this will automatically boost output per man-hour. Productivity can also be measured in gross value added produced per person. The measurement is difficult as the quality of the inputs may vary, with for example, highly trained labour producing more without any additional man-hours and the level of capacity used also impacts on unit output. Productivity is the main driver in increasing living standards over time and thus is very important.

Productivity is complex where it can be improved with investment in capital or higher skilled people or both. The Briefing is a broad overview aimed at union officials, activists and interested others, with its emphasis on current developments and policy.

Figure 1: Labour Productivity Private Sector



Source: OECD Economic Outlook 2005.

Part 1

Productivity Booms and then Slows.....

Figure 1 shows the strong growth in Irish productivity over the past decade and a half, where the trendline shows average growth of just below four percent compared to much lower rates in OECD, the Euro area and even the US.

In the US, where productivity growth has been high since 1995, the rate averaged just over 2 percent in the years between 1995 and 2002, compared to almost 4.5 percent for Ireland in the same period. In Ireland there were rises as high as almost 8 percent in one year, 1997, albeit followed by a steep fall in the next, but again by a rapid rise.

Ireland's Productivity

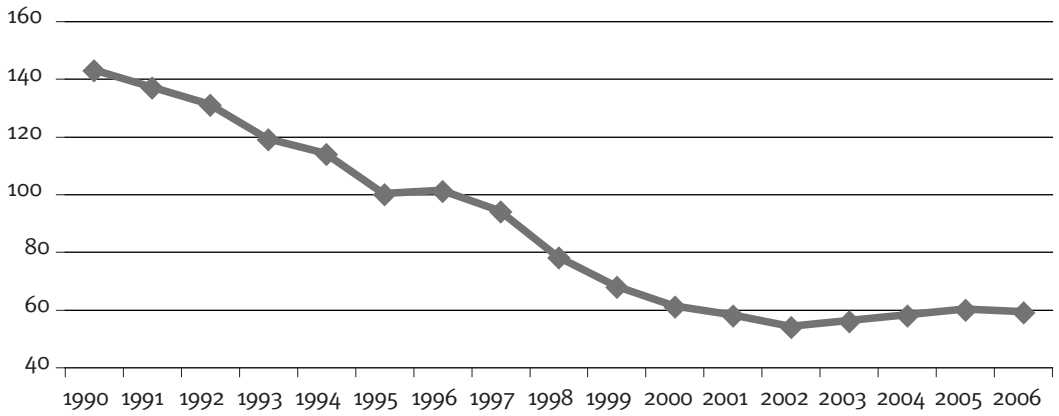
Ireland has had one of the highest rates of productivity growth in the world for many years. Today, it costs only 60 percent of what it cost in 1995 to produce the average good in Ireland, as Figure 2 dramatically shows. It shows that unit labour costs in manufacturing fell from 143 in 1990 to a forecast 60 in 2006. The rise in Irish productivity is a key driver in raising average living standards and was responsible for raising them from well below the EU average only ten or fifteen years ago, to match the average today. However, Figure 2 also shows that productivity growth in manufacturing, measured by reduced unit labour costs, has slowed in recent years, as most economists expected.

The following Figure 3 from the European Commission shows that, compared to all the other older member states (it excluded Luxembourg), the fall in Irish unit labour costs was very substantial. At 84.7 percent of the 1995 level,[2] the closest rival in unit labour cost reduction was Austria at 93.7, closely followed by Spain, but both substantially behind Ireland. While Spain has also been catching up with the rest of Europe in economic performance including productivity, Austria is one of the more mature economies and it performed very well.

The growth in labour productivity in one year, 2003, can be seen in Figure 4 where Norway led, followed by Luxembourg, Belgium, France and then Ireland. The US was 7th in the OECD after Ireland and the Netherlands, though it will be seen

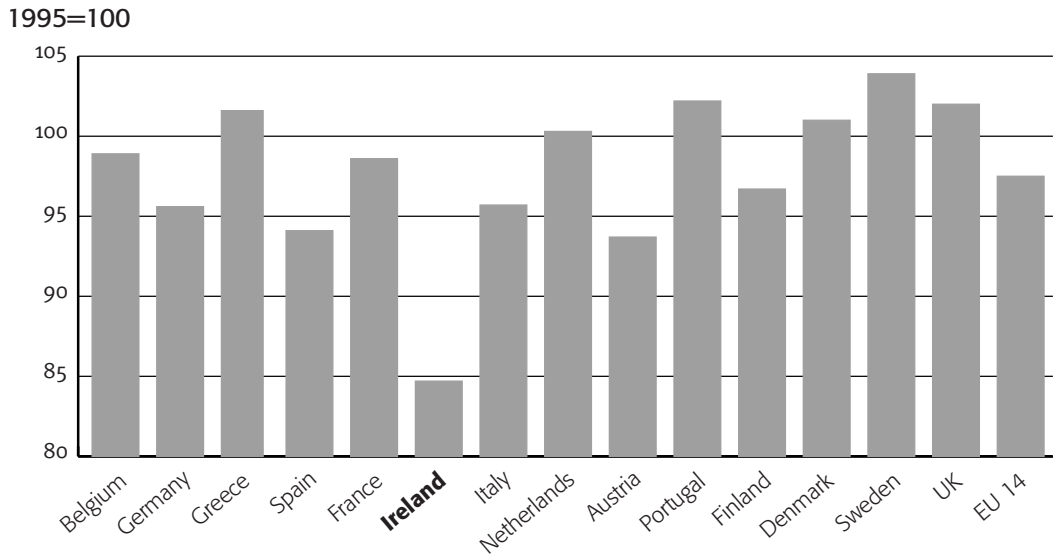
[2] The figures for Ireland differ from the Central Bank data used in Figure 2 as they are from different sources and use a different methodology.

Figure 2: Productivity Rises as Unit Wage Costs Fall (€)



Source: Central Bank 2006. Relative real unit labour costs in manufacturing – common currency.

Figure 3: Real Labour Unit Costs, 2005, EU14



Source: European Economy, Spring 2005.

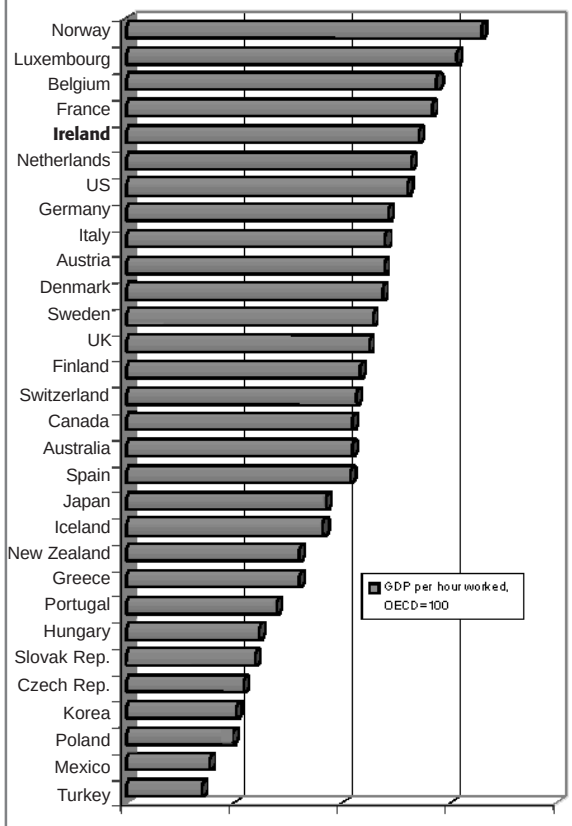
that the US has been a strong performer since 1995.

While there is annual variation in labour productivity, the chart does give an good indication of country performance. The Scandinavian countries are good performers as will also be seen later.

Another study[3] in 2006 put Ireland near the top of the productivity table, ranked by GDP per hour, with Ireland fourth behind France, Norway and Luxembourg. However, in terms of growth and not the level of productivity, Ireland had fallen behind

[3] Conference Board, 2006. This is a business think tank, chaired by Niall Fitzgerald, formerly of Unilever.

Figure 4:
Labour Productivity 2003



Source OECD, OECD in Figures, 2005 edition.

many countries, though most of them, like China with a high growth rate of 8.4 percent in 2004, were coming from a low base. However, the level of productivity in Ireland is now high.

While Figures 2 and 3 showed that Irish unit labour costs fell dramatically in the last decade, Figure 5, from the Irish Central Bank, puts a different spin on the productivity picture. It excludes pharmaceutical and chemicals where foreign multinational firms dominate. These firms also boost already high productivity with transfer pricing where they locate profits in Ireland which may not be technically made here, to avail of the low corporation tax. They have a heavy weighting in the CSO industrial production index, but a much lower employment impact. Productivity growth in Ireland has already fallen from the high levels, in 2001-2003 inclusive. Yet productivity in some sectors is far higher than others though this is the case in all countries.

Table 1 shows the rapid growth in GNP achieved in the past fifteen years - especially at almost 9 percent a year from 1995 to 2000 and it is expected to continue at around 5 percent to 2010 according to ESRI. The table distinguishes between growth per head and per worker with spectacular growth achieved per head in the second half of the 1990s and a high growth rate per worker in that period followed by low productivity per worker over the last five years, at 0.9 percent a year. The low growth is what commentators are focusing upon, with some being very concerned. Yet the ESRI is forecasting that this will improve considerably over the next five years to average 2.5 percent a year, per worker.

On a different basis, that of GDP, and from another source, the following graph, Figure 6, shows the high levels of productivity growth achieved in Ireland between 1995 and 2004, where it exceeded even the high rates of the USA. There were exceptional growth rates in some years and even converting to GNP, the rise in productivity would still be very impressive. However, the decline in the rate of growth over the last few years is what employers and some economists are focusing upon. The fact is that with the strong growth in productivity over a sustained period, Ireland still has achieved a high level, but this achievment is not what they are focusing upon.

The components of potential employment are the participation rate, the working age of the population and the reduction in structural unemployment. In Ireland, there was a substantial contribution from all three between 1998 and 2007 (a forecast for the last three years) according to the OECD – much higher than in other OECD countries, though similar to the EU in participation rates. The fall in structural unemployment contributed 0.5 percentage points to the growth in Irish output between 1998 and 2006, but OECD forecast[4] that this will fall to only

[4] OECD, 2005, Economic Outlook, T1.7, Paris.

Figure 5: Unit Wage Costs in Manufacturing, (Excluding Chemicals)

Source: Cassidy and O'Brien, Central Bank, Qterly Bulletin 3-2005.

0.1 percent between 2007 and 2010 and the contribution of unemployment has already fallen to a low rate, because it is now low.

Ireland performs well in its Information, Communications and Telecoms (ICT) output largely because of the foreign firms located here and it also does well in terms of human capital (education and skills and the number of science and engineering graduates). It performs poorly by international standards in R&D, in the registration of new inventions through patents,[5] numbers of researchers in R&D and in the provision of risk capital financing for high tech firms. Foreign firms account for most of the R&D and for most spending in high tech areas. Irish firms have a higher intensity of R&D spending than foreign firms, largely because the latter spend so little on R&D in Ireland (but they import products which have high R&D investment in them for further manufacture in very modern plants). Irish firms are poor in R&D in food, where we should be leading, though there is evidence that some firms are now investing in this area.

Productivity Paradox 1 - The Dual Economy

Ireland's first productivity paradox, where some sectors have enjoyed soaring productivity while others have seen hardly any rise, appears to mask

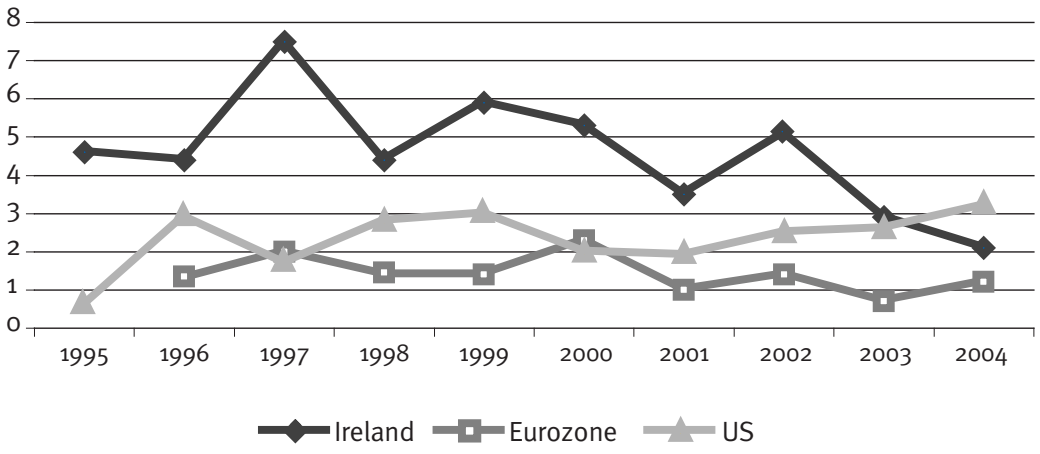
[5] Registration of patents is an international comparator, but it is of limited value – it tells nothing about the value of the patents, if or when they will be used, investment in their eventual use etc.

Table 1. Productivity and Growth - Performance & Forecast, 1990-2015

	1990-95	1995-00	2000-05	2005-10	2010-15
GNP	4.4	8.8	4	4.9	3.3
GNP per head	3.9	7.7	2.2	3.4	1.6
GNP per worker	2.5	3.7	0.9	2.5	1.5

Source: ESRI Medium Term Review, High Growth Forecast summary.

Figure 6: GDP per Hour Worked 1995-04



Source: OECD, Productivity Database, July, 2005.

a serious problem. While Ireland is not alone in having paradoxes around productivity, we have a unique one which is different to those in other countries. It is the 'dualist' nature of our economy. We have known this since the first major review of industrial policy, the Telesis Report back in 1982.[6] It recommended a shift from the high dependence on foreign manufacturing to more emphasis on indigenous industry, a theme repeated in policy papers but not successfully followed. The success of the IDA's policy of picking winners – the growing industrial sectors and later financial and other services - has distracted us from focusing more on indigenous sectors. However, a number of Irish indigenous companies have become very successful internationally and, it will be seen, much of ingenious manufacturing sector, while not having soaring productivity (partly due to the absence the benefit of transfer pricing) is, nonetheless, competitive by international standards.

However, the case may be overstated on this unique Irish productivity paradox simply because the productivity growth in the foreign owned sectors was so high. Further, it is known, but is often ignored, that much of this productivity growth was really 'fluff'. It is not real but it is due to transfer pricing by the foreign multinationals, which locate profits in Ireland, in order to benefit from the low rate of Corporation Tax but then repatriate a significant proportion of them. Ireland does gain from the employee and company tax paid, but our trade and productivity figures are exaggerated. If the gains from transfer pricing are discounted, then the dualist nature of the economy and the consequent productivity paradox are less stark.

Tansey[7] strips out the *value added but not retained in the economy* from productivity by using real GNP and finds that the gains have been 2.2 percent a year between 1995 and 2004 and not the 3.5 percent when MNCs are included. Productivity measured by GNP is the better measure of living standards.

In general, on paper and at first glance, it is the foreign owned firms which have very high productivity and the indigenous or Irish owned firms have much lower productivity. However, while indigenous Irish manufacturing is not

[6] Telesis Report (1982) *Review of Industrial Performance*, NESC. The next report was called the Culliton Report after it chairman and the most recent Ahead of the Curve, (2004) was by the Enterprise Strategy Group, chaired by Eoin O Driscoll, now Chair of Forfas.

[7] Tansey, Paul, 2005, p 53/4.

enjoying the soaring productivity levels of the foreign owned pharma and chemical sectors, it is not weak nor uncompetitive. A recent study of indigenous industry[8] found its performance to be "reasonably encouraging" and "all industrial sectors, except Textiles, Clothing and Leather and Footwear, had faster growth of both output and employment than corresponding sectors in the EU in 1991-2001." Also exports were "overwhelmingly positive on balance" with the exception of the above sectors, compared to the EU. The study was somewhat critical of the Enterprise Strategy Group's negative views on indigenous industry, which focused on the very high growth of the foreign sector, but found that the "growth of Irish indigenous industries relative to the EU looks substantially better than it does at the aggregate level and the Enterprise Strategy Group does not go into that type of detail."

Paradox 2 – 'Islands of Embedded Productivity'

The second productivity paradox unique to Ireland, which is that while foreign firms have high productivity, their R&D investment in Ireland is very low by international standards, is easily explained. The foreign firms have embedded productivity in their manufacturing processes in Ireland and in their products, which are imported from their domestic plants and R&D labs. They undertake little research here because they prefer to keep knowledge work at home, partly because they can write the total cost off against a higher corporate tax level. R&D is a major input to high productivity and so its absence or low level in many firms operating in Ireland which have very high productivity is a worry because it means that there is no investment in the future productivity growth by the owners the firms in Ireland. These 'islands of embedded productivity' can be moved offshore, leaving little or no legacy in jobs or even traces of intellectual property.

Tax credits and direct grants are the preferred policy instruments for boosting R&D and innovation. However, the low corporation tax rate in Ireland acts as a disincentive to investment in R&D here because the tax benefit can be negligible to the company. Therefore, the other way of incentivising R&D is through direct cash payments which is what is being undertaken by Science Foundation Ireland and other state bodies. Ireland as a very small economy cannot be at the cutting edge of R&D and so state subsidies to firms which engage in R&D have to be carefully considered and should be part of an overall coherent national research strategy. There is also a possibility that some state promotional bodies, in an effort to attract foreign direct investing firms at any price, may subsidise them under the guise of R&D, in order to circumvent EU rules on state aid. With high employment, Ireland for the very first time, can be discerning on the type of investment it wants.

The Shift from Manufacturing to Services

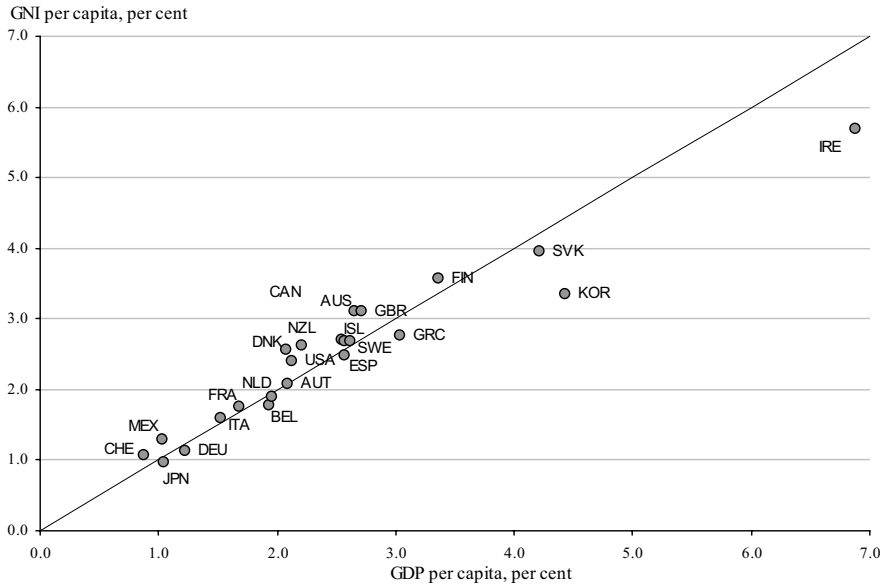
The third major issue around productivity, but one which is not unique to Ireland, is the view that the services sector, where virtually all of the new jobs are being created, has low productivity. This will be examined below to see if this view is correct and also to ascertain, if perhaps, there is change coming with ICT-investment in driving productivity levels in services. This productivity paradox occurs because, in spite of massive investment in computers, productivity is still very low in most areas where they are used. It is high where they are produced, and fortunately Ireland is a major producer of computers and their peripherals and it is one reason for high productivity in some industrial sectors.

In Ireland, there is lower productivity in market services and the construction industry than in capital intensive manufacturing. There has been very strong employment growth in these low productivity sectors between 1991 and 2002, contributing 86 percent of total non-agricultural employment, with industry making up only 14 percent (Cassidy, 2005, p 92). Industrial output growth was very strong and accounted for 57 percent of total growth in non-agricultural business sector output.

The share of wages to profits in national income has seen a substantial drop in wages as profits have grown substantially over the past decade. If jobs are lost and profits rise in the high

[8] O'Malley, Eoin, 2005, "Competitive Performance in Irish Industry" ESRI Qterly, Winter 2004.

Figure 7: GDP and GNI per capita growth, average annual growth 1994-2003, percent



Source: OECD, 2005b, Working Paper No 1 on Alternative Measures of Well-Being, October, Paris.

productivity sectors, then the real beneficiaries are the shareholders. The share of wages in national income has dropped from 67.2 percent in 1994 to a low of under 53 percent in 2002, but rose slightly to 55.4 percent in 2004. This issue is more complex but the point is that the gains from productivity have to be shared and shared fairly.

Figure 7 above shows Ireland's economic growth in the decade to 2004 compared to other OECD countries, measured by both GDP and GNI per capita. Ireland is in the leading position by both measures, by a considerable margin, compared to all others in its growth. As is well known, GDP exaggerates Ireland's position, because of the artificial impact of transfer-pricing by multinationals, as can be seen from Figure 7, where Ireland is at almost 7 percent GDP average growth per capita.

The GNI figure shows that Ireland is still by far in the leading position even with the lesser figure of 5.8 percent.[9] This was a considerable achievement as Figure 7 clearly demonstrates, compared to all the other countries.

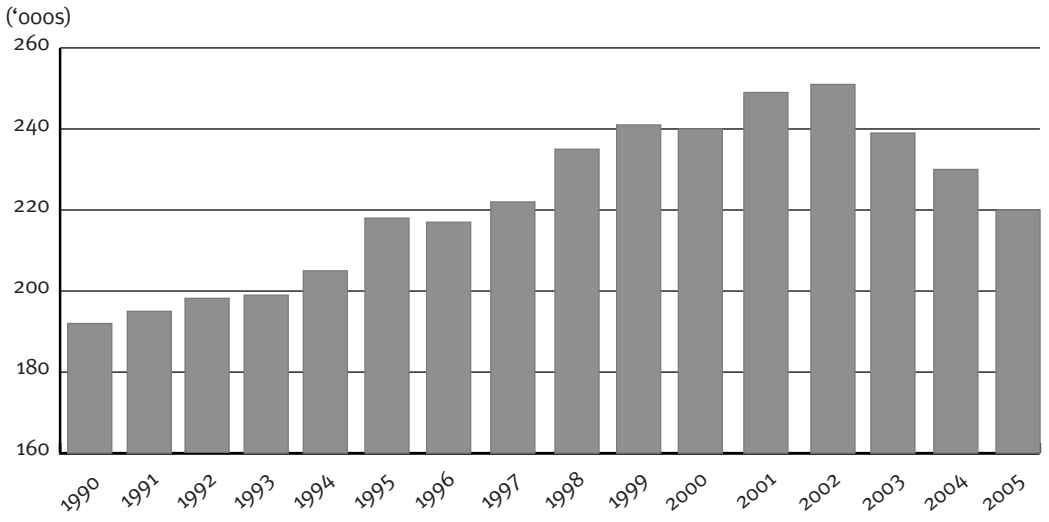
Manufacturing

It can be seen from Figure 8 below that manufacturing employment peaked in 2002. It had been at 223,00 back in 1981 and it fell to 182,00 in 1987. It grew fairly steadily from then on - in contrast to virtually all other developed countries, where manufacturing employment has fallen for many years. In the US, for the first time since the industrial revolution, manufacturing now employs less than 10 percent of the workforce, compared to 25 percent in 1970. It is 12 percent here, close to the level in Britain, but in Germany, it is over 20 percent still.

In contrast, manufacturing output has risen in most countries and in Ireland it has grown strongly with an increase of 167 percent since 1997. Even with the downturn in the economy after 2001, it has still grown by 14 percent in the four years to mid-2005. Manufacturing's share of GDP has fallen, but this reflects the fall in the price of manufactured goods relative to services. In constant prices, its share remained unchanged relative to GDP in most developed countries. Real output of manufacturing in developed countries has been growing annually, in spite of the

[9] The working paper *Alternative Measures of Well-Being* by the OECD is an attempt to broaden the definition of what contributes to economic well being. GDP per capita does not measure the sustainability of incomes, unpaid housework, the distribution of resources, and can measure environmental degradation as positive. In Ireland's case, *GNI or GNP per capita* is probably the best method of measuring economic progress that we have - so far.

Figure 8: Manufacturing Employment in Ireland, 1990-2005



Source: CSO (2005 estimated)

offshoring of some jobs and industries.[10] America remains the largest manufacturing country followed by Japan, with China well behind – producing half of the US total. Most economists do not see much possibility of manufacturing employment expanding again, though the ESRI forecasts that it will be stable over the next five years in Ireland. The real policy challenge will be to maintain the high output and to optimise the number of jobs. This can be best done with a renewed emphasis on indigenous industry, linkages, R&D innovation and investment in people skills.

The growth in output in Irish manufacturing was very high in the 1990s at 11 percent, but then slowed to 5.4 to in 2000 to 2005. Traditional manufacturing never did as well as the high tech industries "but it performed well over the 1990s," according to ESRI.[11] It expects growth of 7 percent to 2010 in output but lower growth of around 2 percent in the traditional sector to 2012. The food processing sector performed well between1980-1995 but then deteriorated, with a recovery between 2000-2005. However, food is not expected to perform well over the next decade.

Overall, the ESRI expects employment in manufacturing to be stable or to pick up very slightly to the end of the decade, but will then contract. Any growth will occur in the high tech sectors, but with falls in the traditional and food sectors. Productivity in manufacturing was high between 1995-2000 at over 11 percent per annum, but fell to half that in the next five years. The ESRI predicts that it will be around 7 percent to 2010, driven largely by the high tech sector.

Thus the importance of manufacturing will decline in coming years as services will become the main driver of economic growth, but it will still continue to be very important in both employment and in output. The distinction between manufacturing and services has become blurred, and it may be better to focus more on high skilled and low skilled workers in the future.

Services

Services exports now account for almost one-third of all Irish exports. Some services are very valuable and some sectors are growing rapidly. Further, the

[10] For more on *Offshore Outsourcing* see the Congress paper. Amiti and Wei of the IMF estimated that services offshoring contributed 11 percent to productivity growth between 1992 and 2000, however material offshoring has a considerably smaller impact on productivity growth. They found a negative impact on employment, though they argued it was small and that it disappeared in many sectors where there is sufficient demand.

[11] ESRI, 2005, MTR, p 53.

relative price of services has increased faster than the price of goods which have fallen in real terms. Thus, service exports are becoming more important in the Irish economy.

The measurement of the productivity in services is difficult because it is inputs and not outputs which are measured and because changes in quality are also difficult to measure. It is known that some service sectors are much more productive than others and we should aim to grow these, while not neglecting to provide all the services that people require. There has been strong demand for personal 'face to face' services as the economy grows and some people have become very wealthy. These people demand and will pay highly for low productivity services. There are growing numbers of jobs in low productivity personal services, where pay not necessarily be low. Good quality personal service contributes to a better quality of life and thus to development.

While many services are labour intensive and have low productivity, others have high productivity. The greater use of ICT, continuous training and better management enhance productivity in services.

The price of goods exported has risen at a much slower rate than the price of services (both exported and domestic market services). Indeed the rise in the price of industrial goods has been much lower than the average rise in prices. Thus industry has had to produce more just to stand still. The terms of trade have moved decisively against goods and in favour of services over the past number of decades. The import-content of services is also substantially lower than merchandise exports in Ireland. The ESRI estimates that "the impact of a unit increase in services imports on the economy may be substantially greater today than it is for a comparable increase in the export of goods,"[12] due to an enhanced multiplier. Thus services exports are more valuable to the Irish economy than the export of goods, many of which have a high import content and value added may be low.

The production of goods requires a lower educated workforce than services, which, together with the decline in unit prices and higher trade in goods, leads to the continuing offshoring of production.[13] Thus two issues for policymakers are that the role of education and upskilling of the existing workforce is vital[14] and secondly, the importance of specialisation in the production of those services which we can export.

As incomes have risen rapidly in Ireland, the demand for services has grown faster than the demand for goods, leading to a greater share of services in total consumption. This, in turn, has led to fall in the import-content of consumption, because goods have a higher import-content than many services. Over half of the value of industrial imports is imported. However, the real picture is less rosy - in other words, much less than half of the value added is generated in Ireland. This is because of transfer-pricing and so the level of profit repatriations must be factored in. This means that value added on goods exported from Ireland was as little as under one-quarter (24 percent in 1998)[15] of the total value. In contrast, the import-content of services exports has risen from 29 percent in 1985 to 42 percent in 1998.

The major export services from Ireland are computer services, insurance and business services, which had 35.5, 19.4, and 19.3 percent of the total exported services, respectively, in 2004. Each has been growing at an average rate of more than 20 percent per annum since 1998.[16]

The level of productivity in services where the skill content can be high and the strong investment in computers, in broadband (by companies) etc. has enhanced the productivity in many areas of services, but this has not been captured in the data.

Computers and Productivity

The economist, Robert Solow observed that "computers are everywhere but in the productivity statistics" back in 1987.[17] Many early studies on the impact of computers on productivity found that in spite of massive investment, they were not increasing productivity. This fourth productivity

[12] Ibid, p 13.

[13] See Congress, 2006, Offshore Outsourcing.

[14] See also Congress 2005 on Life Long Learning.

[15] ESRI, 2005, MTR, p 9, Table 2.1.

[16] Ibid, p 10.Table 2.2.

[17] Solow, Robert, 1987, "We'd better watch out" New York Times, 12 July, Book Review.

paradox is still not fully resolved in the data as we have seen. Investment in information and communications technology (ICT) does contribute to capital deepening and so raises productivity and the manufacture of computers and related products does generate large labour productivity gains. Studies have shown that for a number of countries, including Ireland, where there is large scale manufacture of ICT, there is high productivity. Ireland is leading in the area of ICT-producing productivity. However, in spite of massive investment in ICT, in most countries, besides the US and Australia, "few other countries have thus far experienced similar productivity gains in ICT-using services."[18] Denmark is an exception too (see below on the Big Four and the Nordic countries).

There are several explanations. First, the use of computers initially may have led to a drop in productivity as people spend time training in their use, trying to get them to work, to talk to each other etc. Networks, where real gains can be made, take time to establish. Importantly, the statistics do not pick up the productivity improvements and firm level improvements from ICT may not yet be large enough to be picked up at the aggregate level. One reason the US looked better was simply that it depreciated computers faster than in Europe and so appeared to be investing faster in ICT. Another problem is that it is always difficult to measure productivity in the services sector. New technologies take time to emerge, as did other new technologies like electricity.

ICT is used more widely in some services than in manufacturing and it is particularly used in financial services. The OECD[19] quotes studies which show improvements in the services sector in the US, Australia and in Germany, with other studies indicating improvements in other countries. Firms using advanced ICT led to higher levels of training which is good for economic performance in the long run. As the workers used the technology, they became more productive. The OECD argues that the productivity paradox is "more apparent than real" and that it takes time for the gains to emerge from the use of ICT. Empirical evidence shows that the economic impact of ICT is "significantly improved from what it was only a few years ago", but that "turning ICT investment into higher productivity is not straightforward. It typically requires complementary investment and changes, eg in human capital, organisational change and innovation." It warns that with ICT some firms succeed and other fail.[20]

It is only a few years since the internet penetrated the majority of offices and workplaces linking them all, with the consequential productivity boost. In Ireland, the growth of internet penetration through broadband has been delayed with low investment by the dominant player, Eircom. This privatised, dominant telecoms company has delayed ICT take-up in Ireland because it dramatically reduced its investment to one-third of the level it had been when in public ownership. Ireland's performance in broadband is thus very low. A Forfas study shows it is at the bottom of the lead on take-up, coverage etc, though prices are more competitive.[21]

A major European Commission study of productivity found that "the story which has emerged is one in which the USA has pulled ahead of the EU over recent years in terms of productivity growth rates. This is essentially due to the superior US performance in a wide range of ICT-producing and ICT-using industries."[22] It found that EU productivity growth rates in ICT industries were not much different that those of the US, but as the sectors were much smaller in Europe, the contribution to overall productivity growth is smaller. An exception is Ireland where the ICT-producing sector is large for the size of the country and hence its contribution to the high growth levels here. It found that Ireland's hourly labour productivity growth in the business sector between 1996 and 2000 totalled a staggering 8.4 percent as Table 2 (page 14) shows, compared to 3.1 percent in the US or only 1.7 percent in EU. Most of the contribution was from manufacturing, of which 3.4 percent was ICT-producing and 1.4 for ICT-using in manufacturing. It can be seen that the ICT-using sectors contributed only a small proportion of the total, with the exception of the

[18] OECD 2003a and 2004

[19] OECD, 2003b.

[20] Pilat, 2004, p 58.

[21] Forfas, 2005. See footnote No. 30.

[22] European Commission, European Economy, 2003, *Drivers of Productivity*.

Table 2: Hourly labour productivity growth in the business sector - 1996-2000

(Contributions from manufacturing + private services)

	Total Business Sector*	Contribution from Manufacturing				Contribution from Private Services				Residual Term
		Total	ICT Producing	ICT Using	Rest	Total	ICT Producing	ICT Using	Rest	
Ireland	8.4 (7.6)	7.3	(3.4)	(1.4)	(2.4)	1.8	(0.2)	(0.7)	(0.8)	-0.7
EU15	1.7 (1.6)	0.7	(0.3)	(0.2)	(0.3)	1.0	(0.3)	(0.6)	(0.1)	0.0
USA	3.1 (2.3)	1.2	(0.9)	(0.1)	(0.1)	2.0	(0.0)	(1.8)	(0.1)	-0.1

* Hourly labour productivity growth rates in total economy are in brackets.

Source: European Commission, 2003,"Drivers of Productivity Growth" in European Economy.

US, where it was high in services. Since then, it is likely that the contribution from the ICT-using sectors in most countries has risen.

The second half of the 1990s was an important period for US productivity. Europe had enjoyed much greater productivity growth than the US since 1950, when it was at only 50 percent of the US levels. Europe caught up with the US until the early 1980s, when the catch up stalled, with GDP per capita growth rates rising at similar rates to the US, that is, 2 to 2.25 percent a year in the 1980s and 1 to 1.25 percent in the first half of the 1990s. From mid 1990s, the US began to overtake the EU on GDP per capita growth rates.

Some economists suspect that the growth in America's GDP and so its labour productivity, is overstated compared to Europe's because American statisticians make a much bigger adjustment for improvements in the quality of goods, notably computers. Further, Americans count firms' spending on software as investment, but in much of Europe it counts as a business expense, and is excluded from final output. However, even with these factored in, it does appear that the US has powered ahead since 1995 on many European countries, especially the Big Four, Germany, Italy, France and Spain. The US has performed well in both ICT production and ICT use.

It can be seen from Table 2 that most of Ireland's growth originated in manufacturing, or put another way, the ICT-producing sector in Ireland delivered a high part of the overall contribution. The US had a more balanced growth with 2 percent coming from the services sector and indeed most of it from the ICT-using sector. The size of the contribution from the Irish private services was not far off that of the US, but it was not as well balanced as the US.

The contribution from the rest of manufacturing in Ireland was high too at 2.4, though it includes high productivity areas like chemicals.

The EU study found that in services, "the US appears to have benefited enormously from substantial investment in the intensive ICT-using service industries such as wholesale and retail trade and financial services."[23] Thus it may be that Europe will follow the US in this regard. Some economists have cited what they call the 'Wal-Mart effect' on retailing productivity, where vast out-of-town retailing warehouses have made a major contribution to total US productivity. A few of these economists have urged that Europe follow the US, by allowing major retailers to wipe out the small

[23] ibid, p 83.

'Mom & Pop' stores with vast boxes dropped in sites near motorways, paying a small workforce minimum wages, and giving lower prices (and/or higher profits).

The US, of course, has much more space than Europe, has a far greater car-dependency and stores like Wal-Mart rely on the exploitation of their workforces for part of their lower prices and higher margins and pay the minimum wage and no benefits, especially health benefits. A federal grand-jury investigated Wal-Mart for "allegations that it knowingly used contract cleaners who hired illegal immigrants."[24] The state has to pick up the bill for health and welfare costs of many thousands of Wal-Mart workers in the US.

"According to a study last year by the University of California, Berkeley, wages at Wal-Mart were so low that taxpayers in California alone footed an $86m bill for health benefits and other assistance claimed by Wal-Mart employees".[25] Thus the world's largest firm is subsidised by taxpayers. They also use their huge purchasing power to squeeze sub-suppliers, with whom they maintain no responsibilities.

This phenomenon, even if desirable, would be difficult to replicate in crowded Europe and it is certainly not in keeping with the European Social Model. Importantly, productivity achieved on the backs of the lowest paid workers is neither desirable nor sustainable.

"Wal-Mart, the largest US retailer, says it is taking a tougher approach with suppliers who failed to support its push towards the use of RFID wireless tagging on shipments" according to the Financial Times.[26] The tags are designed as the next step from barcodes, allowing retailers and suppliers to keep track of their products and control inventories more efficiently and while the company is innovative, using its massive buying power, it is pushing much of the cost of development of innovation on to its sub-suppliers.

If it is the better use of ICT in the US which is boosting productivity, then it should be only a matter of time for its impact to take effect in Europe, following investment. The EU Commission study did find that "ICT has indeed been a significant driver of labour productivity in both the USA and the EU." However, it found that ICT contributed around 60 percent to US labour productivity growth but only 40 percent in the case of the EU. The paper argues for more deregulation to achieve the Lisbon Agenda but admits that it is not sufficient in itself and must be accompanied by efforts to boost the production of knowledge, specifically, R&D and education. It points out that a permanent increase of 1 year in the average education levels of the labour force would lead to a 0.45 percentage point gain on the EU long run rate of productivity growth. It found that R&D can also make a contribution, though it says the focus should not be on R&D spending but on creating the framework conditions to promote endogenous (i.e. internally generated) increases in research spending.

Another paper from the Bank of England made the very important and sometimes overlooked point, which this Briefing is emphasising, that "ICT investment requires *complementary investments* in organisational change and retraining to make it effective".[27] This Bank of England study found that "the rate of growth of labour productivity is more strongly associated with the growth of ICT than with that of non-ICT capital."[28] It also found that the successful implementation of an ICT-project requires costly reorganisation of the firm around the new technology which is often not measured as investment in its accounts, nor in the national accounts. Thus this 'complementary investment' in retraining etc. makes estimating total factor productivity (TFP) complex.

This issue of complementary investment is of great importance and it is also of particular interest to trade unions, because education and training is a vital part of the drive to achieve greater productivity and sustainable economic growth. It does however, take time for this vitally important investment in human capital to show results.

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[24] Economist, *Women Versus Wal-Mart*, 24 June 2004.

[25] Economist, *Trade Unions and Wal-Mart*, 25 August 2005.

[26] Financial Times, *Wal-Mart toughens push on wireless tagging*, 19 December 2005.

[27] Bank of England, 2005, "*Productivity Growth in UK industries 1997 - 2000*". Working Paper No 259. London.

[28] Bank of England, 2005 ibid.

Productivity in the EU and US

There are some differences between the measurement of productivity between the US and EU which does make US look better. The US measures investment in computers as investment whereas in Europe it is seen as a business expense. The US included military spending on hardware such as nuclear missiles as investment which contributes to its GDP, whereas other countries only included military spending which has possible civil uses. Europe will change its methods next year and this will add a full 1percent to its GDP over he next few years, but without producing anything more!

It was seen that in 1950, EU productivity was far behind that of the US, but in the 1960s and 1970s and in the early 1980s, there was a rapid catch up of Europe with the US. Then in the second half of the 1990s, the US pulled away again from most of Europe. The US is about 10 percent above Europe as a whole on per capita hourly productivity,[29] though several European states have maintained the same *hourly* productivity as the US. Americans work much longer hours that Europe and also the US employment rate is around 72 percent of the labour force compared to the EU average of 64 percent. So in the late 1990s, the US was combining a high employment and a strong productivity performance. The EU had a prolonged process of capital deepening over three decades when the growth rate of the capital/labour ratio was at "significantly higher levels than in the US," but "a growing gap has emerged in the second half of the 1990s in favour of the US."[30]

There are a number of reasons for the decline in the EU's performance: a number of the large EU states have performed poorly – Germany and most notably Italy. The US also gained in a small number of sectors. Even using data which gives a more accurate picture of ICT's contribution to the EU's growth (it was under-estimated in Europe), it is found that even with a positive contribution from ICT to Europe's growth, industry-level analysis still points to a significant decline in trend productivity in the second half of the 1990s.[31] The level of ICT investment in the EU was lower than in the US in the period and all the EU ICT gains were more than offset by the marked decline in other industry sectors, which still make up 70 percent of EU output. In contrast, the non-ICT sectors of the US economy showed productivity gains.

Another EU paper[32] found that EU's productivity problems are driven by the combined effect of:

- an excessive focus on low and medium-technology industries (with declining productivity growth rates and a globalisation-induced contraction in investment levels);
- an inability to seriously challenge the US's dominance in large areas of the ICT industry, as reflected in the relatively small size of its ICT production sector; and finally,
- its apparent slowness in reaping the productivity enhancing benefits of ICT in a range of ICT-using industries, although measurement issues severely complicate an assessment of the gains from ICT production and diffusion.

A major study of US productivity has shown that "over the entire period 1966-2001, only the top 10 percent of the income distribution enjoyed a growth rate of total real income (excluding capital gains) equal to or above the average rate of economy wide productivity growth. The bottom 90 percent of the income distribution fell behind or even were left out of the productivity gains entirely" (Drew-Becker and Gordon, 2006).

The Drew-Becker and Gordon study showed that the top one-tenth of one percent of the income distribution earned as much of the real 1997-2001 gain in wage and salary income as the bottom 50 percent. "Our results show that the dominant share of real income gains accruing to the top 10 per cent and top 1 percent is almost as large for labour income as for total income. This contradicts those economists who believe that growing inequality is entirely a matter of the dominant share of wealth and capital income at the top."

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[29] Chris Giles, *A productivity prescription: how the US has pulled away from Europe and Japan*, Financial Times, 25th Jan 2006.

[30] European Economy, 2003, "*Drivers of Productivity Growth, An Economy-Wide and Industry Level Perspective*", EU Commission, Brussels. P71.

[31] European Economy, ibid. P66.

[32] Denis, C et al 2005.

Their conclusion is that "the post-1995 productivity growth revival did not automatically signal good news for the majority of American workers and households. Indeed, to the extent that the productivity growth 'explosion' of 2001-2004 was achieved by cost-cutting, layoffs, and abnormally slow employment growth, then the historical link between productivity growth and higher living standards falls apart. Not only have the bottom 90 percent of American workers failed to keep up with productivity growth, many have been harmed by it."

This is very strong statement and the respected conservative economic commentator, Samuel Brittan, writing on this report (Financial Times, 10 Feb., 2006), said "one of the American economists whom I most trust in this dense jungle (on income distribution and productivity) (is) Robert J Gordon." It was not a rise in profits or non-labour income which squeezed middle-class Americans, but the increase in the share of the top 10 per cent wage and salary earners who captured the income gains. They achieved this with "superstars" in media, film and sport pushing most performers down the income distribution, combined with the "escalating compensation" of top corporate executives. The rise in CEO's remuneration was not due to "higher returns to human capital", because it rose by 100 per cent since 1997 whereas those in maths and computer science had a rise of only 5 per cent. Brittan concludes by saying that "we can no longer say with much confidence as before that redistribution will achieve very little."

Working Smarter and Training Improves Productivity

Bloom, Sadun and Van Reenen of the Centre for Economic Performance at LSE examined 11,000 UK establishments (probably the largest micro-based sample in the world for this kind of exercise) from all business sectors and demonstrated that US owned establishments have a significantly higher productivity of IT capital than either non-US multinationals or domestically (UK) owned establishments. From their dataset they found robust evidence that IT has a positive and significant correlation with productivity even after controlling for many factors. They estimated that a doubling of the IT stock is associated with an increase in productivity of between 2 percent and 4 percent.

One explanation as to why has there not been faster productivity growth in Europe since the mid 1990s is simply differences in the way we measure productivity across countries. This is possible, but the research work of CEP still found a difference. If the difference is real, then two explanations may be possible. First, there are some 'natural advantages' to the environment in which US plants operate that enables them to take better advantage of the opportunity of rapidly falling IT prices. These natural advantages could be tougher product market competition, lower regulation in the product and labour markets, better access to risk capital, more educated workers, a larger size of market, more geographical space or a host of other factors.

Bloom et al found that a second class of explanations is that it is not the US environment *per se* that matters but rather the internal organisation (the depth of 'organisational capital') of US firms which has enabled better exploitation of IT. For example, US firms may be simply better managed or they have adopted features that are better at exploiting IT (e.g. more decentralisation or flatter hierarchies).

They tested this by examining the differences in the 'US environment' and the 'US organisation' hypotheses by examining the IT performance of US owned organisations in a non-US environment. They concluded that the higher productivity of IT in the US is not just the US environment, but also has to do with the internal organisation of US firms. Their firm level productivity analysis found that returns to IT that are *larger* than one would expect under the standard growth accounting assumptions and that this is due to complementary investments in 'organisational capital' that are reflected in the coefficients on IT capital, eg. training of workers. This CEP paper suggests that a major reason for this is the way in which US multinationals are able to use new technologies more effectively than other multinationals.

In summary, there were significant impacts of IT on productivity and at least some of the differential

performance of productivity between the US and the EU since the mid-1990s is due to the internal organisation of US firms. Drawing on some of their other work, Bloom, Sadun and Van Reenen show that there is evidence for significant differences in the 'organisational capital' of US firms relative to British and other European firms, even when these US firms operate in Europe. A linked explanation is that IT as a rapidly changing technology requires effective *management practices* (as well as organisational devolution) to be fully exploited.

The EU Big Four and the Nordic Countries

Labour productivity growth in the EU Nordic countries (Denmark, Finland and Sweden) has been much higher than in the larger EU countries (Germany, France, Italy and Spain) since the mid-1990s (when the US took off on productivity). An ECB study (Annenkov and Madaschi, 2005) attributed this to innovation and technological change. It found that ICT diffusion (eg access to broadband etc) is a key element to explain these differences and institutional issues like labour market regulation, human capital (investment in skills) R&D investment and venture capital show the Nordic countries are better positioned than the EU states. As an ECB publication, it is, of course, still critical of what it terms "labour market rigidities" in the Nordic countries. Finland is the top performing country in labour productivity, higher than the US, though Sweden's accelerated since 1996. With greater labour utilisation than the big four EU states, the labour productivity levels in the Nordic (and UK and US) improved significantly, while those in the four decreased with their lower labour utilisation. While ICT-producing countries (Sweden and Finland) have performed well, all three Nordic countries are high ICT-using countries and this has contributed substantially to productivity.

There is a lesson here for Ireland, whose productivity has benefited as an ICT-producing country but is a poor ICT-using country. The privatisation of Eircom was a major debacle in delaying access to fast and cheap phone services and broadband and more general ICT use.[33] A deeper examination of productivity shows that both ICT and non-ICT capital deepening (ie investment in ICT) have been major contributors to high quality growth in productivity in the Nordic countries.

Manufacturing Continues to be Important

In the Congress submission to the Enterprise Strategy Group, we stated "the importance of manufacturing is likely to be challenged by the growth in market services. This is a characteristic of most of the richest countries in the world. However, even if the growth in manufacturing does gradually slow, it will nonetheless, still be very important to the success of the economy out to 2010. It is important to make every effort to ensure that the size of the sector is maximised." Manufacturing in general has higher productivity than services and so is an important wealth generator, though it has been seen that in the "high productivity foreign owned high tech sector," the import-content and impact of profit repatriations do substantially reduce the value added in Ireland (see section on *Services* above). Between 1996 and 2000, hourly productivity growth in Irish manufacturing rose by 7.3 percent compared to only 1.8 percent in private services. This compared to 0.7 for EU manufacturing and 1 percent in private services, as Table 2 shows.

However, the dual nature of Irish manufacturing means that productivity in certain manufacturing areas, such as chemical and pharma has been as high as 8.4 percent compared to a fall in rubber plastics and fuel or a low 1 to 2 percent in indigenous, such as base metals and textiles.

The forecast decline in manufacturing jobs with the shift in jobs to eastern Europe and to China, combined with the continuing growth of services, which have lower productivity, is already occurring in Ireland and in most other developed countries too. However, if Ireland continues to maintain high productivity manufacturing, this will contribute to its overall level. Further, it has been seen that indigenous industry has not performed badly – it only looks poor compared to the apparently soaring productivity growth of the MNC-owned modern sectors.

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[33] It has been seen that expansion of Ireland's broadband and its speed has been held up for a number of years by the privatisation of the dominant telecoms player, Eircom, which after privatisation cut its investment to one-third of its level in state ownership in order to pay huge dividends on its losses to its new shareholder. A Forfas (2005) study of Broadband did not seek to explain the major reason of the poor performance which was the privatisation of Eircom, the dominant player, which then shifted its focus from investment and modernising to rewarding its shareholders after the change in ownership. For more details see Chapter 3 in Sweeney, 2004.

Nonetheless, much has to be done in the development of policy for indigenous manufacturing to grow and to encourage it to invest in R&D. Further, a number of service sectors have high productivity, especially in financial services and policy should be more focused on developing these sectors. Finally, the growth potential of most services, with the universal penetration of the internet, computers, networks, and eventually broadband will rise in the near future, and if it is accompanied by the necessary complementary investment in training and organisational change, its rise could be substantial.

Shifting Policy to Sustainable Economic Development

Economic growth is a desirable objective and it is one of the defining characteristics of the modern economy. It enables consumers to purchase the latest goods and personal services, allows firms to increase sales and profits and enables governments to continue to function with increased revenue every year. Ireland has enjoyed phenomenal economic growth over the past decade. This year and the next two years should see growth rates averaging 5 percent - almost twice the average rate in the 30 OECD countries. Our rapid economic growth has enabled Ireland to catch up and now pass most European countries in our average annual *income*.

There are, however, two problems with this. First, this oft-quoted average disguises growing inequality. Take away some of the biggest beneficiaries of the Celtic Tiger and the average falls and many people are below this average. Secondly, we lag far behind in our economic *wealth*, though we have been investing heavily in infrastructure, which enables further growth in the future and improves living standards too. However, there has been, and continues to be, a price to pay for the headlong rush for economic growth.

As productivity growth slows and with the tight labour market, it is time to consider taking the foot off the economic accelerator. Ireland is no longer a poor, developing economy. It is now time to shift gear and to move policy from the all-out drive for economic 'growth for growth's sake', to sustainable development. Sustainable economic development is where the economy may grow at a slower pace and where incomes grow, but where congestion, spiralling prices, asset prices inflation, quality of life issues and the social consequences of the boom can be eased and addressed.

Ireland's economic growth averaged 7.9 percent in the decade to 2002, far above any other country, bar China. The nearest rival was Korea at 5.6 percent annual growth, followed by Luxembourg at 4.8 percent, Poland at 4.4 percent and the Slovak Republic at 4.6 percent.

The growth rate for Ireland in 2005 was 5.3 percent and of this, a full 3.3 percentage points was made up from domestic demand - that is, from consumption within the Irish economy and investment, with the balance coming from exports. This shows the importance of domestic demand. The problem is that much of it is based on credit and a substantial amount is based on the construction sector, driven by the rapid inflation of house prices. If there was a housing bust, it could catapult the Irish economy into a recession because the 'wealth effect' of housing, (where home owners feel well off and so borrow and spend).

Employment growth in Ireland has been world-beating with an annual average growth of jobs of 4.1 percent between 1992 and 2002. This is over four times the average in the OECD, or much higher than the much vaunted USA with only 1.4 percent per annum. The next best performer in job creation in the decade was Mexico, trailing far behind Ireland at a still high 2.6 percent, followed by Spain at 2.4 and new Zealand at 2.3 (albeit recovering from stagnation, induced by a harsh neo-liberal economic regime in the 1980s). Some countries like Japan, saw negative growth in employment at an annual average of 0.2 percent with Poland at almost minus 1 percent a year in the decade and some countries with little change annually.[34] Ireland had an average growth in employment of 3 percent in 2003 and 2.9 in 2004 and will see a rise of 4.3 in 2005 and 2.5 in 2006, according to the ESRI.

For the first time in our history, ever, Ireland is producing more jobs than it has people to take

[34] OECD, 2005

them up. We are encouraging tens of thousands of immigrants, to come here every year to take up jobs. While this is something to celebrate, there is also a downside. We have to house the new arrivals, to transport them to and from our shores and within the country to work and to play. They increase the demand for goods and services, pay taxes, but society (in which they are now contributing members) has also to educate their children and provide health and welfare services (except for those who have no access to welfare for two years). It has been seen that with very poor enforcement of labour standards, they are open to exploitation which, in turn, impacts on Irish workers.

Overall, immigrants will add to the economy, especially when there is work here and now. However, if the numbers are high, relative to the population, which they appear to be,[35] then it can place a strain on some of our already stretched public services, on our inadequate public transport systems and on the poor health services. We can pay more for better public services, but it will take time to see the results. Fortunately, we do not have to raise taxes rates because it is not necessary in a booming economy and we should still close the many tax loopholes to raise more from those who do not pay proportionally. We do have problems in the delivery of some public services but we can fund improvements with greater efficiency and by curbing the many tax breaks for certain industries and persons of high wealth.

We can enhance and build on our economic success by pursuing sustainable economic growth, that is, growth which does not put a strain on the social fabric of Irish society. High economic growth is imposing many costs such as continuing soaring house prices, substantial and increasing traffic congestion, long commutes, child care problems, pressure on public services, schools and increasing stress on relationships. This policy shift can be undertaken by being more selective on foreign direct investment,[36] by having a more re-distributive tax regime, reducing those incentives to businesses which are not required in an economy close to full employment, enhancing the 'social wage' with greater public resources devoted to better health, education, childcare and public transport.

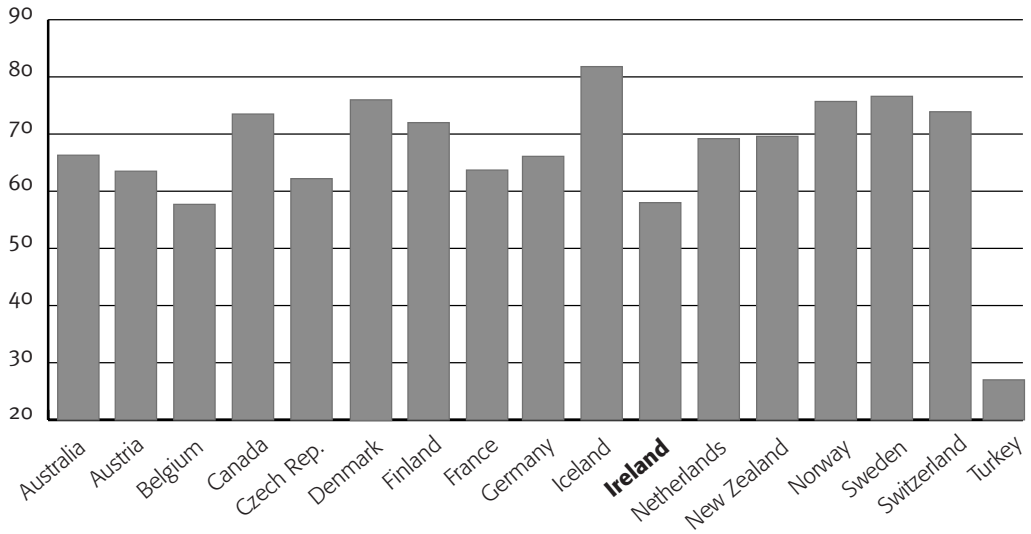
National income and productivity are narrow ways of looking and society's progress. The UN's Human Development Reports state that "human development is about much more than the rise or fall of national incomes. It is about creating an environment in which people can develop their full potential and lead productive, creative lives in accord with their needs and interests". Its human development index (HDI) focuses on three measurable dimensions of human development: living a long and healthy life, being educated and having a decent standard of living. Thus it combines measures of life expectancy, school enrolment, literacy and income to allow a broader view of a country's development than does income alone. Ireland was second in the world in per capita income (after Luxembourg - of 177 countries), but it scored poorly in several areas. For example, it was 28th on life expectancy at birth, 20th on poverty and 20th on education (combined primary, secondary and tertiary gross enrolment ratio), 14th on functional literacy, etc.

Sustainable economic growth is where Ireland, no longer a beggar, but a chooser, can insist that investing companies adhere to good practices in industrial relations, such as union recognition and collective bargaining, on environmental standards, etc. Social partnership must have strong partners. Too many companies which have benefited so much from economic growth which has been, in part, generated by the stable environment and predictability that partnership has brought, have refused their employees the right to professional representation by trade unions. The state has weakened social partnership by allowing these firms to reap benefits without responsibilities to their employees' rights. Government policy should make a very strong case to new investors that the benefits of social partnership no longer apply to

[35] The numbers coming from the new Accession countries are over four times per capita the UK level. Financial Times, *Brussels Divided over central European workers*, 17 Jan 2006.

[36] Some still argue that Ireland should accept any investment by any firm, grant aid it and support it in every way, even though we are close to full employment. We are now having to bring in workers from other countries to fill jobs and the state agencies, planning bodies etc are overwhelmed with work, which is a diversion of scarce public resources. Ireland is in the position to inform investors that they have to conform to acceptable standards of the country in relation to the environment, employment and industrial relations practices. It is no longer acceptable that anti-union employers are welcomed and assisted in every way by the agencies of a state which itself extols the virtues of social partnership.

Figure 9: Employment Ratios of Women, 2004, Selected OECD Countries



Source: OECD Employment Outlook 2005, Table B (Women 25-64).

those who shirk its responsibilities. The 'free riders' should no longer be facilitated by the state in piggy-backing on the work undertaken by unions and most employers in the new economy.

This new era presents an opportunity for policy to ensure that the benefits of growth are more equitably spread, for greater social investment and for investment in public goods. At the same time, we must seek to optimise the rate of productivity growth.

Increasing Participation Rates

Increasing participation rates will increase overall gross national product rather than productivity, though a higher GDP should boost productivity with increased economic activity, more innovation etc. The rates of participation in Europe are far lower than in the US or some Scandinavian countries. People retire earlier in Europe, have much longer holidays, have more bank holidays than the US. These trends are by way of choice - delivered by trade unions in social partnership over the years. In addition the better health and welfare systems have allowed a higher proportion of persons to choose not to participate in the labour market because of disability or unemployment. In the US the working poor *have to work* and too often have to do so for very little. The EU wishes to increase overall participation to 70 percent by 2010 and to 60 per net for women. Only four states meet the 70 percent target, while nine meet it for women. The target of participation by older persons (age 55-64) is at 50 percent. Ireland is not far off these targets and meets the latter one, for older persons' participation.

It has been seen that the US combines higher productivity growth with higher labour force participation than most European countries and so its overall national income is higher. Ireland has greatly increased its labour force participation rates from 60.1 percent in 1990 to 68.6 in 2004. This was greatly aided by reduced unemployment from one of the highest in Europe at 15.7 percent (and very high emigration) in 1993 to just 4.4 percent in 2006. The average participation rate in EU15 was somewhat higher at 70.8 in 2004, though the employment to population ratio (which excludes the unemployed) for Ireland was fractionally higher than the EU15 average and the total OECD average at 65.5 percent.

It is interesting to note that the EU countries with the highest productivity also have high employment rates, ie the Scandinavian countries, (Sweden 73.5; Norway 75.6; Denmark 76; Iceland

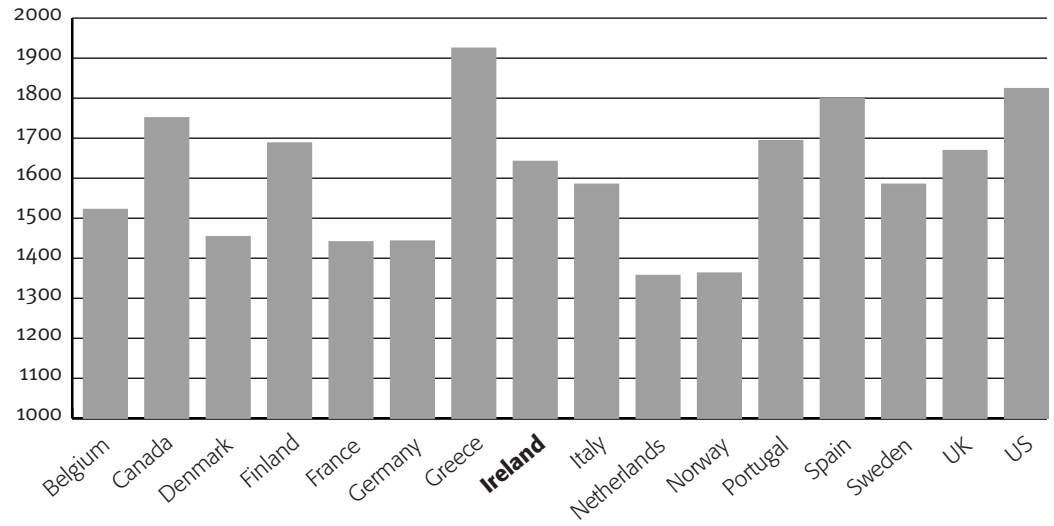
82.8, though Finland is lower at 67.2) and also the US, (though the UK has had high participation and low productivity growth). While the employment rate in OECD Europe (and total OECD) was stable between 1990 and 2004 (up 0.5 to 61.5 percent), it rose slightly for EU15 to 65 percent. It rose for most of the Scandinavian countries. Ireland had the most rapid increase - from just over half its population at work in 1990 (52.1 percent) to 65.5 percent in 2004. Clearly a high employment participation rate ensures higher overall economic activity or national income in an economy, but it is important that overall productivity is reasonably high too. Many agrarian societies have, by necessity, high participation and very low productivity. It is likely that, with longer life expectancy and if pensions remain a problem, there will be a tendency for higher employment rates in most developed economies as people remain in employment for longer.

Participation Rates of Women

The rate of participation of women in Ireland has greatly improved over recent years, but it could still go higher. Figure 9 shows that the participation rate at 58 percent is way behind Nordic countries like Iceland where it is 86 percent, Denmark at 76.1, Finland at 72, Canada at 73.5 percent. Ireland is close to Belgium at 57.7 percent and the EU 15 is 63 percent and US is 69 percent.

Access and affordability of childcare is vital in boosting women's participation in the workforce. There is a more profound, long-term issue here and this is the replacement of the labour force in years to come and the issue of supporting an older population. Unless adequate childcare provision is made in Ireland, then we will have lower numbers of children and this will lead to less at work later and thus less pension provision as the workforce ages.

Figure 10: Hours Worked in 2004



Source: OECD, Employment Outlook, 2005.

Part 2

What Can be Done to Maintain Productivity

The slowdown in productivity growth, which Congress and most economists expected and anticipated, is not a national disaster. It is now time to develop more sophisticated policies to drive greater productivity in the lagging sectors of the economy. These are areas of indigenous industry which have been somewhat neglected, the construction sector, where it has fallen in the past few years, in areas of the public sector and certain private services. It is also time for an independent body to undertake a deeper examination of productivity in services, including public services.

A number of steps can be taken to improve the declining productivity in Ireland by further ensuring more efficient use of ICT in the workplace, with far more effective investment in training especially around ICT use, improving the diffusion of new technology, including low technology, investing in education, to reducing the number of hours, while maintaining output, increasing investment in relevant R&D, innovation, etc. Increasing the participation rates of women in the workforce, while not improving productivity per se, will help overall.

Trade unionists must also take a greater interest in productivity so that it is it no longer defined in the interests of those employers who have a narrow short-term view, who might oppose training for immediate gain and who will not invest in new machinery or computers. It means unions should take a greater interest in management and in dealing with or confronting poor management, which focuses on 'presentism' instead of efficient work.

Working Less and Working Smarter

Irish workers work much longer hours than workers in many other European countries, as Figure 10 shows. We worked an average of 1,642 hours in 2004 compared to 1,441 in France, 1,443 in Germany and 1,454 in Denmark (it is even less in the former West Germany area at 1,426). It is poor economic performers like Portugal and Greece where workers have to work long hours, though workers in the UK and US, following the Anglo-American model are also forced to work long hours. The US worker had to work 1,842 hours in 2004 - a staggering ten weeks more than the German worker. German productivity is the same as in the US. The Germans clearly work smarter!

The US, of course, is known for the long hours its workers have to spend in the office or factory because of their poor holidays. The average worker in the UK worked 27 hours more than the Irish in the 2004.

While the Irish work long hours compared to most other of the EU 15 countries, it is now much less than they did, say, twenty years ago. We worked 349 hours less than in 1990 thanks to concessions won by Congress in national agreements, a drop of a substantial 18 percent in the year. This is equivalent to a reduction of almost nine weeks based on the 39 hour week. It is a serious contribution to the work/life balance for the average worker. A reduction in hours, if executed well in partnership between employers and unions, can boost productivity at firm level.

On the other hand, there has been a growth in involuntary overtime - the number of hours worked involuntarily by some workers in some firms, usually in services. These firms are often American and include some of the professional firms (solicitors and accountants) which put pressure on employees to work long unpaid hours. They are generally non-unionised firms and so employees have no independent advisors to put their case. Many observers have commented that these are particularly unproductive hours, with the 'jacket on the chair' syndrome, with workers tired and de-motivated. 'Presentism' is unproductive and exploitative. It is a growing area in services as the sector expands. It demonstrates the clear need for trade unions in service companies.

The macho image of working long days by a growing number of professionals – mainly men - should be addressed by employers and unions, precisely because it is too often unproductive for

firms as well as impacting on family life, on women who bear the brunt of child rearing.[37]

In the UK, the numbers working unpaid overtime has been calculated by the UK's CSO and in an analysis of these figures, the Trades Union Congress[38] estimated that UK employees did unpaid overtime worth £23 billion in 2004. On average each employee who did unpaid overtime would have earned stg£4,650 for their unpaid hours if they had been paid at their normal hourly rate. Many workers are working long periods for free for their employers in unpaid overtime. The same applies to Ireland, though we cannot estimate the cost to workers as the CSO here does not calculate unpaid overtime.

Fifty-five percent of senior managers and professionals put in unpaid overtime, averaging almost eight hours a week, in the UK. Congress believes that there is a similar pattern here with senior managers and professionals especially in non-union employments.

The reason why European living standards appear lower on average than in the US is that Europeans *choose* to work less than Americans. Many European firms and countries match US productivity per hour. On the other hand, Americans do not choose to work longer hours. They are coerced into doing so. Stronger unions and social partnership have empowered European workers and enabled them to have much greater choice on work/life balance than their American counterparts.

Americans work similar hours in a week, but take much shorter holidays, have less bank holidays, and with poor pensions and a poor welfare state, are forced to work well after normal retirement age. Many elderly Americans are forced to work for low pay, in order to qualify for medical benefits too.

There is a big downside to the lower hours per year (and lower participation rate) worked by Europeans than Americans and that is that Europeans' overall national income is lower. Europeans have far greater freedom to chose their lifestyles. The have chosen a more equal and a less materialist society. It is poorer than the US, but only in the material sense!

R&D, Innovation

The whole package of incentives to attract in FDI should be reformed with a greater focus on the most desirable investments, with greater caution around projects which are of insufficient value and which do not develop linkages with domestic industry. A disadvantage of the low rate of Corporation Tax is that there is little incentive for many firms to invest in R&D areas in Ireland even with special R&D tax breaks because the tax advantage is small.

The level of R&D expenditure in Ireland is low compared to most other EU countries, the US and Japan. In 2004, it was only 1.2 percent of GDP, or about 1 percent of our GNP (which equates to other countries in GDP terms). This is about half of the EU25 average, which is reduced by the new member states. Sweden leads at 3.74, percent, followed by Finland at 3.5 percent, Denmark at 2.6, Germany 2.5, France 2.2, Austria at 2.3. The US is 2.6 and Japan at 3.2 percent of GDP. As the Lisbon goal is 3 percent, we have a very long way to go and the goal is for 66 percent to be from the private sector. Here it is 59 percent.

Congress pointed out in our Life Long Learning Briefing (2005) "There can be too much emphasis on the very latest high-tech R & D when greater returns can be gained from the application of lower tech innovation and investment in education and training. Many hold that the improvement of 'high tech' industries is the key to greater productivity. From this view, the so called 'low-tech' sectors appear to be unimportant. Yet low-tech industries are – and will be in the foreseeable future – important, not only for employment and growth, but also for knowledge formation in economies like Ireland's."

Better Use of ICT

It has been seen that a key reason for the growth in US productivity since 1995 is that in the US there has been more investment in ICT and in complementary investment in organisational change and training. The US has gained as both an ICT-producer and an efficient ICT-user. Ireland is an ICT-

[37] See ESRI study in 2005 on *Time Use in Ireland 2005*, survey report.

[38] Trade union Congress, London. http://www.tuc.org.uk/work_life/tuc-10005-f0.cfm

producer and has gained from this area, but there is considerable "room for improvement" as an ICT-user in many areas, from manufacturing to services.

The paper by John Van Reenen and others in the Centre for Economic Performance at the London School of Economics, quoted above, reveals the importance of training and investment in people.[39]

Education and Training.

While some multinationals investing in Ireland praise the low taxes on profits and low corporate social contributions in Ireland, (on cue from the government agencies, which should also inform them of the importance of union recognition within social partnership), the real competitive advantage which this country has is the well-educated, young, English speaking workforce. It is seen as adaptable and hard working too. Ireland has gained more output from a low input of money into education, but this is not guaranteed to last. This will need to be addressed. Importantly retraining those at work is vital too.

It would be a mistake to rely on immigrants to fill emerging skill gaps and it would be a let down for older Irish workers too who could be retrained. The areas around education, training and outsourcing/offshoring have been highlighted already in two recent Congress Briefings (*Offshore Outsourcing: the Implications for Ireland* and *Life Long Learning: Everybody Wins*).

An OECD study on the determinants of the levels and growth of GDP per capita, confirmed the central role of labour and product market policies in the growth process. It also identified the importance of education, innovation and entrepreneurship in determining productivity and economic growth. This Growth Study[40] found that an increase in the average length of initial education by one year resulted in a gain in the level of GDP per capita of 4 percent. This evidence from a macroeconometric analysis is in line with the results of microeconomic studies that consistently find that wage levels are linked to educational attainment.

As much as two-thirds of the fall in unemployment, from 15.6 percent in 1994 to 6.2 percent in 2004, was due to the rapid rise in educational standards in Ireland (Hamilton, 2005). The growth potential of the economy was increased by one percentage point a year through the increase in skills in the labour force.

In an interesting empirical paper on the impact of training on productivity and wages, Dearden, Reed and Van Reenen (2005) of LSE found that training has had a bigger impact on firms' productivity than had been previously recognised. They studied a panel of British industries over a period of 14 years and found that training is associated with "significantly higher productivity." They pointed out that most studies had examined the private return to work related training which results in higher wages for workers.

Their study found that raising the proportion of workers trained in an industry by one percentage point is associated with an increase in value added per worker of about 0.6 percent and increase in wages of about 0.3 percent (ie while workers enjoy a rise in wages, the impact on productivity growth is twice that of the rise in wages – so firms do much better). They concluded that the existing literature on training "has underestimated the importance of training" on productivity.

While there is a broad consensus on the issue of Life Long Learning and the role of education in productivity in Ireland, it is time to make intervention more effective and to reach down to those who need further education and training the most, the less educated.

The studies by Dearden and others have demonstrated the importance of investment in training. Such investment in human capital has a treble impact on boosting productivity, gains in real wages and in reducing inequality.

Effective Competition and Improved Competitiveness

The role of increased competition, breaking down cartels and the abuse of dominance by large firms is well known. In fact, most economic reports today conclude by calling routinely for "more competition" though few contribute constructive and innovative suggestions on how this is to be achieved. Consumers gain from greater

[39] Bloom, N, R Sadun and John Van Reenen (2005).

[40] OECD, 2003, "Growth Study" Paris.

competition, which not alone brings down prices, but it is a spur to greater innovation and product development.

However, some of the views on what constitutes *competition* may be somewhat naive. Some of the economists who advocate forms of ruthless competition may be merely unintentional advocates of multinational big business, where these corporations' superior economies of scale and scope may wipe out small indigenous firms. The advocates of untrammelled competition do not take a long-term view, but a static one, where the elimination of small competitors by big firms is generally seen as positive because it (may) lead to lower prices. However, some forms of competition may also lead to higher prices or lower quality in the longer term, where a dominant company can eliminate competition.

Competition and change can mean pain, but given time to adapt, the better firms and their employees, who have been in sectors with low competitive pressure, can adapt. The state has an important role as regulator through legislation and its agencies to ensure that competition is fair and that citizens are protected. The issue of effective regulation has become extremely important and 'bad regulation' including both over-regulation and no enforcement of laws, reduces competitiveness.

The term *competitiveness* is a broad one to cover a company's or a country's competitive position and it is judged on many issues, including productivity, costs, innovation, infrastructure, education, institutions and international trade. The factors which drive productivity also contribute to competitiveness. These reports are indicative, can be highly subjective and can be informed by business 'leaders' with definite agendas, which can be far removed from the public interest or workers agendas. Nonetheless, if each benchmark criterion is examined on its own, it can be informative. The benchmarks are also useful in understanding the broad nature of competitiveness.

Various bodies have competitiveness leagues, including the Heritage Foundation in Washington which placed Ireland 3rd best of 161 countries in its 2006 *Index of Economic Freedom*. This right wing think-tank gives low scores to workers' freedom to organise in trade unions and to countries which have good labour and safety regulations and high public spending on health and education. Ireland scores highly on the subjective benchmarks because it has one of the lowest public expenditures in the world; the lowest business taxes in Europe and has very poor enforcement of labour legislation, together with the positive factors, such as a good banking system, economic openness and high foreign investment.

The most respected benchmarking body is the World Economic Forum (WEF), which organises the annual business forum at Davos. This league is dominated by the Scandinavian countries, in spite of their high taxes and high public spending. In the WEF competitiveness report, Ireland was 26th in 2005/6, up from 30th in 2004/5.

Ireland has a National Competitiveness Council which attempts to benchmark Ireland on 170 factors. The current Council does come down in favour of the view that low taxes and light regulation is good for business, in contrast to the top performing economies in the WEF which have high taxes and strong regulation, but it includes many other factors which are useful in giving indications of performance in the many areas which make up the complex area of competitiveness.

Infrastructure and Reduced Commuting

Commuting is a major talking point for workers, adding up to 20 hours weekly for some. Much of the long travel time is due to the congestion generated by cars bought with the economic boom, combined with poor intercity roads and non-integrated and poor public transport.

Congestion on roads in the EU 15 is very bad compared to the US, with some countries worse than others: a quarter of UK trunk roads are congested for more than an hour a day compared to just 15 minutes a day in the Netherlands. We do not have figures for Ireland, but we must be one of the worst. Dublin Bus had BDO Simpson Xavier undertake an estimate of how much congestion delays cost the company. It found it cost €60.05 million in 2004, compared with €49.36 million in 2003 and €34.86 million in 2001 (*Irish Times*, 6 Jan 2006).

The failure of government or its agencies to deal effectively with the massive congestion on the M50, Europe's busiest motorway, impacts negatively on productivity regionally. Another administration would simply enact a Compulsory Purchase (CPO)of the West Link bridge, throw it open and fund the ancillaries and third lane of the M50 from of its burgeoning coffers and construct it over 24/7. While there is merit in congestion charges, the decision by Government to pay for the purchase of the bridge by tolling the length of the capital city by-pass, the M50, is dubious, if it is to work as a by-pass. The importance of the M50 means that ultimately it is reducing national productivity as workers and business people can verify, hourly.

The idea to nationalise the West Link Bridge (a small privately owned section of the publicly funded M50 ring-road around Dublin) originated from Congress[41] and was aimed primarily at relieving the stress on workers' commuting. It would of course, also greatly improve national competitiveness and so productivity. It is not just commuting workers who are affected but all those in transport and logistics. It must cost firms much more to deliver a part or package per kilometre in the Dublin region than anywhere else in Europe – adversely impacting on competitiveness and overall productivity.

There are other areas of infrastructure where Ireland is lagging and which are only being addressed very slowly. While Ireland is investing at close to twice the EU level, it is still insufficient and there still are serious problems with planning and legal challenges. Political leaders have been singularly unable to deal with key area of waste, though the exception - the plastic bag tax - shows what can be achieved. A consequence of the privatisation of much of the waste area has been the break up of the former integrated operations of local authorities. The inability of government to deal with the waste issue is a major cost for many businesses and it is contributing to inefficiency.

Another obstacle to higher productivity in Ireland is *Nymbism*. It is very important that Irish people have a say on their major infrastructural projects but, when due process is gone through, then workers' jobs should not be jeopardised by further actions - which also impose costs and an overall loss of productivity. Workers who lose their jobs in construction are too often the unseen victims of these actions, some of which have no social value at all.

The ideological drive for a 'free market' in electricity has pushed up the price (factoring in the rises in energy prices) in the effort to entice new investment in electricity generation. The ESB delivered secure and relatively cheap electricity when it was a regulated monopoly only five years ago. Electricity, an input to almost every business, is part of the cost-price spiral in Ireland. The drive for 'competition' on a small island, where scale is important and where new entrants are slow to emerge for small rewards, has pushed up electricity prices.[42]

Institutional and Other Influences on Productivity

Boyle and McQuinn claim that international differences in output per worker across 127 countries are fundamentally determined by variations in, what they term, a country's *social infrastructure*. "Social infrastructure is taken to be the institutions and government policies that characterise the output generating process of an economy." However, this is a very narrow definition and it is not just the government and institutional attitudes which impact on productivity in a country, but it is also affected by many other factors including the quality of its infrastructure, its roads, public transport, communications, the quality and strength of its banking system, its legal system, even its health sectors, but especially education and training, and many more factors.

There are a number of issues which impact on a national productivity which are difficult to measure and so economists tend to ignore them. One is that there are a large number of women at work who are struggling to maintain a work life balance. In addition, there are many women at home who might chose to work, part-time or atypically, but who cannot do so because of the lack of support

[41] Pre-Budget Submission for 2005, November 2004.

[42] ICTU, 2005, Submission on Electricity Market.

[43] Michael Prowse, *Britain overlooks the human factor in productivity*, Financial Times, 12 January, 2006.

and the high cost of child care. This is a real hard issue for the future too – the failure to address childcare means that less children are being born in a somewhat hostile atmosphere to child-rearing for working parents. This means that the replacement of labour has become quite difficult and this leads to serious implication for the future workforce and, in the longer term, for pensions.

An important but overlooked factor in productivity is the human factor. Michael Prowse of the Centre for Economic Performance at the LSE points out that low productivity "may be less a reflection of physical or technical shortcomings (lack of investment or skills) than a failure to find a social model that brings out the best in average employees."[43] A productive workplace "is likely to be one in which the average band member feels justly treated as a member of a social group". He warns against firms which treat workers as mere commodities and believes that "the widening pay differentials between boardroom and shop floor pay may have boosted the work effort of directors, although this remains unproven. But what has it done for rank and file morale? And why should the average employee work his heart out for an employer who refuses to contribute to decent pensions and sacks staff in downturns?" Prowse argues that what "behavioural economics suggest is a direct link between fairness and productivity. People give their best when they feel justly treated relative to others."

The important critical factor is investment in education and training. Ireland can gain substantially from such investment from pre-schooling, through longer times in second level, more fourth level degrees through to life-long-learning.[44] The many factors which impact on competitiveness and indirectly on productivity are listed in the reports of the National Competitiveness Council.[45]

Excessive regulation and bureaucracy can hinder productivity by imposing obstacles on businesses. Most economists call for what they term 'light regulation' in order to improve productivity but for working people, poor labour laws and little enforcement are a major burden on their working lives. Countries which try to develop through the exploitation of labour will fail and so the enforcement of labour standards, as in Scandinavian countries, can facilitate competitiveness. Flexibility and adaptability of labour markets are best achieved through education, training, paid educational leave and partnership - not by coercion.

In our Briefing Papers, Congress has made many suggestions which would improve workers' lives and enhance productivity. For example, a major institutional change is required in the way state companies are governed. The current system, where the Department of Finance holds the shares in these companies is, by its very purpose, risk averse and impedes these important companies in their expansion. The system is also very political and time consuming. A State Holding Company should be established urgently which will free up Ministerial, Cabinet and civil service time and enable the expanding state companies to access capital for growth.[46]

Conclusion

The achievement on productivity growth and the levels attained in recent years in Ireland has been striking. Ireland has had one of the highest rates of productivity growth in the world for many years. Ireland has attained a high level of productivity in the world overall and in many sectors.

This report has shown that if Ireland is to sustain productivity, it has to invest more in education and training around ICT-use. Productivity in ICT use is low in Ireland but it is high in some EU countries like Denmark and also in the US. It requires deeper investment in ICT, but 'complementary investment', that is, training in the use of the new computers and related equipment. Investment in human capital enhancement in the area of ICT in training, re-training, upskilling and especially in improving management skills is needed and it also requires greater devolved responsibility to workers.

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[41] Pre-Budget Submission for 2005, November 2004.

[42] ICTU, 2005, *Submission on Electricity Market*.

[43] Michael Prowse, *Britain overlooks the human factor in productivity*, Financial Times, 12 January, 2006.

[44] ICTU, *Life Long Learning Everybody Wins*, June 2005.

[45] National Competitiveness Council, *The Competitiveness Challenge or the Annual Competitiveness Report*, annually. Both reports list the many complex factors which impact on the area of competitiveness.

[46] ICTU, *A New Governance Structure for State Companies*, Summer 2005.

If Europe follows the US, it is likely that there will be greater output from ICT-usage in the very near future when the investment of recent years in physical ICT generates the long-awaited results. The key is that it must be accompanied by investment in training too. The CEP/LSE study has shown that the management of ICT investment, which is superior in US multinational firms - wherever they are located - than indigenous, is extremely important in generating productivity from ICT use.

The ICT-producing sectors, where Ireland has had very high productivity growth because we have a high share of ICT production, have contributed to our growth, but the ICT-using sectors need more attention from policy-makers to boost productivity. While it is likely that there will be greater investment in the ICT-using sectors in services and indeed manufacturing too, in Ireland in the near future, it has to accompanied by strong investment in the *complementary* areas. It has been shown that IT, as a rapidly changing technology, requires effective *management practices* (as well as organisational devolution) to be fully exploited. Ireland has a relatively large ICT producing sector and Congress believes that hedonic or quality-adjusted improvements are not fully captured in the measurement of its productivity, just as we believe producivity in services is also underestimated.

Even if Europe does succeed in catching up with the US on productivity, we must question the value of such an "achievement." It has been seen that the top 10 per cent in the US captured all of the gains from the productivity increase since 1995. In the words of Dew Becker and Gordon, "not only have the bottom 90 percent of American workers failed to keep up with productivity growth, many have been harmed by it." They even state that because of this, they are forced to conclude that the "historical link between productivity growth and higher living standards falls apart." Ireland does not yet have the skewed levels of wealth and income distribution of the US, but it is essential that we do not follow the US in the distribution of the gains from productivity. This is a key reason to take the foot off the growth accelerator and to focus more on economic development, including income re-distribution.

The recent decline in what were very rapid increases in Ireland's productivity is not a national disaster, but an opportunity to shift the fundamental direction of economic policy from one of solving an unemployment crisis which no longer exists to one of sustainable economic development. This means greater focus on the redistribution of the benefits of growth to many more people in our society. A more equitable society, with greater opportunity for all in the IT services age, will generate a more dynamic economy.

Productivity is too important an issue to be left to employers to set the agenda. Trade unionists must take a greater interest in productivity so that it is it no longer defined narrowly in the interests of those employers who have a short-term understanding of what is a very complex issue, which impacts profoundly on workers and all in society.

It has been seen that in "high productivity foreign owned high-tech sector," the high import-content and impact of profit repatriations do substantially reduce the value added in Ireland (to only 24 percent) of a unit of industrial exports. Most economists were aware that a) the high growth in Irish productivity was not sustainable; b) that there were productivity paradoxes in Ireland with a dichotomy in output - with very high output (and it was and is overstated through transfer pricing) from foreign firms and low from indigenous firms; c) with a further paradox of a high technological intensity of output but very low R&D investment - where Ireland has 'islands of embedded productivity;' d) that, for some time, there has been a shift from manufacturing to services, which was happily delayed in Ireland for a decade; and that, in a further productivity paradox, e) the huge investment in ICT has not driven the level of productivity which might have been expected, especially in the ICT-using sector, which could have a major positive impact on services and especially public services.

Workers must be compensated for inflation and should also share in economic growth - which is running at more than double the EU average. Most economists and policymakers have known for many years that the high growth in Irish

productivity was overstated with transfer pricing and that it was not sustainable at such high levels in the longer run. We know we had an exceptionally prolonged growth phase with the Celtic Tiger. Only the truly naive believed that all of the income and productivity was generated in Ireland instead of being the result of prolonged tax avoidance by international companies utilising our low corporation tax regime. We have also known for many years that the R&D spending from MNCs here was low and that they have little incentive to locate R&D here. R&D investment in Ireland is very low and needs to be boosted, though it should focus on areas where a small economy can generate innovation and returns.

Productivity is important and the maximisation of employment in manufacturing is important, together with renewed attention to indigenous industry, which is performing reasonably well. Policy has to change to reflect the new reality of lower productivity growth and while it must also encourage productivity increases in all services, it should focus on the growth of those services with higher productivity.

Europe had much lower productivity than the US until 1950. Then growth was slow in the US and Europe caught up by the 1990s. However, the US took off again from 1995. It was seen that the US has greater overall economic output than Europe, because America's employment rates are higher and because Americans must work much longer and into old age. American workers do not have the choices on how long they can work that Europeans have. The result of longer working hours and lives and a higher employment rate means that Americans have, in aggregate, a higher national income than Europe, but it is a deeply unequal society. Nonetheless, Europe is aware of the dichotomy and is trying to catch-up on the US with the *Lisbon Strategy*. Ireland has some of the longest working years in Europe and while the participation rate of women has grown, it is still far behind the most competitive European states, the Nordic countries. It is likely that employment rates will grow in Europe, though this must be with agreement between the social partners.

Addressing critical issues like childcare, eldercare policies, education and training and a less stressed workforce, with a better work/life balance, means a more productive workforce.[47] Further, it has been argued that investment in integrated public transport to reduce commuting times for workers, to reduce congestion for business will help national productivity too. Institutional reform and other issues all will contribute to productivity of the whole economy and its competitiveness.

The ESRI has advocated that Ireland needs to become "an attractive place to live as well as work" in order to attract and hold skilled labour.[48] Some business people myopically only see their own immediate interests as being the drivers of competitiveness. They fail to see the wider picture, which includes the whole socio-economic infrastructure, work/life balances, stress management, quality of life issues and long-term investment in education etc.

Policy must adapt to the new era of lower productivity growth, of sustainable development and focus on redistribution of the much higher incomes and growing private wealth which many of the Irish now enjoy. Greater emphasis on building the social wage - a better health system, affordable, well designed housing and local environments, culture, education etc. - is the way forward in order to achieve sustainable development. It is not an accident that the economies with the most equitable income and wealth distribution are the most successful.

[47] ICTU, *Caring for the Future: Who Cares?*, Summer 2005.

[48] ESRI, 2005, *Medium Term Review*, page 101, Dublin.

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Design & Print: Ralaheen Ltd.