ENTERPRISE IRELAND

IRELAND

Economic Profile

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Introduction

Ireland's economy is one of the world's most globalised, with extensive external trade and investment links. It is also one of the world's most dynamic, with annual growth rates in excess of averages for the developed world. Record growth was experienced in the 1990's, with a 10% average rate recorded for the period 1997-2000. Subsequent to the international slowdown of 2001/2003, growth rates receded to the 4-5% range, still among the highest within the EU and OECD. There has been no significant weakening across a range of key economic variables including asset prices, fiscal balance and employment. The legacy of the decade of growth of the 1990's will be substantial, in particular Ireland's transition from one of Europe's poorest economies to one of its wealthiest.

Background of Economic Growth

Ireland's period of unprecedented economic growth began in the early 1990's. Between 1990 and 1995 the economy grew at an annual average growth rate of 4.8% and, between 1995 and 2000, it averaged 9.5%. Growth rates have since been maintained in the 4-5% range, a level almost five times higher than the old EU15 average.

The growth in the Irish economy is reflected in the year by year increases in national GDP, which in 2005 reached €160 billion. On a per capita basis (population of 4.2 million), this was equivalent to €38,000 per person, the second highest in the EU (after Luxembourg). Measured on the basis of purchasing power, Ireland's level of economic activity or GDP per inhabitant is now almost 40% above the average for the EU 25. In addition to a doubling of national income, achievements over the last ten years include a reduction in unemployment rates from 14% to 4%, and an increase of over 600,000 or over 50% in the number of employed.

By any standard measure, Ireland's performance is exceptional. Ireland has consistently topped the 30 member OECD economic growth tables, often by a substantial margin. For the latest 5 year period (2001-2005 OGCD), Ireland's average GDP growth rate of 5.3% was again the highest (with Slovakia second at 4.7%). The accompanying table compares Ireland's recent 5 year performance with that of its best performing EU partners.

The extent to which the Irish economy has converged to fully developed levels can also be considered in comparison to other OECD 'catch up' economies, such as Spain, Greece and Portugal, and the new EU accession states. With 1995 as a base (calculated on the basis of purchasing power parities), per capita GDP has increased by over 70% in Ireland, by almost 40% in Poland, Hungary, and the Slovak Republic, 30% in Greece and Spain, and 20% in Portugal and the Czech Republic.

GDP or national output performance has been strongly influenced by the presence in Ireland of a very large foreign owned industry sector. The profits and dividends repatriated by this sector are excluded from calculation of GNP. Whereas in most countries these two measures closely coincide, this has not been the case in Ireland, where GDP has historically exceeded GNP by as much as 20%. GNP is a better measure than GDP of the value added or income accruing to residents of a country.

Leading EU 25 Annual GDP Growth Rates 2001-2005

Irl	OECD	Eurozone	Slovakia	Greece	Hungary	Czech Rep.	Spain
5.3%	2.1%	1.4%	4.7%	4.2%	4.2%	3.3%	3.1%

Source: OECD 2005

Economic Success Factors

There is broad agreement that key factors in Ireland's economic achievements in the 1990's were the following:

- A youthful population and rapidly expanding labour supply:
- Substantial inward investment inflows;
- The strategic deployment of EU Structural and Cohesion Funds;
- Pursuit of pragmatic and innovative government policies;
- A Social Partnership approach to economic development;
- An openness to international trade in goods and services, and to new ideas; and,
- An emphasis on education and technological innovation.

These factors remain substantially in place. In particular, since 1987, national pay agreements between employees, employers, and government have played a central role in moderating inflation and maintaining labour competitiveness. There have been six such Social Partnership agreements since they were first launched under the Programme for National Recovery in 1987. Among the many by-products has been a dramatic reduction in days lost in industrial disputes, which, even with the substantial rise in the labour force, are now the lowest on record.

Current Economic Outlook

The Irish economy proved to be highly resilient to the international economic slowdown of 2001-2003, surprisingly so given the high levels of integration with the world economy. There was no appreciable rise in unemployment, and while there were some job losses, the wholesale curtailment or closure of multinational operations that had been feared, failed to materialise. These developments provided reassurance that the many multinational operations now based in Ireland have embedded themselves into, and become stable long term components of, the Irish economy.

The immediate economic outlook continues to be robust. In 2005, the economy grew by 4.7% in GDP terms, and by 5.4% in GNP terms. Led by the construction sector, employment increased by 4.6% and total employment at the end of 2005 stood at 1.98 million. The unemployment rate currently stands at 4.4%, the third lowest in the EU 25, the average rate of which is 8.2%. The unemployment rate for under 25's at 9% is also third lowest in the EU 25 which has an average of 17.7%.

Current official forecasts for 2006 are for 4.8% GDP growth and 5.1% GNP growth. Employment is projected to rise by 3.5% and the unemployment rate to remain at 4.4%. Inflation is projected at 4%.

The fundamental factors driving the Irish economy remain favourable. In particular, the economy faces a very fortunate set of demographic circumstances over the next 15 years. However, there are dangers, in particular the very high dependency on the building sector and the pace at which current construction levels are adjusted downward, rising levels of household debt, escalating cost levels, and the ongoing threat of global economic and energy imbalances. Medium and longer term prospects will depend crucially on maintaining competitiveness in the context of what is now a high wage economy. Nevertheless, while the potential of the Irish economy to grow is now less than some years ago, most commentators still believe that it can still grow at 4-5% per annum out to the end of the decade.

Public Finances

The economic and public sector reforms set in train in the late 1980's provided the basis for a remarkable turnaround in Ireland's public finances, and reversed over two decades of yearly deficits. From a deficit position of 9% of GDP in 1987, the budgetary balance moved into surplus in 1997. Any subsequent budget deficits have all been below the 1% level, which compares favorably to EU and eurozone average deficits of 2.5%. Ireland's budgetary balance is in a healthier state than most of its euro-zone partners, and easily satisfies the existing requirements of the Fiscal Stability and Growth Pact. Ireland's debt to GDP ratio, currently at 28%, is also the second lowest in the European Union.

This radical improvement in the public finances was driven by the programme of public expenditure reform introduced in the late 1980's, which kick-started the ensuing economic recovery. Burgeoning tax receipts were the outcome of strong economic growth and more than offset the effect of successive reductions in personal and corporate tax rates. The servicing of government debt as a percentage of government expenditures has fallen from the 28% range at the start of the 1990s to the current level of 6-7%.

Public finances and tax revenues remain in a very healthy state. This is supporting the ongoing requirement for substantial infrastructural investment. Ireland's infrastructure spend is well above the EU average (capital expenditures under the National Development Plan average 5% of GDP annually).

The overall budgetary balance has also been impacted by steps the Government took in 1999 to pre-funding future pension liabilities through a National Pensions Reserve Fund. The equivalent of 1% of GNP is placed in this Fund each year, which was also assigned the major portion of the proceeds from the privatisation of Ireland's state telephone company (Telecom Eireann) in 2000. This initiative is in part a response to EU long-term projections for public spending on pensions and health/long term care. It is a unique initiative among EU member states, and, combined with Ireland's relatively youthful demographic profile, will place Ireland in a very strong future funding position.

Allocation of Budgetary Expenditures 2005

Debt Service	EU Budget Contribution	Economic Services	Health	Education	Social Welfare	Security	Other
5.7%	3.3%	6.9%	24.4%	15.5%	29.9	6.5%	7.9%

Breakdown of Tax Revenues 2005

Income Tax	VAT	Corporation Tax	Excise Duties	Stamp Duties	Capital Gains Tax	Other
29.6%	31.0%	15.4%	13.5%	5.6	4.0%	0.9%

Renewal of the National Infrastructure

The continued expansion in economic growth placed a severe strain on Ireland's infrastructure, which prior to the 1990's suffered from decades of under-investment. Tackling this was assigned the highest priority in the National Development Plan (NDP) 2000-2006 that was launched in 1999. This set out Ireland's medium term strategy for the upgrading of the national infrastructure, and was the largest and most ambitious public investment plan ever drawn up for Ireland. Under it, an investment of €52 billion (in 1999 prices) was committed for the period 2000-2006, 90% of which was funded from the Irish Exchequer, and the balance from existing EU programmes (€6 billion over six years from the Structural and Cohesion Fund and CAP). For 2005 alone, the total capital investment in infrastructure was over €6 billion, equivalent to 4.7% of GNP. This was the third highest in the EU 25 (after Malta and Luxembourg), and compares to an EU 25 average of about 2.5%.

Five years into this plan, significant inroads have been made in Ireland's infrastructure deficit, e.g:

- The Dublin Port Tunnel close to completion;
- Completion or commencement of work on over 40 national road projects;
- Completion of the new LUAS tram system for the Dublin metropolitan area;
- Completion of over 180 water and wastewater schemes;
- Commencement of almost 500-health service projects ranging from major acute hospitals to more minor works.

Continued upgrading of Ireland's transport infrastructure is a central component of the plan. Major investment in Ireland's transportation infrastructure got underway in the 1990's, and had already borne fruit in the form of dramatic improvements in Ireland's accessibility for travel purposes and in the logistics of Ireland's international trade. New road and sea routes brought Europe within easy access, while expanded airport facilities and competitive travel services improved Irish business links to the world.

Nevertheless, with levels of car ownership continuing to increase, and freight traffic expanding in line with GDP, additional upgrading of the transport infrastructure was still required. Consequently, the NDP provided for an additional investment of €8.8 billion in transport improvements, €6 billion of which to be applied to national roads and €2.8 billion to public transport improvements. This investment allocation was more than double the amount invested for the period 1994-1999. A significant number of foreign engineering and construction companies are involved in delivering this programme, supplementing Ireland's own capabilities in this area.

A successor NDP, covering the period 2007-2013, and fully funded from national sources, is now being finalised. Tackling the economy's infrastructure deficit through investments in transportation (in particular) is being emphasised. The Transport 21 framework will be instrumental in bringing the infrastructure stock up to the required standard. Investment in Education is also a core part of the new NDP, and the Government is placing R&D at the heart of its economic development stratgy. The Programme for Research in Third Level Institutions (RTLI) is advancing the strategic development of institutional research capabilities, enhancing the numbers, quality, and relevance of graduate output and supporting high quality inter-disciplinary and inter-institutional research.

EU Membership and Enlargement

In January 2003, Ireland marked the 30th anniversary of EU membership. EEC accession in 1973 was a decisive milestone in opening Ireland to a global economy and reducing its economic dependence on the UK. Since accession, per capita GDP in Ireland has increased from almost 60% of the EU average in 1973 to well over 100% today, and the proportion of exports to non-UK destinations has increased from 45% to over 80%. EU membership has also had a broadening impact on the public consciousness, and surveys repeatedly show the Irish to be among the most committed of Europeans. The latest Eurobarometer surveys show continuing high levels of support for EU membership, with 77% of Irish people viewing EU membership postively, the highest among the 30 states surveyed (the Netherlands at 74%, and Spain at 72% were the next highest). This support is grounded in many factors, cultural and political as well as economic.

EU financial transfers have been a factor. Payments under the CAP and the Structural and Cohesion Funds have at critical times been significant, proportionately never more so than in the late 1980’s and early 1990’s, when the level of net transfers peaked at 5-6% of GDP. While the agricultural component has predominated in absolute terms, averaging 50-70% of the gross total, the balance, deployed across a broad spectrum of infrastructural and program areas, has had a more catalytic and lasting impact. The scale of the payments themselves has on occasion been exaggerated. For example, in the year 2000, Ireland’s net receipts from the EU came to €1.5 billion (gross receipts amounted to €2.6 billion), which was equivalent to only 1.5% of GDP. In the intervening years this has fallen, and net receipts are now below 1% of GDP and falling. Ireland is soon be a net contributor, as it comes to symbolise the success of the the EU convergence process.

Ireland’s decision to join the eurozone from the beginning was another statement of its commitment to the ‘European Project’, and the ease with which the country qualified underlined the dramatic improvement in the country’s economy and public finances. EMU membership was embraced by Ireland’s internationally oriented business community, which viewed it as a logical step in the further integration of European markets and as a boost to Ireland’s credibility as a location for internationally mobile investment. The lower interest rates that resulted have also acted as a boost to business investment and have been a factor sustaining high growth levels. The transition to actual use of the euro currency at the start of 2002 was exceptionally smooth, and Ireland was among the first of the 12-euro zone members to complete the process.

Ireland has also been a strong supporter of EU enlargement, and sees substantial common ground and shared interests among the new member states. In its role as President of the EU, Ireland presided over the accession of these states at a formal ceremony in Dublin on May 1 2004.

Exports

A key factor in Ireland’s economic success has been the sustained expansion in exports (since 1960, the value of exports has increased over 40 times in real terms) which on average contribute about one half to Ireland’s annual economic growth performance. Since the mid 1990’s, Ireland’s rate of export growth has outpaced world trade growth by a factor of three, and Ireland’s annual rate of real export growth in goods and services has consistently ranked in the top five of the 30 member OECD grouping.

This performance has been reflected in consistently large and growing surpluses on merchandise trade. Ireland’s merchandise trade surplus 2005 stood at 22% of total merchandise trade (exports and imports), compared to a trade surplus ratio in 1990 of 7%. 2005 exports stood at €88 billion (5% up from 2004), and 2005 imports at €56 billion (up 11% from 2004).

In contrast to the recent slowdown in merchandise exports, Ireland’s services exports have continued to grow rapidly. Ireland had a 2.2% share of world services exports in 2004 but only a 0.3% share of the world economy, illustrating the openess of the Irish economy to services trade. Service exports now comprise an estimated 34% of total exports, which is comparable to UK (34%) and US (30%) levels. Computer Services comprises the largest services export category (comprising 35% of the total), while Financial, Insurance, and general business services exports are other very important categories. According to WTO statistics, Ireland is ranked 13th in the world in exports of commercial services.

These export trends have seen Ireland surpass Belgium as the most export-oriented EU member state. In 2005, exports of goods and services stood at 80% and 96% respectively of GDP and GNP. Apart from the Benelux region these export/GDP ratios are substantially higher than the EU export/GDP norm of 20-30%.

According to WTO statistics for the year 2004, Ireland ranks as the 23rd largest exporter in the world. Ireland was ranked 22nd in 2002. Ireland vies each year with Belgium and Singapore as the leading non-oil exporting country on a per capita basis. Ireland's per capita exports are over seven times those of the USA, six times those of Japan, and over four times those of the UK.

These trade statistics have been driven by massive expansion in the countrys manufacturing base, an estimated 85% of which is exported. The key export driver has been foreign owned manufacturing, an estimated 95% of whose output is exported (with Intel, Dell, and Microsoft together accounting for approximately 20% of Irish exports). In large part because of the role of MNCs, the share of high-technology products in Ireland's exports, at 41%, is the highest in Europe. The attraction of Ireland for foreign owned manufacturers is not the small domestic market but the advantageous business environment from which to export. Globally, foreign investment is now more important than traditional exporting as a means of accessing foreign markets, and has proved to be the primary basis of Ireland's export expansion.

The export propensity of Irish owned manufacturers is considerably lower, at an estimated 43% of sales, indicating a much greater reliance on the domestic market. This is not too dissimilar to the pattern found in other countries. In recent years, as an alternative to direct exporting, Irish owned firms have begun supplying foreign markets through the establishment of foreign-based subsidiaries, notably in the US, UK, and Central European markets.

Indigenous exports grew by 7.2% in 2005 to €10.7billion, compared to a growth of 3% in overall exports. For the first time, indigenous exports out preformed exports from the multi-national sector. Exports to Northern Europe in 2005 were €6.2billion (+6.4%), Americas €1.2billion (13.6%) and Asia €564million (+14.6%). The Software, Services and Emerging Sectors grew by 9.1% to €1.3billion, Industrial and Lifesciences Sector by 8.5% to €2.2billion and the Food and Retail Consumer Sector by 6.4% to €7billion.

The most notable change in recent years in Ireland's trade profile has been the displacement of the UK by the USA as Ireland's leading export market. In 2005, the US market accounted for 18.7% of Irish exports, compared to a 17% UK share. The UK share has been declining year by year, and the current 17% share contrasts sharply with the 55% share it held in 1973, the year Ireland joined the EEC. Ireland's trade balance with the UK moved into deficit for the first time in 2004, reflecting increased UK penetration of the retail and other sectors. The UK now accounts for 31% of Irish imports, compared to a 26% other EU shareand a 14% US share.

The growth in exports to the USA has been striking – as recently as 1990 it accounted for only 9% of Irish exports. Proportionately the USA is now a much more significant export market for Ireland than for any individual EU state other than the UK. The third largest export market, Germany, takes 7.5% of exports. The US share has been driven by the operations of US owned businesses in Ireland. Exports to the EU are nevertheless steadily increasing, and (excluding the UK), the EU 25 accounted for 46% of Irish exports in 2005 compared to 21% in 1973.

The steady growth in the EU market has to a degree been overshadowed by more dramatic growth in exports to the USA. China is also now emerging as a significant force. Imports from China increased by 33% in 2005 (28% in 2004), and China is now the fourth largest source of imports, after the UK, the USA, and Germany.

A range of new initiatives (trade missions, stronger representation etc.) are now underway as part of an Asia Strategy in recognition of the importance of China and Asia generally to Ireland's longer term trade future.

Inward Investment

Inward investment has played a critical role in Ireland's economic development, providing tens of thousands of jobs, disseminating technological know-how and expertise within the wider economy, linking up with indigenous industry, boosting productivity, and underpinning export growth. Adoption of international best practices by Irish firms, improvements in the skill levels of Irish workers, and exposure to leading edge technologies are some of the benefits from foreign direct investment (FDI) in the Irish economy. Reinvested earnings (as opposed to greenfield investment) is the most important source of inflows, and is testament to the continued profitability of doing business in Ireland. New FDI is increasingly accounted for by firms already located in Ireland that are expanding or modernising their operations. According to the OECD, the cumulative stock of FDI invested in Ireland in 2004 stood at 125% of GDP, by far the highest ratio of any of the OECD countries, except Luxembourg.

Between one third and one half of Ireland's FDI, on average, is invested in Dublin's International Financial Services Centre. This investment category covers movements of capital by foreign owned companies to their financial subsidiaries based in the IFSC, mostly to be invested in overseas assets. The IFSC was established in 1987 and now ranks as one of the leading locations worldwide for international banking, insurance, and investment funds. It employs approximately 16,000 people, and is host to more than half the worlds top 20 insurance companies and to more than half the worlds 50 largest banks. The IFSC is also central to the 15-year master plan for the regeneration of the Dublin docklands, and the projected generation of 40,000 jobs in the wider area. The total value of Irish domiciled funds exceeded $500 billion for the first time in 2004, compared to a figure of $21 billion in 1995. The total net asset value of all funds serviced in Dublin (including non-domiciled funds) reached $768 billion in 2004 and is now on track to soon reach the trillion dollar level.

Another distinctive feature of Ireland's FDI is the very high share accounted for by the USA. US investment in Ireland exceeds €61 billion, and there are almost 500 US companies based here (approximately half of all foreign companies), directly employing over 90,000 people. Ireland ranks fourth worldwide as the most attractive market for US manufacturing investment, after Canada, the UK, and the Netherlands. On a per capita basis, Ireland has twice as much US FDI stock as the UK. At the sectoral level, Ireland is the biggest location worldwide for US FDI in the information sector and 4th worldwide in chemicals. A feature of US FDI is that it is concentrated in manufacturing, unlike much of EU sourced FDI, which is concentrated either within the IFSC or in services such as retailing or banking. The attraction of Ireland to US investment is based on solid business fundamentals. According to the US Bureau of Economic Analysis (2003), the rate of return for US owned companies in Ireland from 1995-2002 averaged 20%, the highest in Western Europe, compared to 14.6% for the Netherlands (the second highest) and 7.6% for the UK.

US investment continues to grow. For example, during 2005 more than 20 new investment projects were announced, including investments from global leaders such as Yahoo and Amazon. The result of this inward investment has been the creation of an export-oriented and high-skilled industry sector, concentrated in high technology manufacturing (electronics, health care and pharmaceuticals) and in internationally traded services (software, telemarketing, financial services and shared corporate services). Key FDI dominated sectors include the following:

- *Pharmaceuticals:* Currently 13 of the top 15 world pharmaceutical companies have substantial operations in Ireland, and 6 out of the 10 of the world's top selling drugs are produced here (including Lipitor and Zocor). Exports exceed €35 billion annually and over 17,000 people are directly employed. Companies based here include Wyeth, Schering-Plough, Merck Sharpe and Doehme, Pfizer, Novartis, Allergan, and GlaxoSmith Kline.

- *Information and Communications Technology:* 7 of the worlds top 10 ICT companies have a substantial presence in Ireland, including IBM, Intel, Hewlett Packard, Dell, Oracle, Lotus, and Microsoft. Direct employment exceeds 45,000, and exports are over €21 billion annually.

- *Medical Technologies:* 15 of the worlds top 25 Medical Technologies companies are based in Ireland, including Boston Scientific, Becton Dickinson, Bausch and Lombe, Abbott, Johnson & Johnson, and Stryker. Exports are over €4 billion annually and direct employment is in excess of 22,000.

The competition for international investment is intense, and with the emergence of the countries of Central and Eastern Europe, as well as Asia, the options have increased. Nevertheless, Ireland is still holding its own; for example, for the years 2002-2003, levels of FDI into Ireland were equivalent to the totals attained by the 10 member Central and Eastern European bloc (averaging $25 billion annually). There has been a slowdown in 2004, with the 2004 inflow standing at less than half the 2003 inflow. In terms of number of new projects and number of new jobs, the trend is still upward. Increasingly, it is the quality rather than the quantity of new jobs that is being emphasised.

Thus, Ireland continues to attract leading edge investments. For example, the new €1.8 billion Wyeth Biopharma Campus near Dublin is the largest biotechnology campus developed as a single project aywhere in the world. While Ireland is no longer a low cost location, the movement of industry up the value chain has protected the investment base, and losses have been limited, largely confined to the ICT sector.

Outward Investment

Unusually for a developed country, the stock of FDI invested in Ireland is over three times the amount of FDI that Ireland has invested abroad. Outward investment by Irish firms and residents began to increase in the late 1990's, albeit from a very low historic base. This is a pattern consistent with that of other economies as they move to higher stages of economic development. While the pace of internationalisation still lags the EU average, it is accelerating. Thus, the FDI outflow of €12.7 billion recorded for 2004 (which excludes property related investments) is the largest ever recorded, and marks the first year that FDI outflows from Ireland exceeded FDI inflows. Notable areas include the hotel, construction, food and energy sectors. At around 40%, the stock of outward FDI as a percentage of Irish GDP is broadly in line with the average of other EU countries.

Traditionally, Irish investments have been concentrated in the UK and in more recent years the USA, and together these two destinations are estimated to account for around 55% of the total. A recent trend has been an increasing level of expansion by Irish owned companies in the new EU accession states, in sectors such as electronics, construction, banking, and ICT. This outward flow is seen as complementary and even essential to the viability of their Irish operations.

Studies of the outward direct investment phenomenon show it has positive benefits for the whole economy, with exports of finished goods being replaced by exports of headquarters services to foreign affiliates. Outward investment also boosts trade, technology transfer, and integration into global production networks, and is a catalyst for movement into higher value added activities. It marks a significant evolutionary stage in the development of the Irish economy and its integration into the global economy.

Population, Labour Force, and Employment

Since the 1970's, Ireland's population has been on an increasing trend, which is a remarkable turnaround for a country that struggled with population decline and high levels of emigration for decades. The population now stands at just over 4.2 million, its highest level in 130 years. The current 2% annual rate of population increase is the highest in the EU. This is being driven by high levels of immigration and natural increase, and along with increased levels of female labour force participation, has helped to boost the labour supply to its highest level ever, at over 2 million people (during the 1990's Ireland's labour force expanded at five times the EU rate). Currently the population is expanding at approximately over 80,000 persons per year, and is a crucial factor in sustaining the high levels of economic growth.

Compared to the rest of Europe, Ireland has a markedly younger population profile, with over 40% of the popoulation under the age of 25. The proportion of the population aged over 65 is the lowest in Europe, as is the overall dependency ratio (the proportion of the population aged under 15 and over 65). Within the EU 15 group, Ireland has the proportionally largest economically active age group (16 to 64). The youthful demographic profile underpins the future labour supply, and by 2010 (according to UN projections), under 25s as a share of the population will stand at 32.8% in Ireland, compared to the projected average for all of Europe of 27.9%. By 2020, these proportions are respectively projected at 31.8% and 26.3%.

Immigration is now a significant factor in Ireland's expanding population and labour supply and is averaging approximately 70,000 annually. Foreign nationals are now estimated to account for almost 10% of the total population (although half of these are UK nationals). The last few years have registered noticeably high levels from the new EU accession states of Central and Eastern Europe, to whom Ireland has adopted a liberal entry policy. More than one third of immigrants (38%) in the year to April 2005 came from the new EU accession states, with the majority from Poland and Lithuania (another 27% were returning Irish immigrants). This source of labour is proving to be a vital competitive factor for many Irish companies and sectors, particularly in the tourism and hotel sector, in manufacturing, in information technology, and in fruit and vegetable harvesting. Out-migration for work and educational experience continues to be popular with younger Irish people, averaging between 15-20,000 annually. This has historically been a source of future return migration and an important channel of transmission of skills and experience acquired abroad.

Continued growth in the labour supply, allied to steady productivity growth, underpins Ireland's medium term growth projections. Productivity growth in Ireland averaged over 3% annually during the 1990's, and productivity growth in manufacturing was even higher, averaging 8% per annum. This was by far the highest in Europe, and almost double that of the USA, at 4.3%. This productivity growth was largely driven by the MNC sector. These high productivity levels are illustrated in the following table.

% Population under 25 by the year 2015

Ireland	USA	France	UK	Germany	Spain	Europe
31.8	33.4	31.2	29.1	25.3	24.4	26.3

United Nations Secretariat 2004

Labour Productivity 2004 – GDP(PPP) per person employed per hour (US$)

Ireland	USA	France	UK	Germany	Spain	Europe
48.73	43.22	36.17	35.01	33.23	19.58	18.95

IMD World Competitiveness Yearbook 2005

These combined labour market and productivity effects considerably enhanced Ireland's international competitiveness in the late 1990's, when unit wage costs fell to approximately half of our major trading partners. However, the resurgence in the euro, and strong recent wage pressures, are posing a new competitive threat, particularly in the UK and US markets. For example, from a position of parity with the UK in 1995, Irish labour costs fell to 76% of UK levels over the following five years, broadly equivalent to the shift in UK-Irish exchange rates. Since then however, the combination of wage inflation and euro strength has brought about approximate parity. A substantial labour cost differential with the USA has also been narrowed, with Irish labour costs now estimated to be 90% of US levels. A 40% differential with the eurozone area has been reduced to an estimated 20% differential. The narrowing of these differentials is of particular significance for the indigenous sector, which is particularly dependent on the UK, and which would have difficulty achieving the productivity increases needed to fully offset the impact on unit labour costs.

Education and Training

Education and Training is a vital component of Ireland's knowledge-based economy, and is a priority investment under the National Development Plan. The NDP 2000-2006 provided for a total investment of €12.6 billion (1999 prices) in employability and training measures, covering such areas as early education, third level access, skills development, and apprenticeships. Public expenditures overall on education have increased by 150% since 1985.

The growth in tertiary education in Ireland has been extraordinary with the age participation rate rising from 11% in 1965 to an estimated 57% in 2003 and in numbers from about 21,000 in 1965 to over 137,000 by 2003. The number of third level students has increased by 105% between 1990/91 and 2003/04. Ireland was one of the first European countries to grasp the economic importance of education (OECD) and economic studies have suggested that this upskilling of the labour force accounts for almost 1% per annum of additional national output over the last decade or so. The proportion of 25-34 year olds that have attained tertiary education now stands at 37%, compared to an EU average of 27% and a US average of 40%. Although concerns exist over meeting future demands for graduates in science, technology and engineering, nevertheless, according to the EU Education Report, Ireland has a much higher proportion of graduates in mathematics, science and technology per 1000 inhabitants in the 20-29 age group, 23.2% compared to the EU average 9.3%. Ireland produced over 48,000 graduates in 2004, and of these, almost 57% are graduates with qualifications in Engineering, Computer Software, Business Studies and Science.

The IMD World Competitiveness Yearbook 2005 has ranked Ireland's education system second from 60 countries surveyed for meeting the needs of a competitive economy.

Over the last ten years, the number of full time students in third level education has increased by almost 80%, while the number of full time students in technical/technological institutions has more than doubled. Ireland ranks fourth in the OECD in terms of the increase in third level education enrolments since 1995. The output of computer graduates has increased from 500 in 1996 to almost 2,000 currently, roughly equivalent to the total output of software graduates in Germany.

Public Expenditure on all levels of Education relative to GDP (2001)

Ireland	Denmark	Germany	UK	USA	Sweden	EU	OECD
4.1%	6.8%	4.3%%	4.7%	5.1%	6.3%	5.0%	5.0%

Source: OECD 2004

The apprenticeship system has been transformed from one based on time served to a standards based programme with better-qualified entrants. Major initiatives include the funding of 14,000 new post-secondary places (at the Institutes of Technology); the creation of 4,000 new engineering and computer software places; a new three-year programme to boost science and research; and the launch of a new Education Technology Investment Fund.

Demographic factors have reinforced these trends. Thus, the shift of the population structure from generations born in the 1930's to those born in the 1960's and 1970's, who have a much higher level of educational attainment, is having a significant effect. For example, while only 30% of the population in the 55 to 64 age group has completed secondary education, the corresponding figure for the 25 to 34 age group is 66%. That increase, an indicator of changing human capital, is well above the OECD average.

Taxation

A tax burden that is relatively low by international standards has also been a factor in Ireland's economic growth. The OECD has estimated Ireland's share of tax revenues as a percentage of GDP at 28% (2003), the lowest within the EU15 grouping, which averages around 40%. The adoption of low tax rate policies by many EU accession states is in part based on the example of Ireland's economic success. The reduced tax burden has been achieved through both income and corporate tax reductions. The standard rates of personal income tax now stand at 20% and 42%.

Ireland also offers a highly attractive corporate tax environment. The corporate tax rate has been progressively reduced, and from January 1 2003, a rate of 12.5% has applied to trading profits in all sectors, including manufacturing and international services. Notwithstanding the low rate, corporate tax receipts still account for on average 15% of total tax revenues.

Innovation and R&D

Although Ireland's expenditures on R&D as a proportion of GDP are still well below the EU and US averages, Ireland did start from a very low level of research intensity and since the 1990's has increased its expenditures substantially, e.g. at 5.9% per annum in the period 1992-1997 and at 12.3% per annum in the period 1997-2002.

Ireland's R&D intensity (expenditures as a percentage of GDP) currently stands at 1.2%, compared to an EU 25 average of 1.9% (compared to the US level of 2.6% and Japan of 3.2%). The Lisbon 2010 target is 3%. However, because of the expenditure growth that has been occurring, the ratio of expenditures to GDP has been increasing at 7.3% annually in the period 2001-04, which compares very favourably to the average rate of growth within the EU of 1.3%.

The new political priority was reflected in the National Development Plan for 2000-2006 where €2.5 billion was allocated to research, technology, innovation and development, a five-fold increase compared to the period 1994-1999. Specific initiatives included the establishment of Science Foundation Ireland with a mission to establish a world class research capability in niche areas of ICT and biotechnology, by funding people and programmes achieving excellence in research quality. The research supported has to have strategic relevance for the economy. SFI's research funding has gradually increased from €10 million in 2001 to €121 milion in 2005. SFI is playing a major role in helping to internationalise the Irish research system, both by attracting people to work in Ireland, and facilitating and

2005 Corporation Tax Rates

Ireland	Belgium	Netherlands	UK	Germany	Poland	Slovakia	Cyprus
12.5%	34%	31.5%	30%	26%	19%	19%	10%

Deloitte and Touche 2005

encouraging international associations. The Higher Education Authority, through the Programme for Research in Third Level Insitutions (PRTLI) is the other major source of research funding in Ireland. Under the NDP 2000-2006, both the SFI and the HEA were allocated over €600 million each to fund their respective activities.

At the enterprise level, this research strategy is complemented by initiatives such as the Innovation Partnership Fund of Enterprise Ireland which supports collaboration between Irish companies and third level colleges in carrying out commercially oriented research.

In June 2006, a new strategy for Science, Technology and Innovation was announced, involving an investment of €3.8 billion over the next seven years. Five main areas of the economy will be opened up for hugely enhanced R&D – agri-food, marine industries, energy, healthcare and the environment. While the government is committed to raising its investment in this area, Ireland will be only able to approach the Lisbon 2010 target of 3% if industry shoulders two thirds of the cost as is the case in the most developed economies. This will require a growing readiness among multinational firms to undertake R&D on their Irish sites (so far only one quarter are active R&D performers) as well as a greater investment among indigenous Irish companies.

Recent analyses of Ireland's strengths and weaknesses indicated that Ireland appears to do relatively well in terms of the number of science graduates in the labour force (first in the EU), the share of manufacturing value added that is designated high-tech (first in the EU), and the level of home internet access (seventh in the EU). It does less well in terms of the number of patents per million of population (11th in the EU), R&D expenditure as a percentage of GDP (10th in the EU), and government funded R&D as a percentage of GDP (last in the EU).

E-Commerce and the New Economy

The Irish government has moved decisively to integrate Ireland into the e-commerce age. Steps taken include public policy initiatives aimed at strengthening competition in the telecommunications market; a substantial investment programme in broadband infrastructure; and introduction of one of the most e-commerce friendly regulatory environments in Europe.

The completion of two major transatlantic fibre-optic cable projects in 2001 has provided first-rate broadband connectivity to the USA (and the UK) at very low prices to companies operating from Ireland. These infrastructure investments are part of the medium-term aim to move Ireland along the path of becoming a major eBusiness hub in Europe and are proving to be a decisive factor for many companies choosing to locate in Ireland.

Within Ireland, a €250 million investment has been earmarked under the National Development Plan to promote the countrywide uptake of e-commerce and Internet use. This initiative is designed to push Ireland into the top ten of OECD countries for broadband connectivity. High-speed Internet access is being rolled out to a first phase of 67 towns within the next five years. The plan is to subsequently extend this to all 190 towns in the State with a population of over 1,500. The aim is for Ireland to be the first country in Europe to have such level of broadband service widely available, and to substantially improve on some of the rankings Ireland is currently weak. Ireland's current broadband penetration rate of 4% is one of the lowest in the EU (ranked at 19th out of 25), andis well below penetration rates averaging 18% in the leading countries of Netherlands and Denmark. Ireland is also ranked low in online business to business transactions, and numbers of secure web servers for e-commerce.

To complement the infrastructure developments, the Irish government has also undertaken initiatives to foster a supportive e-business environment. Thus, in 2002, the European Commission identified Ireland as the strongest performer in the EU in the area of e-government (e.g. in areas such as on-line tax revenue filing). State agencies are also active, with Enterprise Ireland establishing an e-Business Accelerator fund to fast track significant scale projects designed to integrate ICT's into business practices.

In the regulatory sphere, a significant step forward was the passing of the Electronic Commerce Act, which came into force in 2000. This Act affords legal recognition to electronic transactions and encrypted digital signatures and paves the way for a range of services to be available over the Internet. It will allow the development of a safe and secure on-line trading environment within Ireland, supporting business and consumer transactions on line, facilitating the development of eCommerce in Ireland, and demonstrating Ireland's internet friendly environment.

Ireland - the Global Economy

Ireland's emergence as a global and entrepreneurial economy is a development regularly featured in international research reports. For example, a 2003 report on the Attractiveness of Offshore Locations by international consultants AT Kearney concluded that Ireland had the highest degree of economic integration of the over 60 countries studied, and is now the world's most globalised economy. A 2004 report by the same source ranked Ireland first in Europe in terms of its business environment and in terms of people and skills availability.

In a similar vein, the 2006 Index of Economic Freedom, compiled by the Wall Street Journal and the Heritage Foundation, ranked Ireland as the third most liberal economy of 157 countries surveyed. This report also stated that Ireland has one of the world's most pro-business environments, and that Ireland's policy framework promotes an open and competitive business environment.

Similarly, a recent report by the Global Entrepreneurship Monitor rated Ireland as one of the best countries in the world in which to start a business, level with the USA, and second in Europe (after Iceland). The Economist Intelligence Unit has also ranked Ireland as one of the most attractive business locations in the world. The World Bank 'Doing Business in 2005' report ranked Ireland the 15th best location in the world for doing business.

In the global growth competitiveness survey published by the World Economic Forum (based on a poll of 11,000 business leaders), Ireland was ranked 26th in 2005, up from 30th position in 2004 (Finland has been ranked 1st for the last 4 years and five Nordic countries feature in the top 10). Ireland performed strongly in terms of the macroeconomic environment and the quality of public institutions, but less strongly in terms of the levels of technological readiness and innovation. This survey uses a range of criteria – taxation, infrastructure, macroeconomy and communications – to rank countries in terms of their growth prospects over the next 5-8 years. Ireland's ranking on the complementary Business Competitiveness Index improved from 22nd in 2004 to 19th in 2005, attributable to improved ratings for the sophistication of company operations and strategy and in the qualiy of the national business environment. Notwithstanding the improvement, Ireland still lags behind a number of other EU nations – e.g. Sweden, Austria, and Denmark – in this survey.

Irish Economy 2005

Real GDP Growth	4.7%
Real GNP Growth	5.4%
Employment Growth	4.6%
Unemployment Rate	4.4%
Inflation (CPI)	2.5%
Debt/GDP	28%
GDP	160 Billlion
GNP	135 Billion
Labour Force	2,015,000
Employed	1,980,000
Population (April 06)	4.2 Million
Natural increase	32,000
Net In-Migration	46,000