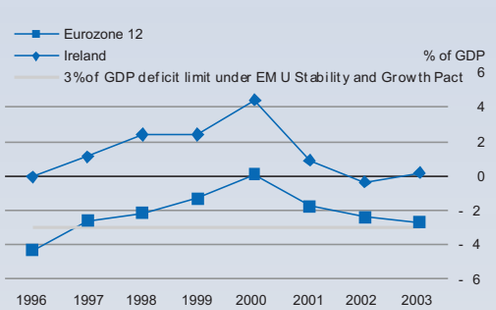
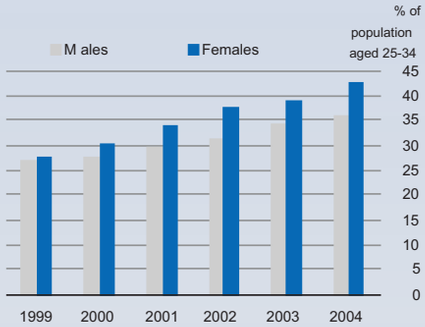
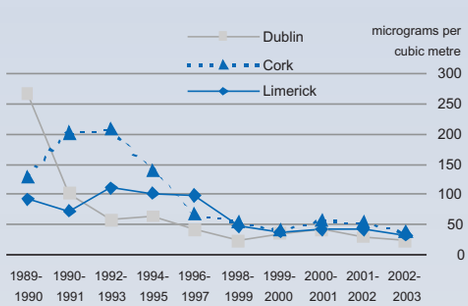
Central Statistics Office
IRELAND

Measuring Ireland's Progress

2004







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Contents

Preface

In December 2003, in response to a specific request in *Sustaining Progress*, the CSO published an initial set of national progress indicators. Feedback was invited from users as an input into the preparation of subsequent reports. The main feedback received was that the publication should be repeated, if possible on an annual basis. The timing of this second publication has been delayed by three months to include more up-to-date international data which are often only available 12-15 months after the end of a year.

From the feedback received, it would appear that the policy debate has been greatly facilitated by the initial report. Bringing together in one report a diverse set of key indicators for all EU countries was appreciated by our users. A similar approach was also followed in another recent publication, *Women and Men in Ireland 2004*.

The current report is very similar to the previous publication, with only minor changes to the set of indicators. Data have been included for five additional countries (Iceland, Norway, Switzerland, Bulgaria and Romania) whenever they were available.

Internationally, there has been an increasing level of interest in national progress indicators and a high-level OECD conference in Palermo in November 2004 was devoted to this topic. There was considerable interest in the Irish experience at this conference.

We would welcome feedback on this report as input into the 2005 report.

Donal Garvey
Director General

Chapter 1

Introduction

1.1 Introduction

This chapter briefly reviews the background leading to the preparation of national progress indicators reports and the role of the social partners and the National Statistics Board (NSB) in requesting this work. The chapter also presents an overall summary of the selected indicators.

1.2 Background to indicator report

The social partnership agreement 2003-2005[1] requested the CSO to support a move towards more evidence-based policy-making by developing a set of national progress indicators. In its report, *Developing Irish Social and Equality Statistics to meet Policy Needs*, the NSB asked the CSO to prepare a preliminary national progress indicators report[2]. It was intended that this initial report would facilitate discussions between the main users and producers of key economic and social statistics with a view to reaching consensus on the most appropriate set of indicators to determine whether target national economic and social outcomes are being achieved.

The NSB reiterated the need for a key national progress indicators report in its *Strategy for Statistics 2003-2008*[3]. The Board requested that the selected indicators should be consistent with international statistical concepts and facilitate international benchmarking.

In response to this request, a preliminary set of national progress indicators was published in December 2003. Volume 1 of the report presented the selected indicators in both a national and international context. Volume 2 gave an overview of existing national and international reports and provided a context for the initial selection of indicators.

This report presents an updated set of national progress indicators. The report will be updated annually.

1.3 Overview of selected indicators

The list of national progress indicators is presented in summary format in Table A. A total of 108 indicators covering 48 domain themes have been selected. Around 57 per cent of these relate principally to social domains (3 to 9), reflecting the emphasis on societal outcomes as the ultimate aim of policy measures. The other indicators cover the economy, innovation and the environment.

Most indicators are presented in both a national and international context. The national context is generally in a time series format while the international context compares Ireland with other EU countries.

Based on feedback received and developments in data availability, a small number of changes have been made to the initial set of indicators published in 2003. A new indicator on social protection expenditure has been added to the social cohesion section. The section on poverty rates has been revised to include data from a new EU Survey on Income and Living Conditions (EU SILC). Most indicators have been updated with more recent data, however in a few cases no updates were available. Two indicators on housing ownership at EU level and household composition have been removed from the list of indicators due to issues around data availability, quality and clarity of meaning. The total number of indicators remains the same as in the 2003 report.

1.4 Structure of report and brief technical notes

Chapter 2 presents the selected indicators. In cases where tables are not sorted by year, the sort data column is highlighted with a darker background. The appendices describe the indicator definitions and data sources in greater detail.

In many tables, both GDP and GNI data have been given for Ireland because Ireland is almost unique in the EU in the wide divergence between GDP and GNI. As far as possible international tables include an aggregate figure for the 25 EU Member States. In some cases, where this figure was not available, an

[1] Department of the Taoiseach (2003): *Sustaining Progress, Social Partnership Agreement 2003-2005.*
[2] Recommendation 10.
[3] NSB (2003), *Strategy for Statistics, 2003-2008*, Stationery Office, Dublin.

aggregate figure for the 15 countries who were EU members prior to May 2004 is used. These figures are labelled EU 25 or EU 15 as appropriate. The term EU in the commentary refers to the 25 Member States unless otherwise specified.

The national and international data sources are given for each indicator. Most of the national data are compiled by the CSO. In some cases, the survey name more widely used at EU level is quoted, for example, the QNHS is referred to as the EU Labour Force Survey (LFS).

The figures in the tables and graphs reflect the data availability position as at early March 2005.

Table A Selected key indicators of national progress

Domain and sub-domain	Indicator	
Economy		
Gross Domestic Product	1.1	Ireland: GDP and GNI, 1994-2003
	1.2	EU: GDP and GNI at current market prices, 2003
	1.3	EU: GDP per capita in Purchasing Power Standards, 2001-2003
Government debt	1.4	Ireland, EU and Eurozone: General government consolidated gross debt, 1995-2004
	1.5	EU: General government consolidated gross debt, 2001-2003
Public balance	1.6	Ireland and Eurozone: Public balance, 1996-2003
	1.7	EU: Public balance, 2001-2003
	1.8	Ireland: Central and Local Government current expenditure, 1994-2003
Gross fixed capital formation	1.9	Ireland and EU: Gross fixed capital formation, 1994-2003
	1.10	EU: Gross fixed capital formation, 2001-2003
International transactions	1.11	EU: Current account balance, 2001-2003
	1.12	EU: Direct investment flows, 2003
International trade	1.13	EU: Exports of goods and services, 2001-2003
	1.14	EU: Imports of goods and services, 2001-2003
Exchange rates	1.15	International: Bilateral euro exchange rates, 1999-2004
	1.16	Ireland: Trade weighted competitiveness indicator, 1999-2004
Interest rates	1.17	Eurozone: Convergence of interest rates for loans to non-financial corporations up to one year, 1995-2004
	1.18	Eurozone: Interest rates for short-term loans (new business) to non-financial corporations, 2003-2004
	1.19	Eurozone: Interest rates for bank overdraft facilities for non-financial corporations, 2004
Harmonised Index of Consumer Prices	1.20	Ireland and EU: Harmonised Index of Consumer Prices, 1996-2004
	1.21	EU: Harmonised Index of Consumer Prices, 2002-2004
Price levels	1.22	Ireland and EU: Comparative price levels of final consumption by private households including indirect taxes, 1994-2003
	1.23	EU: Comparative price levels of final consumption by private households including indirect taxes, 2001-2003
Innovation and technology		
Science and technology graduates	2.1	Ireland: Science and technology graduates, per 1,000 population aged 20-29, 1994-2003
	2.2	EU: Mathematics, science and technology PhDs awarded per 1,000 population aged 25-34, 2000-2002
Research and development expenditure	2.3	Ireland and EU: Gross domestic expenditure on R&D, 1994-2003
	2.4	EU: Gross domestic expenditure on R&D, 1993-2003
Patent applications	2.5	Ireland and EU: European Patent Office applications, 1993-2002
	2.6	EU: European Patent Office applications, 2002
Household internet access	2.7	Ireland: Private households with internet access, 1998-2004
	2.8	EU: Private households with internet access, 2002-2004
Employment and unemployment		
Employment rate	3.1	Ireland: Employment rates, 1995-2004
	3.2	EU: Employment rates by sex, 2004
Labour productivity	3.3	Ireland: GDP and GNI in PPS per hour worked and per person employed, 1994-2003
	3.4	EU: GDP in PPS per person employed, 2003
Unemployment rate	3.5	Ireland and EU: Unemployment rates, 1995-2004
	3.6	EU: Unemployment rates by sex, 2004
	3.7	Ireland and EU: Long-term unemployment rates, 1994-2003
	3.8	EU: Long-term unemployment rates by sex, 2003
Jobless households	3.9	Ireland: Population aged 18-59 living in jobless households, 1995-2004
	3.10	EU: Population aged 18-59 living in jobless households, 2002-2004
Older workers	3.11	EU: Employment rate of workers aged 55-64 by sex, 2003
	3.12	EU: Average exit age from the labour force by sex, 2002
Social cohesion		
Social protection expenditure	4.1	Ireland and EU: Social protection expenditure, 1994-2002
	4.2	EU: Expenditure on social protection, education and health, 2001

Domain and sub-domain	Indicator	
Risk of poverty	4.3	EU: At risk of poverty rates, 2003
	4.4	Ireland: At risk of poverty rates by age and sex, 2003
	4.5	Ireland: Persons in consistent poverty by age and sex, 2003
	4.6	Ireland: Persons in consistent poverty by principal economic status, 2003
Gender pay gap	4.7	Ireland and EU: Gender pay gap, 1994-2003
	4.8	EU: Gender pay gap, 2001-2003
Voter turnout	4.9	Ireland: Numbers voting in Dáil elections, 1973-2002
	4.10	EU: Votes recorded at national parliamentary elections, 1981-2003
Official development assistance	4.11	Ireland: Net official development assistance, 1994-2003
	4.12	EU: Net official development assistance, 2001-2003
Education		
Education expenditure	5.1	Ireland: Real non-capital public expenditure on education, 1998-2003
	5.2	Ireland: Student numbers by level, 1994-2003
	5.3	EU: Public expenditure on education, 1999-2001
Pupil-teacher ratio	5.4	EU: Ratio of students to teachers, 2001/2002
	5.5	EU: Average class size at ISCED levels 1 and 2, 2001/2002
Third level education	5.6	Ireland: Persons aged 25-34 with 3rd level education, 1999-2004
	5.7	EU: Persons aged 25-34 with 3rd level education by sex, 2004
Literacy	5.8	Ireland: Student performance on the combined reading, mathematical and scientific literacy scales by sex, 2003
	5.9	EU: Student performance on the combined reading, mathematical and scientific literacy scales, 2003
Early school leavers	5.10	Ireland: Early school leavers by labour force status and sex, 2004
	5.11	Ireland: Proportion of the population aged 20-64 with at least upper secondary education, 2004
	5.12	EU: Early school leavers, 2004
Health		
Health care expenditure	6.1	Ireland: Non-capital public expenditure on health care, 1994-2003
	6.2	EU: Total expenditure on health as percentage of GDP, 2000-2002
Life expectancy	6.3	Ireland: Life expectancy at birth and at age 65 by sex, 1925-2003
	6.4	EU: Life expectancy at birth by sex, 2002
Population		
Population distribution	7.1	Ireland: Population distribution by age group, 1995-2004
	7.2	Ireland: Household composition, 1995-2004
	7.3	EU: Population change, 1995-2004
Migration	7.4	Ireland: Migration and natural increase, 1995-2004
	7.5	Ireland: Immigration by country of origin, 1995-2004
	7.6	Ireland and EU: Rate of natural increase of population, 1994-2003
Age of population	7.7	Ireland: Age dependency ratio, 1995-2004
	7.8	EU: Young and old as proportion of population aged 15-64, 2003
Fertility	7.9	Ireland and EU: Total fertility rate, 1994-2003
	7.10	EU: Total fertility rate, 1993-2003
Lone parent families	7.11	Ireland: Lone parent families with children aged under 20 by sex of parent, 1995-2004
Living alone	7.12	Ireland: Persons aged 65 and over living alone by sex, 1995-2004
Housing		
Dwelling completions	8.1	Ireland: Dwelling unit completions, 1994-2003
	8.2	Ireland: Nature of occupancy of private households, 1961-2002
Mortgages	8.3	Ireland: New housing loans, 1994-2003
	8.4	Eurozone: Interest rates for household mortgages (new business), 2003-2004
Crime		
Headline offences	9.1	Ireland: Headline offences detection rates by Garda Division, 2001-2003
	9.2	Ireland: Headline offences recorded by Garda Division, 2003
	9.3	Ireland: Headline offences recorded, 2000-2003
Homicides	9.4	Ireland: Homicides recorded, 1970-2003
	9.5	EU: Homicide rate per 100,000 population, 2000-2002

Domain and sub-domain	Indicator	
Environment		
Greenhouse gases	10.1	Ireland: Total net greenhouse gas emissions, 1994-2003
	10.2	EU: Net greenhouse gas emissions, 2002, and Kyoto 2008-2012 target
Energy intensity of economy	10.3	Ireland: Gross inland consumption of energy at constant 1995 prices, 1994-2003
	10.4	EU: Gross inland consumption of energy at constant 1995 prices, 2002
River water quality	10.5	Ireland: River water quality, 1987-2000
Urban air quality	10.6	Ireland: Smoke concentrations in urban areas, 1989-2003
Acid rain precursors	10.7	Ireland: Acid rain precursor emissions, 2001-2003
	10.8	Ireland: Acid rain precursor emissions, 1994-2003
Waste management	10.9	Ireland: Total waste collected and percentage landfilled by type, 2001-2003
	10.10	EU: Municipal waste collected and landfilled, 2003
Transport	10.11	Ireland: Private cars under current licence, 1994-2003
	10.12	EU: Passenger cars per 1,000 population aged 15 and over, 2000-2002
	10.13	Ireland and EU: Share of road in total inland freight transport, 1994-2003
	10.14	EU: Share of road in total inland freight transport, 2001-2003
	10.15	Ireland and EU: Index of inland freight transport volume, 1994-2003
	10.16	EU: Index of inland freight transport volume, 2001-2003

Chapter 2

Indicators

2.1 Commentary

This section gives an overview of Ireland's situation in respect of the economic, social and environment statistical indicators in comparison with other EU countries. More detailed commentary on the individual indicators can be found in Section 2.2.

Key findings include:

- In 2003, Ireland had the second highest GDP per capita, expressed in terms of purchasing power standards within the EU. However, based on GNI, Ireland falls back to joint ninth place with France at 11% above the EU average.

- Investment in Ireland in Gross Fixed Capital Formation (GFCF) increased by 43% over the period 1994-2003. In each year since 1997, Ireland has invested a higher proportion of GDP in GFCF than the EU average.

- Ireland remains one of the most successful EU states at attracting foreign investment, with direct inward investment flows representing 17% of GDP in 2003. The corresponding Eurozone 12 figure was just 1.7% of GDP.

- Ireland's international trade competitiveness has deteriorated since 2000, mainly due to higher inflation and an appreciating euro. Cumulative inflation in Ireland over the period 2000-2004 was 16% compared to an EU 25 average of 9%. Over the same period, the euro increased in value against the dollar by 17%.

- The employment rate in Ireland rose from 54% in 1995 to 65.5% in 2004. The rate for women increased by over 14 percentage points over that period, while the rate for men rose by around 9 percentage points. Productivity in Ireland, measured as GDP per person employed, was the third highest in the EU in 2003.

- The unemployment rate in Ireland increased from a low point of 3.6% in 2001 to 4.4% in 2004. However, Ireland still had the second lowest unemployment rate in the EU in 2004 at less than half of the EU 25 average. The long-term unemployment rate was 1.5% in 2003, which was considerably better than the EU average of 4%.

- The employment rate of persons aged 55-64 was higher than the EU average in 2003. However only 33.4% of women in Ireland in this age group were in employment compared to 64.7% of men.

- The proportion of Irish people at risk of poverty, after pensions and social transfer payments were taken into account, was 21% in 2003. This was one of the highest rates in the EU. The effect of pensions and social transfers on reducing the at-risk-of-poverty rate was low in Ireland compared with other EU countries. In 2001, social protection expenditure in Ireland was 15.3% of GDP. This was half of the rate in Sweden and the lowest of the then 15 EU countries.

- Over 9% of men and women in Ireland were in consistent poverty in 2003. Unemployed people were most likely to be in consistent poverty.

- Ireland's net official development assistance amounted to 0.39% of GNI in 2003. This was below both the UN 2007 target of 0.7% of GNI and the interim Irish Government 2002 target of 0.45% of GNI.

- Non-capital public expenditure on education per student rose by 31.8% during 1998-2003, after allowing for inflation. Most of the increased expenditure was directed towards primary and secondary education.

- An average of €1,441 (at constant 1995 prices) per person was spent on non-capital public expenditure on health care in Ireland in 2003. This represented an increase of 86.7% on the 1994 level.

- The pupil-teacher ratio at primary level in Ireland in the school year 2001/2002 was one of the highest in the EU at 19.5. Just over half of all EU states had a pupil-teacher ratio of less than 15 at primary level.

- In 2003, 15 year old girls displayed much higher reading literacy proficiency than boys of the same age in Ireland. However, boys performed better in mathematical literacy both in Ireland and across OECD countries.

- Early school leavers represented 12.9% of the 18-24 age group in Ireland in 2004. The unemployment rate for early school leavers in this age group was 21.8% in 2004 compared with an unemployment rate of 7.9% for all persons aged 18-24.

- The population in Ireland increased by 12.3% to over 4 million persons in the period 1995-2004. This was the second highest rate of increase in the EU behind Cyprus and was significantly higher than the EU 25 growth of just 2.2%. The fertility rate in Ireland remained the highest in the EU in 2003, at a rate of 1.98 compared to an EU average of 1.48.

- Life expectancy at birth was 80.3 years for Irish women and 75.1 years for Irish men in the period 2001-2003. Life expectancy for men in Ireland was slightly above the EU average of 74.8 years but that for women was 0.8 years below the corresponding EU figure of 81.1 years.

- Ireland's greenhouse gas emissions were at 131% of 1990 levels in 2001. This was 16% higher than the Kyoto 2008-2012 target for Ireland of 113% of 1990 levels. The situation improved in the period 2002-2003 with emissions decreasing to a level of 124.7% of 1990 levels or 10.4% above the Kyoto target in 2003.

- The percentage of waste landfilled in Ireland decreased from 87% in 2001 to 72% in 2003. Paper and glass were the materials most likely to be recycled with 39% of paper waste and 42% of glass waste recycled in 2003.

2.2 Indicators

1.1 Ireland: GDP and GNI, 1994–2003

	€b		%	€000
Year	**GDP**	**GNI**	**GNI as % of GDP**	**GNI at constant (1995) prices per capita**
1994	46.4	42.8	92.1	12.4
1995	52.5	47.6	90.5	13.2
1996	57.9	52.8	91.2	14.2
1997	67.0	60.2	89.8	15.3
1998	77.6	69.1	89.0	16.3
1999	89.5	77.3	86.4	17.5
2000	103.1	89.1	86.5	19.0
2001	115.4	97.9	84.8	19.5
2002	128.0	105.9	82.7	19.5
2003	134.8	112.9	83.8	19.7

Source: CSO National Accounts

- In 2003, the GNI figure for Ireland was 83.8% of the GDP figure. This was higher than the 82.7% recorded in 2002 but considerably lower than the 92.1% in 1994. The situation in Ireland is exceptional among EU countries, with Luxembourg the only other country where the difference between GDP and GNI is more than 10% of GDP (see Tables 1.1 and 1.2). The gap reflects the importance of foreign direct investment to the Irish economy.

- After Luxembourg, with a GDP/GNI ratio of 88.5, the next five lowest EU countries had ratios in the range 93.7 to 98.3. These were all new EU Member States (see Table 1.2).

1.2 EU: GDP and GNI at current market prices, 2003

	€b		
Country	**GDP**	**GNI**	**GNI as % of GDP**
Belgium	269.5	274.7	101.9
United Kingdom	1,591.4	1,622.3	101.9
Malta[4]	4.3	4.3	101.5
France	1,557.2	1,560.1	100.2
Greece	153.0	153.0	100.0
Sweden	267.3	267.2	100.0
Latvia	9.9	9.8	99.8
Slovak Republic[4]	28.8	28.7	99.6
EU 25	**9,755.4**	**9,704.3**	**99.5**
Denmark	188.0	186.5	99.3
Germany	2,128.2	2,114.2	99.3
Slovenia	24.6	24.4	99.3
Cyprus[4]	11.6	11.5	99.0
Italy	1,300.9	1,286.9	98.9
Spain	744.8	734.7	98.7
Portugal	130.5	128.8	98.7
Finland	143.3	141.4	98.7
Netherlands	454.3	447.7	98.6
Austria	226.1	222.7	98.5
Poland	185.2	182.0	98.3
Lithuania	16.3	15.7	96.6
Czech Republic	80.1	76.4	95.4
Hungary	73.2	69.5	94.9
Estonia	8.0	7.5	93.7
Luxembourg	24.0	21.2	88.5
Ireland	**134.8**	**112.9**	**83.8**
Switzerland[4]	284.9	292.8	102.8
Norway	195.4	196.6	100.6
Romania	44.9	44.6	99.3
Bulgaria[4]	17.7	17.2	97.5
Iceland	9.4	9.1	97.3

Source: Eurostat, CSO National Accounts

[4] Forecast.

1.3 EU: GDP per capita in Purchasing Power Standards, 2001–2003

EU 25=100

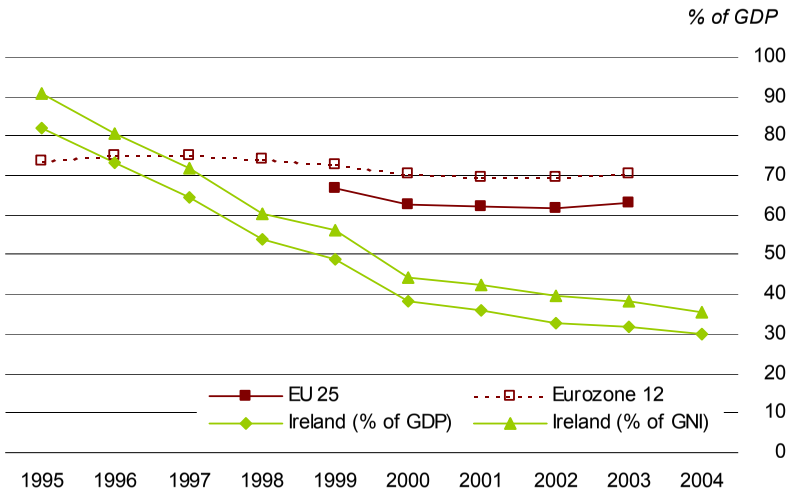
Country	2001	2002	2003
Luxembourg	213.3	212.6	214.7
Ireland (GDP)	**129.5**	**132.6**	**132.5**
Denmark[5]	126.3	122.5	122.6
Austria	124.4	122.7	122.2
Netherlands	124.2	122.0	121.0
United Kingdom[5]	115.1	117.8	118.5
Belgium	117.3	116.7	117.8
Sweden[5]	116.4	114.8	115.2
Finland	114.1	113.7	113.7
France	114.8	112.9	111.0
Ireland (GNI)	**109.8**	**109.7**	**111.0**
Germany	110.1	108.7	108.1
Italy[5]	109.6	109.0	106.9
EU 25	**100.0**	**100.0**	**100.0**
Spain[5]	92.3	94.6	97.8
Cyprus	88.8	82.9	81.3
Greece	73.8	77.7	80.9
Slovenia	74.8	75.3	76.8
Portugal	77.2	76.7	74.7
Malta	74.6	73.8	73.8
Czech Republic	66.1	67.6	68.8
Hungary	56.4	58.6	60.5
Slovakia	48.9	51.3	52.1
Estonia	44.8	46.6	48.5
Poland	45.9	45.6	46.0
Lithuania	40.8	42.4	45.8
Latvia	37.4	38.9	41.0
Norway[5]	158.2	149.5	147.7
Iceland[5]	125.3	119.8	118.7
Bulgaria[5]	28.6	28.8	29.7
Romania	26.7	28.6	29.6

Source: Eurostat, National Accounts

- In 2003, Ireland had the second highest GDP per capita, expressed in terms of purchasing power standards within the EU. However, based on GNI, Ireland falls back to joint ninth place with France at 11% above the EU average (see Table 1.3).
- The new EU Member States were all well below the EU 25 average in 2003. However, most of them improved even over the short period shown in the table (see Table 1.3).

[5] Forecast for 2003.

1.4 Ireland, EU and Eurozone[6]: General government consolidated gross debt, 1995–2004



Source: Eurostat, CSO

- General government consolidated gross debt as a percentage of GDP fell sharply in Ireland from 82% to just under 30% over the 1995-2004 period. (see Graph 1.4).
- Ireland had a low debt/GDP ratio compared to other EU countries at around half of the EU average in 2003 (see Table 1.5).
- With the exception of Cyprus and Malta, the new EU Member States generally had very low debt to GDP ratios in 2003 (see Table 1.5).

1.5 EU: General government consolidated gross debt, 2001–2003

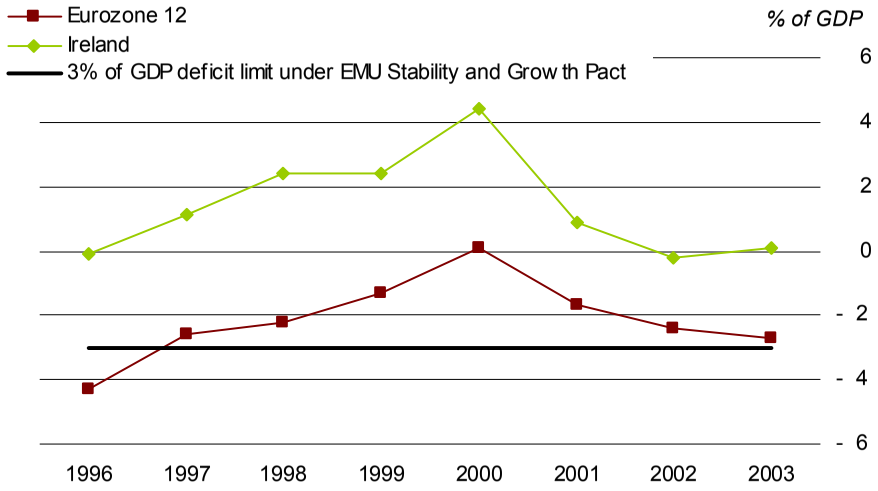
% of GDP

Country	2001	2002	2003
Estonia	4.4	5.3	5.3
Luxembourg	5.5	5.7	5.4
Latvia	14.9	14.1	14.4
Lithuania	22.9	22.4	21.6
Slovenia	28.1	29.5	29.5
Ireland (% of GDP)	**35.8**	**32.6**	**32.0**
Czech Republic	25.3	28.8	37.8
Ireland (% of GNI)	**42.3**	**39.4**	**38.2**
United Kingdom	38.8	38.3	39.8
Slovak Republic	48.7	43.3	42.6
Poland	36.7	41.1	45.4
Finland	43.8	42.6	45.6
Denmark	49.2	48.8	45.9
Spain	57.5	54.4	50.7
Sweden	54.4	52.6	52.0
Netherlands	52.9	52.6	54.1
Hungary	53.5	57.2	59.1
Portugal	55.8	58.4	60.3
EU 25	**62.1**	**61.6**	**63.3**
France	56.5	58.8	63.7
Germany	59.4	60.9	64.2
Austria	67.1	66.6	65.1
Eurozone 12	**69.5**	**69.4**	**70.7**
Cyprus	64.3	67.4	70.9
Malta	62.2	62.7	71.1
Belgium	108.1	105.8	100.7
Italy	110.6	107.9	106.2
Greece	114.7	112.5	109.9
Romania	23.2	23.3	21.8
Norway	29.2	35.7	42.0
Bulgaria	66.2	53.2	46.2

Source: Eurostat, CSO National Accounts

[6] Eurozone 11 and Greece up to 31 December 2000, Eurozone 12 from 1 January 2001.

1.6 Ireland and Eurozone: Public balance, 1996–2003



Source: Eurostat, CSO National Accounts

- The public balance in Ireland was significantly in surplus during the late 1990s. Over the period 2000-2003, the public balance decreased from a surplus of 4.4% of GDP to a small surplus of 0.1% of GDP (see Graph 1.6 and Table 1.7).

- In 2003, four Eurozone member states exceeded the 3% of GDP deficit limit under the EMU Stability and Growth Pact (France, Germany, United Kingdom and the Netherlands). Estonia had the highest public balance surplus (3.1%) in 2003 of EU countries. Norway showed a much higher surplus than any EU state in the period 2001-2003 (see Table 1.7).

1.7 EU: Public balance, 2001–2003

% of GDP

Country	2001	2002	2003
Estonia	0.3	1.4	3.1
Finland	5.2	4.3	2.3
Luxembourg	6.4	2.8	0.8
Belgium	0.6	0.1	0.4
Spain	-0.4	-0.1	0.4
Denmark	2.0	0.7	0.3
Sweden	2.8	0.0	0.3
Ireland (% of GDP)	**0.9**	**-0.2**	**0.1**
Ireland (% of GNI)	**1.1**	**-0.2**	**0.1**
Austria	0.3	-0.2	-1.1
Latvia	-2.1	-2.7	-1.5
Lithuania	-2.0	-1.5	-1.9
Slovenia	-2.8	-2.4	-2.0
Italy	-2.6	-2.3	-2.4
Eurozone 12	**-1.7**	**-2.4**	**-2.7**
EU 25	**-1.2**	**-2.3**	**-2.8**
Portugal	-4.4	-2.7	-2.8
Netherlands	-0.1	-1.9	-3.2
United Kingdom	0.7	-1.7	-3.3
Slovak Republic	-6.0	-5.7	-3.7
Germany	-2.8	-3.7	-3.8
Poland	-3.8	-3.6	-3.9
France	-1.5	-3.2	-4.1
Greece	-3.7	-3.7	-4.6
Hungary	-4.4	-9.2	-6.2
Cyprus	-2.4	-4.6	-6.4
Malta	-6.4	-5.9	-9.7
Czech Republic	-5.9	-6.8	-12.6
Norway	13.6	9.1	8.3
Bulgaria	0.2	-0.8	-0.1
Romania	-3.5	-2.0	-2.0

Source: Eurostat, CSO National Accounts

1.8 Ireland: Central and Local Government current expenditure, 1994–2003

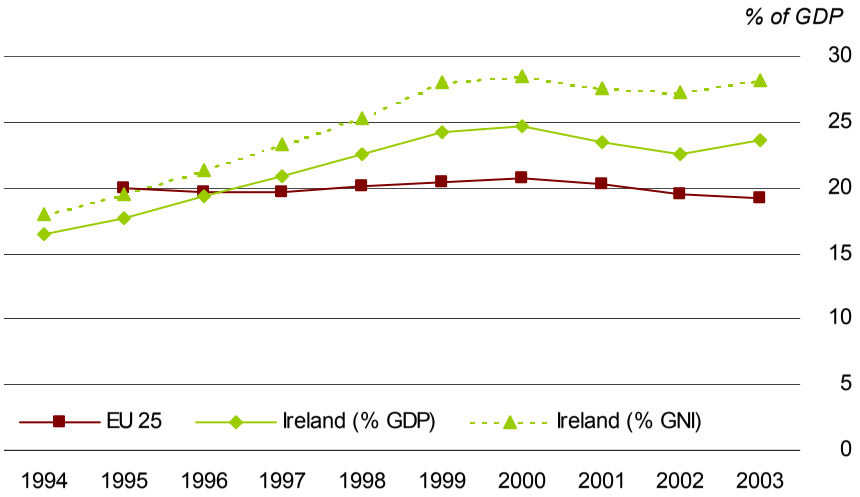
%

Year	% of GDP	% of GNI
1994	38.4	41.7
1995	35.6	39.3
1996	34.1	37.4
1997	31.7	35.3
1998	29.6	33.3
1999	27.1	31.3
2000	25.8	29.9
2001	26.6	31.4
2002	27.3	33.0
2003	28.0	33.4

Source: CSO National Accounts

- Current expenditure by central and local government decreased from 38.4% of GDP in 1994 to 28% in 2003 and from 41.7% to 33.4% when measured as a percentage of GNI, reflecting Ireland's strong economic growth over the period (see Tables 1.1 and 1.8).

1.9 Ireland and EU: Gross fixed capital formation, 1994–2003



Source: Eurostat, CSO

- Since 1997, Ireland has had a higher rate of investment in gross fixed capital formation than the EU 25 average. The gap narrowed briefly in the period 2000-2001 but increased again in 2003 with a figure of 23.6% of GDP for Ireland compared to an EU average of 19.2% (see Graph 1.9 and Table 1.10).

- Five of the countries that joined the EU in 2004 had higher fixed capital investment rates relative to GDP than Ireland in 2003 (see Table 1.10).

1.10 EU: Gross fixed capital formation, 2001–2003

% of GDP

Country	2001	2002	2003
Estonia	27.0	28.7	28.4
Ireland (% of GNI)	**27.8**	**27.1**	**28.2**
Czech Republic	27.6	26.6	26.6
Slovak Republic	28.8	27.6	25.8
Greece	23.8	23.9	25.7
Spain	25.3	25.2	25.6
Latvia	25.1	24.1	24.4
Slovenia	24.5	23.3	23.9
Ireland (% of GDP)	**23.4**	**22.6**	**23.6**
Portugal	27.1	25.0	22.6
Hungary	23.5	23.4	22.3
Austria	22.0	20.8	21.5
Lithuania	20.2	20.4	21.4
Malta	21.0	15.0	20.7
Netherlands	21.7	20.7	20.1
Denmark	20.3	20.6	20.0
Luxembourg	22.8	21.9	19.8
EU 25	**20.3**	**19.5**	**19.2**
France	20.1	19.4	19.2
Italy	19.7	19.8	19.1
Belgium	20.9	19.5	18.9
Finland	20.5	18.9	18.4
Poland	20.7	19.0	18.3
Germany	20.3	18.6	17.8
Cyprus	17.1	18.2	17.2
United Kingdom	16.6	16.4	16.3
Sweden	17.4	16.7	15.8
Romania	20.7	21.3	22.5
Iceland	22.2	18.7	21.5
Switzerland	22.2	21.5	21.0
Bulgaria	18.2	18.3	19.6
Norway	18.3	17.7	16.7

Source: Eurostat, CSO National Accounts

1.11 EU: Current account balance, 2001–2003

current account balance as % of GDP

Country	2001	2002	2003
Luxembourg	:	11.8	8.2
Belgium	:	9.3	7.6
Sweden	4.4	5.3	6.4
Finland	7.1	7.6	4.2
Netherlands	3.2	2.9	3.3
Denmark	3.0	2.0	2.7
Germany	0.1	2.2	2.3
France	1.7	1.0	0.3
EU 25	**-0.8**	**0.1**	**0.0**
Slovenia	0.2	1.4	-0.4
Austria	-1.9	0.3	-0.5
Slovak Republic	-8.4	-8.0	-0.9
Ireland	**-0.7**	**-1.3**	**-1.4**
Italy	-0.1	-0.8	-1.4
United Kingdom	-2.3	-1.7	-1.7
Poland	-2.9	-2.7	-2.0
Spain	-2.8	-2.4	-2.8
Cyprus	-3.3	-4.5	-3.5
Malta	-4.2	-2.0	-5.6
Portugal	-9.9	-7.3	-5.7
Czech Republic	-5.4	-5.7	-6.1
Greece	-8.0	-7.3	-6.4
Lithuania	-4.7	-5.2	-6.9
Latvia	-7.7	-6.6	-8.2
Hungary	-6.2	-7.2	-9.0
Estonia	-5.6	-10.2	-13.2
Iceland	-4.4	-0.3	:
Norway	15.4	12.9	13.1
Bulgaria	-7.3	-5.6	-8.5
Romania	-5.5	-3.3	-5.7

Source: Eurostat, CSO Balance of Payments

- Ireland had a small, but increasing, current account deficit in our balance of international payments over the period 2001-2003 (see Table 1.11).
- Eight of the EU member states had current account surpluses in 2003 (see Table 1.11).

1.12 EU: Direct investment flows, 2003

% of GDP

Country	Inward	Outward
Luxembourg	341.5	-373.7
Ireland	**17.7**	**-2.3**
Belgium	10.3	-12.0
Estonia	9.9	-1.6
Cyprus[7]	9.1	-2.4
Malta	6.1	-0.4
Netherlands	3.8	-7.4
Spain	3.0	-2.8
Czech Republic	2.9	-0.3
Austria	2.9	-2.8
France	2.7	-3.3
Latvia	2.7	-0.3
Hungary	2.7	-2.0
Poland	2.1	-0.2
Finland	2.0	1.6
Slovak Republic	1.8	0.0
Eurozone 12	**1.7**	**-1.8**
Denmark	1.4	-0.6
Slovenia	1.2	-1.7
United Kingdom	1.2	-3.7
Italy	1.1	-0.6
Lithuania	1.0	-0.2
Sweden	0.8	-5.5
Portugal	0.7	-0.1
Germany	0.5	-0.1
Greece	:	:
Bulgaria	7.1	-0.1
Romania	3.2	-0.1
Iceland[8]	1.4	-2.1
Norway	0.9	-1.1

Source: Eurostat, CSO Balance of Payments

- Direct investment in Ireland by foreign companies represented 17.7% of GDP in 2003. Apart from Luxembourg, this rate of investment was considerably higher than in any of the other EU countries. Outward investment by companies resident in Ireland into their foreign subsidiaries and associates was around one-eighth of the level of inward investment (see Table 1.12 and Appendix 1).

[7] 2001 data.
[8] 2002 data.

1.13 EU: Exports of goods and services, 2001–2003

exports as % of GDP

Country	2001	2002	2003
Luxembourg	:	138.7	133.6
Belgium	:	101.1	97.7
Ireland	**98.4**	**93.5**	**83.7**
Malta	81.4	82.1	78.2
Slovak Republic	72.5	70.9	77.3
Estonia	83.9	74.1	75.0
Netherlands	70.8	69.3	68.7
Czech Republic	66.4	61.4	62.4
Hungary	72.8	64.1	62.1
Slovenia	57.6	57.6	56.5
Austria	51.9	52.3	51.9
Lithuania	50.1	53.1	51.8
Cyprus	56.2	50.9	46.7
Denmark	47.5	47.5	45.6
Sweden	45.6	44.7	44.0
Latvia	41.6	41.0	42.2
Finland	40.2	38.7	37.2
Germany	35.5	36.2	36.4
EU 25	**37.1**	**36.6**	**35.9**
Poland	27.7	29.6	34.4
Portugal	30.7	30.0	30.2
Spain	30.1	28.9	28.1
France	28.3	27.3	26.1
United Kingdom	27.4	26.2	25.4
Italy	27.7	26.3	24.7
Greece	25.6	22.3	21.3
Bulgaria	53.3	51.7	53.7
Norway	45.4	43.9	44.2
Romania	33.4	35.4	36.3
Iceland	40.7	39.7	:

Source: Eurostat, CSO Balance of Payments

♦ Exports of merchandise goods and services from Ireland were 98.4% of GDP in 2001. By 2003, the value of exports from Ireland represented a significantly lower 83.7% of GDP. Exports represented slightly more than one-third of EU 25 GDP over the period 2001-2003 (see Table 1.13).

1.14 EU: Imports of goods and services, 2001–2003

imports as % of GDP

Country	2001	2002	2003
Italy	26.3	25.4	24.3
France	26.7	25.6	25.2
United Kingdom	30.2	29.2	28.3
Greece	35.1	30.8	28.6
Spain	31.5	30.0	29.5
Finland	31.7	30.1	31.0
Germany	33.6	32.0	32.2
EU 25	**36.2**	**35.1**	**34.6**
Portugal	41.0	37.9	36.6
Poland	31.4	33.0	36.9
Sweden	39.5	37.8	37.0
Denmark	40.9	41.7	39.3
Cyprus	54.5	52.1	48.3
Austria	51.6	50.3	50.7
Latvia	51.7	51.1	55.0
Slovenia	58.3	56.1	56.5
Lithuania	55.4	58.7	57.6
Netherlands	65.8	65.3	63.5
Czech Republic	68.9	63.5	64.6
Hungary	74.3	66.5	66.8
Ireland	**83.4**	**77.0**	**68.2**
Slovak Republic	80.4	77.8	78.5
Estonia	87.4	81.2	83.0
Malta	86.6	83.8	83.7
Belgium	:	93.1	90.5
Luxembourg	:	115.4	112.3
Iceland	41.5	37.8	:
Norway	28.4	30.1	30.3
Romania	41.1	41.0	44.0
Bulgaria	62.0	59.0	63.2

Source: Eurostat, CSO Balance of Payments

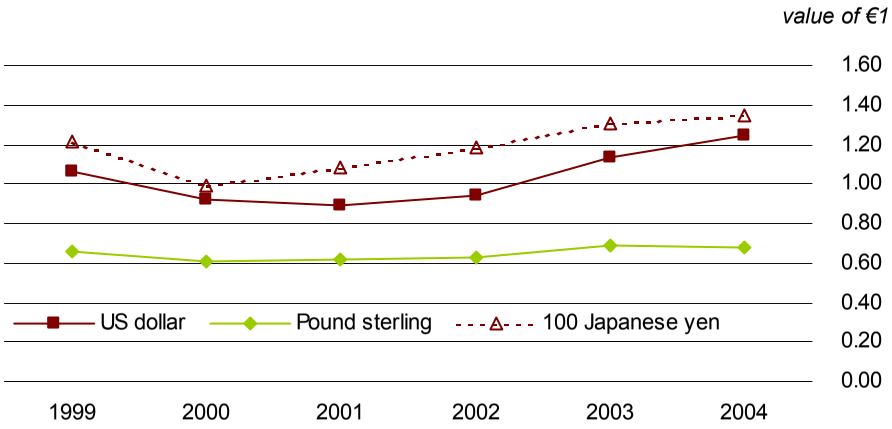
♦ Imports of goods and services into Ireland decreased from 83.4% of GDP in 2001 to 68.2% in 2003. The EU average for imports was around 35% of GDP for the same period (see Table 1.14).

1.15 International: Bilateral euro[9] exchange rates, 1999–2004

value of €1

Year	US dollar	Pound sterling	Japanese yen
1999	1.066	0.659	121.3
2000	0.924	0.609	99.5
2001	0.896	0.622	108.7
2002	0.946	0.629	118.1
2003	1.131	0.692	131.0
2004	1.244	0.679	134.4

Source: European Central Bank



1.16 Ireland: Trade weighted competitiveness indicator, 1999–2004

1999Q1=100

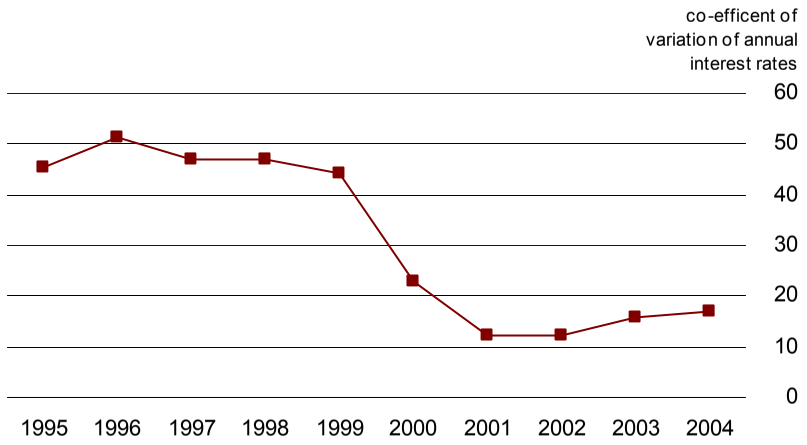
Year	Nominal TWCI	Real TWCI (Deflated by consumer prices)	Real TWCI (Deflated by producer prices)
1999	97.2	98.0	98.0
2000	90.7	94.8	94.8
2001	91.4	97.5	97.3
2002	93.4	102.8	101.8
2003	100.4	113.2	108.8
2004	102.1	115.7	107.7

Source: Central Bank, Financial Services Authority of Ireland

- The euro initially decreased in value against the US dollar by 16% between its introduction in 1999 and 2001 but then appreciated by almost 40% over the following three years to stand at 17% above the 1999 value in 2004. A broadly similar pattern was observed in respect of the movements of the euro against the Japanese yen (see Table 1.15 and graph).
- The relationship between the euro and the pound sterling has been much more stable over the period (see Table 1.15 and graph).
- Ireland's trade weighted competitiveness improved from 97.2 in 1999 to 90.7 in 2000 before slipping in the period 2001-2004, mainly due to higher inflation and an appreciating euro (see Tables 1.15, 1.16 and Graph 1.20).

[9] On 1 January 1999, the euro became the national currency of the 11 participating EU countries. Greece joined the euro currency on 1 January 2001.

1.17 Eurozone: Convergence of interest rates for loans to non–financial corporations up to one year, 1995–2004



Source: Eurostat, European Central Bank

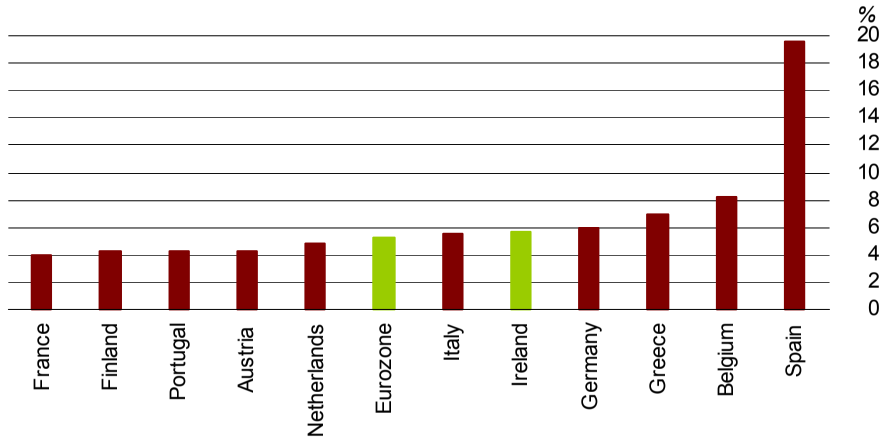
1.18 Eurozone: Interest rates for short–term loans (new business) to non–financial corporations, 2003–2004

interest rate[10,11]

Country	2003		2004	
	Loans of value up to €1m	Loans of value greater than €1m	Loans of value up to €1m	Loans of value greater than €1m
Austria	3.98	3.04	3.48	3.03
Netherlands	3.68	2.91	3.51	2.95
Finland	3.68	2.99	3.54	2.98
France	3.21	2.91	3.60	2.67
Spain	3.89	2.94	3.74	2.87
Belgium	3.81	2.90	3.80	2.91
Luxembourg	2.78	3.41	3.91	3.16
Eurozone	**4.03**	**3.12**	**3.98**	**3.05**
Italy	4.06	3.13	4.04	3.00
Ireland	**4.35**	**4.33**	**4.38**	**4.09**
Germany	4.55	3.32	4.50	3.34
Greece	5.13	3.78	5.04	3.77
Portugal	5.63	3.59	5.52	3.53

Source: Eurostat, European Central Bank

1.19 Eurozone: Interest rates for bank overdraft facilities for non–financial corporations, 2004[10,11]

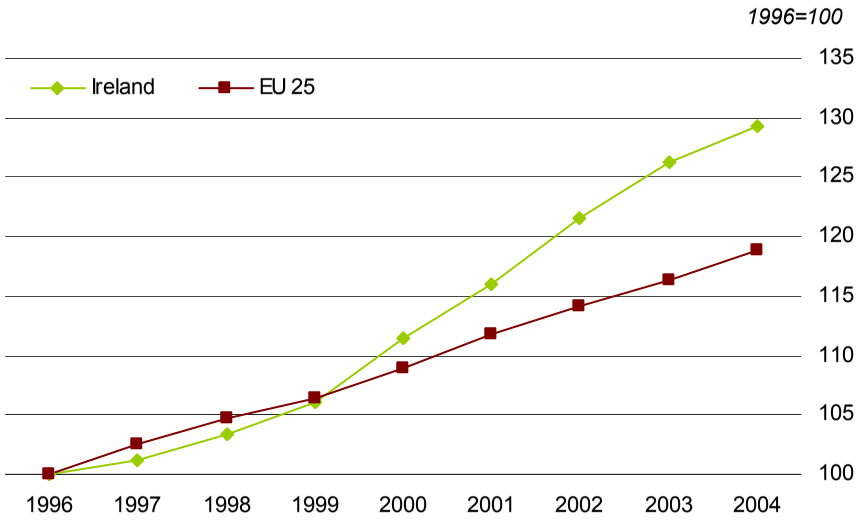


Source: Eurostat, European Central Bank

- Interest rates for loans of up to one year, converged dramatically among the Eurozone countries between 1999 and 2001, but diverged again in the period 2002-2004 (see Graph 1.17).
- In Ireland, variable interest rates and rates fixed for up to one year on new loans to non-financial corporations were at 4.38% for loan amounts of up to one million euro at the end of 2004, which was an increase of 0.03 of one percent on the same time in 2003. In contrast, interest rates on loans of amounts greater than one million euro decreased by 0.24 of one per cent in the same period. However, Ireland still had the highest interest rate among Eurozone countries for loans of this type, compared to a Eurozone average rate of 3.05% (see Table 1.18).
- Interest rates for bank overdrafts to non-financial corporations in Ireland at 5.69% were higher than the Eurozone average of 5.26% in 2004 (see Graph 1.19).

[10] Rates shown are as at end of period.
[11] Rates shown cover both floating (variable) rates and rates fixed for up to one year.

1.20 Ireland and EU: Harmonised Index of Consumer Prices, 1996–2004



Source: Eurostat, CSO

- Inflation in Ireland, as measured by the HICP, has been consistently higher than the EU average since 1999. Cumulative inflation over the period 1996-2004, at 29.2% was ninth highest in the enlarged EU and it was more than 10 percentage points higher than the EU 25 average. As expected, seven of the countries with higher inflation rates than Ireland over the period 1996-2004 had joined the EU in 2004. Lithuania is the only one of the new EU countries with a below average inflation rate (see Table 1.21).

- The inflation index in Bulgaria and Romania in 2004 was 916.8 and 1,830.0 respectively at base 1996 (see Table 1.21).

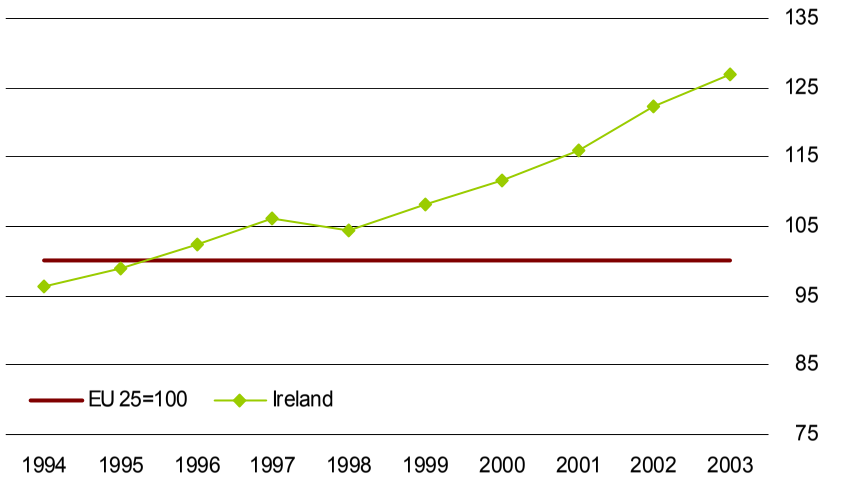
1.21 EU: Harmonised Index of Consumer Prices, 2002–2004

1996=100

Country	2002	2003	2004
Germany	107.6	108.8	110.7
United Kingdom	108.3	109.8	111.2
Austria	108.8	110.2	112.3
France	108.3	110.7	113.3
Sweden	109.7	112.3	113.4
Finland	112.0	113.5	113.7
Belgium	110.7	112.3	114.4
Denmark	113.4	115.6	116.7
Lithuania	118.1	116.9	118.2
Luxembourg	112.1	115.0	118.7
EU 25	**114.1**	**116.3**	**118.8**
Italy	113.8	117.0	119.7
Netherlands	118.2	120.8	122.5
Spain	116.8	120.5	124.1
Cyprus	117.5	122.2	124.5
Malta	119.5	121.8	125.1
Portugal	118.4	122.3	125.3
Ireland	**121.5**	**126.3**	**129.2**
Greece	124.8	129.0	133.0
Latvia	123.5	127.1	135.0
Czech Republic	133.0	132.9	136.3
Estonia	139.4	141.4	145.6
Poland	162.8	164.0	169.9
Slovenia	157.7	166.7	172.8
Slovak Republic	155.5	168.6	181.0
Hungary	187.8	196.6	209.9
Norway	113.9	116.2	116.9
Iceland	123.5	125.2	128.1
Bulgaria	843.8	863.7	916.8
Romania	1,418.9	1,635.5	1,830.0

Source: Eurostat HICP

1.22 Ireland and EU: Comparative price levels of final consumption by private households including indirect taxes, 1994–2003



Source: Eurostat, CSO

- In the first half of the 1990s, price levels in Ireland were below the EU 25 average. Since 1995, Ireland has been relatively more expensive than the EU 25 average and by 2003 our price level was 27% above the EU average. In 2003, Ireland was among the four EU countries with the highest price levels. The other countries in this group were Denmark, Finland and Sweden. The cost of living in Iceland and Norway was on a similar scale to that of Denmark (see Graph 1.22 and Table 1.23).

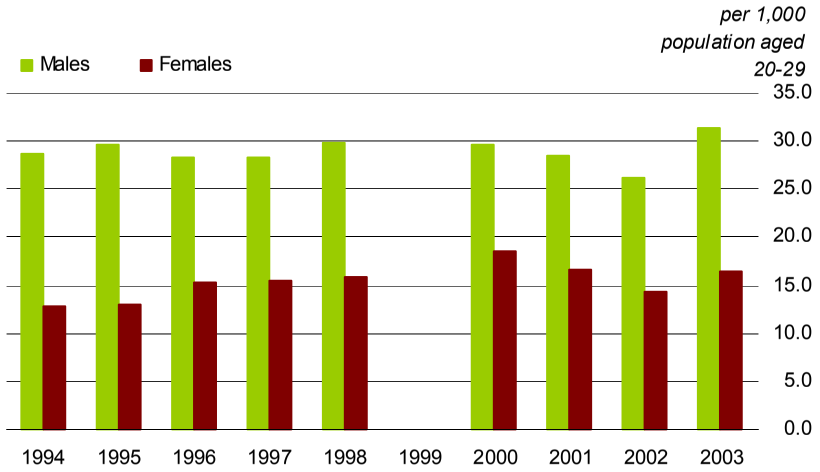
1.23 EU: Comparative price levels of final consumption by private households including indirect taxes, 2001–2003

EU 25=100

Country	2001	2002	2003
Slovakia	44.7	44.6	49.8
Poland	63.0	59.5	53.3
Lithuania	53.1	54.6	54.4
Latvia	58.3	57.6	55.1
Czech Republic	50.4	54.7	55.2
Hungary	52.0	56.9	58.0
Estonia	59.9	62.1	62.2
Malta	75.5	73.7	72.8
Slovenia	73.2	75.5	77.1
Portugal	74.6	76.2	79.5
Greece	84.6	82.2	84.3
Spain	85.1	85.0	85.6
Cyprus	84.0	90.9	93.9
EU 25	**100.0**	**100.0**	**100.0**
Italy	95.5	97.9	102.2
United Kingdom	114.3	110.7	103.2
Belgium	102.8	102.3	103.9
Luxembourg	103.0	102.5	105.3
Netherlands	104.0	105.3	106.6
Austria	102.6	105.2	107.2
France	105.5	106.1	108.2
Germany	107.1	107.5	108.9
Sweden	117.1	121.1	124.3
Finland	122.8	124.4	125.9
Ireland	**116.0**	**122.4**	**127.0**
Denmark	130.7	135.6	139.3
Romania	41.9	41.2	40.5
Bulgaria	39.6	41.6	42.1
Iceland	125.2	133.9	136.3
Norway	137.6	149.4	144.6

Source: Eurostat HICP

2.1 Ireland: Science and technology graduates, per 1,000 population aged 20–29[12], 1994–2003



Source: Eurostat, Department of Education and Science

- Ireland continues to produce considerably more male graduates in science and technology subjects than female graduates. The proportion of male graduates decreased from 29.7 per 1,000 males aged 20-29 in 2000 to 26.1 per 1,000 in 2002 but increased to 31.4 in 2003. The proportion of female graduates per 1,000 females aged 20-29 followed a similar pattern between 2000 and 2002, decreasing from 18.5 to 14.4 but showed a smaller increase to 16.6 in 2003 which was still below the 2000 level (see Graph 2.1).

- The proportion of mathematics, science and technology PhDs awarded in Ireland, at 0.6 per 1,000 population aged 25-34 was slightly higher than the EU average of 0.5 in 2001. The proportion for Ireland dropped to 0.5 in 2002. Sweden had the highest rate (1.4) in 2002 (see Table 2.2). No adjustment has been made for graduates travelling abroad to foreign universities to take their PhDs nor for foreign students taking their PhDs in Ireland.

[12] Data not available for 1999.

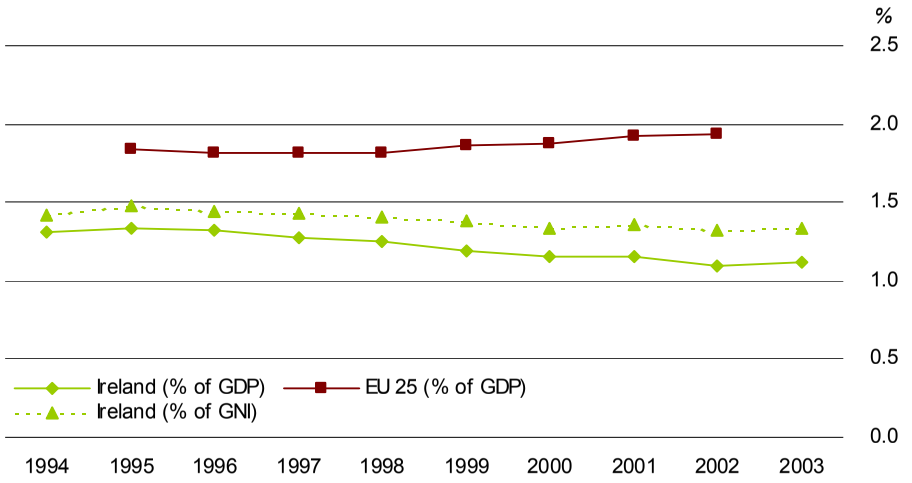
2.2 EU: Mathematics, science and technology PhDs awarded per 1,000 population aged 25–34, 2000–2002

per 1,000 population aged 25-34

Country	2000	2001	2002
Sweden	1.2	1.4	1.4
Germany	0.8	0.8	0.8
United Kingdom	0.7	0.8	0.8
Austria	0.6	0.7	0.7
Portugal	0.5	0.6	0.6
Slovenia	0.4	0.5	0.6
Belgium	0.4	0.5	0.5
Ireland	**0.5**	**0.6**	**0.5**
Czech Republic	0.3	0.4	0.4
Spain	0.3	0.4	0.4
Netherlands	0.3	0.4	0.4
Slovak Republic	0.2	0.3	0.4
Poland	:	0.3	0.3
Estonia	0.2	0.2	0.2
Lithuania	0.3	0.2	0.2
Hungary	0.2	0.1	0.2
Latvia	0.1	0.1	0.1
EU 25	**0.5**	**0.5**	**:**
Denmark	0.5	0.3	:
Greece	:	:	:
France	0.7	0.7	:
Italy	0.2	0.2	:
Cyprus	0.0	0.0	:
Luxembourg	:	:	:
Malta	0.0	0.0	:
Finland	1.0	1.0	:
Switzerland	:	:	1.1
Bulgaria	0.1	0.1	0.1
Iceland	:	:	0.0
Norway	0.1	0.1	0.0

Source: Eurostat, Department of Education and Science

2.3 Ireland and EU: Gross domestic expenditure on R&D, 1994–2003



Source: Eurostat, Forfás

- Ireland spent considerably less on research and development[13] as a percentage of GDP/GNI than most EU countries in the period 1994-2003 (see Graph 2.3).
- Sweden and Finland invested considerably more in R&D relative to GDP in 2003 than any other EU country. The levels of investment in R&D in Iceland increased by almost 50% between 1998 and 2003 (see Table 2.4).

[13] Investment in research and development made outside of Ireland by foreign companies with subsidiaries based in Ireland is not included in the figures for Ireland.

2.4 EU: Gross domestic expenditure on R&D, 1993–2003

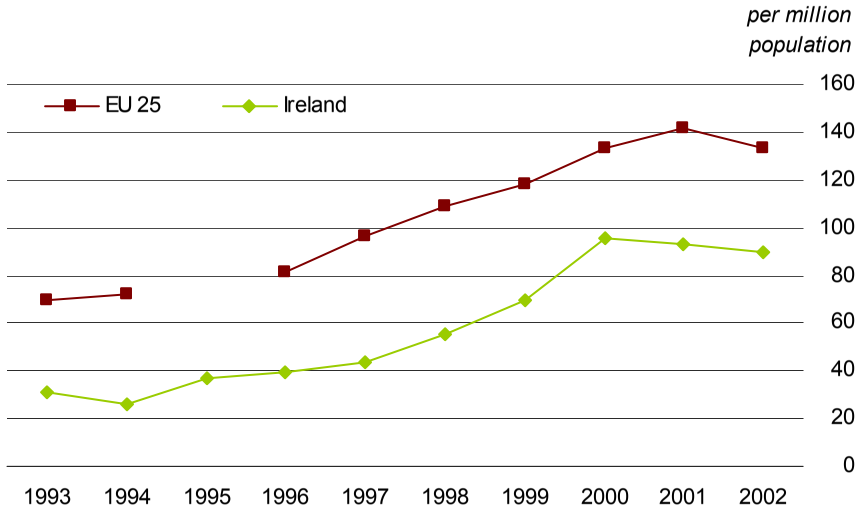
% of GDP

Country	1993	1998	2003
Sweden	2.99	3.62	4.27[21]
Finland	2.18	2.88	3.51
Denmark	1.74	2.06	2.60
Germany	2.33	2.31	2.50
Belgium	1.70[14]	1.90	2.33[15]
France	2.40	2.17	2.19
Austria	1.47	1.78	2.19
EU 25	**1.84**	**1.82**	**1.93**[17]
Netherlands	1.93	1.94	1.89[21]
United Kingdom	2.11	1.81	1.87[17]
Luxembourg	:	:	1.71[16]
Slovenia	1.60	1.39	1.53
Czech Republic	:	1.16	1.35
Ireland (% of GNI)	**1.28**	**1.39**	**1.35**
Italy	1.13	1.07	1.16[17]
Ireland(% of GDP)	**1.17**	**1.25**	**1.12**
Spain	0.88	0.89	1.11
Hungary	0.98	0.68	0.97
Portugal	0.61[18]	0.62[20]	0.79
Estonia	:	0.58	0.77
Lithuania	0.52[19]	0.55	0.68
Greece	0.47	0.51[20]	0.64[21]
Poland	0.65[14]	0.68	0.59
Slovakia	0.90[19]	0.79	0.57
Latvia	0.44	0.41	0.39
Cyprus	:	0.23	0.33
Iceland	1.33	2.07	3.09[17]
Norway	1.72	1.64[20]	1.89
Bulgaria	1.18	0.57	0.50
Romania	:	0.49	0.40

Source: Eurostat

[14] 1995 data.
[15] 2003 data.
[16] 2000 data.
[17] 2002 data.
[18] 1992 data.
[19] 1994 data.
[20] 1997 data.
[21] 2001 data.

2.5 Ireland and EU: European Patent Office applications, 1993–2002

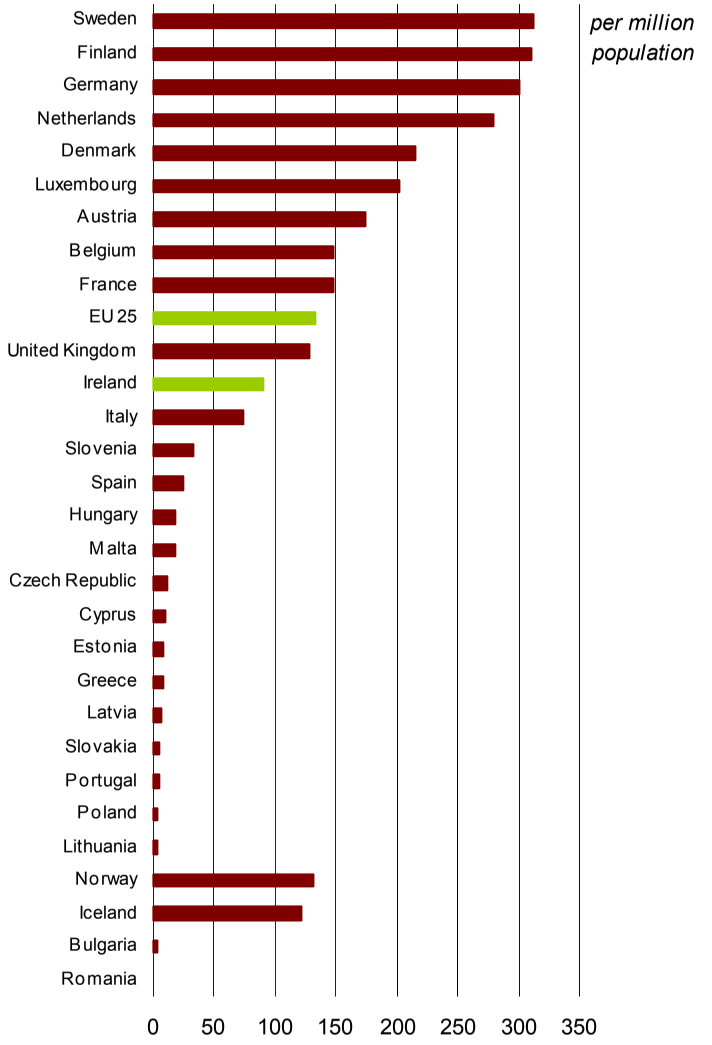


Source: Eurostat, EPO

- There was a significant increase in the number of applications made to the European Patent Office from Ireland during the 1994-2000 period but there was a 6% decrease between 2000 and 2002. Trends in the EU 25 were broadly similar to Ireland over the 1996-2000 period but the number of patent applications at EU level continued to increase in 2001 before decreasing by around 6% in 2002 (see Graph 2.5).

- The number of applications for patents per million inhabitants from Ireland was around two-thirds of the EU average in 2002. Sweden and Finland were over twice the EU average. Among the new EU countries, Slovenia had the highest rate (see Graph 2.6).

2.6 EU: European Patent Office applications, 2002



Source: Eurostat, EPO

2.7 Ireland: Private households with internet access, 1998–2004

Households	1998	2000	2003	2004
Households connected to the internet (000s)	61.2	266.0	463.2	537.0
% of all households	5.0	20.5	33.5	38.2

Source: CSO QNHS

- Almost 40% of all private households in Ireland were connected to the internet in 2004 compared to only 5% in 1998 (see Table 2.7).
- Denmark, at 69%, had the highest rate of household internet access in the EU in 2004. Ireland, at 38.2%, ranked ninth of the twenty-one EU countries reporting levels of internet access in private households in 2004. The EU average was 42% of households. Iceland had the highest rate of all countries reporting with 81% of households having internet access. (see Table 2.8).

2.8 EU: Private households with internet access, 2002–2004

% of households

Country	2002	2003	2004
Denmark	56.0	64.0	69.0
Germany	46.0	54.0	60.0
Luxembourg	40.0	45.0	59.0
United Kingdom	50.0	55.0	56.0
Cyprus	:	:	53.0
Finland	44.0	47.0	51.0
Slovenia	:	:	47.0
Austria	33.0	37.0	45.0
EU 25	**:**	**:**	**42.0**
Ireland	**:**	**33.5**	**38.2**
Spain	:	28.0	34.0
France	23.0	31.0	34.0
Italy	34.0	32.0	34.0
Estonia	:	:	31.0
Poland	:	:	26.0
Portugal	:	22.0	26.0
Greece	12.0	16.0	17.0
Latvia	:	:	15.0
Hungary	:	:	14.0
Lithuania	4.0	6.0	12.0
Czech Republic	:	15.0	:
Netherlands	58.0	59.0	:
Iceland	:	:	81.0
Norway	:	60.0	60.0

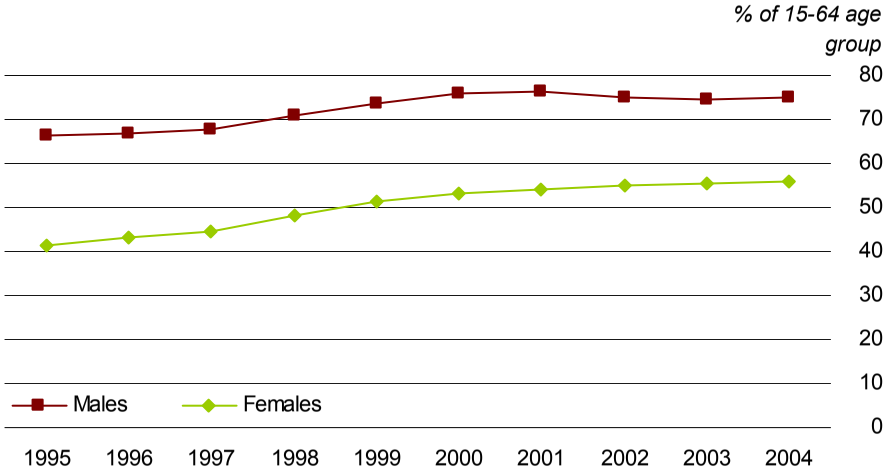
Source: Eurostat, CSO QNHS

3.1 Ireland: Employment rates, 1995–2004

% of population aged 15-64

Year	Persons	Males	Females
1995	54.0	66.5	41.4
1996	55.1	66.8	43.3
1997	56.1	67.6	44.6
1998	59.7	71.1	48.1
1999	62.5	73.6	51.2
2000	64.5	75.7	53.2
2001	65.2	76.2	54.0
2002	65.1	75.0	55.2
2003	65.1	74.7	55.3
2004	65.5	75.2	55.8

Source: CSO QNHS[22]



- The employment rate for women in Ireland rose by over 14 percentage points over the period 1995-2004, compared to an increase of less than 9 percentage points for men. The rate for men decreased from 76.2% in 2001 to 74.7% in 2003 but showed an increase in 2004 at 75.2% (see Table 3.1).

[22] LFS (April 1995-1997) and QNHS (March-May, 1998-2004).

3.2 EU: Employment rates by sex, 2004

% of population aged 15-64

Country	Persons	Males	Females	Sex difference
Denmark	75.1	79.6	70.5	9.1
Netherlands	73.5	80.9	65.8	15.1
Sweden	72.9	74.2	71.5	2.7
United Kingdom	71.8	78.1	65.3	12.8
Cyprus	69.2	78.8	60.4	18.4
Austria	69.0	76.4	61.7	14.7
Portugal	68.1	75.0	61.4	13.6
Finland	67.7	69.7	65.7	4.0
Ireland	**65.5**	**75.2**	**55.8**	**19.4**
Germany	65.1	71.0	59.1	11.9
Czech Republic	64.7	73.1	56.3	16.8
France	63.2	69.4	57.2	12.2
EU 25	**63.0**	**70.9**	**55.1**	**15.8**
Estonia	62.9	67.2	59.0	8.2
Luxembourg	62.7	73.3	52.0	21.3
Slovenia	62.6	67.4	57.6	9.8
Latvia	61.8	66.1	57.9	8.2
Lithuania	61.1	64.0	58.4	5.6
Spain	59.7	73.2	46.0	27.2
Belgium	59.6	67.3	51.8	15.5
Greece	57.8	72.4	43.8	28.6
Slovakia	57.7	63.3	52.2	11.1
Hungary	57.0	63.5	50.9	12.6
Italy	56.1	69.6	42.7	26.9
Malta	54.2	74.5	33.6	40.9
Poland	51.2	56.5	46.0	10.5
Norway	75.5	78.3	72.6	5.7
Romania	57.6	63.8	51.5	12.3
Bulgaria	52.5	56.0	49.0	7.0

Source: Eurostat, LFS

- Ireland's employment rate, at 65.5% was just above the average EU rate of 63% in 2004. All EU states had higher male than female employment rates with the highest differences in Malta, Greece, and Spain and the lowest differences in Finland and Sweden (see Table 3.2).

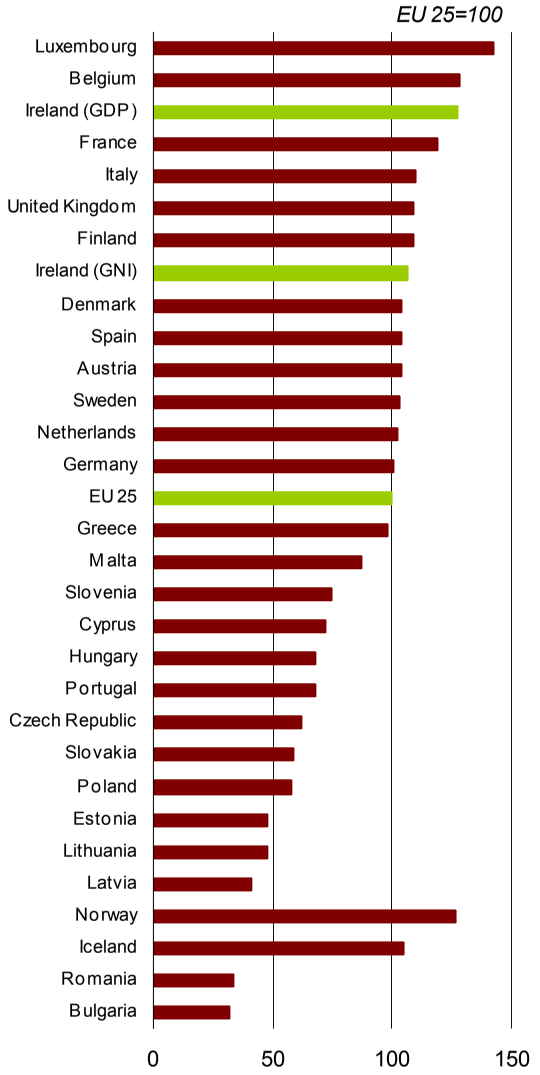
3.3 Ireland: GDP and GNI in PPS per hour worked and per person employed, 1994–2003

Year	*EU 15=100* per hour worked		*EU 25=100* per person employed	
	GDP	GNI	GDP	GNI
1994	90.1	83.0	101.0	93.0
1995	92.9	84.1	114.8	103.9
1996	94.1	85.8	116.5	106.3
1997	101.1	90.8	122.4	110.0
1998	103.7	92.3	120.7	107.5
1999	105.6	91.3	121.2	104.8
2000	106.9	92.4	123.0	106.3
2001	109.1	92.5	125.3	106.2
2002	112.8	93.3	129.1	106.8
2003	115.5	96.8	127.2	106.6

Source: Eurostat, CSO National Accounts

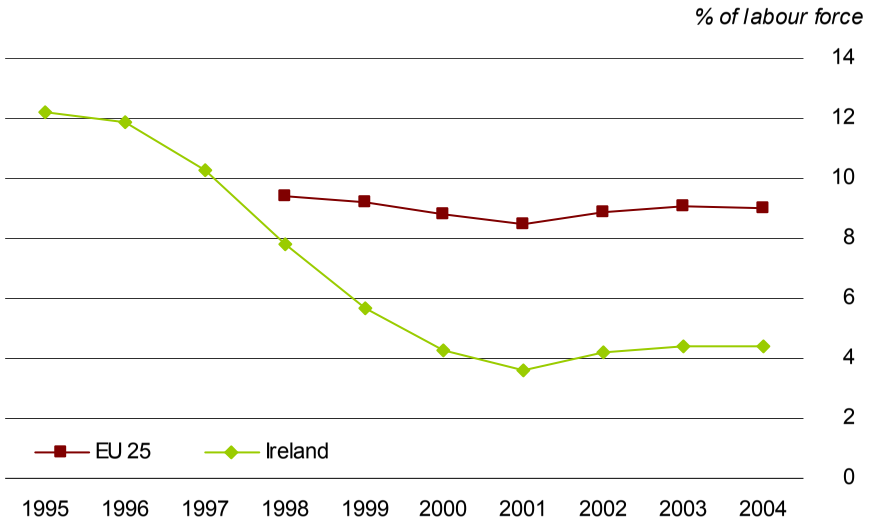
- The productivity of the Irish workforce as measured by GDP in PPS per person employed was 27.2% higher than the EU average in 2003 (see Table 3.3).
- In terms of GDP, productivity per hour worked in Ireland has been higher than the EU average since 1997 and Ireland had the third highest productivity rate among EU states in 2003 (see Table 3.3 and Graph 3.4).

3.4 EU: GDP in PPS per person employed, 2003



Source: Eurostat, CSO National Accounts

3.5 Ireland and EU: Unemployment rates, 1995–2004



Source: Eurostat, CSO

- The unemployment rate in Ireland has been consistently lower than the rate for the enlarged EU since 1998. Unemployment rates in Ireland declined from 7.8% in 1998 to a low point of 3.6% in 2001. Over the past three years the rate has remained fairly stable at just over 4%. The Irish rate in 2004 was less than half of the EU 25 average and was the second lowest of all EU countries (see Graph 3.5 and Table 3.6).

- Four EU countries, including Ireland, had higher male than female unemployment rates, as did Norway, Romania and Bulgaria (see Table 3.6).

3.6 EU: Unemployment rates by sex, 2004

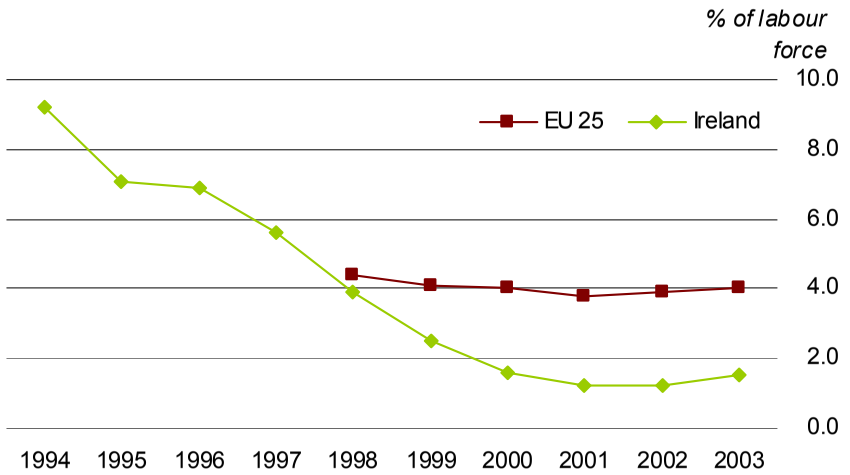
% of labour force

Country	Persons	Males	Females	Sex difference
Luxembourg	4.2	3.4	5.3	-1.9
Ireland	**4.4**	**4.9**	**3.7**	**1.2**
Austria	4.5	3.9	5.2	-1.3
Netherlands	4.7	4.3	5.1	-0.8
United Kingdom	4.7	5.1	4.2	0.9
Cyprus	5.0	4.0	6.3	-2.3
Denmark	5.4	5.1	5.6	-0.5
Hungary	5.9	5.8	6.0	-0.2
Slovenia	6.0	5.6	6.5	-0.9
Sweden	6.3	6.5	6.1	0.4
Portugal	6.7	5.9	7.6	-1.7
Malta	7.3	6.9	8.3	-1.4
Belgium	7.8	7.0	8.8	-1.8
Czech Republic	8.3	7.1	9.8	-2.7
Italy	8.4	6.5	11.3	-4.8
Finland	8.8	8.7	8.9	-0.2
EU 25	**9.0**	**8.0**	**10.2**	**-2.2**
Estonia	9.2	10.3	8.1	2.2
Germany	9.5	8.7	10.5	-1.8
France	9.6	8.7	10.7	-2.0
Greece[23]	9.7	6.2	15.0	-8.8
Latvia	9.8	9.2	10.3	-1.1
Spain	10.8	7.9	14.9	-7.0
Lithuania	10.8	10.3	11.3	-1.0
Slovakia	18.0	17.0	19.3	-2.3
Poland	18.8	18.0	19.7	-1.7
Norway	4.4	4.9	3.9	1.0
Romania	7.1	8.2	5.9	2.3
Bulgaria	11.9	12.2	11.5	0.7

Source: Eurostat LFS

[23] 2003 data.

3.7 Ireland and EU: Long–term unemployment rates, 1994–2003



Source: Eurostat, CSO

- The long-term unemployment rate in Ireland fell in every year between 1994 and 2001, but showed a slight increase in 2003. The rate has remained below the EU average since 1998 (see Graph 3.7).

- The long-term unemployment rate for Ireland was 1.5% in 2003 compared to an EU average of 4.0%. The rate for men in Ireland and the UK was twice that for women in 2003. However, at EU level, the rate for women was higher at 4.5% compared to 3.6% for men in 2003. Norway had a lower long term unemployment rate than any EU state at 0.6% (see Table 3.8).

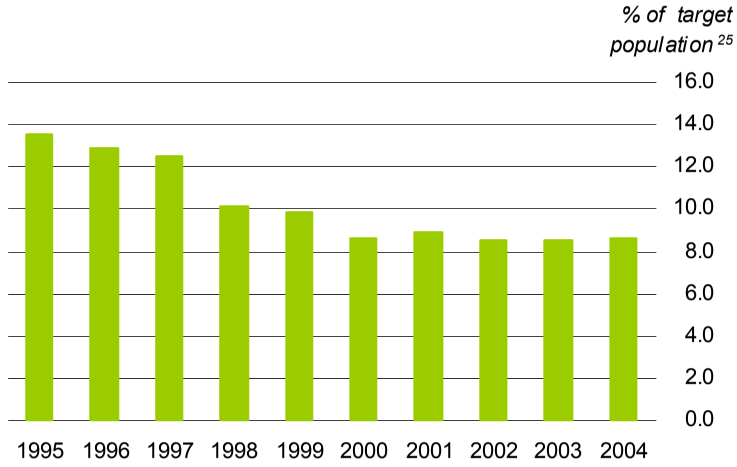
3.8 EU: Long–term unemployment rates by sex, 2003

% of labour force

Country	Persons	Males	Females
Luxembourg	0.9	0.9	0.9
Netherlands	1.0	1.0	1.1
Sweden	1.0	1.2	0.8
Denmark	1.1	1.3	1.0
Cyprus	1.1	0.8	1.4
United Kingdom	1.1	1.4	0.7
Austria	1.2	1.2	1.2
Ireland	**1.5**	**1.8**	**0.9**
Portugal	2.2	1.8	2.7
Finland	2.3	2.6	2.0
Hungary	2.4	2.5	2.3
Slovenia	3.4	3.3	3.6
France	3.5	3.1	4.0
Malta	3.5	3.5	3.0
Belgium	3.7	3.4	4.0
Czech Republic	3.8	2.9	5.0
Spain	3.9	2.4	6.0
EU 25	**4.0**	**3.6**	**4.5**
Latvia	4.3	4.1	4.6
Estonia	4.6	4.8	4.4
Germany	4.7	4.8	4.7
Italy[23]	4.9	3.9	6.7
Greece	5.1	2.8	8.4
Lithuania	6.1	5.7	6.5
Poland	10.7	10.1	11.5
Slovakia	11.1	10.9	11.4
Norway	0.6	0.8	0.4
Romania	4.1	4.2	3.9
Bulgaria	8.9	9.1	8.6

Source: Eurostat LFS

3.9 Ireland: Population aged 18–59 living in jobless households, 1995–2004



Source: CSO QNHS[24]

- The proportion of the population aged 18-59 living in jobless households in Ireland decreased by almost five percentage points in the period 1995-2004, falling from 13.5% in 1995 to 8.6% in 2004 (see Graph 3.9).
- Ten EU countries had a lower proportion of 18-59 year olds living in jobless households than Ireland, with Cyprus having the lowest rate at 5% in 2004 (see Table 3.10 and footnote).

3.10 EU: Population[25] aged 18–59 living in jobless households, 2002–2004

% of target population[25]

Country	2002	2003	2004
Cyprus	5.3	5.2	5.0
Portugal	4.6	5.5	5.3
Luxembourg	6.3	6.6	6.6
Spain	7.2	7.2	7.3
Slovenia	8.0	8.7	7.5
Latvia	10.5	8.7	7.8
Czech Republic	7.3	7.7	8.0
Lithuania	9.1	7.4	8.1
Netherlands	6.7	8.1	8.3
Denmark	8.4	8.6	8.6
Ireland	**8.5**	**8.5**	**8.6**
Malta	7.2	7.9	8.8
Austria	7.5	7.4	8.8
Greece	9.3	9.0	9.0
Estonia	10.8	10.9	9.5
Italy	10.2	9.7	9.7
EU 25	**10.2**	**10.2**	**10.4**
Germany	10.0	10.6	10.6
France	10.4	10.7	10.8
Slovakia	10.9	10.1	10.8
Finland	:	10.9	10.9
United Kingdom	11.2	10.9	11.0
Hungary	13.0	11.6	11.9
Belgium	14.2	14.4	13.7
Poland	15.1	14.8	15.8
Sweden	:	:	:
Romania	11.3	11.1	11.1
Bulgaria	16.6	15.3	13.7

Source: Eurostat LFS

[24] LFS (April 1995-1997) and QNHS (March-May, 1998-2004).

[25] The target population is persons aged 18-59 excluding persons living in households where everyone is aged 18-24 and either in education or inactive (see Appendix 1).

3.11 EU: Employment rate of workers aged 55–64 by sex, 2003

% of 55-64 age group

Country	Persons	Males	Females
Sweden	68.6	70.8	66.3
Denmark	60.2	67.3	52.9
United Kingdom	55.5	64.8	46.4
Estonia	52.3	58.9	47.3
Portugal	51.6	62.1	42.4
Cyprus	50.4	68.9	32.7
Finland	49.6	51.0	48.3
Ireland	**49.2**	**64.7**	**33.4**
Netherlands	44.8	57.3	32.1
Lithuania	44.7	55.3	36.7
Latvia	44.1	51.3	38.8
Czech Republic	42.3	57.5	28.4
Greece	42.1	59.2	26.2
Spain	40.8	59.3	23.4
EU 25	**40.2**	**50.3**	**30.7**
Germany	39.5	47.8	31.2
France	36.8	40.9	32.9
Malta	32.5	53.8	13.0
Italy	30.3	42.8	18.5
Austria	30.1	40.2	20.6
Luxembourg	30.0	39.1	20.9
Hungary	28.9	37.8	21.8
Belgium	28.1	37.8	18.7
Poland	26.9	35.2	19.8
Slovakia	24.6	41.0	11.2
Slovenia	23.5	33.2	14.6
Norway	66.9	71.5	62.3
Romania	38.1	43.5	33.3
Bulgaria	30.0	40.5	21.0

Source: Eurostat LFS

- In Ireland, 64.7% of men aged 55-64 were employed in 2003 compared to 33.4% of women. Finland had the smallest difference between the employment rates of men and women in this age group in 2003 (see Table 3.11).
- There is a very wide variation across the EU in the employment rate of persons aged 55-64. The variation shows similar patterns to the national average exit age data (see Tables 3.11 and 3.12).

3.12 EU: Average exit age from the labour force by sex, 2002

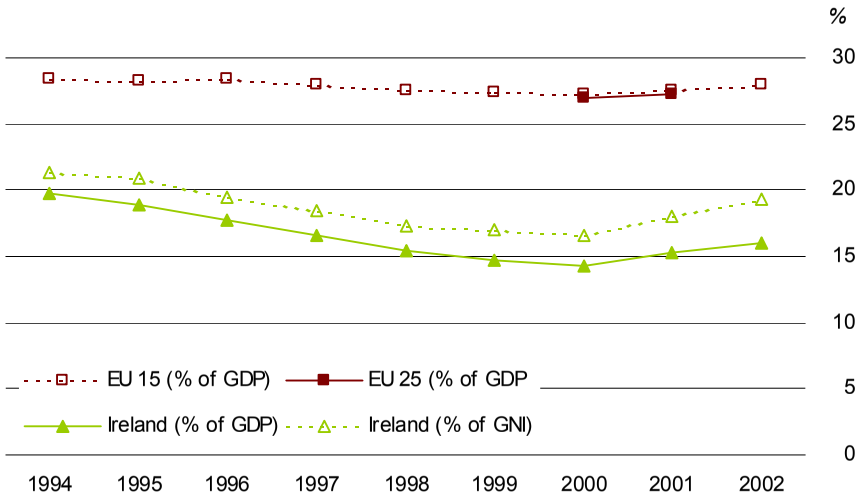
years

Country	Persons	Males	Females
Lithuania	63.3	:	:
Greece	63.2	63.9	62.5
Sweden	63.1	63.5	62.8
United Kingdom	63.0	64.2	61.9
Cyprus	62.7	:	:
Ireland	**62.4**	**62.0**	**62.8**
Denmark	62.1	62.3	62.0
Portugal	62.1	63.7	60.6
Germany	61.6	61.9	61.4
Hungary	61.6	60.9	62.1
Spain	61.4	61.6	61.3
EU 25	**61.0**	**61.5**	**60.5**
Italy	61.0	60.9	61.0
Estonia	60.8	:	:
Netherlands	60.4	61.0	59.9
Latvia	60.3	:	:
Finland	60.3	60.7	60.0
Czech Republic	60.0	61.2	59.0
France	59.6	59.7	59.6
Luxembourg	59.3	:	:
Malta	58.8	:	:
Austria	58.8	59.4	58.2
Belgium	58.7	58.6	58.7
Poland	58.0	59.8	56.4
Slovakia	57.8	60.0	55.9
Slovenia	56.2	:	:
Romania	62.8	62.6	62.9
Norway	62.8	62.8	62.8
Bulgaria	58.7	60.1	57.5

Source: Eurostat LFS

- The average exit age from the labour force was 62.4 years in Ireland in 2002, the sixth highest age among EU member states. The average exit age in Ireland for women was 62.8 years compared with 62 years for men. Slovenia had the lowest exit age in the EU at 56.2 years (see Table 3.12).
- In 2002, the average exit age from the labour force in the EU was 61 years with the age for women being lower than that for men in most EU countries except Ireland, Belgium, Hungary, and Italy (see Table 3.12).

4.1 Ireland and EU: Social protection expenditure, 1994–2002



Source: Eurostat, CSO National Accounts

- Social protection expenditure as a proportion of GDP was lower in Ireland over the period 1994-2002 than in the EU 15 Member States. Expenditure in Ireland decreased from 19.7% of GDP in 1994 to 14.3% in 2000, but increased again to 16% in 2002 (see Graph 4.1).
- Ireland's expenditure on social protection[26] in 2001, at 15.3% of GDP was the fourth lowest of the EU Member States[27]. The EU average was 27.3%. Sweden had the highest expenditure at 31.4% of GDP (see Tables 4.2 and 4.3).
- Ireland's expenditures on education and health were also below the EU average in 2001. Ireland's combined expenditure on social protection, education[28] and health[29] amounted to just over a quarter of GDP in 2001 compared to an EU average of almost 41% of GDP (see Tables 4.2, 5.3 and 6.2).

[26] Social protection expenditure data for Ireland does not cover private pension schemes organised on a group basis which are included in the social protection expenditure figures of most other countries. In addition, Ireland has the second lowest proportion of persons aged 65 and over in the population in the EU which has an effect on social protection expenditure.
[27] Excluding Cyprus for which no data were available.

4.2 EU: Expenditure on social protection, education and health, 2001

% of GDP

Country	Social protection	Education[28]	Health[29]	Total
Sweden	31.4	7.3	8.8	47.5
Denmark	29.4	8.5	8.6	46.5
Germany	29.8	4.6	10.8	45.2
France	30.0	5.8	9.4	45.2
Belgium	27.5	6.1	9.0	42.6
Austria	28.6	5.7	7.6	41.9
Netherlands	27.5	5.0	8.5	41.0
EU 25	**27.3**	**5.1**	**8.5**	**40.9**
Greece	27.1	3.9	9.4	40.4
Slovenia	25.5	6.1	8.2	39.8
United Kingdom	27.6	4.7	7.5	39.8
Portugal	24.0	5.9	9.3	39.2
Finland	25.7	6.2	7.0	38.9
Italy	25.6	5.0	8.3	38.9
Poland	22.1	5.6	6.0	33.7
Hungary	19.8	5.2	7.4	32.4
Spain	20.1	4.4	7.5	32.0
Ireland (% of GNI)[26]	**18.0**	**5.1**	**8.1**	**31.2**
Luxembourg	21.3	3.8	5.9	31.0
Malta	17.3	4.5	8.9	30.7
Czech Republic	19.2	4.2	6.9	30.3
Slovak Republic	19.1	4.0	5.6	28.7
Lithuania	15.2	5.9	5.7	26.8
Ireland (% of GDP)[26]	**15.3**	**4.4**	**6.9**	**26.6**
Latvia	14.3	5.8	5.0	25.1
Estonia	14.3	5.5	5.1	24.9
Cyprus	:	6.3	6.2	:
Switzerland	28.2	5.5	10.9	44.6
Norway	25.6	7.0	8.1	40.7
Iceland	20.2	6.5	9.2	35.9

Source: Eurostat, CSO National Accounts

[28] Public expenditure.
[29] Public and private expenditure.

4.3 EU: At risk of poverty rates, 2003[30]

% of population

Country	Before pensions and social transfers	After pensions only	After pensions and social transfers	Risk reduction
Czech Republic	39	21	8	31
Luxembourg	39	23	10	29
Hungary	32	15	10	22
Slovenia	36	16	10	26
Finland	40	28	11	29
Sweden	45	29	11	34
France	44	26	12	32
Netherlands	36	22	12	24
Austria	43	24	13	30
Germany	35	24	15	20
Cyprus	26	18	15	11
Latvia	43	24	16	27
Lithuania	40	24	17	23
Poland	50	32	17	33
Estonia	41	25	18	23
United Kingdom	33	26	18	15
Spain	40	22	19	21
Portugal	:	26	19	:
Ireland[31]	**39**	**34**	**21**	**18**
Slovakia	43	28	21	22
EU 25	**:**	**:**	**:**	**:**
Belgium	:	:	:	:
Denmark	:	:	:	:
Greece	:	:	:	:
Italy	:	:	:	:
Malta	:	:	:	:
Bulgaria	37	17	13	24
Romania	42	23	18	24

Source: Eurostat

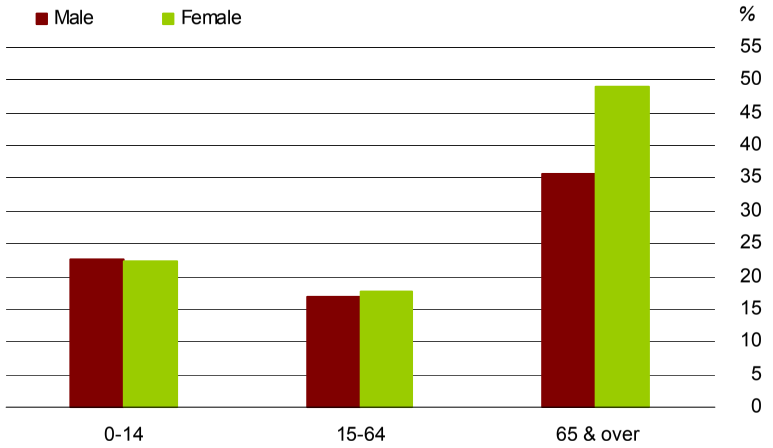
[30] Data in Table 4.3 are obtained from the EU Survey on Income and Living Conditions (EU SILC) for Ireland, Austria and Luxembourg and from comparable national sources for other countries. EU wide data are not yet available from EU SILC (see also Appendix 1).

[31] Rates calculated using Eurostat income definition and modified OECD equivalence scale (see Appendix 1).

4.4 Ireland: At risk of poverty rates by age and sex, 2003[32]

Age	Males	Females	Persons
0-14	22.7	22.3	22.5
15-64	16.9	17.8	17.4
65 & over	35.7	48.9	43.2
Total	**20.0**	**22.6**	**21.3**

Source: CSO EU SILC



- The at risk of poverty rate[31] in Ireland before pensions and social transfers was 39% in 2003. After pensions and social transfers, the rate fell to 21%. Ireland's risk reduction was one of the lowest among both existing and new EU member states. As a result, the risk of poverty rate in Ireland after pensions and social transfers was at the top of the EU range (see Tables 4.2 and 4.3).

- In 2003, 20% of males and 22.6% of females were at risk of poverty in Ireland. In the 65 years and over age group, the at risk of poverty rate was much higher for women at 48.9% than the rate for men at 35.7%. In younger age groups there was little difference between the rates for men and women (see Table 4.4 and graph).

[32] June-December 2003.

4.5 Ireland: Persons in consistent poverty by age and sex, 2003[32,33]

% of cohort

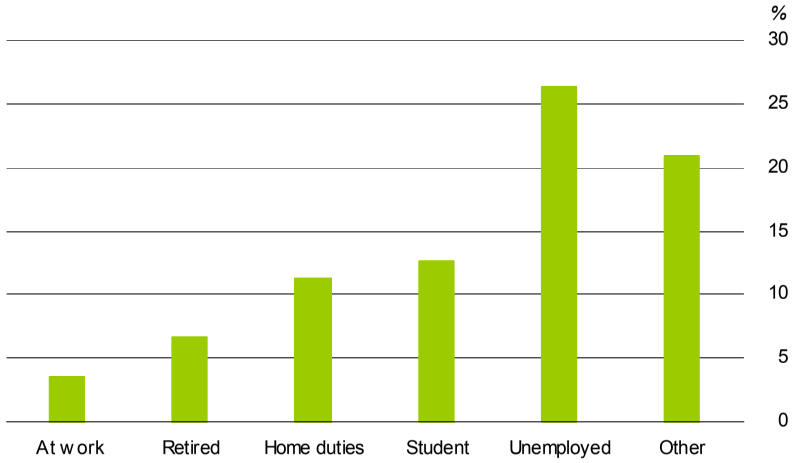
Age group	Males	Females	Persons
0-14	14.4	14.7	14.6
15-64	7.8	8.5	8.1
65+	:	6.8	7.0
Total	**9.2**	**9.6**	**9.4**

Source: CSO EU SILC

- Individuals are defined as being in consistent poverty if they are at risk of poverty and are suffering enforced deprivation as defined by a set of eight deprivation indicators (see Appendix 1). In Ireland, in 2003, 9.4% of the population were living in consistent poverty (see Table 4.5).

- In 2003, 26.4% of unemployed persons were in consistent poverty, compared with 3.5% of people at work (see Graph 4.6).

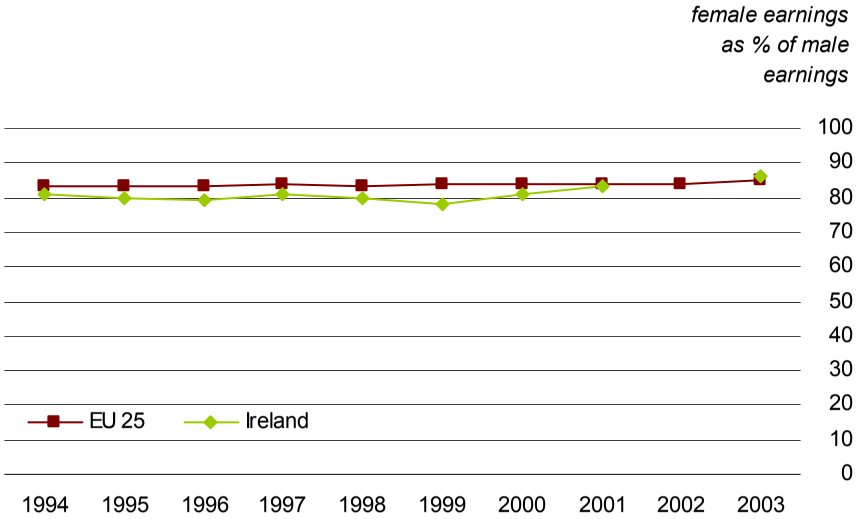
4.6 Ireland: Persons in consistent poverty by principal economic status, 2003[32,33]



Source: CSO EU SILC

[33] The consistent poverty measure for 2003 is not comparable with that of earlier years due to changes in the data source (see also Appendix 1).

4.7 Ireland and EU: Gender pay gap, 1994–2003



Source: Eurostat[34]

- In 1994, women's earnings were 81% of men's earnings in Ireland compared to 83% in the EU as a whole. By 2003 this proportion had increased to 86% in Ireland compared to an EU average of 85% (see Graph 4.7).

4.8 EU: Gender pay gap, 2001–2003

female earnings as % of average gross hourly male earnings

Country	2001	2002	2003
Malta	91	94	96
Portugal	90	92	91
Greece	82	83	89
Poland	88	89	89
France	86	87	88[35]
Ireland	**83**	**:**	**86**[35]
Hungary	80	84	86
EU 25	**84**	**84**	85
Luxembourg	84	83	85
Latvia	84	84	84
Sweden	82	83	84
Lithuania	84	84	83
Austria	80	:	83[35]
Denmark	85	82[35]	82
Spain	83	79[35]	82
Netherlands	81	81	82
Czech Republic	80	81[35]	81
United Kingdom	79	77[35]	78
Germany	79	78[35]	77
Slovakia	77	73	77
Estonia	76	76	76
Cyprus	74	75	75
Belgium	88	:	:
Italy	94	:	:
Slovenia	89	91	:
Finland	83	80[35]	:
Norway	83	84	84
Bulgaria	77	79	82
Romania	82	83	82

Source: Eurostat[34]

[34] See Appendix 1 for details of national data sources.

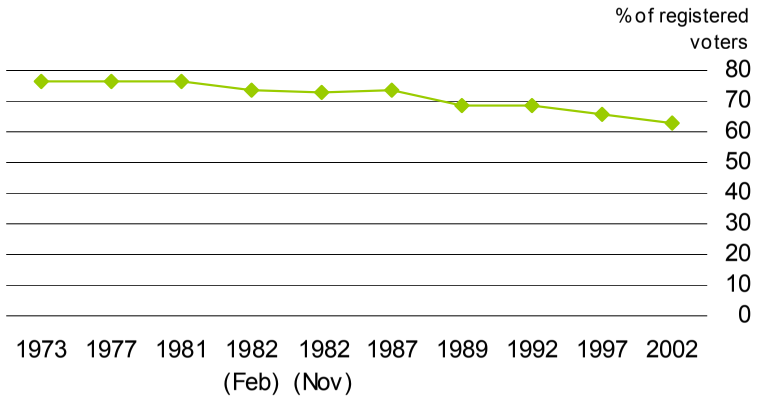
[35] Break in series due to change in data source from ECHP in 2001 to EU SILC in 2003.

4.9 Ireland: Numbers voting in Dáil elections, 1973–2002

000's

Year of election	Registered voters	Votes recorded	% turnout
1973	1,783.6	1,366.5	77
1977	2,118.6	1,616.8	76
1981	2,275.5	1,734.4	76
1982 (Feb)	2,275.5	1,679.5	74
1982 (Nov)	2,335.2	1,701.4	73
1987	2,445.5	1,793.5	73
1989	2,448.8	1,677.6	69
1992	2,557.0	1,751.4	68
1997	2,741.3	1,806.9	66
2002	3,002.2	1,878.6	63

Source: Department of the Environment, Heritage and Local Government



- Voter turnout at Dáil elections has gradually declined from over 75% in the 1970s to 63% in 2002. This decline was mirrored in Europe where all EU countries except Malta showed a decrease in voter turnout over the period 1981-2003 (see Tables 4.9 and 4.10).

- Ireland had a relatively low rate of turnout in 2002 compared to other national parliamentary elections across the EU in the period 1998-2003. The average turnout for EU countries in that period was 69.6% (see Table 4.10). Voting is compulsory by law in Belgium, Cyprus Greece, Italy, Luxembourg, the Netherlands and parts of Austria and Switzerland but levels of enforcement vary (see Appendix 1).

4.10 EU: Votes recorded at national parliamentary elections, 1981–2003

% of registered voters

Country	1981-1984	1990-1994	1998-2003
Malta	94.6	96.0	95.4
Cyprus	95.7	94.3	91.8
Belgium	94.6	92.7	90.6
Denmark	87.8	82.8	87.1
Luxembourg	88.8	88.3	86.5
Italy	89.0	87.4	81.4
Austria	92.6	86.1	80.4
Sweden	91.4	86.7	80.1
Netherlands	81.0	78.7	80.0
Germany	89.1	77.8	79.1
Greece	81.5	83.0	75.0
Hungary	:	75.4	73.5
Latvia	:	81.2	71.2
Slovenia	:	85.9	70.4
Slovak Republic	:	84.7	70.1
EU 25	**81.7**	**76.9**	**69.6**
Spain	79.8	77.0	68.7
Finland	75.7	68.4	65.3
Portugal	78.6	68.2	62.8
Ireland	**72.9**	**68.5**	**62.6**
France	70.9	68.9	60.3
United Kingdom	72.8	77.8	59.4
Estonia	:	67.8	58.2
Lithuania	:	75.2	58.2
Czech Republic	:	84.7	57.9
Poland	:	52.1	46.2
Iceland	88.6	87.6	84.1
Norway	82.0	75.8	75.0
Bulgaria	:	83.9	66.6
Romania	:	76.3	65.3
Switzerland	48.9	46.0	45.4

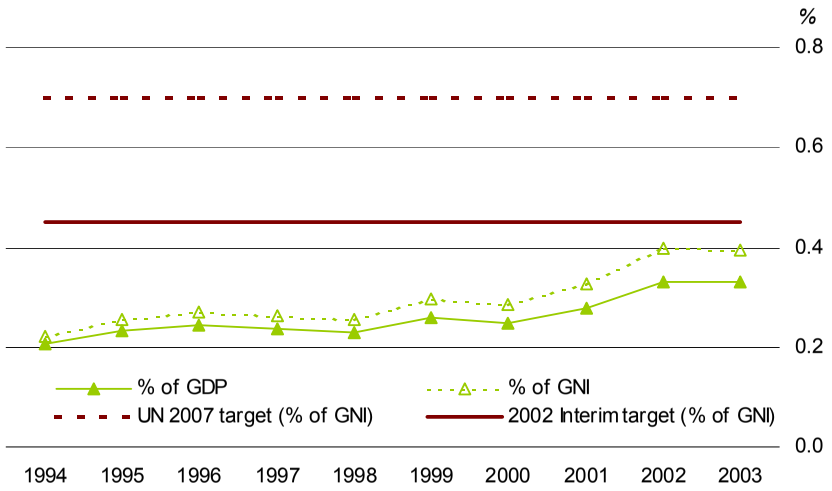
Source: International Institute for Democracy and Electoral Assistance

4.11 Ireland: Net official development assistance, 1994–2003

€m

Year	Net ODA	% of GDP	% of GNI
1994	95.5	0.21	0.22
1995	122.0	0.23	0.26
1996	142.3	0.25	0.27
1997	157.6	0.24	0.26
1998	177.3	0.23	0.26
1999	230.3	0.26	0.30
2000	254.8	0.25	0.29
2001	320.1	0.28	0.33
2002	422.1	0.33	0.40
2003	445.7	0.33	0.39

Source: Department of Foreign Affairs



4.12 EU: Net official development assistance, 2001–2003

% of GNI

Country	2001	2002	2003
Denmark	1.03	0.96	0.84
Luxembourg	0.76	0.77	0.81
Netherlands	0.82	0.81	0.80
Sweden	0.77	0.84	0.79
Belgium	0.37	0.43	0.60
France	0.32	0.38	0.41
Ireland	**0.33**	**0.40**	**0.39**
Finland	0.32	0.35	0.35
United Kingdom	0.32	0.31	0.34
Germany	0.27	0.27	0.28
Spain	0.30	0.26	0.23
Portugal	0.25	0.27	0.22
Greece	0.17	0.21	0.21
Austria	0.34	0.26	0.20
Italy	0.15	0.20	0.17
Norway	0.80	0.89	0.92
Switzerland	0.34	0.32	0.39

Source: OECD Development Co-operation Report

- The proportion of Irish GNI represented by net official development assistance increased from 0.22% in 1994 to 0.39% in 2003 (see Table 4.11).
- In 2003, the Irish contribution was below both the 2002 interim Irish Government target of 0.45% of GNI and the UN 2007 target of 0.7% (see Table and Graph 4.11).
- Four EU countries in addition to Norway exceeded the UN target in 2003 (see Table 4.12).

5.1 Ireland: Real non-capital public expenditure on education, 1998–2003

€ per student at 1995 prices *€m at 1995 prices*

Year	Level			Total non-capital expenditure
	First	Second[36]	Third[37]	
1998	2,053	3,066	5,661	2,748.6
1999	2,144	3,145	5,849	2,836.6
2000	2,220	3,301	5,544	2,896.1
2001	2,393	3,623	5,920	3,123.1
2002	2,673	3,934	6,047	3,391.6
2003	2,928	4,234	5,958	3,623.9

Source: Department of Education and Science, CSO

5.2 Ireland: Student numbers[38] by level, 1994–2003

000s

Year	Level			
	First	Second[36]	Third (full-time)	Third (part-time)
1993/1994	505,883	367,645	86,624	22,368
1994/1995	491,256	371,230	89,693	21,705
1995/1996	478,692	369,865	95,099	21,910
1996/1997	469,628	371,184	100,204	22,795
1997/1998	460,845	368,160	104,439	25,439
1998/1999	452,533	362,051	108,509	27,764
1999/2000	444,310	353,860	115,696	31,469
2000/2001	439,560	345,384	119,991	32,265
2001/2002	441,065	340,078	124,589	34,965
2002/2003	443,720	339,231	129,283	34,680

Source: Department of Education and Science

- Real expenditure per student in Ireland increased by 42.6% and 38.1% for first and second level students respectively over the period 1998-2003. However the corresponding increase at third level was a more modest 5.2% (see Table 5.1 and Appendix 1).
- These contrasting trends are partly explained by the trend in student numbers. The numbers of students decreased by 12.3% at first level and by 7.7% at second level between 1993/94 and 2002/03. However, over the same period, the number of third level students increased by around 50% (see Table 5.2).

[36] Second level includes further education (e.g. post-Leaving Certificate programmes).
[37] Full-time equivalents.
[38] Only students in institutions which are aided by the Department of Education and Science are included in this table.

5.3 EU: Public expenditure on education, 1999–2001

% of GDP

Country	1999	2000	2001
Denmark	8.1	8.4	8.5
Sweden	7.5	7.4	7.3
Cyprus	5.7	5.6	6.3
Finland	6.3	6.1	6.2
Belgium	:	:	6.1
Slovenia	:	:	6.1
Lithuania	6.1	5.7	5.9
Portugal	5.7	5.7	5.9
France	5.9	5.8	5.8
Latvia	5.8	5.4	5.8
Austria	5.8	5.7	5.7
Poland	4.9	5.0	5.6
Estonia	6.1	5.6	5.5
Hungary	4.7	4.5	5.2
EU 25	**5.0**	**4.9**	**5.1**
Ireland (% of GNI)	**5.3**	**5.0**	**5.1**
Italy	4.8	4.6	5.0
Netherlands	4.8	4.9	5.0
United Kingdom	4.6	4.6	4.7
Germany	4.6	4.5	4.6
Malta	4.8	4.6	4.5
Ireland (% of GDP)	**4.6**	**4.4**	**4.4**
Spain	4.5	4.4	4.4
Czech Republic	4.1	4.0	4.2
Slovak Republic	4.4	4.2	4.0
Greece	3.6	3.8	3.9
Luxembourg	4.1[39]	:	3.8
Norway	7.2	6.8	7.0
Iceland	6.0	6.0	6.5
Bulgaria	3.7	4.4	3.5
Romania	3.4	2.9	3.3

Source: Eurostat

- In terms of GNI, public expenditure on education in Ireland was just above the EU 25 level in 1999 and 2000 and at the same level in 2001 (see Table 5.3).

[39] 1997 data.

5.4 EU: Ratio of students to teachers, 2001/2002

Country	ISCED 1-3	ISCED 1	ISCED 2	ISCED 3
Italy	10.3	10.6	9.9	10.3
Hungary	11.4	10.8	10.7	13.1
Denmark[40]	11.7	10.9	:	14.2
Portugal	9.5	11.0	9.3	7.5
Luxembourg[40]	10.2	11.6	9.0	:
Lithuania[40]	9.4	12.4	8.5	8.3
Greece	10.6	12.5	9.3	9.3
Sweden	12.8	12.5	12.2	14.1
Slovenia	13.2	12.6	13.0	13.7
Poland	13.4	12.8	14.1	13.7
Belgium[40]	10.7	13.1	:	9.3
Austria	11.3	14.4	9.8	10.3
Spain[40]	12.6	14.6	13.7	8.3
Finland[40]	14.4	15.8	10.6	16.0
Latvia	14.1	16.9	13.5	12.7
Netherlands[40]	16.5	17.0	:	15.9
Czech Republic	15.1	18.9	14.4	12.5
Germany	16.1	18.9	15.7	13.6
Malta	12.7	19.1	9.7	10.1
France	14.3	19.4	13.9	10.6
Cyprus	15.1	19.4	13.0	11.7
Ireland[40]	**16.2**	**19.5**	**14.6**	**:**
United Kingdom[40]	20.1	19.9	17.6	21.6
Slovak Republic	15.1	20.1	14.0	13.3
Estonia	:	:	:	:
Iceland[40]	11.2	11.4	:	10.6
Bulgaria	13.5	16.8	12.8	11.7
Romania	14.8	17.7	13.3	14.4
Norway[40]	10.8	:	11.1	10.3

Source: Eurostat, Department of Education and Science

- Ireland had a student to teacher ratio of 19.5 at primary education level (ISCED 1) in 2001/2002. This was the third highest ratio in the EU. The overall student to teacher ratio for first and second level education for Ireland in 2001/2002 was 16.2 (see Table 5.4).

[40] See country specific notes in Appendix 1.

5.5 EU: Average class size at ISCED levels 1 and 2, 2001/2002

Country	ISCED 1	ISCED 2
Lithuania	15.5	21.8
Luxembourg	15.7	19.9
Greece	17.5	23
Latvia	17.9	19.9
Italy	18.3	20.8
Slovenia	18.5	21.4
Denmark	19.1	18.8
Portugal	19.1	18.1
Austria	20.1	23.9
Hungary	20.4	21.3
Slovak Republic	20.8	23.3
Spain	20.9	25.4
Poland	20.9	24.3
Czech Republic	21.3	23.3
Estonia	21.9	23.6
Cyprus	21.9	25.3
Malta	21.9	22.7
Germany	22.2	24.7
France	22.6	24.3
Ireland	**24.2**	**21.4**
Belgium	:	:
Netherlands	:	:
Finland	:	:
Sweden	:	:
United Kingdom	:	:
Romania	18.7	21.9
Switzerland	19.6	18.6
Bulgaria	19.9	21.6
Iceland	:	:
Norway	:	:

Source: Eurostat, Department of Education and Science

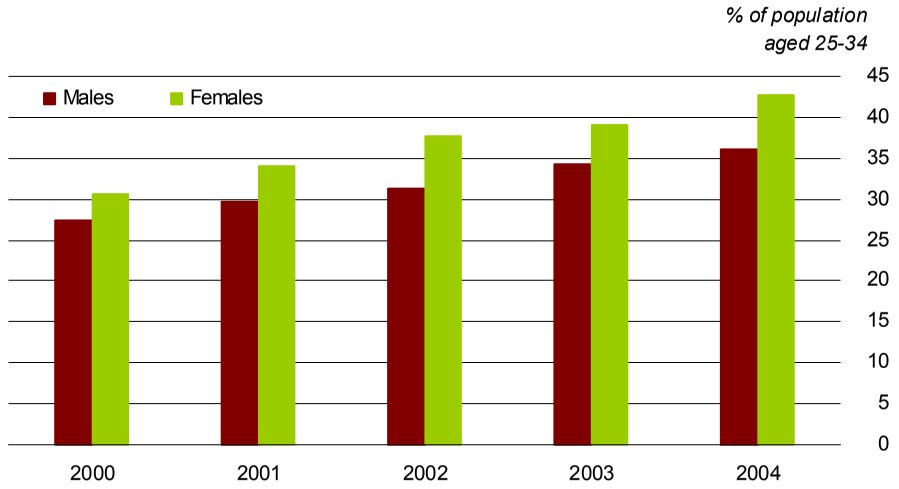
- In 2001/2002, the average class size in Ireland for primary education was 24.2 which, mirroring the student to teacher ratio, was the highest among reporting EU countries (see Table 5.5).

5.6 Ireland: Persons aged 25–34 with 3rd level[41] education, 1999–2004

% of population aged 25-34

Year	Persons	Males	Females
1999	27.1	26.7	27.5
2000	29.0	27.5	30.5
2001	31.9	29.8	34.0
2002	34.5	31.3	37.7
2003	36.6	34.2	39.0
2004	39.4	36.0	42.7

Source: CSO QNHS



- Over the period 1999-2004, the proportion of females aged 25-34 in Ireland with 3rd level education rose from 27.5% in 1999 to 42.7% in 2004. Over the same period, the rate for males increased from 26.7% to 36% (see Table 5.6). The widening gap reflects the increasing tendency for females to remain in education longer than males.

- In 2004, 39.4% of the population aged 25-34 in Ireland had 3rd level education compared with 24.8% in the EU (see Table 5.7).

[41] ISCED 97 levels 5-6.

5.7 EU: Persons aged 25–34 with 3rd level education by sex, 2004

% of population aged 25-34

Country	Persons	Males	Females
Cyprus	42.9	41.2	45.3
Belgium	39.6	35.4	43.8
Ireland	**39.4**	**36.0**	**42.7**
Spain	39.2	35.0	43.5
France	38.1	34.9	41.4
Finland	38.1	29.8	46.3
Lithuania	35.0	29.8	40.3
Denmark	34.7	30.1	39.6
United Kingdom	34.6	34.7	34.5
Sweden	34.2	29.0	39.5
Estonia	28.0	21.5	35.5
Netherlands[42]	27.7	26.1	29.4
EU 25[43]	**24.8**	**23.0**	**26.7**
Greece	24.6	21.8	27.4
Slovenia	24.2	17.0	32.6
Poland	22.6	18.2	27.2
Germany[43]	21.1	22.0	20.1
Austria	21.0	21.4	20.7
Luxembourg[43]	19.7	18.8	17.6
Latvia	19.6	14.8	24.4
Malta	19.6	19.2	19.2
Hungary	18.5	15.7	21.6
Portugal	18.4	13.5	23.4
Italy	14.6	12.1	17.1
Slovak Republic	14.4	13.4	15.8
Czech Republic	12.7	12.7	12.9
Norway	39.4	33.9	45.1
Switzerland	30.5	37.8	23.4
Iceland[42]	28.2	25.0	26.3
Bulgaria	23.8	16.6	31.1
Romania	12.2	11.3	13.3

Source: Eurostat LFS

[42] 2002 data.
[43] 2003 data.

5.8 Ireland: Student performance on the combined reading, mathematical and scientific literacy scales by sex, 2003

Mean score of 15 year old students

Literacy type	Ireland		All OECD countries	
	Males	Females	Males	Females
Reading	501	530	477	511
Mathematical	510	495	506	494
Scientific	506	504	503	497

Source: OECD, Educational Research Centre

- Girls in Ireland performed much better than boys in reading literacy tests in 2003 with an average score of 530 for females compared to 501 for males (see Table 5.8). These scores combined to give Ireland the second highest reading literacy for 15 year old students among EU countries in 2003 (see Table 5.9).

- Boys in Ireland performed better than girls in mathematical literacy, reflecting a similar trend across OECD countries. The PISA study focussed primarily on mathematical literacy in 2003 (see Table 5.8 and Appendix 1).

5.9 EU: Student performance on the combined reading, mathematical and scientific literacy scales, 2003

Mean score of 15 year old students

Country	Reading literacy	Mathematical literacy	Scientific literacy
Finland	543	544	548
Netherlands	513	538	524
Belgium	507	529	509
Czech Republic	489	516	523
Denmark	492	514	475
France	496	511	511
Sweden	514	509	506
Austria	491	506	491
Ireland	**515**	**503**	**505**
Germany	491	503	502
OECD average	**494**	**500**	**500**
Slovak Republic	469	498	495
Luxembourg	479	493	483
Poland	497	490	498
Hungary	482	490	503
Spain	481	485	487
Portugal	478	466	468
Italy	476	466	486
Greece	472	445	481
Switzerland	499	527	513
Iceland	492	515	495
Norway	500	495	484

Source: OECD PISA

5.10 Ireland: Early school leavers[44] by labour force status and sex, 2004

000s

Labour force status	Persons	Males	Females
In employment	33.0	24.8	8.2
Unemployed	9.2	6.1	3.1
Unemployment rate of early school leavers (%)	21.8	19.7	27.4

Source: CSO QNHS

5.11 Ireland: Proportion of the population aged 20–64 with at least upper secondary education, 2004

% of age group

Age group	Persons	Males	Females
20-24	86.2	83.1	89.4
25-34	80.1	76.6	83.6
35-44	68.9	65.3	72.6
45-54	54.4	51.8	57.1
55-64	40.2	38.8	41.6

Source: CSO QNHS

- The unemployment rate for persons in Ireland aged 18-24 with, at most, lower secondary education was 21.8% in 2004. The unemployment rate for all persons in the 18-24 age group was 7.9% in 2004 (see Tables 3.6 and 5.10).
- More than 86% of persons aged 20-24 in 2004 had completed second level education or higher. This figure decreased for older age groups down to 40.2% of persons aged 55-64. Women of all ages in Ireland are more likely than men to have completed at least upper secondary education (see Table 5.11).
- The proportion of persons aged 18-24 who left school with, at most, lower secondary education in Ireland, was 12.9% in 2004. The EU average rate was 15.9%. The four countries with the lowest early school leaver rates were all new EU Member States (see Table 5.12).

[44] Persons aged 18-24 with, at most, lower secondary education and not in further education or training.

5.12 EU: Early school leavers[44], 2004

% of population aged 18-24

Country	Persons	Males	Females
Slovenia	4.2	5.8	2.6
Poland	5.7	7.7	3.7
Czech Republic	6.1	5.8	6.5
Slovakia	7.1	7.8	6.4
Denmark	8.1	10.4	5.8
Sweden	8.6	9.3	7.9
Finland	8.7	10.6	6.9
Austria	9.2	9.9	8.5
Lithuania	9.5	11.6	7.4
Belgium	11.9	15.6	8.3
Estonia[45]	12.6	15.6	9.6
Hungary	12.6	13.7	11.4
Ireland	**12.9**	**16.0**	**9.7**
Germany	12.8	12.9	12.8
France	14.2	16.0	12.4
Netherlands[48]	15.0	15.7	14.3
Greece	15.3	19.6	11.0
Latvia	15.6	20.5	10.7
EU 25[46]	**15.9**	**18.1**	**13.6**
United Kingdom[47]	16.7	17.0	16.4
Luxembourg[48]	17.0	14.4	19.6
Cyprus	18.4	23.3	14.3
Italy	23.5	26.8	20.1
Spain	30.4	37.2	23.2
Portugal	39.4	47.9	30.6
Malta	45.0	46.6	43.1
Norway	4.5	5.2	3.7
Bulgaria	21.4	22.1	20.7
Romania	23.6	24.9	22.4
Iceland[48]	27.3	31.6	22.9

Source: Eurostat LFS

[45] 2002 data.
[46] EU 25 figure is calculated using latest available year for countries without data for 2004 and provisional UK data.
[47] Provisional data - all GSCE levels are excluded until a new ISCED 3c level definition is implemented in 2005 at EU level.
[48] 2003 data.

6.1 Ireland: Non–capital public expenditure on health care, 1994–2003

Year	Non-capital public expenditure		
	Total (€m)	% of GDP	Per capita at constant 1995 prices (€)
1994	2,793.3	6.0	772
1995	2,980.4	5.7	801
1996	3,049.0	5.2	828
1997	3,504.0	5.2	824
1998	3,885.6	5.0	886
1999	4,647.0	5.2	937
2000	5,422.7	5.3	1,057
2001	6,801.5	5.9	1,147
2002	7,933.4	6.1	1,325
2003	8,852.8	6.8	1,441

Source: Department of Health and Children

- Non-capital public expenditure on health care in Ireland as a proportion of GDP decreased from 6.0% in 1994 to 5.0% in 1998 before increasing each year since then to 6.8% in 2003 (see Table 6.1).
- An average of €1,441 (at constant 1995 prices) per person was spent on non-capital public expenditure on health care in Ireland in 2003. This represented an increase of 86.7% on the 1994 level and an increase of 62.6% on the 1998 level (see Table 6.1 and Appendix 1).
- Ireland's expenditure on public and private health was 7.3% of GDP in 2002, which was lower than the EU average of 8.7% (see Table 6.2).

6.2 EU: Total expenditure[49] on health as percentage of GDP, 2000–2002

% of GDP

Country	2000	2001	2002
Germany	10.6	10.8	10.9
France	9.3	9.4	9.7
Malta	8.8	8.9	9.7
Greece	9.7	9.4	9.5
Portugal	9.2	9.3	9.3
Sweden	8.4	8.8	9.2
Belgium	8.8	9.0	9.1
Netherlands	8.2	8.5	9.1
Denmark	8.4	8.6	8.8
Ireland (% of GNI)	**7.4**	**8.1**	**8.8**
EU 25	**8.3**	**8.5**	**8.7**
Italy	8.1	8.3	8.5
Hungary	7.1	7.4	7.8
Austria	7.7	7.6	7.7
United Kingdom	7.3	7.5	7.7
Spain	7.5	7.5	7.6
Finland	6.7	7.0	7.3
Ireland (% of GDP)	**6.4**	**6.9**	**7.3**
Czech Republic	6.6	6.9	7.1
Cyprus	6.0	6.2	6.4
Luxembourg	5.5	5.9	6.2
Poland	5.7	6.0	6.1
Lithuania	6.0	5.7	5.7
Slovakia	5.5	5.6	5.7
Estonia	5.5	5.1	5.1
Latvia	4.8	5.0	4.9
Slovenia	8.0	8.2	:
Iceland	9.2	9.2	9.9
Norway	7.7	8.1	8.7
Romania	4.1	4.1	4.2
Switzerland	10.4	10.9	11.2

Source: WHO Health for All Database

[49] Public and private.

6.3 Ireland: Life expectancy at birth and at age 65 by sex, 1925–2003

years

Period	At birth		At 65 years	
	Males	Females	Males	Females
1925-1927	57.4	57.9	12.8	13.4
1935-1937	58.2	59.6	12.5	13.1
1940-1942	59.0	61.0	12.3	13.2
1945-1947	60.5	62.4	12.0	13.1
1950-1952	64.5	67.1	12.1	13.3
1960-1962	68.1	71.9	12.6	14.4
1965-1967	68.6	72.9	12.4	14.7
1970-1972	68.8	73.5	12.4	15.0
1978-1980	69.5	75.0	12.4	15.4
1980-1982	70.1	75.6	12.6	15.7
1985-1987	71.0	76.7	12.6	16.2
1990-1992	72.3	77.9	13.4	17.1
1995-1997	73.0	78.5	13.8	17.4
2001-2003	75.1	80.3	15.4	18.7

Source: CSO Vital Statistics

- Life expectancy at birth in Ireland increased from under 58 years in 1925-1927 to 75.1 years for males and 80.3 years for females in 2001-2003. Over the same period, there was an increase of just over two and a half years in the life expectancy of men aged 65 compared with an increase of over five years in the life expectancy of older women (see Table 6.3).

- In 2002, the life expectancy at birth for males in Ireland was slightly higher than the EU average of 74.8 years while that of females was almost a year lower than the EU average of 81.1 years (see Table 6.4).

- The difference between life expectancy at birth for men and women was lowest in Sweden at 4.4 years. The corresponding difference for Ireland was 5.1 years and 6.3 years for the EU as a whole (see Table 6.4).

6.4 EU: Life expectancy at birth by sex, 2002

years

Country	Males	Females	Sex difference
Spain	75.8	83.5	7.7
France	75.8	83.0	7.2
Italy	76.8	82.9	6.1
Sweden	77.7	82.1	4.4
Austria	75.8	81.7	5.9
Luxembourg	74.9	81.5	6.6
Finland	74.9	81.5	6.6
Germany	75.4	81.2	5.8
EU 25	**74.8**	**81.1**	**6.3**
Belgium	75.1	81.1	6.0
Cyprus[50]	76.1	81.0	4.9
Malta	75.9	81.0	5.1
Greece	75.4	80.7	5.3
Netherlands	76.0	80.7	4.7
Portugal	73.8	80.5	6.7
Slovenia	72.7	80.5	7.8
United Kingdom	75.9	80.5	4.6
Ireland	**75.1**	**80.3**	**5.1**
Denmark	74.8	79.5	4.7
Czech Republic	72.1	78.7	6.6
Poland	70.4	78.7	8.3
Slovak Republic	69.9	77.8	7.9
Lithuania	66.3	77.5	11.2
Estonia	65.3	77.1	11.8
Hungary	68.4	76.7	8.3
Latvia	64.8	76.0	11.2
Switzerland	77.8	83.0	5.2
Iceland	78.5	82.3	3.8
Norway	76.4	81.5	5.1
Bulgaria	68.9	75.6	6.7
Romania	67.5	74.8	7.3

Source: Eurostat

[50] 2001 data.

7.1 Ireland: Population distribution by age group, 1995–2004

Year	0-14 years	15-24 years	25-44 years	45-64 years	65 years and over	Total
	%	%	%	%	%	000 persons
1995	24.4	17.4	27.8	19.1	11.4	3,601.3
1996	23.7	17.5	28.0	19.4	11.4	3,626.1
1997	23.1	17.5	28.3	19.7	11.4	3,664.3
1998	22.6	17.4	28.6	20.1	11.3	3,703.1
1999	22.2	17.2	28.9	20.5	11.3	3,741.6
2000	21.8	16.9	29.2	20.8	11.2	3,789.5
2001	21.5	16.6	29.7	21.0	11.2	3,847.2
2002	21.1	16.4	30.1	21.2	11.1	3,917.2
2003	21.0	16.2	30.3	21.5	11.1	3,978.9
2004	20.9	15.8	30.5	21.7	11.2	4,043.8

Source: CSO Census of Population[51]

7.2 Ireland: Household composition, 1995–2004

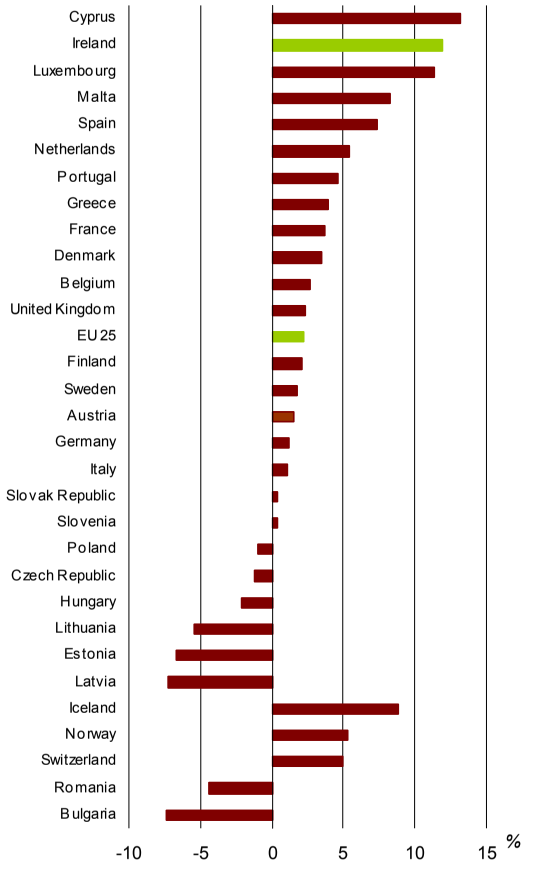
Year	Total households	1 person households	2 person households	3 or more person households	Average household size
	000 households	000 households	000 households	000 households	Persons
1995	1,150.4	260.4	265.5	624.5	3.13
1996	1,160.1	255.0	276.4	628.7	3.13
1997	1,191.9	269.7	288.5	633.7	3.07
1998	1,224.6	264.9	297.1	662.7	3.02
1999	1,253.9	276.8	304.1	672.9	2.98
2000	1,283.6	292.8	311.4	679.4	2.95
2001	1,302.5	283.4	331.5	687.6	2.95
2002	1,344.4	296.9	347.0	700.5	2.91
2003	1,383.8	305.2	370.6	708.0	2.88
2004	1,405.9	297.8	385.6	722.5	2.88

Source: CSO QNHS[52]

- The population increased by 12.3% to over 4 million persons over the period 1995-2004. The proportion of the population aged 25-64 increased from 46.9% in 1995 to 52.2% in 2004. Conversely, there was a decrease in the 0-14 age group from 24.4% in 1995 to 20.9% of the population in 2004 (see Table 7.1).

[51] See Appendix 1 – Domain 7.
[52] LFS (April 1995-1997) and QNHS (March-May, 1998-2004).

7.3 EU: Population change, 1995–2004[53]



Source: Eurostat

- In Ireland, average household size decreased from 3.13 persons in 1995 to 2.88 persons in 2004. There was a 45% increase in the number of 2 person households, a 14% increase in 1 person households and a 16% increase in 3 or more person households over the same period (see Table 7.2).

- Ireland had the second highest percentage increase in population between 1995 and 2004 in the EU after Cyprus (see Graph 7.3).

[53] 1994-2001 United Kingdom; 1995-2003 for Greece, Finland and Austria. EU figure based on latest year available for countries with no 2004 data.

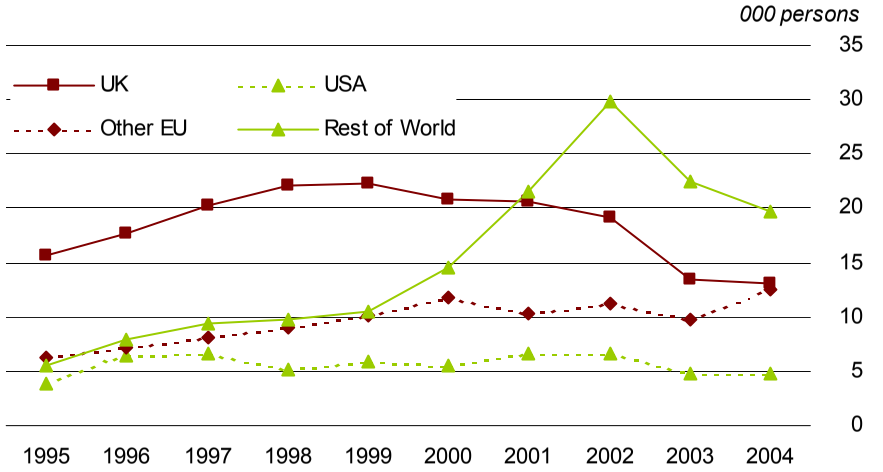
7.4 Ireland: Migration and natural increase, 1995–2004

000 persons

Year	Net migration	Emigration	Immigration	Natural increase
1995	-1.9	33.1	31.2	17.2
1996	8.0	31.2	39.2	16.9
1997	19.2	25.3	44.5	19.0
1998	17.4	28.6	46.0	21.5
1999	17.3	31.5	48.9	21.2
2000	26.0	26.6	52.6	21.8
2001	32.8	26.2	59.0	24.8
2002	41.3	25.6	66.9	28.8
2003	29.8	20.7	50.5	31.9
2004	31.6	18.5	50.1	33.3

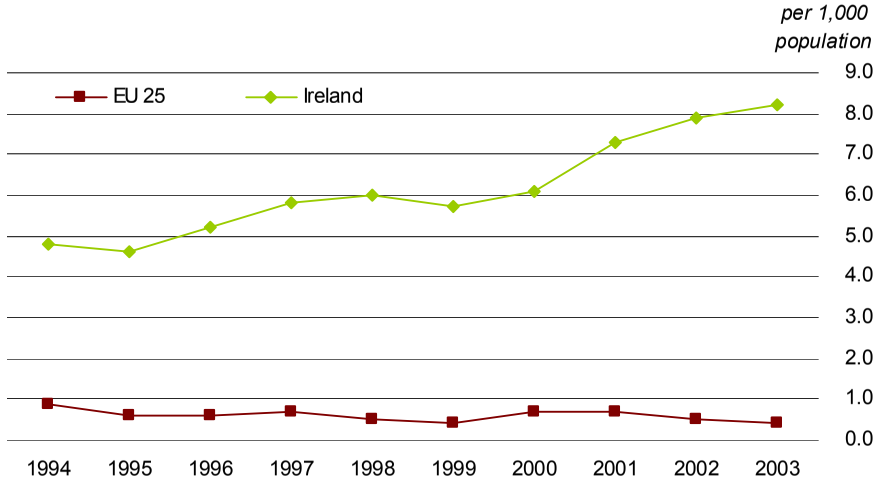
Source: CSO migration estimates

7.5 Ireland: Immigration by country of origin, 1995–2004



Source: CSO migration estimates

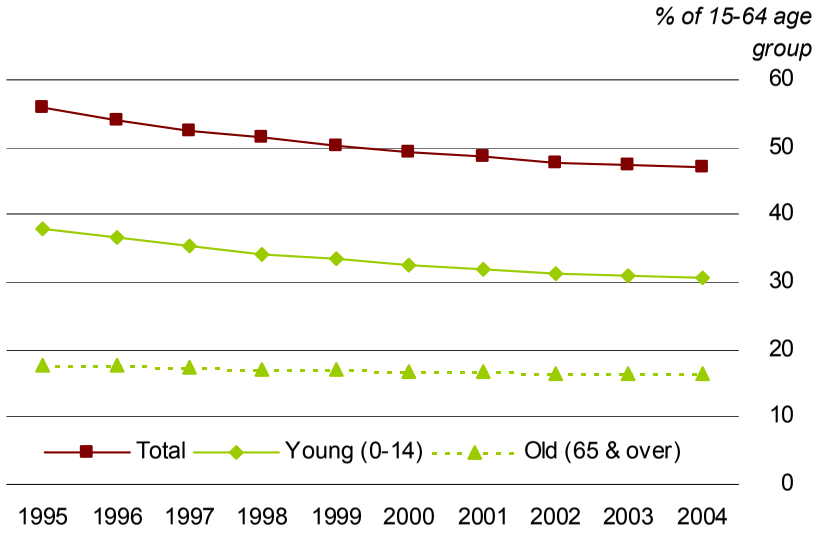
7.6 Ireland and EU: Rate of natural increase of population, 1994–2003



Source: Eurostat

- There was net migration into Ireland each year since 1996 compared to a small level of net emigration from Ireland in 1995. The level of net inward migration increased from 8,000 in 1996 to 41,300 in 2002 before falling to 31,600 in 2004 (see Table 7.4).
- The level of annual gross emigration from Ireland decreased from 33,100 persons in 1995 to 18,500 persons in 2004 (see Table 7.4).
- There was a significant increase in the number of persons moving to Ireland from countries other than the UK, EU and USA between 1999 and 2002. However the number of persons in this category fell sharply by more than one-third in the period 2002-2004 (see Graph 7.5).
- The rate of natural increase of the population in Ireland was 8.2 per 1,000 population in 2003 compared to an average of just 0.4 per 1,000 in the EU. The EU rate has been constant over the 1994-2003 period, whereas the rate for Ireland increased from 4.6 per 1,000 in 1995 (see Table 7.4 and Graph 7.6).

7.7 Ireland: Age dependency ratio, 1995–2004



Source: CSO Census of Population

- Ireland had the second highest proportion of persons aged under 15 in the EU (30.8%) and the lowest proportion of persons aged 65 and over (16.4%) in 2003 (see Table 7.8).
- This resulted in a combined age dependency ratio of 47.2% in Ireland in 2003 which was similar to the EU average of 49% although markedly different in composition (see Table 7.8).

7.8 EU: Young and old as proportion of population aged 15–64, 2003

% of population aged 15-64

Country	Young and old	Young (0-14)	Old (65 & over)
Cyprus	48.5	31.0	17.6
Ireland	**47.2**	**30.8**	**16.4**
United Kingdom[54]	52.8	28.9	23.8
France	53.7	28.7	25.1
Denmark	50.7	28.4	22.3
Malta[55]	46.7	28.2	18.5
Luxembourg	49.0	28.1	20.9
Sweden	54.3	27.8	26.5
Netherlands	47.7	27.5	20.3
Lithuania	49.3	27.3	22.0
Finland	49.6	26.6	22.9
Belgium	52.5	26.5	26.0
Poland	44.1	25.7	18.4
Slovak Republic	42.0	25.6	16.5
EU 25	**49.0**	**24.8**	**24.2**
Estonia	48.0	24.5	23.5
Austria	47.2	24.4	22.8
Hungary	45.9	23.5	22.4
Latvia	46.7	23.4	23.3
Portugal	48.1	23.4	24.7
Greece[56]	48.0	22.4	25.6
Germany	48.2	22.3	25.9
Czech Republic	41.8	22.1	19.7
Spain[55]	46.3	21.3	25.0
Italy[54]	48.4	21.3	27.1
Slovenia	42.4	21.3	21.0
Iceland	53.0	35.1	17.9
Norway	53.4	30.7	22.7
Switzerland	48.0	25.0	23.0
Romania	45.4	24.8	20.6
Bulgaria	46.2	21.3	24.9

Source: Eurostat

[54] 2001 data.
[55] 2002 data.
[56] 2000 data.

7.9 Ireland and EU: Total fertility rate, 1994–2003

Expected number of children a woman will have

Year	EU 25	Ireland
1994	1.48	1.85
1995	1.44	1.85
1996	1.44	1.89
1997	1.44	1.94
1998	1.43	1.95
1999	1.42	1.91
2000	1.48	1.90
2001	1.46	1.96
2002	1.46	1.98
2003	1.48	1.98

Source: Eurostat, CSO Vital Statistics

- By 1994 the fertility rate in Ireland had fallen to an all time low of 1.85. Since then it has recovered somewhat to stand at 1.98 in 2003 (see Table 7.9).
- Ireland had the highest fertility rate in the EU in 2003 and only Iceland among other European countries had a comparable rate (see Table 7.10).
- The fertility rate increased in 13 of the 25 EU Member States including Ireland, between 1998 and 2003, resulting in a small increase in the EU average rate from 1.43 to 1.48 (see Table 7.10).

7.10 EU: Total fertility rate, 1993–2003

Expected number of children a woman will have

Country	1993	1998	2003
Ireland	**1.91**	**1.95**	**1.98**
France	1.65	1.75	1.89
Denmark	1.75	1.72	1.76
Finland	1.81	1.70	1.76
Netherlands	1.57	1.63	1.75
Sweden	1.99	1.50	1.71
United Kingdom	1.75	1.71	1.71
Luxembourg	1.70	1.68	1.63
Belgium	1.61	1.59	1.61
EU 25	**1.52**	**1.43**	**1.48**
Cyprus	2.27	1.92	1.46
Portugal	1.51	1.48	1.44
Malta	2.01	1.72[57]	1.41
Austria	1.50	1.37	1.39
Estonia	1.45	1.21	1.35
Germany	1.28	1.36	1.34
Hungary	1.69	1.33	1.30
Spain	1.27	1.15	1.29
Italy	1.25	1.19	1.29
Latvia	1.51	1.10	1.29
Greece	1.34	1.29	1.27
Lithuania	1.74	1.46	1.25
Poland	1.85	1.44	1.24
Slovenia	1.34	1.23	1.22
Czech Republic	1.67	1.16	1.18
Slovak Republic	1.92	1.38	1.17
Iceland	2.22	2.05	1.99
Norway	1.86	1.81	1.80
Switzerland	1.51	1.46	1.41
Romania	1.45	1.32	1.27
Bulgaria	1.46	1.11	1.23

Source: Eurostat

[57] 1999 data.

7.11 Ireland: Lone parent families with children aged under 20 by sex of parent, 1995–2004

000 families

Year	Male	Female	Total
1995	8.2	56.1	64.3
1996	8.4	60.1	68.5
1997	8.1	65.6	73.7
1998	9.2	83.4	92.6
1999	9.9	78.1	88.0
2000	10.3	93.0	103.4
2001	10.5	102.9	113.3
2002	11.8	103.9	115.6
2003	10.0	105.5	115.6
2004	10.7	106.5	117.1

Source: CSO QNHS[58]

- The number of lone parent families with children aged under 20 increased by 82.1% between 1995 and 2004. The ratio of female to male heads of household for lone parent families with children aged under 20, increased from just under 7:1 in 1995 to almost 10:1 in 2004 (see Table 7.11).

[58] LFS (April 1995-1997) and QNHS (March-May, 1998-2004).

7.12 Ireland: Persons aged 65 and over living alone by sex, 1995–2004

	000 households with persons aged 65 and over			*% of all households*
Year	**Persons**	**Males**	**Females**	**Persons**
1995	122.1	38.5	83.6	10.6
1996	116.9	37.8	79.1	10.1
1997	122.3	39.7	82.6	10.3
1998	132.9	42.0	90.9	10.9
1999	138.9	42.4	96.5	11.1
2000	142.1	45.4	96.8	11.1
2001	141.0	45.2	95.7	10.9
2002	142.9	45.8	97.1	10.6
2003	142.6	45.0	97.6	10.3
2004	141.9	45.2	96.7	10.1

Source: CSO QNHS[59]

- There were twice as many women aged 65 and over living alone in 2004 as there were men (see Table 7.12).
- The percentage of persons aged 65 and over living alone in 2004 was 31.5% (see Tables 7.1 and 7.12).
- Households consisting of older persons living alone represented around 10 to 11% of all households over the period 1995-2004 (see Table 7.12).

[59] LFS (April 1995-1997) and QNHS (March-May, 1998-2004).

8.1 Ireland: Dwelling unit completions, 1994–2003

number of dwelling units

Year	Total	Private	Local Authority	Voluntary
1994	26,863	23,588	2,374	901
1995	30,575	26,604	2,960	1,011
1996	33,725	30,132	2,676	917
1997	38,842	35,454	2,632	756
1998	42,349	39,093	2,771	485
1999	46,512	43,024	2,909	579
2000	49,812	46,657	2,204	951
2001	52,602	47,727	3,622	1,253
2002	57,695	51,932	4,403	1,360
2003	68,819	62,686	4,516	1,617

Source: Department of the Environment, Heritage and Local Government

8.2 Ireland: Nature of occupancy[60] of private households, 1961–2002

% of private households

Year	Owner-occupied	Rented	Other
1961	59.8	35.6	4.6
1971	68.8	28.9	2.3
1981	74.7	22.6	2.6
1991	80.0	17.9	2.1
2002	79.8	18.5	1.7

Source: CSO Census of Population

- Private dwelling unit completions represented 88% of total completions in 1994. This proportion rose to almost 94% in 2000 but had dropped to around 91% by 2003 (see Table 8.1).
- The total number of dwelling unit completions increased by a factor of 2.6 from 26,863 units in 1994 to 68,819 units in 2003 (see Table 8.1).
- The proportion of households in Ireland that were owner-occupied increased from 59.8% in 1961 to 79.8% in 2002 (see Table 8.2).

[60] 'Not stated' replies excluded.

8.3 Ireland: New housing loans, 1994–2003

Year	Number	Total value (€m)	Average value of mortgage (€000)	Representative mortgage interest rate for building societies (%)
1994	46,483	2,076.7	44.7	7.18
1995	47,035	2,284.0	48.6	7.62
1996	56,009	2,959.6	52.8	6.80
1997	57,901	3,589.0	62.0	7.22
1998	61,407	4,587.1	74.7	7.10
1999	70,817	6,516.9	92.0	4.93
2000	74,258	7,598.2	102.3	5.38
2001	66,786	7,664.0	114.8	5.69
2002	79,292	10,825.2	136.5	4.66
2003	84,749	13,523.7	159.6	3.74

Source: Department of the Environment, Heritage and Local Government

- The average value of a new housing loan in Ireland rose from €44,700 in 1994 to €159,600 in 2003. Mortgage interest rates almost halved in this period while the number of loans taken out for housing has almost doubled (see Table 8.3).
- Interest rates for new mortgages in Ireland were lower than the Eurozone average at the end of 2004 (see Table 8.4).

8.4 Eurozone: Interest rates for household mortgages (new business), 2003–2004

interest rate[61,62]

Country	2003	2004
Netherlands	3.51	3.10
Finland	3.29	3.12
Spain	3.29	3.19
Belgium	3.72	3.36
Luxembourg	3.40	3.38
Ireland	**3.47**	**3.39**
Portugal	3.43	3.39
Eurozone	**3.62**	**3.43**
Italy	3.61	3.54
France	3.81	3.61
Austria	4.40	4.17
Greece	4.31	4.21
Germany	4.63	4.37

Source: Eurostat, European Central Bank

[61] Rates shown are as at end of period.
[62] Rates shown in this table cover both floating (variable) rates and rates fixed for up to one year.

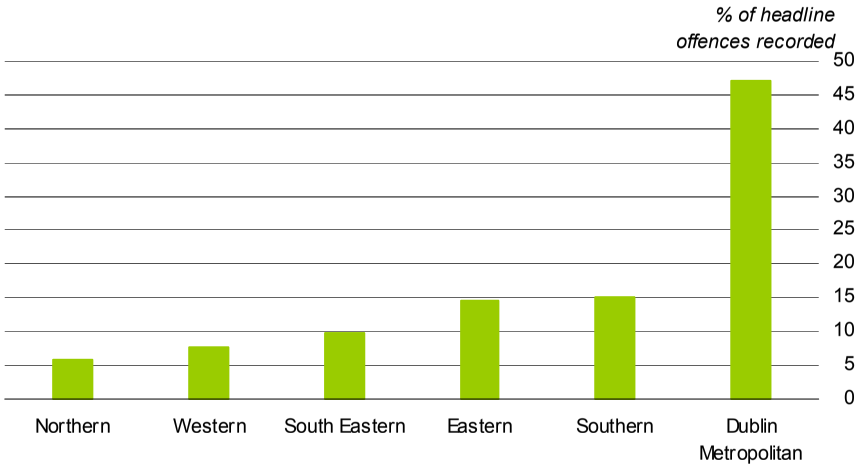
9.1 Ireland: Headline offences detection rates by Garda Division, 2001–2003

% headline offences detection rate

Garda Division	2001	2002	2003
Eastern	38.9	34.3	31.2
Dublin Metropolitan	40.4	37.7	34.1
Northern	43.7	37.1	37.8
South Eastern	48.4	44.3	44.6
Southern	43.4	41.4	39.7
Western	39.2	39.8	36.8
State	**41.5**	**38.5**	**36.0**

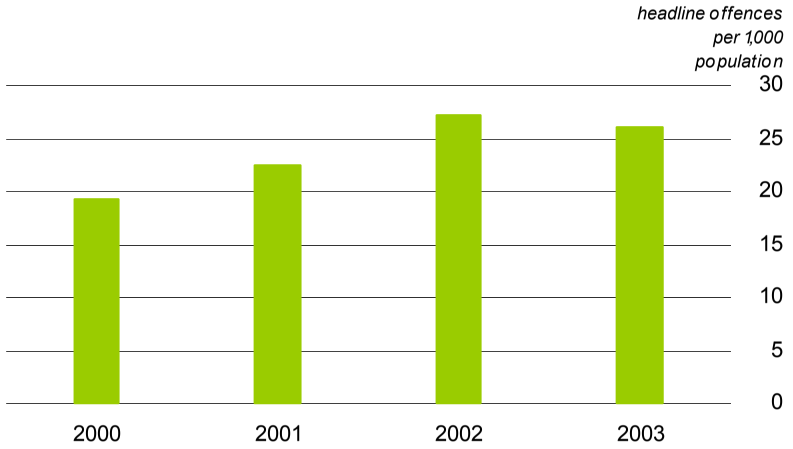
Source: An Garda Síochána

9.2 Ireland: Headline offences recorded by Garda Division, 2003



Source: An Garda Síochána

9.3 Ireland: Headline offences recorded[63], 2000–2003

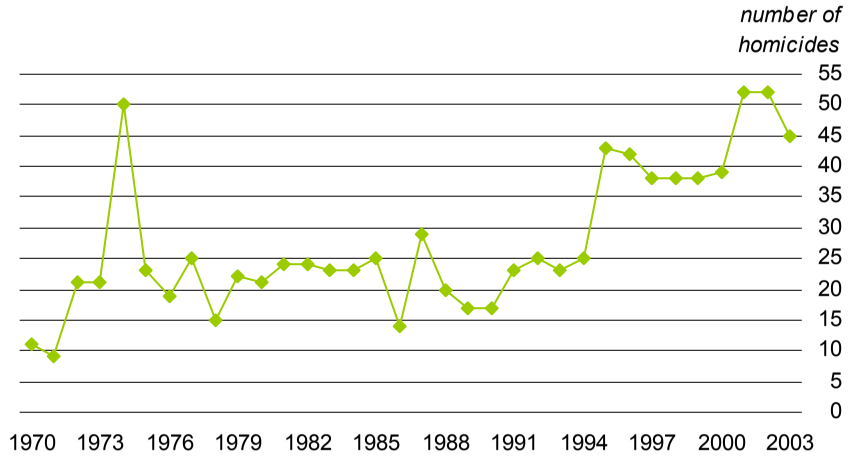


Source: An Garda Síochána

- The detection rate for headline offences was 36% in 2003 (see Table 9.1).
- The Dublin Metropolitan region accounted for 47% of headline offences recorded in 2003 (see Graph 9.2).
- The number of headline offences recorded rose from 19.3 per 1,000 population in 2000 to 27.2 in 2002 but fell slightly again to around 26 in 2003 (see Graph 9.3).

[63] Crime figures up to 1999 used an old classification system that divided crimes into categories of indictable/non-indictable. With the introduction of the PULSE information system in the Garda Síochána, a new classification of crimes as headline/non-headline was adopted. Figures for 2000 and subsequent years refer to the new classification of headline crimes. While this category reflects to a large extent what in the past was defined as indictable crime, the terms are not identical and therefore direct comparisons cannot be made between years prior to 2000 and subsequent years.

9.4 Ireland: Homicides recorded, 1970–2003



Source: An Garda Síochána

- The number of homicides recorded in Ireland since 1995 is significantly above the average for earlier periods. A decrease in the number of homicides was recorded in 2003, for the first time since 1997 (see Graph 9.4). The exceptional peak in 1974 was due to the bombings in Dublin and Monaghan.

- Ireland with a homicide rate of around 1.5 per 100,000 has one of the lowest rates in the EU in recent years (see Table 9.5).

9.5 EU: Homicide rate per 100,000 population[64], 2000–2002

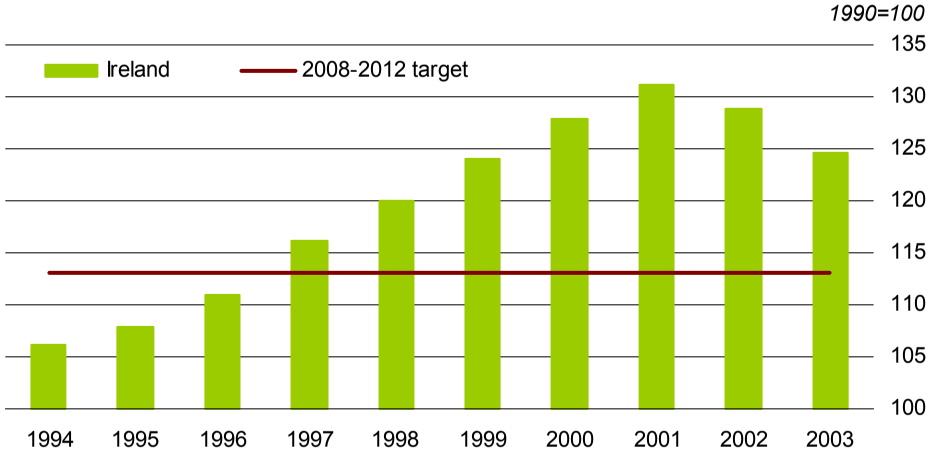
rate per 100,000 population

Country	2000	2001	2002
Ireland	**1.5**	**1.6**	**1.5**
Finland	0.7	1.7	:
Austria	:	2.0	2.1
Czech Republic	2.7	2.3	2.3
Slovak Republic	2.6	2.4	:
Portugal	3.3	2.6	2.6
United Kingdom	2.7	2.8	:
Spain	2.9	2.9	:
Germany	3.4	3.2	3.2
Poland	3.4	3.5	:
Denmark	4.1	3.7	3.9
Italy	3.8	3.8	:
France	3.7	3.9	4.1
Hungary	3.5	4.0	3.5
Belgium	2.7	6.0	:
Latvia	11.2	9.0	:
Sweden	:	10.0	:
Lithuania	:	10.8	:
Luxembourg	14.0	11.3	:
Estonia	13.7	12.1	:
Netherlands	:	:	:
Greece	2.8	:	:
Cyprus	1.7	:	:
Malta	2.0	:	:
Slovenia	4.1	::	:

Source: Interpol International Crime Statistics

[64] The international statistics do not take account of the differences which exist between definitions of punishable acts in different national laws, or the diversity of statistical methods, or the changes which may occur during the reference period and affect the data collected. However, the figures give a broad outline of trends in specific countries.

10.1 Ireland: Total net greenhouse gas emissions, 1994–2003



Source: Environmental Protection Agency

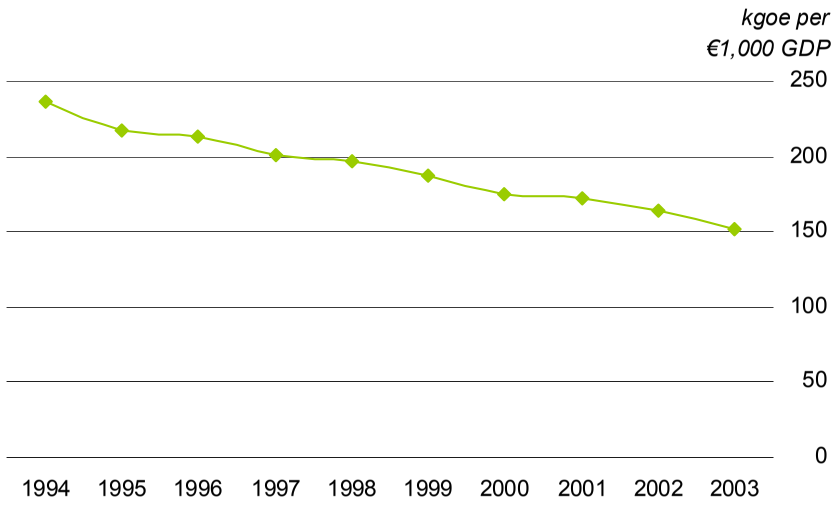
- Under the Kyoto protocol, EU countries agreed to reduce total greenhouse gas emissions in the EU to 8% below 1990 levels for the period 2008-2012. Ireland's Kyoto burden-sharing target is to have an increase of not more than 13% of our 1990 levels by that period (see Graph 10.1).
- Ireland exceeded the 2008-2012 Kyoto target of 113 for greenhouse gas emissions in 1997 and reached 131% of the 1990 level in 2001 Since then the situation has improved with the 2003 levels at 124.7% of 1990 levels (see Graph 10.1).
- Ireland's levels of emissions were still considerably worse than the EU 25 average of 91% of 1990 levels in 2002 (see Table 10.2).

10.2 EU: Net greenhouse gas emissions, 2002, and Kyoto 2008–2012 target

		1990=100	*%*
Country	**2002**	**2008-2012 Kyoto target**	**2002 level as % of target**
Latvia	36.9	92.0	40.1
Lithuania	39.8	92.0	43.3
Estonia	44.8	92.0	48.7
Poland	67.7	94.0	72.0
Hungary	69.0	94.0	73.4
Slovakia	71.8	92.0	78.0
Czech Republic	74.3	92.0	80.8
Sweden	96.3	104.0	92.6
United Kingdom	85.1	87.5	97.3
France	98.1	100.0	98.1
Greece	126.5	125.0	101.2
Germany	81.1	79.0	102.7
Finland	106.8	100.0	106.8
Netherlands	100.6	94.0	107.0
Slovenia	98.7	92.0	107.3
Belgium	102.1	92.5	110.4
Portugal	141.0	127.0	111.0
Ireland	**128.9**	**113.0**	**114.1**
Italy	109.0	93.5	116.6
Luxembourg	84.9	72.0	117.9
Spain	139.4	115.0	121.2
Austria	108.5	87.0	124.7
Denmark	99.2	79.0	125.6
EU 25	**91.0**	**:**	**:**
Cyprus	149.7	:	:
Malta	128.5	:	:
Bulgaria	44.0	92.0	47.8
Romania	52.0	92.0	56.5
Iceland	95.9	110.0	87.2
Norway	106.1	101.0	105.0

Source: Eurostat

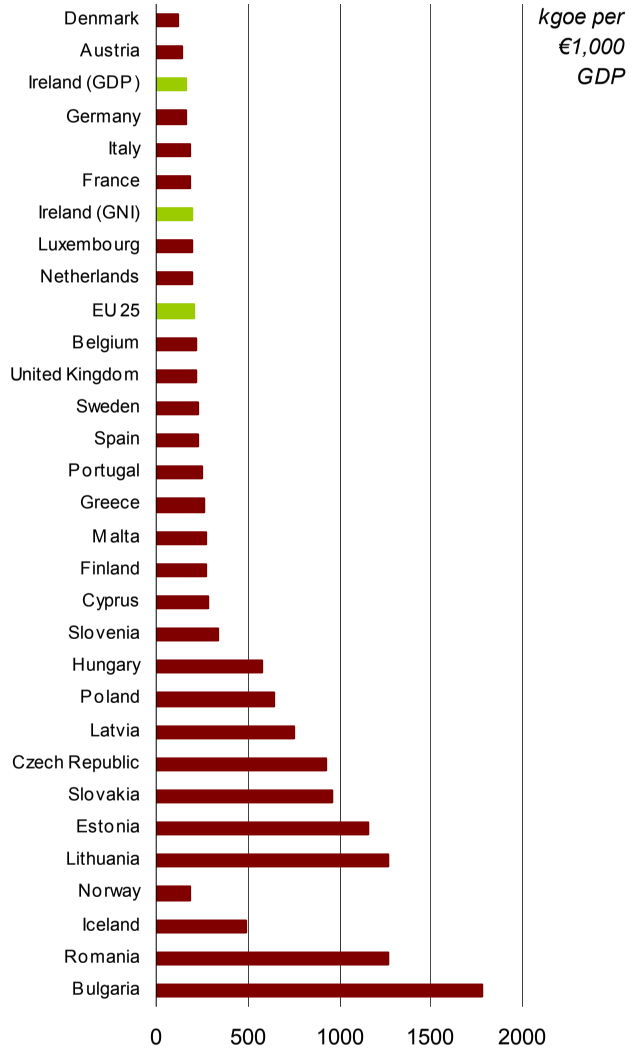
10.3 Ireland: Gross inland consumption of energy at constant 1995 prices, 1994–2003



Source: Sustainable Energy Ireland, CSO

- Ireland's energy intensity ratio improved from 236.4 in 1994 to 151.3 in 2003 (see Graph 10.3). This ratio is calculated by dividing total usage of coal, electricity, oil, natural gas and renewable energy by GDP (see Appendix 1).
- The ratio for Ireland in terms of both GDP and GNI was lower than the EU 25 figure of 209.9 in 2002. In terms of GDP, Ireland had the third lowest ratio of the EU 25 countries (see Graph 10.4).

10.4 EU: Gross inland consumption of energy at constant 1995 prices, 2002



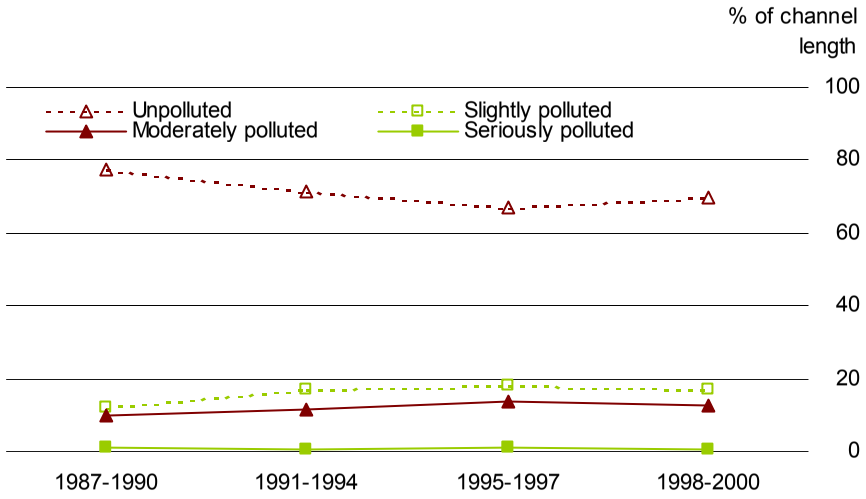
Source: Eurostat

10.5 Ireland: River water quality, 1987–2000

% of channel length

Quality	1987-1990	1991-1994	1995-1997	1998-2000
Unpolluted	77.3	71.2	67.0	69.8
Slightly polluted	12.0	16.8	18.2	17.0
Moderately polluted	9.7	11.4	13.8	12.4
Seriously polluted	0.9	0.6	0.9	0.8
Total	**100**	**100**	**100**	**100**

Source: Environmental Protection Agency

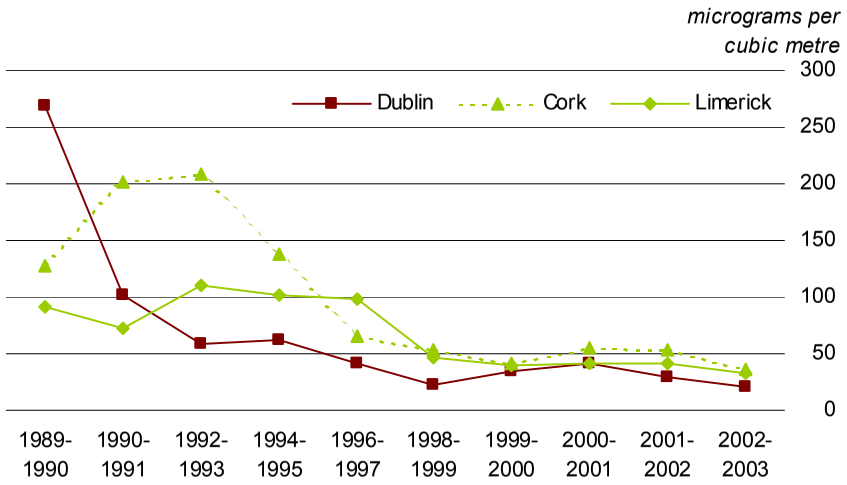


- The percentage of unpolluted river water in Ireland decreased from 77.3% in the period 1987-1990 to 67.0% in 1995-1997 but there was an improvement to 69.8% during 1998-2000 (see Table 10.5).
- The percentage of seriously polluted water has remained below 1% throughout the entire 1987-2000 period (see Table 10.5).

10.6 Ireland: Smoke concentrations[65] in urban areas, 1989–2003

Year	Dublin	Cork	Limerick
			μg per m³
1989-1990	269	128	92
1990-1991	102	202	73
1992-1993	58	209	110
1994-1995	62	138	101
1996-1997	41	66	99
1998-1999	23	54	47
1999-2000	35	42	39
2000-2001	42	56	41
2001-2002	29	53	42
2002-2003	21	37	32

Source: Environmental Protection Agency



- Smoke pollution levels in Dublin decreased dramatically from 269 μg per m³ in 1989-1990 to 58 μg per m³ in 1992-1993, following the introduction of legal restrictions on the sale of non-smokeless coals in 1990. Similar improvements occurred when the ban was extended to Cork in 1995 and Limerick in 1998. In 2002-2003, the smoke concentrations in Dublin were 21 μg per m³, Cork 37 μg per m³ and Limerick 32 μg per m³ (see Table 10.6).

- European legislation has set limit values of not exceeding 50 μg per m³ on more than 35 days per annum from 2005.

[65] 98 percentile of daily mean.

10.7 Ireland: Acid rain precursor emissions, 2001–2003

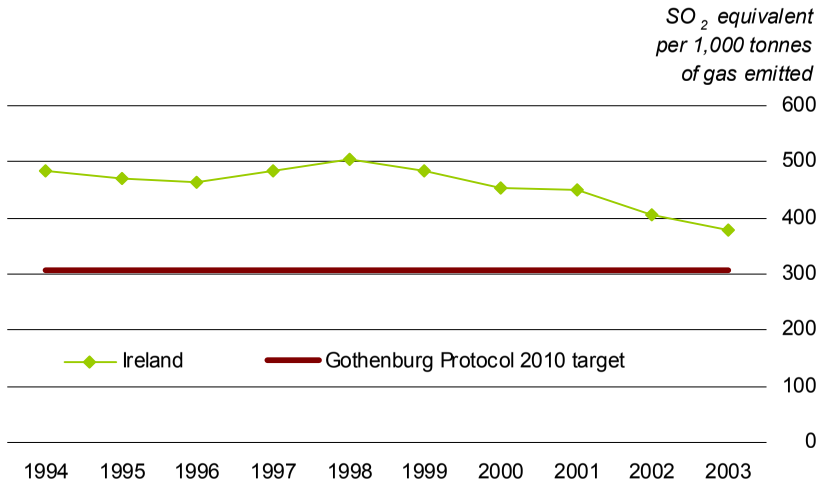
SO_2 equivalent per 1,000 tonnes of gas emitted

Gas	2001	2002	2003
Sulphur dioxide (SO_2)	125.8	96.2	76.4
Nitrogen oxides (NO_X)	93.9	87.1	83.3
Ammonia (NH_3)	230.8	224.0	218.8
Total	**450.5**	**407.3**	**378.5**

Source: Environmental Protection Agency

- The level of acid rain precursor emissions in Ireland decreased in each of the last three years, down to a level of 378.5 in 2003. The decrease is mainly due to lower levels of sulphur dioxide emissions (see Table 10.7 and Graph 10.8).
- The Gothenburg Protocol 2010 target emissions level is 300. In 2001, Ireland's emissions were 50% above this target, but by 2003 the levels had reduced to 26% above the target (see Graph 10.8).

10.8 Ireland: Acid rain precursor emissions, 1994–2003



Source: Environmental Protection Agency

10.9 Ireland: Total waste collected and percentage landfilled by type, 2001–2003

	000s tonnes			% of total waste		
	Waste collected			Waste landfilled		
Material	**2001**	**2002**	**2003**	**2001**	**2002**	**2003**
Paper	804.4	846.2	925.2	79.3	69.0	61.2
Glass	151.2	161.0	170.8	71.6	62.7	57.2
Plastic	237.4	249.3	252.9	93.3	85.3	81.0
Ferrous, aluminium & other metals	69.6	72.3	73.9	94.3	88.1	82.7
Textiles	60.1	57.3	57.0	93.2	97.7	93.9
Organic waste	578.2	645.1	701.2	96.2	84.8	75.0
Others	396.7	367.7	378.3	87.4	91.9	85.5
Total	**2,297.6**	**2,398.8**	**2,559.4**	**86.7**	**79.3**	**71.6**

Source: Environmental Protection Agency

- There was an 11% increase in Ireland's total waste collected between 2001 and 2003. In the same period, the proportion of total waste landfilled decreased by 15 percentage points from 86.7% in 2001 to 71.6% in 2003 (see Table 10.9).
- The proportion of municipal waste landfilled in Ireland in 2003 was 71.7%, which was considerably above the EU average of 48.9%. The Netherlands had the lowest proportion of landfilled waste at 2.7% (see Table 10.10).

10.10 EU: Municipal waste collected and landfilled, 2003

	kg per person		
Country	**Collected**	**Landfilled**	**% landfilled**
Netherlands	599	16	2.7
Denmark	675	34	5.0
Belgium	446	56	12.6
Sweden	471	64	13.6
Germany	638	127	19.9
Luxembourg	658	149	22.6
Austria	610	183	30.0
France	561	214	38.1
EU 25	**534**	**261**	**48.9**
Spain	609	361	59.3
Italy	523	323	61.8
Finland	450	285	63.3
Estonia	418	274	65.6
Latvia	362	248	68.5
Slovakia	319	222	69.6
Ireland	**643**	**461**	**71.7**
Czech Republic	280	201	71.8
Portugal	452	338	74.8
United Kingdom	610	460	75.4
Slovenia	451	344	76.3
Hungary	463	390	84.2
Cyprus	724	653	90.2
Greece	428	393	91.8
Poland	260	251	96.5
Lithuania	263	263	100.0
Malta	549	549	100.0
Norway	696	102	14.7
Romania	364	288	79.1
Bulgaria	499	407	81.6
Iceland	1040	867	83.4

Source: Eurostat

10.11 Ireland: Private cars under current licence, 1994–2003

000s

Year	Private cars under current licence	Private cars per 1,000 population aged 15 and over
1994	939.0	349.4
1995	990.4	363.7
1996	1,057.4	382.2
1997	1,134.4	402.5
1998	1,196.9	417.4
1999	1,269.2	436.0
2000	1,319.3	445.5
2001	1,384.7	458.6
2002	1,447.9	468.6
2003	1,507.1	479.2

Source: Department of the Environment, Heritage and Local Government

- The number of private cars per 1,000 population aged 15 and over in Ireland has risen from 349 in 1994 to 479 in 2003 (see Table 10.11). However, Ireland's car ownership rate was still lower than the EU average of 555 in 2002 (see Table 10.12).

- Austria and Estonia were the only EU countries where the car ownership rate decreased between 2001 and 2002 (see Table 10.12).

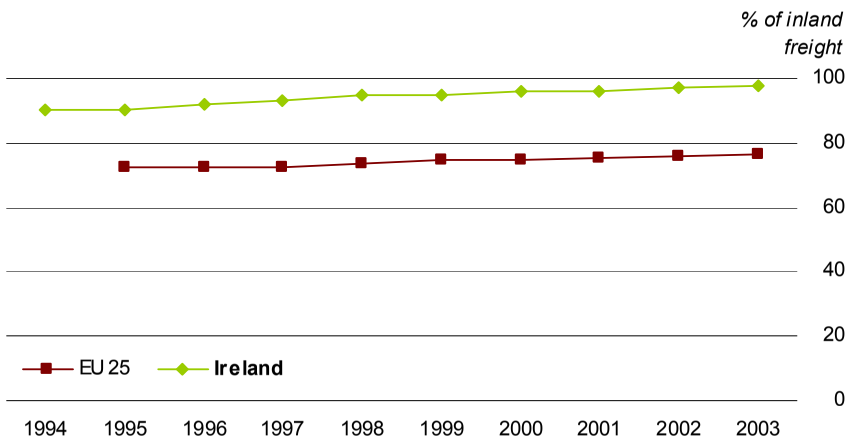
10.12 EU: Passenger cars per 1,000 population aged 15 and over, 2000–2002

cars per 1,000 population aged 15 and over

Country	2000	2001	2002
Luxembourg	772.1	784.9	792.9
Italy	667.5	680.2	687.5
Malta	613.1	617.6	639.0
Germany	631.0	637.2	638.3
France	586.9	596.8	602.8
Austria	616.5	625.0	591.4
Belgium	553.9	558.9	561.3
EU 25	**531.8**	**544.9**	**555.3**
Sweden	552.6	552.8	553.3
United Kingdom	518.0	532.8	546.8
Slovenia	519.3	525.7	540.3
Spain	509.7	523.4	531.8
Netherlands	504.4	513.8	521.1
Cyprus	497.8	511.2	513.7
Finland	502.8	507.8	512.7
Ireland	**445.5**	**458.6**	**468.6**
Portugal	418.9	432.9	447.0
Denmark	426.0	429.5	432.4
Czech Republic	400.5	410.8	424.1
Lithuania	418.5	403.6	418.0
Greece	341.4	366.7	398.1
Estonia	413.1	361.7	354.8
Poland	322.0	337.9	352.2
Latvia	284.9	299.9	316.3
Slovak Republic	293.8	296.6	303.1
Hungary	278.2	291.7	297.2
Iceland	736.6	730.4	731.9
Switzerland	597.2	606.3	611.2
Norway	510.8	517.5	522.6
Bulgaria	293.0	310.8	:
Romania	170.6	177.4	:

Source: Eurostat

10.13 Ireland and EU: Share of road in total inland freight transport[66], 1994–2003



Source: Eurostat, CSO

- Road transport accounted for 90.2% of total inland freight transport in Ireland in 1994. This share has gradually increased to reach 97.6% in 2003, compared to an EU average of 76.4% (see Graph 10.13 and Table 10.14).
- Ireland's use of road in inland freight transport in 2003 was among the highest in the EU with only Greece, Cyprus and Malta having higher proportions of freight transported by road (see Table 10.14).

10.14 EU: Share of road in total inland freight transport, 2001–2003

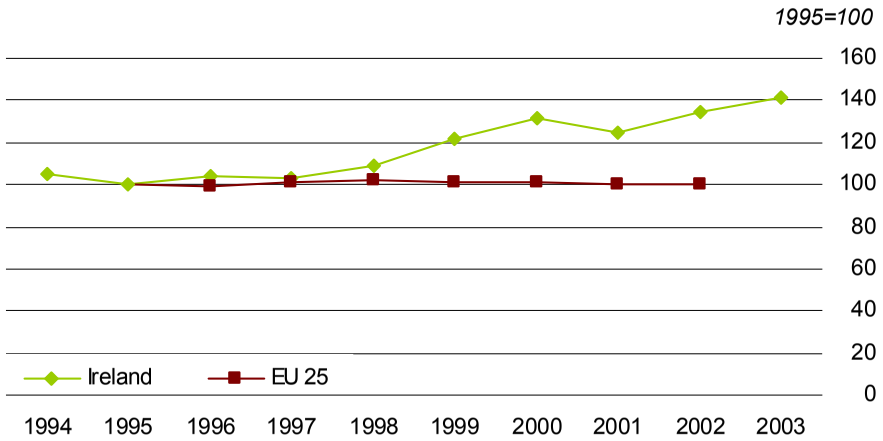
% of inland freight

Country	2001	2002	2003
Latvia	27.4	29.1	27.5
Estonia	35.3	31.1	39.9
Lithuania	51.7	52.3	50.0
Slovenia	66.0	59.8	59.0
Poland	60.4	60.5	60.8
Slovakia	53.6	57.6	61.2
Sweden	63.6	65.9	64.5
Hungary	67.3	66.7	65.4
Netherlands	63.0	63.3	67.2
Austria	65.9	65.9	67.4
Germany	67.2	67.0	67.8
Czech Republic	69.7	73.3	74.5
Finland	75.4	76.6	75.3
EU 25	**75.5**	**76.1**	**76.4**
Belgium	78.3	77.5	76.5
France	77.9	77.8	78.8
Italy	89.4	90.4	89.5
United Kingdom	89.3	89.7	89.8
Luxembourg	89.6	91.5	92.0
Denmark	91.7	92.3	92.1
Portugal	93.3	93.1	93.1
Spain	93.2	94.1	94.3
Ireland	**96.0**	**97.1**	**97.6**
Greece	98.3	98.5	98.2
Cyprus	100.0	100.0	100.0
Malta	100.0	100.0	100.0
Bulgaria	60.2	62.9	61.7
Romania	48.6	57.4	62.9
Norway	84.0	85.1	86.4
Iceland	100.0	100.0	100.0

Source: Eurostat

[66] Road, rail and inland waterways, measured in tonne-km.

10.15 Ireland and EU: Index of inland freight transport volume[67], 1994–2003



Source: Eurostat, CSO

- The volume increase of freight transported, relative to the volume change in GDP, was 141.7 in Ireland over the 1995-2003 period. By contrast the EU 25 figure remained quite static at 1995 levels over the period. This indicates that GDP growth in Ireland was accompanied by a much greater increase in freight activity on Irish roads (see Graph 10.15 and Table 10.16).

10.16 EU: Index of inland freight transport volume, 2001–2003

1995=100

Country	2001	2002	2003
Slovakia	49.7	47.7	48.6
Poland	79.0	78.1	78.4
United Kingdom	87.4	85.9	85.4
Denmark	85.6	85.5	87.2
Hungary	91.9	91.3	87.2
Netherlands	96.8	94.5	89.3
Sweden	88.8	90.3	90.8
Finland	93.8	94.7	91.5
Slovenia	103.3	92.4	93.3
Italy	100.9	102.7	93.4
France	97.8	95.6	93.7
Belgium	100.0	99.6	95.2
Czech Republic	93.5	97.9	99.0
Cyprus	93.9	95.7	99.6
EU 25	**99.8**	**100.6**	**99.7**
Germany	104.8	103.6	104.5
Luxembourg	106.4	107.3	109.0
Portugal	125.7	124.5	118.3
Austria	117.2	118.9	118.5
Lithuania	98.9	118.5	120.9
Greece	131.5	127.2	122.7
Latvia	120.1	122.4	133.1
Spain	123.3	137.0	139.2
Ireland (GDP)	**124.7**	**134.6**	**141.7**
Ireland (GNI)	**148.0**	**166.2**	**177.1**
Estonia	176.2	174.8	190.0
Malta	:	:	:
Bulgaria	33.3	33.2	35.0
Romania	81.7	90.1	95.4
Iceland	101.6	103.7	104.4
Norway	119.2	117.9	124.8

Source: Eurostat

[67] Measured in tonne-km / GDP (in constant 1995 Euro), 1995=100.

Appendices

Appendix 1 Definitions

1 Economy

Gross Domestic Product (1.1 to 1.3)

Gross Domestic Product (GDP) is the central aggregate of National Accounts. GDP at market prices is the final result of the production activity of resident producer units. GDP is compiled both in constant prices and in current prices. Constant price data indicate the development of volumes, while current price data reflect volume and price movements.

GDP expressed at market prices equals gross value added at factor cost plus national taxes on production less national subsidies on production.

GDP less net primary incomes from abroad less EU taxes plus EU subsidies is equal to Gross National Income (GNI).

Gross National Income (GNI) is conceptually equal to Gross National Product (GNP) plus EU subsidies less EU taxes.

Purchasing Power Parities (PPPs) are a weighted average of relative price ratios in respect to a homogeneous basket of goods and services, both comparable and representative for each country. They show the ratio of the prices in national currency of the same goods or services in different countries. The application of PPPs eliminates the effects of differences in price levels between countries thus allowing volume comparisons of GDP components and comparisons of price levels.

Purchasing Power Standards (PPS) are an artificial common reference currency used in the EU to eliminate differences in purchasing power, or price levels, between countries. They are fixed in a way that makes the average purchasing power of one euro in the European Union equal to one PPS. Hence one PPS buys the same average volume of goods and services in all countries. Economic volume aggregates in PPS are obtained by dividing their original value in national currency units by the respective PPPs.

The population of a country consists of all persons, national or foreign, who are permanently settled in the economic territory of the country on a particular date, even if they are temporarily absent from it (see also Population domain definitions). GDP per capita is calculated by dividing GDP by the population.

GDP per capita in PPS allows the comparison of levels of economic activity of different sized economies (per capita) irrespective of their price levels (in PPS). It is less suited for comparisons over time.

Government debt (1.4 and 1.5)

General government consolidated gross debt at nominal value is the standardised measure of indebtedness of EU governments. The general government sector comprises the sub-sectors of central government, local government, and social security funds. The debt of commercial State companies/public corporations is excluded. It takes account of all liabilities included in the traditional national definition of National Debt, without any offsetting of liquid assets, together with the liabilities of non-commercial State agencies and local authorities.

Debt is valued at nominal (face) value, and foreign currency debt is converted into national currency using end-year market exchange rates.

GDP at current market prices is used as the denominator for calculating the General Government Consolidated Debt as a percentage of GDP ratio.

GNI at current market prices, is used as the denominator for calculating the General Government Consolidated Debt as a percentage of GNI ratio.

Public balance (1.6 to 1.8)

Public balance (or General Government balance) measures the difference between incomes and outlays of the General Government. It refers to the concept of general government net borrowing (negative balance) or net lending (positive balance) in the European System of Accounts.

Central and Local Government current expenditure is composed of subsidies, national debt interest, transfer payments, and expenditure on goods and services. It is one of the elements of the public balance.

Gross fixed capital formation (1.9 and 1.10)

Gross fixed capital formation (GFCF) is an indicator of investment in assets such as building and construction, and machinery and equipment. Such investment is generally regarded as leading to higher productivity and an improved living infrastructure. GFCF is a component of GDP.

GDP valued at current market prices is used as a denominator.

International transactions (1.11 and 1.12)

The Balance of Payments accounts consist of three tables or accounts: the Current account; the Capital account; and the Financial account.

The current account consists of trade in merchandise and services, income inflows and outflows, and current transfers. In the current account, credit items are exports of merchandise and services, income inflows, and current transfer receivables. Debit items are imports, income outflows, and transfer payables.

The current account balance is the total of all current account credits less the total of all current account debits.

Direct investment flows is a category of international investment that reflects a lasting interest by a resident in one economy in an enterprise resident in another economy. The extent of equity ownership should be at least 10%. Flows reflect the transactions that occurred during a particular year rather than the cumulative stock or aggregate position.

Direct investment inward covers the investment by foreign companies in Ireland. From the point of view of the country being invested in, this can be regarded as a liability. A negative figure indicates that disinvestments exceeded any investments during the period. Hence a minus figure indicates a reduction in liabilities of the country being invested in.

Direct investment outward covers the investment abroad by parent companies resident in Ireland. From the point of view of the country making the investment, this can be regarded as an asset. A negative figure indicates that investments abroad exceeded any disinvestments, or disposals, during the period. Hence a minus figure indicates an increase in assets for the country making the investment.

GDP valued at current market prices is used as a denominator.

International trade (1.13 and 1.14)

Goods and services incorporates both merchandise exports and imports and services exports and imports.

Merchandise trade refers to Ireland's external trade in goods with other countries. The data sources for these estimates are a combination of Customs-based non-EU trade statistics and the Revenue Commissioners Intrastat survey of Irish traders engaged in trade with other EU Member States.

Services exports and imports include transport, tourism and travel, communications, insurance and financial services, computer services, royalties and licences, and some business and other services.

The valuation of goods and services is based on Balance of Payments principles. In the official external trade statistics, exports and imports are valued cost, insurance and freight. In Balance of Payments, they are valued free on board.

Exchange rates (1.15 and 1.16)

Trade weighted competitiveness indicators[68] (TWCIs) measure how changes in the value of the Irish currency and changes in the prices of imports and exports combine to improve or worsen the competitiveness of Irish exports and imports. An increase in the index signifies an erosion of Ireland's trade competitiveness.

TWCIs are essentially measures of change in nominal and real exchange rates. These changes are examined through changes in exchange rates, and changes in domestic prices and costs relative to those in our trading partners. The weighting system, on which an exchange rate index is based, is a double weighting scheme that seeks to assign an export weight to the currency of each trading partner according to that trading partner's share of both its own market and the markets of all other trading partners. This is because exporters compete in foreign markets not only with domestic producers of import substitutes but also with exporters from other countries. Overall trade weights combine the double export weight with a bilateral import weight in proportion to the relative size of Irish exports and imports.

The European Central Bank (ECB) calculates the effective exchange rates for the euro based on a narrow group of 12 trading partners and a broad group of 38 countries. The Irish Central Bank added the 11 euro countries to the narrow group of 12 countries used by the ECB, and calculated weights for each of these 23 countries. Using late 1990s trade data for weighting, ten countries accounted for 83% of total Irish manufacturing trade (UK, USA, Germany, France, Japan, Netherlands, Italy, Belgium, Singapore and Spain). For practical reasons, such as improved timeliness, the TWCIs for Ireland were calculated using these ten countries.

Gains and losses in trade competitiveness depend on the balance between changes in our consumer and producer prices relative to our competitors, and to changes in the value of the euro relative to the dollar, sterling and the yen.

Bilateral exchange rates shown are annual period averages, shown in units per euro. The reference rates are based on the European Central Bank's regular daily concertation procedure between central banks within and outside the European System of Central Banks.

Interest rates (1.17 to 1.19)

Convergence of interest rates is defined as the coefficient of variation of national retail interest rates across the Eurozone 12 members and the EU Member States. The indicator measures the trend towards integration of financial markets. A decline in the variation coefficient of interest rates over time shows an increasing degree of financial market integration.

Monetary Financial Institution (MFI) interest rate statistics are compiled by national Central Banks within the euro area, according to the European Central Bank Regulation (EC) No 63/2002. The scope of euro area MFI interest rate statistics is all interest rates that MFIs resident in the euro area apply to euro-denominated deposits and loans vis-à-vis non-financial sectors (other than government) resident in the euro area, i.e. vis-à-vis households and non-financial corporations of any size. In practice, mainly credit institutions need to report MFI interest rate statistics.

The statistics are compiled for the euro area as a whole and individually for each Member State in order to give information about the level and development of interest rates both at euro area and at national level. MFI interest rate statistics are collected at monthly frequency. The interest rates shown in the tables in this publication refer to end December of each year.

[68] See article by John Kelly and Brian Golden in the Winter 2001 Central Bank quarterly bulletin "Trade Weighted Competitiveness Indicators for Ireland".

Harmonised Index of Consumer Prices (1.20 and 1.21)

The EU Harmonised Index of Consumer Prices (HICP) is calculated in each Member State. HICPs are designed to allow the comparisons of consumer price trends in the different EU countries. The index measures the change in the average level of prices (inclusive of all indirect taxes) paid for consumer goods and services by all private households in a country and by all foreign visitors to that country.

HICPs were designed specifically for EMU convergence. They are calculated according to a harmonised approach and a regulated set of definitions. They were not intended to replace existing national Consumer Price Indices, which are calculated based on national definitions.

Price levels (1.22 and 1.23)

Comparative price levels are the ratio between PPPs and the market exchange rate for each country. The ratio is shown in relation to the EU average (EU 25=100). If the index of the comparative price levels shown for a country is higher (lower) than 100, the country concerned is relatively expensive (cheap) as compared with the EU average.

See indicator 2.7 for the definition of Private households.

2 Innovation and technology

Science and technology graduates (2.1 and 2.2)

Science and technology comprises Life sciences; Physical sciences; Mathematics and statistics; Computing; Engineering and engineering trades; Manufacturing and processing; and Architecture and building. For data prior to 1998, the corresponding fields are: Natural sciences; Mathematics and computer science; Engineering; Architecture and town planning; and Trade, craft and industrial programmes.

These indicators include tertiary graduates from public and private institutions. Tertiary education refers to International Standard Classification of Education (ISCED 97) levels 5 and 6. See Section 5 for detailed information on ISCED 97 classifications.

Data on science and technology graduates are collected through the joint UNESCO-OECD-EUROSTAT data collection questionnaires on graduates.

Research and development expenditure (2.3 and 2.4)

Research and experimental development (R&D) comprises creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture and society and the use of this stock of knowledge to devise new applications.

Gross domestic expenditure on R&D is composed of: Business enterprise expenditure in R&D; Higher Education expenditure in R&D; Government expenditure in R&D; and Private Non-profit expenditure in R&D. R&D basic data are provided to Eurostat directly by the Member States of the European Union.

Patent applications (2.5 and 2.6)

Patents covered refer to applications filed directly under the European Patent Convention or to applications filed under the Patent Co-operation Treaty and designating the European Patent Office (EPO). Patent applications are counted according to the year in which they were filed at the EPO. The regional distribution of patent applications is assigned according to the inventor's place of residence. If one application has more than one inventor, the application is divided equally among all of them and subsequently among their regions, thus avoiding double counting.

Data are expressed per million of the population.

Household internet access (2.7 and 2.8)

Household internet access data were collected in an Information and Communications Technology survey that was asked of a sub-sample of the main CSO Quarterly National Household Survey (QNHS) sample. One member of each household in the survey was asked *"Does any member of this household have access to the internet at home?"*. Persons answered *Yes* to this question if they accessed the internet at home via a PC, TV set, mobile phone, games console and other devices.

A private household is defined as a person or group of persons with common housekeeping arrangements, separately occupying all or part of a private house, flat, apartment or other private habitation of any kind. The persons who make up a private household jointly occupy living accommodation, share main meals in general, and have common provision for basic living needs.

Each of the following is regarded as one private household:

- All persons living in the same private dwelling and having their meals together;
- A person living alone or with domestic employees;
- A lodger living in a room or rooms in a house or flat, and not sharing in any housekeeping arrangements with the other residents;
- A resident caretaker of a house, office, etc. whether living alone or with family/others; and
- Persons living in the same private dwelling and sharing much of the expenses - such as rent, food, electricity, gas, etc.

3 Employment and unemployment

The International labour Office (ILO) classification distinguishes the following main subgroups of the population aged 15 or over:

Persons in employment are all persons:

- who worked in the week before the survey for one hour or more for payment or profit, including work on the family farm or business; and
- all persons who had a job but were not at work because of illness, holidays, etc. in the week.

Persons classified as unemployed are persons who, in the week before the survey:

- were without work;
- were available for work within the next two weeks; and
- had taken specific steps, in the preceding four weeks, to find work.

The labour force comprises persons in employment plus persons unemployed.

The inactive population is all other persons in the population who are not part of the labour force.

Employment rate (3.1 and 3.2)

The employment rate is calculated by dividing the number of employed persons aged 15-64 by the number of persons in the population aged 15-64. The Labour Force Survey (or the QNHS for Ireland) covers persons aged 15 years and over, living in private households.

Persons living in collective households (halls of residence, medical care establishments, religious institutions, collective workers' accommodation, hostels, etc.) and persons carrying out obligatory military service are not included.

Labour productivity (3.3 and 3.4)

GDP in PPS per person employed is intended to give an overall impression of the productivity of national economies. This measure depends on the structure of total employment and therefore could be lowered by a shift from full-time to part-time work.

GDP in PPS per hour worked is intended to give a clearer picture of productivity. Total hours worked represents the aggregate number of hours actually worked as an employee or self-employed during the accounting period. Total hours worked is the preferred measure of labour inputs for the system of national accounts. It is more difficult to measure than total employment.

Unemployment rate (3.5 to 3.8)

The unemployment rate is the number of people unemployed as a percentage of the labour force.

The long-term unemployment rate is calculated as the number of persons unemployed for one year or more expressed as a percentage of the total labour force.

Jobless households (3.9 and 3.10)

The proportion of the population aged 18-59 living in jobless households is calculated by dividing the number of persons aged 18-59 living in households where no one is working by the total population aged 18-59. Both the numerator and the denominator excludes persons living in households where everyone is aged 18-24 and either in education or inactive.

The definitions apply to persons living in private households. The unemployment figures prior to 2001 are not strictly comparable with 2001 and later years. Before 1998, education was related only to education and vocational training which was relevant for the current or possible future job of the respondent.

Older workers (3.11 and 3.12)

Effective average exit age from the labour force gives the average age of withdrawal from labour market. It is based on a probability model considering the relative changes of activity rates from one year to another at a specific age. The starting points are the activity rates per age and year coming from the EU quarterly Labour Force Survey.

The activity rate (also known as the participation rate) represents the labour force as a percentage of the total population for a given age. Both the numerators and the denominators come from the LFS. The definitions apply to persons living in private households.

The small sample sizes in higher ages in some countries makes it necessary to artificially smooth the decline of activity rates linearly from age 65 to age 70 so that in the age 71 the active population in terms of the model is zero. In such cases, the moving average activity rates over the ages 64 to 66 is used instead of the actual activity rate for age 65.

The starting year for this indicator is 2001 when most EU countries carried out quarterly LFS surveys. The activity rates taken into consideration were the average over four quarterly observed rates in the year considered. Quarter 1 or 2 data were used in cases where LFS data for all quarters were not available.

The EU 25 average exit age is computed on the basis of the EU activity rates (EU labour force as a percentage of the EU population of a given age).

4 Social cohesion

Social protection expenditure (4.1 and 4.2)

Social protection expenditure data are drawn up according to the ESSPROS (European System of integrated Social Protection Statistics) methodology. The data include the expenditure broken down in social benefits, administration cost and other expenditure. In addition, social benefits are classified by functions of social protection. Data are available for all EU Member States except Cyprus Annual data for the European Union are derived from all countries, for which the respective data are available, usually by adding up the aggregates for all Member States after expressing them in a common currency (ECU/Euro). National Statistical Institutes and/or Ministries of Social Affairs are responsible for data collection in national currency. Most of the data are administrative data. See notes on Tables 5.3 and 6.2 for definitions of the education and health expenditure data shown in Table 4.2.

Risk of poverty (4.3 to 4.6)

The at risk of poverty rate indicator is defined as the share of persons with an equivalised disposable income below the at risk of poverty threshold, which is set at 60% of the national median equivalised disposable income (after social transfers). This share is calculated for: the original income before pensions and social transfers; the original income including pensions; and the original income after pensions and social transfers (total income). This indicator focuses on the relative risk of poverty in relation to the rest of the population in a country rather than the absolute risk of poverty. Hence a person classified as in poverty in one country would not necessarily be classified as in poverty in another country if they were at the same absolute income level.

The data in Table 4.3 is obtained from the following sources:

- The EU Survey on Income and Living Conditions (EU SILC) 2003 for Ireland, Austria and Luxembourg (data for Austria and Luxembourg are provisional);
- National sources ex-post harmonised with EU SILC for 18 other Member States (data for Portugal and Slovakia are provisional).

EU SILC is carried out under EU legislation and commenced in Ireland in June 2003. The primary focus of the survey is the collection of information on the income and living conditions of different types of households. The survey also provides information on poverty, deprivation and social exclusion. The first set of results for Ireland from the survey based on data collected in the period June to December 2003 was published in January 2005. EU SILC replaced the European Community Household Panel (ECHP) survey which was discontinued after the 2001 survey.

While the income definitions used in the ECHP and EU SILC are similar, there are some operational differences. The income reference period in the ECHP was a standard 12-month calendar period whereas in EU SILC a floating 12-month reference period is used (i.e. for each respondent the income reference period is the 12 months preceding the date of interview).

In Ireland, the interviewing period for the EU SILC in 2003 ran from June through to December and therefore any seasonal issues such as the timing of bonus/commission payments (and hence recall issues) may not be fully accounted for in the EU SILC 2003 data. However EU SILC is a continuous survey and EU SILC 2004 data will be based on a 12-month interviewing period. The at risk of poverty rates are broadly comparable in both surveys.

For Table 4.3, the EU definition of income is used. The key differences between the national and EU definitions of income are:

- The EU definition of gross income does not include income from private pensions. These are defined as private schemes fully organised by the individual, where contributions are at the discretion of the contributor independently of their employer or the State. Thus, private pensions do not include occupational or State pensions.

- All contributions to pension plans, except for those to private pension plans, are deducted from gross income when calculating disposable income under the EU definition. No pension contributions of any

kind are deducted from gross income in the calculation of disposable income for national purposes from the national definition of income.

For EU at risk of poverty rates, the equivalised disposable income for each person is calculated as the household total net income divided by the equivalised household size according to the modified OECD scale (which gives a weight of 1.0 to the first adult, 0.5 to other persons aged 14 or over who are living in the household and 0.3 to each child aged less than 14).

In tables 4.4 to 4.6 the national equivalence scale and definition of income are used to calculate at risk of poverty rates. The national equivalence scale used to obtain the equivalised household size attributes a weight of 1 to the first adult in a household, 0.66 to each subsequent adult (aged 14+ living in the household) and 0.33 to each child aged less than 14. The purpose of an equivalence scale is to account for the size and composition of different income units (households) and thus allows for a more accurate comparison between households. However, numerous scales have been developed, and there is no real consensus as regards the most appropriate scale to use. For EU purposes, the modified OECD scale has been accepted to allow comparison across countries. At a national level, the alternative national scale has been used in the past in the calculation of relative poverty and consistent poverty rates, and thus is used for retrospective comparison nationally.

For all tables the population consists of all the persons living in private households in a country. The term person therefore includes all the members of the households, whether they are adults or children.

In the EU SILC income details and household composition are collected for all households. Where income is missing, it is imputed based on industry and occupation

Consistent poverty

The consistent poverty measure considers those persons who are defined as being at risk of poverty (using the national income definition and equivalence scale) and assesses the extent to which this group may be excluded and marginalised from participating in activities which are considered the norm for other people in society. The identification of the marginalised or deprived is achieved on the basis of a set of eight basic deprivation indicators:

- No substantial meal for at least one day in the past two weeks due to lack of money;
- Without heating at some stage in the past year due to lack of money;
- Experienced debt problems arising from ordinary living expenses;
- Unable to afford two pairs of strong shoes;
- Unable to afford a roast once a week;
- Unable to afford a meal with meat, chicken or fish (or vegetarian equivalent) every second day;
- Unable to afford new (not second-hand) clothes; and
- Unable to afford a warm waterproof coat.

An individual is defined as being in consistent poverty if they are:

- Identified as being at risk of poverty; and
- Living in a household deprived of one or more of the eight basic deprivation items listed above

Note that it is enforced deprivation that is relevant in this context. For example, a household may not have a roast once a week. The household is classified as deprived of this basic indicator only if the reason they didn't have it was because they could not afford it.

Measures of consistent poverty are not comparable between 2003 (EU SILC data) and previous years (ECHP data) due to changes in methodology. This poverty measured is used in Ireland but is not used internationally.

Gender pay gap (4.7 and 4.8)

The gender pay gap in unadjusted form is given as the average gross hourly earnings of female paid employees as a percentage of average gross hourly earnings of male paid employees. The gender pay gap is based on several data sources, including the European Community Household Panel (ECHP), the EU Survey on Income and Living Conditions (EU SILC) and national sources. The target population consists of all paid employees aged 16-64 who are 'at work 15+ hours per week'.

Administrative data are used for Luxembourg and the labour force survey is used for France (up to 2002) and Malta. All other sources are national surveys except as follows:

- 2003 Statistics on Income and Living Conditions - Greece, Ireland and Austria
- 2002 European Community Household Panel (ECHP) - Greece
- 2001 and before: European Community Household Panel (ECHP) - Belgium, Germany, Italy, Denmark, Ireland, United Kingdom, Greece, Spain, Portugal, Austria, Finland

Voter turnout (4.9 and 4.10)

Persons entitled to vote refers to the total number of persons in a given country who are registered to vote.

Voting is compulsory by law in Belgium, Cyprus Greece, Italy, Luxembourg, the Netherlands and parts of Austria and Switzerland. There is weak or no enforcement of this law in Italy, Greece and the Netherlands. For further information on compulsory voting and related issues see http://www.idea.int/.

Official development assistance (4.11 and 4.12)

Official development assistance, or foreign aid, consists of loans, grants, technical assistance and other forms of co-operation extended by governments to developing countries. A significant proportion of official development assistance is aimed at promoting sustainable development in poorer countries, particularly through natural resource conservation, environmental protection and population programmes.

The United Nations Millennium Development goals set a target for net ODA as 0.7% of donor countries Gross National Income to be reached by 2007. The Irish Government has committed itself to achieving this target.

5 Education

Education expenditure (5.1 to 5.3)

Non-capital public expenditure on education includes direct public expenditure on educational institutions, public subsidies to other private entities for education matters and public subsidies to households such as scholarships and loans to students for tuition fees and student living costs.

The expenditure has been deflated to real prices by using the National Accounts series for net expenditure by central and local government on current goods and services at base year 1995. For comparison purposes, the all items CPI index rescaled to base 1995 is also shown in the table below:

1995=100

Year	Government current expenditure	All items CPI index
1993	95.3	95.3
1994	97.2	97.5
1995	100.0	100.0
1996	102.0	101.7
1997	107.9	103.2
1998	112.0	105.6
1999	117.5	107.4
2000	124.7	113.4
2001	133.4	118.9
2002	140.5	124.4
2003	149.0	128.7

Public expenditure on education as used for the international comparison includes both current and capital expenditure.

In the mid-1990s, undergraduate tuition fees were abolished in Ireland. In 1995/96, third level students paid half-fees and from 1996/97 undergraduate fees were abolished.

Educational institutions are defined as entities that provide instructional services to individuals or education-related services to individuals and other educational institutions.

International data are collected through the joint UNESCO-OECD-EUROSTAT data collection questionnaires on educational finance. Countries provide data coming usually from administrative sources on the basis of commonly agreed definitions.

Data on total public expenditure on education are expressed as a percentage of GDP. National public expenditure as a percentage of the GDP is calculated using figures in national currency both for public expenditure and for GDP. European averages are weighted and therefore take into account the relative proportion of the student population or the education expenditure of the considered countries. They are calculated taking into account all relevant countries for which data are available. They are considered of sufficient quality if countries with available data exceed 70% of the population or of the GDP of the European aggregate.

Pupil-teacher ratio (5.4 and 5.5)

Pupil-teacher ratio is calculated by dividing the number of full-time equivalent pupils at a given level of education by the number of full-time equivalent teachers teaching at that level. Data are collected through the joint UNESCO-OECD-EUROSTAT data collection questionnaires on educational personnel. The following qualifications regarding the data in Table 5.4 should be borne in mind:

Belgium	Data exclude the German Community and all independent private institutions. Teachers in social advancement education (ISCED 3) in the French Community are not included. ISCED 4 included in ISCED 3.
Denmark	ISCED 2 is included in ISCED 1.
Finland	ISCED 3 includes ISCED 4 and 5 vocational and technical programmes.
Iceland	ISCED 4 is partly included in ISCED 3. ISCED 2 is included in ISCED 1.
Ireland	ISCED 2 includes ISCED 3 and 4.
Lithuania	ISCED 3 includes vocational programmes only, general programmes are included in ISCED 2. The methodology to calculate full-time equivalent teachers improved in 2002, therefore data is not comparable with previous years.
Luxembourg	Public sector only. ISCED 2 includes ISCED 3.
Netherlands	ISCED 1 includes ISCED 0. ISCED 3 includes ISCED 2. The methodology for

	statistics on personnel in secondary education changed in 2002. The decrease in the pupil/teacher ratio is mainly a result of the changed methodology.
Norway	ISCED 2 includes ISCED 1. ISCED 3 includes ISCED 4.
Spain	ISCED 3 includes ISCED 4.
United Kingdom	ISCED 3 includes ISCED 4.

Average class size is calculated by dividing the number of pupils at a given level of education by the number of classes at that level. Data refer only to regular pupils/classes so special needs programmes are excluded. Data are collected through the joint UNESCO-OECD-EUROSTAT data collection questionnaires on class size.

EU 25 aggregates are not currently available for these indicators due to difficulties in comparing data between countries as illustrated by the country specific notes.

The International Standard Classification of Education (ISCED 97) is the basis for international education statistics. It incorporates 6 levels of education:

ISCED 0 Pre-primary level of education: Initial stage of organised instruction, designed primarily to introduce very young children to a school-type environment. This level of education should be centre or school based, be designed to meet the educational and developmental needs of children at least 3 years of age and have staff that are adequately trained and qualified to provide an educational programme for these children.

ISCED 1 Primary level of education: Programmes normally designed to give students a sound basic education in reading, writing and mathematics. This level represents the beginning to systematic studies characteristic of primary education, e.g. reading, writing and mathematics. It is marked by entry into the nationally designated primary institutions or programmes. The commencement of reading activities alone is not a sufficient criterion for classification of an educational programme to ISCED 1.

ISCED 2 Lower secondary level of education: The lower secondary level of education generally continues the basic programmes of the primary level, although teaching is typically more subject-focused. Programmes at the start of level 2 should correspond to the point where programmes begin to be organised in a more subject-oriented pattern, using more specialised teachers conducting classes in their field of specialisation.

ISCED 3 Upper secondary level of education: The final stage of secondary education in most countries. Instruction is often more organised along subject-matter lines than at ISCED level 2 and teachers need to have a higher level, or more subject-specific, qualification than at ISCED 2. Admission into ISCED 3 usually requires the completion of ISCED 2 or a combination of basic education and life experience that demonstrates the ability to engage with ISCED 3 subject matter. There are substantial differences in the typical duration of ISCED 3 programmes both across and between countries, typically ranging from 2 to 5 years of schooling.

ISCED 4 Post secondary non-tertiary education: These programmes straddle the boundary between upper secondary and post-secondary education from an international point of view, even though they may be considered as upper secondary or post-secondary in a national context. They are often not significantly more advanced than programmes at level 3 but they serve to broaden the knowledge of participants who have already completed a level 3 programme. The students tend to be older than those in ISCED 3 programmes and have usually completed ISCED 3. The duration of these programmes will generally be between 6 months and two years (full-time equivalent duration).

ISCED 5 First stage of tertiary education: ISCED 5 programmes have an educational content more advanced than those offered at levels 3 and 4. Entry to these programmes normally requires the successful completion of ISCED level 3 or a similar qualification at ISCED level 4.

ISCED 5A: These programmes are largely theoretically based and are intended to provide sufficient qualifications for gaining entry into advanced research programmes and professions with high skills requirements. The minimum cumulative theoretical duration of these programmes is three years (full-time equivalent). The faculty must have advanced research credentials. Completion of a research project or thesis may be required.

ISCED 5B: These programmes are generally more practical/technical and occupational specific than ISCED 5A programmes. They do not prepare students for direct access to advanced research programmes. The programme content is typically designed to prepare students to enter a particular occupation.

ISCED 6 Second stage of tertiary education: This level is reserved for tertiary programmes leading to the award of an advanced research qualification. The programmes are developed to advanced study and original research. This level requires the submission of a thesis or dissertation of publishable quality that is the product of original research and represents a significant contribution to knowledge. It is not solely based on course work and it prepares recipients for faculty posts in institutions offering ISCED 5A programmes, as well as research posts in government and industry.

Third level education (5.6 and 5.7)

See notes on ISCED 97 under indicators 5.4 and 5.5.

Literacy (5.8 and 5.9)

The OECD Programme for International Student Assessment (PISA) assesses young people's capacity to use their knowledge and skills in order to meet real-life challenges, rather than merely examining how well the students had mastered their school curriculum. PISA assesses literacy in reading, mathematics and science. The PISA survey was first conducted in 2000 in 32 countries. Two thirds of the assessment in 2000 focussed on reading literacy. The second study, conducted in 2003 in 41 countries focussed primarily on mathematical literacy. In 2006, the primary focus will be on science and the study will return to focussing on reading in 2009.

Students aged between 15 years and 3 months and 16 years and 2 months at the beginning of the assessment period and who were enrolled in an educational institution were eligible to be included in the study. No distinction was made on the basis of whether they were attending full-time or part-time.

The PISA scale for each literacy area was devised so that across OECD countries, the average score is 500 points, and around two-thirds of students achieve between 400 and 600 points.

The OECD average is the mean of the data values for all OECD countries for which data are available or can be estimated. The OECD average can be used to see how one country compares on a given indicator with another country. Each country contributes equally to the OECD average. Hence it does not take into account the absolute size of the student population in each country.

The OECD total takes the OECD countries as a single entity, to which each country contributes in proportion to the number of 15 year-olds enrolled in its schools. It illustrates how a country compares with the OECD area as a whole.

Early school leavers (5.10 to 5.12)

Early school leavers are persons aged 18 to 24 in the following two conditions (numerator): the highest level of education or training attained is ISCED 0, 1 or 2; and respondents declared not having received any education or training in the four weeks preceding the survey.

The denominator is the total population of the same age group, excluding non-response answers to the questions 'highest level of education or training attained' and 'participation to education and training'. Both the numerators and the denominators come from the Labour Force Survey (Quarterly National Household Survey (QNHS) in Ireland). A reference period of four weeks has been chosen for the questions on participation in order to avoid distortion of information due to recall problems. The reference period is the last four weeks preceding the survey. The information collected relates to all education or training received whether or not relevant to the respondent's current or possible future job. It includes initial education, further education, continuing or further training, training within the company, apprenticeship, on-the-job training, seminars, distance learning, evening classes, self-learning etc. It includes also courses followed for general interest and may cover all forms of education and training such as language, data processing, management, art/culture, and health/medicine courses. Before 1998, education was related only to education and vocational training which was relevant for the current or possible future job of the respondent.

The data for Ireland are not strictly comparable between 2003 and earlier years as modifications to the questionnaire in 2003 increased capture of information on receipt of education in the four weeks prior to the survey.

6 Health

Health care expenditure (6.1 and 6.2)

Public non-capital expenditure on health care in Ireland includes expenditure on items such as services and administration in hospitals, community health and welfare expenditure, and services for the disabled.

The expenditure has been deflated to real prices by using the National Accounts series for net expenditure by central and local government on current goods and services at base year 1995 (see series under Indicator 5.1 definitions).

Total expenditure on health as used for the international comparison includes both public and private capital and non-capital expenditure on health. These figures are compiled by the World Health Organisation. Whenever possible, the OECD definition of total expenditure on health is applied. It includes: household health expenses, including goods and services purchased at the consumer's own initiative and the cost-sharing part of publicly financed or supplied care; government-supplied health services including those in schools, prisons and armed forces and special public health programmes such as vaccination; investment in clinics, laboratories etc.; administration costs; research and development, excluding outlays by pharmaceutical firms; industrial medicine; outlays of voluntary and benevolent institutions. In the case of most central and eastern European countries the following has to be included: direct state budget allocated to the health sector, state subsidies to the mandatory health insurance system; mandatory health insurance contributions by employers and employees; direct health expenditure of employers for running industrial medical facilities; direct health expenditures of ministries and governmental agencies; charity health expenditures; foreign assistance; outstanding debt at the end of the year; private health insurance and direct private health charges. The OECD Health Database is used as the primary data source for those countries that are OECD Member States.

Life expectancy (6.3 and 6.4)

Life expectancy at birth or at age 65 is the average number of years that a person at that age can be expected to live, assuming that age-specific mortality levels remain constant.

7 Population

Population distribution (7.1 to 7.3)

The total population of the country may comprise either all of the usual residents of the country (de jure) or all persons present in the country on a particular date (de facto). Published census figures for Ireland are on a de facto basis.

Ireland last conducted a census of population in 2002. Population estimates for the period 1997-2001 have been revised following the results of this census. All tables in this publication are based on the revised estimates.

Migration (7.4 to 7.6)

Emigration refers to persons resident in Ireland leaving to live abroad for over one year.

Immigration refers to persons coming to Ireland from another country for the purposes of taking up residence for over one year.

Net migration is the net effect of emigration and immigration on a country's population in a given time period.

The natural increase is calculated by subtracting deaths from births within a population in a given time period. The figures for births include babies born in Ireland to non-residents and immigrants.

Country of origin refers to a person's previous country of residence.

Age of population (7.7 and 7.8)

The young age dependency ratio is calculated by dividing the number of persons in the population aged between 0 and 14 years by the number of persons aged between 15 and 64 years. The old age dependency ratio is calculated by dividing the number of persons aged 65 and over by the number of persons aged 15-64.

The total age dependency ratio is the sum of persons aged 0-14 and 65 and over divided by the number of persons aged 15-64.

Fertility (7.9 and 7.10)

The crude birth rate is the number of births actually occurring in a country in a given time period, divided by the population of the area as estimated at the middle of the particular time period. The rate is usually expressed per 1,000 of population.

Total fertility rate refers to the average number of children that would be born alive to a woman during her life if she were to pass through her childbearing years conforming to the age-specific fertility rates for a given year. The rate is calculated by the summation of the age-specific fertility rates. A rate of 2.1 is considered to be replacement level for the population of developed countries.

Lone parent families (7.11)

A family unit consists of either:

1. A married couple, or
2. A married couple and one or more of their never-married children, or
3. One parent and one or more of his or her never-married children, or
4. A couple living together (with never-married children, if any) who are not married to each other, where it is clear that the couple form a "de facto" family unit.

Households may contain more than one family unit or may contain a family together with other persons not in a family unit.

The number of lone parent family units may be understated as there are problems identifying lone parent families particularly where the lone parent lives with his/her parents. The information recorded in the Labour Force Survey, on the relationship of each person in the household to the reference person of the household, does not clearly identify multiple parent/child relationships. In such cases, the lone parent family may not be identified as a distinct family unit. This is a general problem that arises in multiple family households and the difficulties affect the identification of other family units also.

Living alone (7.12)

See the household internet access indicator in domain 2 for a definition of private households.

8 Housing

Dwelling completions (8.1 and 8.2)

Dwelling unit completions comprise units built for private sale, for Local Authority (LA) use, and voluntary housing completions. The LA figures exclude acquisitions of private units for social housing use. Social housing use comprises LA and voluntary housing.

Local Authority housing has traditionally been the main option for those who could not afford decent housing from their own means. Local Authorities charge rents based on the income of the household. Persons who have been a tenant of a local authority house for at least one year, may apply to the Local Authority to purchase it at a discounted price.

Voluntary housing bodies play an important role in Ireland in providing rental housing throughout the country for people who could not otherwise afford to provide suitable accommodation from their own resources. The voluntary housing bodies are responsible for tenancy allocations in consultation with the Local Authorities. They are non-profit organisations. Voluntary bodies must be approved by the Department of the Environment, Heritage and Local Government in order to qualify for financial and other aid for the provision of housing.

Owner-occupiers refer to persons who either own outright or are purchasing the property of which they are a household member. Typically the owner should possess a title deed to the property. Persons purchasing Local Authority or Voluntary housing are included.

Nature of occupancy data are collected in each Census of Population conducted at the start of a decade.

Owner-occupied includes accommodation being purchased from a Local Authority or under a Tenant Purchase Scheme as well as owner-occupied premises with and without outstanding mortgages.

Other occupancy refers to rent-free accommodation that is not owned by the occupier.

Cases where this question was not answered (or not stated) in the census are excluded from the calculations.

Mortgages (8.3 and 8.4)

Mortgages are loans made against the security of a property.

In Table 8.3 mortgage interest rates are calculated from Building Society information in Ireland. Rates from Permanent TSB and First Active plc. are included in the Building Society information. Annuity and endowment mortgages are included.

The interest rates shown in Table 8.4 are part of the MFI interest rate statistics as described in the notes on Table 1.18. Rates are as at end December of each year.

9 Crime

Headline offences (9.1 to 9.3)

Headline/Indictable offences are crimes such as murder, fraud, burglary and sexual offences. Non-indictable offences, such as failing to wear a seat belt or begging, can be tried in lower Courts. Crime figures up to 1999 used an old classification system that divided crimes into categories of indictable/non-indictable. With the introduction of the PULSE information system in the Garda Síochána, a new classification of crimes as headline/non-headline was adopted. Figures for 2000 and subsequent years refer to the new classification of headline crimes. While this category reflects to a large extent what in the past was defined as indictable crime, the terms are not identical and therefore direct comparisons cannot be made between years prior to 2000 and subsequent years.

Garda Divisions are composed of the following

Region	County composition
Eastern	Carlow; Kildare; Laois; Longford; Louth; Meath; Offaly; and Westmeath
Dublin Metropolitan	Dublin
South-Eastern	Kilkenny; Tipperary; Waterford; Wexford; and Wicklow
Southern	Cork; Kerry; and Limerick
Western	Clare; Galway; Mayo; and Roscommon
Northern	Cavan; Donegal; Leitrim; Monaghan; and Sligo

Homicides (9.4 and 9.5)

Homicide refers to intentional and non-intentional killing, including infanticide. The distinction between intentional and unintentional homicide differs from country to country, as does the definition of attempted murder.

Intentional homicide refers to death deliberately inflicted on a person by another person, including infanticide.

Non-intentional homicide refers to death not deliberately inflicted on a person by another person. This includes the crime of manslaughter, but excludes traffic accidents that result in the death of persons.

10 Environment

Greenhouse gases (10.1 and 10.2)

This indicator shows trends in anthropogenic emissions of the greenhouse gases: carbon dioxide (CO_2), nitrous oxide (N_2O), methane (CH_4) and three halocarbons, hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF_6), weighted by their global warming potentials. The figures are given in CO_2 equivalents.

Under the Kyoto Protocol, industrialised countries have a legally binding commitment to reduce their collective greenhouses gas emissions by at least 5% compared to 1990 levels by the period 2008-2012. For EU countries, Member States agreed that some countries be allowed to increase their emissions, within limits, provided these are off-set by reductions in others and the EU Kyoto target of a reduction of 8% compared to 1990 is achieved by 2008/2012. Each country's emissions target must be achieved by that period. It will be calculated as an average over the five years.

Data are expressed as an index reference year (1990 or base year)=100, original data refers to Gigagramme (Gg) = thousands tonnes of CO_2 equivalent.

Global warming potentials can be used to convert the emissions of individual gases into CO_2 equivalents. The global warming potential of each gas takes account of the fact that different gases remain in the atmosphere for differing lengths of time. The conversion factors for the three main greenhouse gases are:

CO_2 equivalents per tonne of gas emitted

Emitted gas	Global warming potential over 100 years
Carbon dioxide (CO_2)	1
Methane (CH_4)	21
Nitrous oxide (N_2O)	310

Energy intensity of economy (10.3 and 10.4)

The energy intensity ratio is the result of dividing the Gross Inland Consumption by the GDP. Since Gross Inland Consumption is measured in kgoe (kilogram of oil equivalent) and GDP in 1,000 euro, this ratio is measured in kgoe per 1,000 euro. It measures the energy consumption of an economy and its overall energy efficiency.

The Gross Inland Consumption of Energy is calculated as the sum of the Gross Inland Consumption of the five types of energy: coal, electricity, oil, natural gas and renewable energy sources. The GDP figures are taken at constant prices to avoid the impact of inflation using a base year of 1995.

Data are compiled through five annual Joint Questionnaires (one for each type of energy). The methodology is harmonised for all EU and OECD countries.

EU-25 figures are calculated simply by the addition of national data.

River water quality (10.5)

River water is the principal source of drinking water in Ireland. The Environmental Protection Agency (EPA) conducts an assessment of river water quality every three years on behalf of Local Authorities. Samples are taken from over 3,000 locations around Ireland. These biological surveys began in 1971.. River water quality is classified into four quality classes based on a scheme of biotic indices, which codify the characteristic changes induced in flora and fauna of rivers and streams in the presence of pollution. Unpolluted waters include pristine waters and also waters of a less high but acceptable standard. Slightly polluted and moderately polluted waters are mainly characterised by eutrophication and may not be able to support fish survival. Seriously polluted waters are characterised by the presence of high concentrations of biodegradable organic waste. These waters are of very little beneficial use.

Urban air quality (10.6)

Urban air quality comprises two sub-elements based on concentration levels of ozone and fine particulates in ambient air in urban areas. Ozone is a strong photochemical oxidant, which causes serious health problems and damage to ecosystem, agricultural crops and materials. Human exposure to elevated ozone concentrations can give rise to inflammatory responses and decreases in lung function.

The indicator target and limit values, as set in EC legislation, are as follows:

- The target value for Ozone for the protection of human health is 120 µg /m³ (max. daily 8h-mean), not to be exceeded on more than 25 days per calendar year averaged over three years, from 2010; and
- The limit value for PM_{10} is 50 µg /m^3 (24 h average) not to be exceeded on more than 35 days per calendar year, from 2005.

The year to year variability of exceedances is large, particularly for ozone. The occurrence of high ozone peaks is strongly dependent on weather conditions. Comparisons between countries are only justified if coverage with stations is either sufficiently large, or if there is a really representative number of monitoring stations reporting regularly. These conditions are rarely satisfied.

The PM_{10} indicator shows percentages of urban population potentially exposed to concentration levels exceeding the limit value for the protection of human health in a calendar year. The limit value for PM_{10} is

50 µg/m^3 (24h average) not to be exceeded on 35 or more days per calendar year, from 2005. For each urban station the number of days with a daily averaged concentration in excess of the limit value is calculated from the available hourly or daily values. The selected urban stations include station types "urban" and "street". Only time series with a data capture of at least 75% are used. The number of exceedance days per city, is obtained by averaging the results of all urban stations. The stations classified as "street" are influenced by local (traffic) emissions and might not be representative for the concentrations in more residential areas. Both station types have been included in the analysis to maximise the coverage; this may imply, however, that urban air quality concentrations are overestimated. Urban population data is obtained from the GISCO database.

Legislation in Ireland forbids the sale of bituminous coal in the following urban areas: Dublin (since 1990); Cork (since 1995); Arklow, Drogheda, Dundalk, Limerick and Wexford (all since 1998); Celbridge, Galway, Leixlip, Naas and Waterford (all since 2000); and Bray, Kilkenny, Sligo and Tralee (all since 2003).

Acid rain precursors (10.7 and 10.8)

Acid rain occurs when acidic gases and particles are transported in the air before falling as wet or dry deposition. High concentrations can be harmful to health, to water and soil quality, to buildings, and can reduce plant growth.

Burning of coal with a high sulphur content is a significant source of sulphur dioxide (SO_2).

Oxides of nitrogen (NO_x) arise when fossil fuels are burnt under certain conditions. There are three major forms of fossil fuels: coal, oil and natural gas.

Ammonia (NH_3) emissions arise primarily from animal manure and nitrogen based fertilisers.

Acid rain precursor emissions are expressed in sulphur dioxide equivalents using the following conversion factors:

SO_2 equivalents per tonne of gas emitted

Emitted gas	Acid rain precursors
Sulphur dioxide (SO_2)	1.0000
Oxides of nitrogen (NO_x)	0.6957
Ammonia (NH_3)	1.8824

Waste management (10.9 and 10.10)

Municipal waste refers to the waste collected by local municipal authorities. This is a part of the overall amount of waste generated. This indicator presents the amount of waste collected by or on behalf of municipal authorities. The bulk of this waste stream is from households though 'similar' wastes from sources such as commerce, offices and public institutions are also included.

Municipal waste includes among other things the following types of materials: paper, paperboard and paper products, plastics, glass, metals, food and garden waste and textiles. Present statistical data collection provides, when available, separate figures for household waste and similar waste according to the 6 categories mentioned above.

Landfill is defined as deposit of waste into or onto land, including specially engineered landfill, and temporary storage of over one year on permanent sites. The definition covers both landfill in internal sites (i.e. where a generator of waste is carrying out its own waste disposal at the place of generation) and in external sites.

The quantity collected is expressed in tonnes per year. Indicator data is measured in kg per person per year using population figures on January 1st of each year.

Transport (10.11 to 10.16)

Private cars are used for personal purposes and not for carrying persons or goods for a fee. Taxis, small company vans and exempt vehicles are not taxed as private cars.

Passenger cars are road vehicles intended for the carriage of passengers and designed to seat no more than nine persons including the driver.

Inland freight transport includes transport by road, rail and inland waterway. Road transport is based on all movements of vehicles registered in the reporting country on national territory. Rail and inland waterways transport are based on movements on national territory, regardless of the nationality of the vehicle or vessel.

The index of inland freight transport volume indicator is the ratio between tonne-kilometres and GDP indexed on 1995.

One tonne-kilometre represents the movement of one-tonne over a distance of one kilometre.

GDP is measured in euro at constant 1995 prices.

Appendix 2 Data sources

Domain and sub-domain	Indicator		Data source
Economy			
Gross Domestic Product	1.1	Ireland: GDP and GNI, 1994-2003	CSO, National Accounts CSO, Annual Population estimates
	1.2	EU: GDP and GNI at current market prices, 2003	Eurostat data explorer[69]: Economy and Finance\National accounts\Annual national accounts\Income, saving and net lending/net borrowing – Current prices
	1.3	EU: GDP per capita in Purchasing Power Standards, 2001-2003	Eurostat data explorer: Key indicators on EU policy\Structural indicators\General economic background
Government debt	1.4	Ireland, EU and Eurozone: General government consolidated gross debt, 1995-2004	Eurostat data explorer: Economy and Finance\Government statistics\Government deficit and debt\EU excessive deficit procedure\EU excessive deficit procedure – ESA 95
	1.5	EU: General government consolidated gross debt, 2001-2003	Eurostat data explorer: Economy and Finance\Government statistics\Government deficit and debt\EU excessive deficit procedure\EU excessive deficit procedure – ESA 95
Public balance	1.6	Ireland and Eurozone: Public balance, 1996-2003	Eurostat data explorer: Economy and Finance\Government statistics\Government deficit and debt\EU excessive deficit procedure\EU excessive deficit procedure – ESA 95
	1.7	EU: Public balance, 2001-2003	Eurostat data explorer: Economy and Finance\Government statistics\Government deficit and debt\EU excessive deficit procedure\EU excessive deficit procedure – ESA 95
	1.8	Ireland: Central and Local Government current expenditure, 1994-2003	CSO, National Accounts
Gross fixed capital formation	1.9	Ireland and EU: Gross fixed capital formation, 1994-2003	Eurostat data explorer: Economy and Finance\National accounts\Annual national accounts\GDP and main aggregates\GDP and main components - current prices
	1.10	EU: Gross fixed capital formation, 2001-2003	Eurostat data explorer: Economy and Finance\National accounts\Annual national accounts\GDP and main aggregates\GDP and main components - current prices
International transactions	1.11	EU: Current account balance, 2001-2003	Eurostat data explorer: Economy and Finance\Balance of payments – International transactions\Balance of payments statistics\Balance of payments by country Economy and Finance\National accounts\Annual national accounts\GDP and main aggregates\GDP and main components - current prices
	1.12	EU: Direct investment flows, 2003	Eurostat data explorer: Economy and Finance\Balance of payments – International transactions\Balance of payments statistics\Balance of payments by country Economy and Finance\National accounts\Annual national accounts\GDP and main aggregates\GDP and main components - current prices
International trade	1.13	EU: Exports of goods and services, 2001-2003	Eurostat data explorer: Economy and Finance\Balance of payments – International transactions\Balance of payments statistics\Balance of payments by country Economy and Finance\National accounts\Annual national accounts\GDP and main aggregates\GDP and main components - current prices

[69] http://europa.eu.int/comm/eurostat/newcronos/reference/display.do?screen=welcomeref&open=/&product=EU_MAIN_TREE&depth=1&language=en

Domain and sub-domain	Indicator		Data source
	1.14	EU: Imports of goods and services, 2001-2003	Eurostat data explorer: Economy and Finance\Balance of payments – International transactions\Balance of payments statistics\Balance of payments by country Economy and Finance\National accounts\Annual national accounts\GDP and main aggregates\GDP and main components - current prices
Exchange rates	1.15	International: Bilateral euro exchange rates, 1999-2004	European Central Bank, Monthly Bulletin, Table 8.2 Bilateral exchange rates
	1.16	Ireland: Trade weighted competitiveness indicator, 1999-2004	CSO, National Accounts Central Bank
Interest rates	1.17	Eurozone: Convergence of interest rates for loans to non-financial corporations up to one year, 1995-2004	Eurostat data explorer: Key indicators on European policy\Structural indicators\Economic reform
	1.18	Eurozone: Interest rates for short-term loans (new business) to non-financial corporations, 2003-2004	Eurostat data explorer: Economy and Finance\Exchange rates and interest rates\Interest rates\Retail bank interest rates\Harmonised MFI interest rates\MFI interest rates – Loans to non-financial corporations\Loans to non-financial corporations – other (NB)
	1.19	Eurozone: Interest rates for bank overdraft facilities for non-financial corporations, 2004	Eurostat data explorer: Economy and Finance\Exchange rates and interest rates\Interest rates\Retail bank interest rates\Harmonised MFI interest rates\MFI interest rates – Loans to non-financial corporations\Loans to non-financial corporations – bank overdraft
Harmonised Index of Consumer Prices	1.20	Ireland and EU: Harmonised Index of Consumer Prices, 1996-2004	Eurostat data explorer: Economy and Finance\Prices\Harmonised indices of consumer prices\Harmonised indices of consumer prices – Annual data
	1.21	EU: Harmonised Index of Consumer Prices, 2002-2004	Eurostat data explorer: Economy and Finance\Prices\Harmonised indices of consumer prices\Harmonised indices of consumer prices – Annual data
Price levels	1.22	Ireland and EU: Comparative price levels of final consumption by private households including indirect taxes, 1994-2003	Eurostat data explorer: Key indicators on European policy\Structural indicators\Economic reform
	1.23	EU: Comparative price levels of final consumption by private households including indirect taxes, 2001-2003	Eurostat data explorer: Key indicators on European policy\Structural indicators\Economic reform
Innovation and technology			
Science and technology graduates	2.1	Ireland: Science and technology graduates, per 1,000 population aged 20-29, 1994-2003	Eurostat data explorer Population and social conditions\Education and training\Education\Education indicators\Tertiary education graduates CSO, Annual population estimates
	2.2	EU: Mathematics, science and technology PhDs awarded per 1,000 population aged 25-34, 2000-2002	Eurostat data explorer Population and social conditions\Education and training\Education\Education indicators\Tertiary education graduates
Research and development expenditure	2.3	Ireland and EU: Gross domestic expenditure on R&D, 1994-2003	Eurostat data explorer: Key indicators on European policy\Structural indicators\Innovation and research
	2.4	EU: Gross domestic expenditure on R&D, 1993-2003	Eurostat data explorer: Key indicators on European policy\Structural indicators\Innovation and research

Domain and sub-domain	Indicator		Data source
Patent applications	2.5	Ireland and EU: European Patent Office applications, 1993-2002	Eurostat data explorer: Key indicators on European policy\Structural indicators\Innovation and research
	2.6	EU: European Patent Office applications, 2002	Eurostat data explorer: Key indicators on European policy\Structural indicators\Innovation and research
Household internet access	2.7	Ireland: Private households with internet access, 1998-2004	CSO, Information society statistics – Ireland 2004, Table 3.1
	2.8	EU: Private households with internet access, 2002-2004	Eurostat data explorer: Science and technology\Information society statistics\Policy indicators\Citizens access to and use of the Internet
Employment and unemployment			
Employment rate	3.1	Ireland: Employment rates, 1995-2004	CSO, QNHS
	3.2	EU: Employment rates by sex, 2004	Eurostat data explorer: Key indicators on EU policy\Structural indicators\Employment CSO, QNHS
Labour productivity	3.3	Ireland: GDP and GNI in PPS per hour worked and per person employed, 1994-2003	Eurostat data explorer: Key indicators on EU policy\Structural indicators\General economic background
	3.4	EU: GDP in PPS per person employed, 2003	Eurostat data explorer: Key indicators on EU policy\Structural indicators\General economic background
Unemployment rate	3.5	Ireland and EU: Unemployment rates, 1995-2004	Eurostat data explorer: Key indicators on EU policy\Structural indicators\Employment
	3.6	EU: Unemployment rates by sex, 2004	Eurostat data explorer: Key indicators on EU policy\Structural indicators\Employment
	3.7	Ireland and EU: Long-term unemployment rates, 1994-2003	Eurostat data explorer: Key indicators on EU policy\Structural indicators\Social cohesion
	3.8	EU: Long-term unemployment rates by sex, 2003	Eurostat data explorer: Key indicators on EU policy\Structural indicators\Social cohesion
Jobless households	3.9	Ireland: Population aged 18-59 living in jobless households, 1995-2004	Eurostat data explorer: Key indicators on EU policy\Structural indicators\Social cohesion
	3.10	EU: Population aged 18-59 living in jobless households, 2002-2004	Eurostat data explorer: Key indicators on EU policy\Structural indicators\Social cohesion
Older workers	3.11	EU: Employment rate of workers aged 55-64 by sex, 2003	Eurostat data explorer: Key indicators on EU policy\Structural indicators\Employment
	3.12	EU: Average exit age from the labour force by sex, 2002	Eurostat data explorer: Key indicators on EU policy\Structural indicators\Employment
Social cohesion			
Social protection expenditure	4.1	Ireland and EU: Social protection expenditure, 1994-2002	Eurostat data explorer: Population and social conditions\Living conditions and welfare\Social protection\Social protection expenditure\Expenditure – summary tables\Expenditure-main results

Domain and sub-domain	Indicator		Data source
	4.2	EU: Expenditure on social protection, education and health, 2001	Eurostat data explorer: Population and social conditions\Living conditions and welfare\Social protection\Social protection expenditure\Expenditure – summary tables\Expenditure-main results Population and social conditions\Education and training\Education\Indicators on education finance World Health Organisation, Health for All Database http://data.euro.who.int/hfadb/
Risk of poverty	4.3	EU: At risk of poverty rates, 2003	Eurostat data explorer: Population and social conditions\Living conditions and welfare\Income and living conditions\Monetary (income) poverty\Low income
	4.4	Ireland: At risk of poverty rates by age and sex, 2003	CSO, EU Survey on Income and Living Conditions
	4.5	Ireland: Persons in consistent poverty by age and sex, 2003	CSO, EU Survey on Income and Living Conditions
	4.6	Ireland: Persons in consistent poverty by principal economic status, 2003	CSO, EU Survey on Income and Living Conditions
Gender pay gap	4.7	Ireland and EU: Gender pay gap, 1994-2003	Eurostat data explorer: Key indicators on EU policy\Structural indicators\Employment
	4.8	EU: Gender pay gap, 2001-2003	Eurostat data explorer: Key indicators on EU policy\Structural indicators\Employment
Voter turnout	4.9	Ireland: Numbers voting in Dáil elections, 1973-2002	Deparment of the Environment, Heritage and Local Government, Franchise Section
	4.10	EU: Votes recorded at national parliamentary elections, 1981-2003	International Instititute for Democracy and Electoral Assistance, Statistics on voter turnout, http://www.idea.int/vt/index.cfm
Official development assistance	4.11	Ireland: Net official development assistance, 1994-2003	Department of Foreign Affairs, Development Co-operation Ireland Annual report, Annex 1, Ireland's Official Development Assistance
	4.12	EU: Net official development assistance, 2001-2003	OECD, Development Co-operation Report, 2004, Statistical Annex, Table 4
Education			
Education expenditure	5.1	Ireland: Real non-capital public expenditure on education, 1998-2003	Department of Education and Science, Key Education Statistics
	5.2	Ireland: Student numbers by level, 1994-2003	Department of Education and Science, Key Education Statistics
	5.3	EU: Public expenditure on education, 1999-2001	Eurostat data explorer: Population and social conditions\Education and training\Education\Indicators on education finance
Pupil-teacher ratio	5.4	EU: Ratio of students to teachers, 2001/2002	Eurostat data explorer: Population and social conditions\Education and training\Education\Education indicators\Pupil/Student – teacher ratio and average class size
	5.5	EU: Average class size at ISCED levels 1 and 2, 2001/2002	Eurostat data explorer: Population and social conditions\Education and training\Education\Education indicators\Pupil/Student – teacher ratio and average class size
Third level education	5.6	Ireland: Persons aged 25-34 with 3rd level education, 1999-2004	CSO, QNHS CSO, Annual populatione estimates

Domain and sub-domain	Indicator		Data source
	5.7	EU: Persons aged 25-34 with 3rd level education by sex, 2004	Eurostat data explorer Population and social conditions\Labour market\Employment and unemployment\Socio-demographic labour force statistics\Population and households
Literacy	5.8	Ireland: Student performance on the combined reading, mathematical and scientific literacy scales by sex, 2003	OECD, Learning for Tomorrow's World – First Results from PISA 2003, Tables 2.5, 6.3, 6.7
	5.9	EU: Student performance on the combined reading, mathematical and scientific literacy scales, 2003	OECD, Learning for Tomorrow's World – First Results from PISA 2003, Tables 2.5, 6.2, 6.6
Early school leavers	5.10	Ireland: Early school leavers by labour force status and sex, 2004	CSO, QNHS
	5.11	Ireland: Proportion of the population aged 20-64 with at least upper secondary education, 2004	CSO, QNHS
	5.12	EU: Early school leavers, 2004	Eurostat data explorer: Key indicators on EU policy\Structural indicators\Social cohesion
Health			
Health care expenditure	6.1	Ireland: Non-capital public expenditure on health care, 1994-2003	Department of Health and Children, Health Statistics, Table L6 CSO, Annual population estimates CSO, National accounts
	6.2	EU: Total expenditure on health as percentage of GDP, 2000-2002	World Health Organisation, Health for All Database http://data.euro.who.int/hfadb/
Life expectancy	6.3	Ireland: Life expectancy at birth and at age 65 by sex, 1925-2003	CSO, Vital Statistics, Irish Life Tables No 14, 2001-2003
	6.4	EU: Life expectancy at birth by sex, 2002	Eurostat data explorer: Population and social conditions\ Population\Demography\National data\Mortality
Population			
Population distribution	7.1	Ireland: Population distribution by age group, 1995-2004	CSO, Annual population estimates
	7.2	Ireland: Household composition, 1995-2004	CSO, QNHS
	7.3	EU: Population change, 1995-2004	Eurostat data explorer: Population and social conditions\ Population\Demography\National data\Population
Migration	7.4	Ireland: Migration and natural increase, 1995-2004	CSO, Annual migration estimates
	7.5	Ireland: Immigration by country of origin, 1995-2004	CSO, Annual migration estimates
	7.6	Ireland and EU: Rate of natural increase of population, 1994-2003	Eurostat data explorer: Population and social conditions\ Population\Demography\National data\Population
Age of population	7.7	Ireland: Age dependency ratio, 1995-2004	CSO, Annual population estim
	7.8	EU: Young and old as proportion of population aged 15-64, 2003	Eurostat data explorer: Population and social conditions\ Population\Demography\National data\Population
Fertility	7.9	Ireland and EU: Total fertility rate, 1994-2003	CSO, Vital Statistics Eurostat data explorer: Population and social conditions\ Population\Demography\National data\Fertility

Domain and sub-domain	Indicator		Data source
	7.10	EU: Total fertility rate, 1993-2003	Eurostat data explorer: Population and social conditions\ Population\Demography\National data\Fertility
Lone parent families	7.11	Ireland: Lone parent families with children aged under 20 by sex of parent, 1995-2004	CSO, QNHS
Living alone	7.12	Ireland: Persons aged 65 and over living alone by sex, 1995-2004	CSO, QNHS
Housing			
Dwelling completions	8.1	Ireland: Dwelling unit completions, 1994-2003	Department of the Environment, Heritage and Local Government, Annual Housing Statistics Bulletin
	8.2	Ireland: Nature of occupancy of private households, 1961-2002	CSO, Census of Population
Mortgages	8.3	Ireland: New housing loans, 1994-2003	Department of the Environment, Heritage and Local Government, Annual Housing Statistics Bulletin
	8.4	Eurozone: Interest rates for household mortgages (new business), 2003-2004	Eurostat data explorer: Economy and Finance\Exchange rates and interest rates\Interest rates\Retail bank interest rates\Harmonised MFI interest rates\MFI interest rates – Loans to households\Loans to households – housing (NB)
Crime			
Headline offences	9.1	Ireland: Headline offences detection rates by Garda Division, 2001-2003	An Garda Síochána, Annual Report
	9.2	Ireland: Headline offences recorded by Garda Division, 2003	An Garda Síochána, Annual Report
	9.3	Ireland: Headline offences recorded, 2000-2003	An Garda Síochána, Annual Report
Homicides	9.4	Ireland: Homicides recorded, 1970-2003	An Garda Síochána, Annual Report
	9.5	EU: Homicide rate per 100,000 population, 2000-2002	Interpol – International crime statistics
Environment			
Greenhouse gases	10.1	Ireland: Total net greenhouse gas emissions, 1994-2003	Eurostat data explorer: Key indicators on EU policy\Structural indicators\Environment
	10.2	EU: Net greenhouse gas emissions, 2002, and Kyoto 2008-2012 target	Eurostat data explorer: Key indicators on EU policy\Structural indicators\Environment
Energy intensity of economy	10.3	Ireland: Gross inland consumption of energy at constant 1995 prices, 1994-2003	Eurostat data explorer: Key indicators on EU policy\Structural indicators\Environment
	10.4	EU: Gross inland consumption of energy at constant 1995 prices, 2002	Eurostat data explorer: Key indicators on EU policy\Structural indicators\Environment
River water quality	10.5	Ireland: River water quality, 1987-2000	Environmental Protection Agency
Urban air quality	10.6	Ireland: Smoke concentrations in urban areas, 1989-2003	Environmental Protection Agency
Acid rain precursors	10.7	Ireland: Acid rain precursor emissions, 2001-2003	CSO, Environmental Accounts
	10.8	Ireland: Acid rain precursor emissions, 1994-2003	CSO, Environmental Accounts
Waste mangement	10.9	Ireland: Total waste collected and percentage landfilled by type, 2001-2003	Environmental Protection Agency

Domain and sub-domain	Indicator		Data source
Transport	10.10	EU: Municipal waste collected and landfilled, 2003	Eurostat data explorer: Key indicators on EU policy\Structural indicators\Enviro
	10.11	Ireland: Private cars under current licence, 1994-2003	Department of the Environment, Heritage and Local Government, Irish Bulletin of Vehicle and Driver Statistics, Table 1. CSO, Annual population estimates
	10.12	EU: Passenger cars per 1,000 population aged 15 and over, 2000-2002	EU Energy and Tranport in Figures Pocketbook Table 3.6.2 Eurostat data explorer: Population and social conditions\ Population\Demography\National data\Population
	10.13	Ireland and EU: Share of road in total inland freight transport, 1994-2003	Eurostat data explorer: Key indicators on EU policy\Structural indicators\Environment
	10.14	EU: Share of road in total inland freight transport, 2001-2003	Eurostat data explorer: Key indicators on EU policy\Structural indicators\Environment
	10.15	Ireland and EU: Index of inland freight transport volume, 1994-2003	Eurostat data explorer: Key indicators on EU policy\Structural indicators\Environment
	10.16	EU: Index of inland freight transport volume, 2001-2003	Eurostat data explorer: Key indicators on EU policy\Structural indicators\Environment