The Role of the Higher Educational Sector and its Institutes of Technology in Irish Economic Development

Professor Gabriel M. Crean
Vice-President for Research
Athlone Institute of Technology

Outline

- Irish Economy
  - Employment Demand Projections
  - National Skills Strategy
- Rapidly Changing Higher Educational Sector
  - Universities
  - Institutes of Technology
- Role of the Institutes of Technology in Enterprise Development
- Athlone Institute of Technology
- Future Perspectives

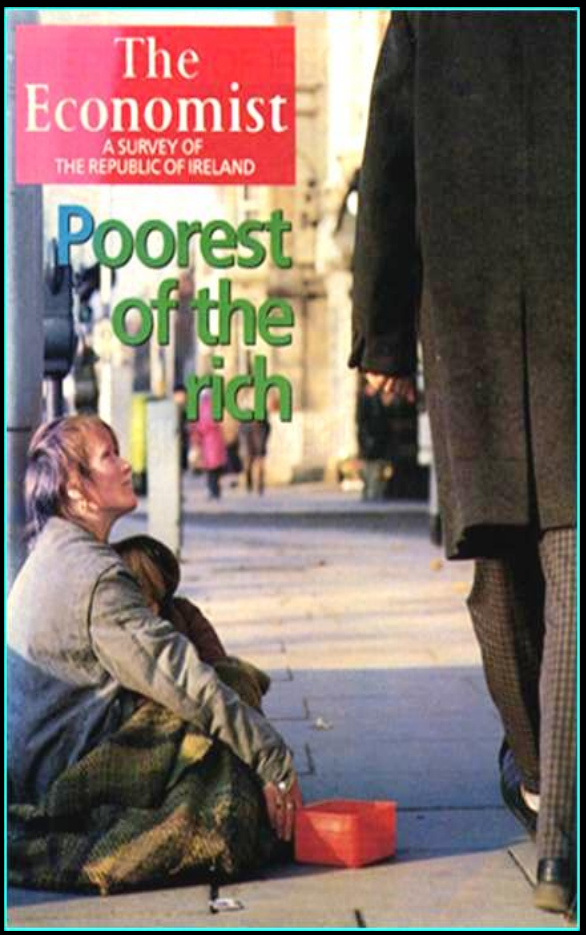
Ireland Today



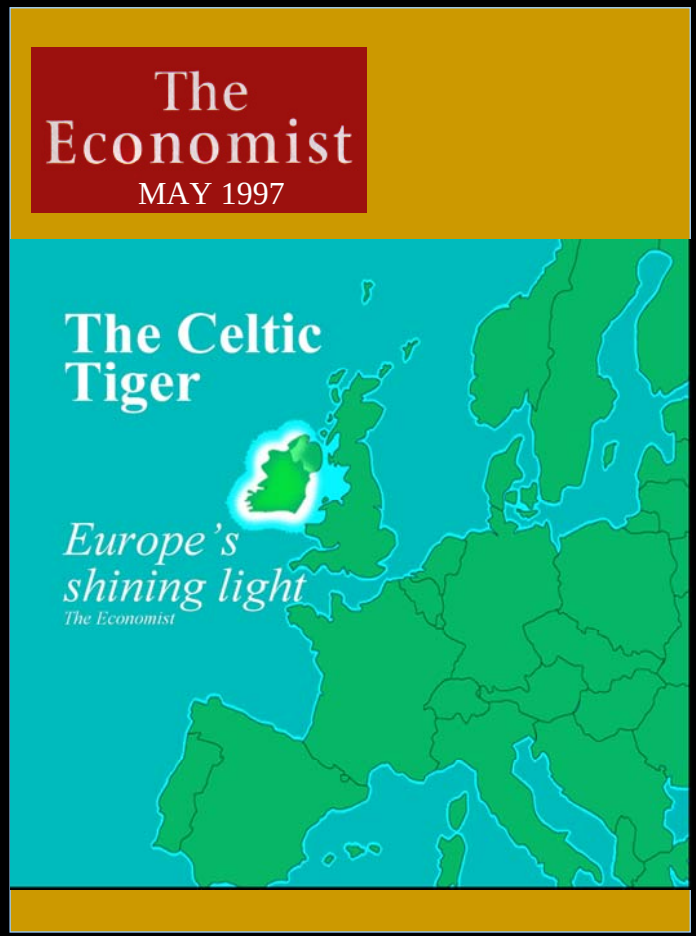



The Irish Economy Today

1988



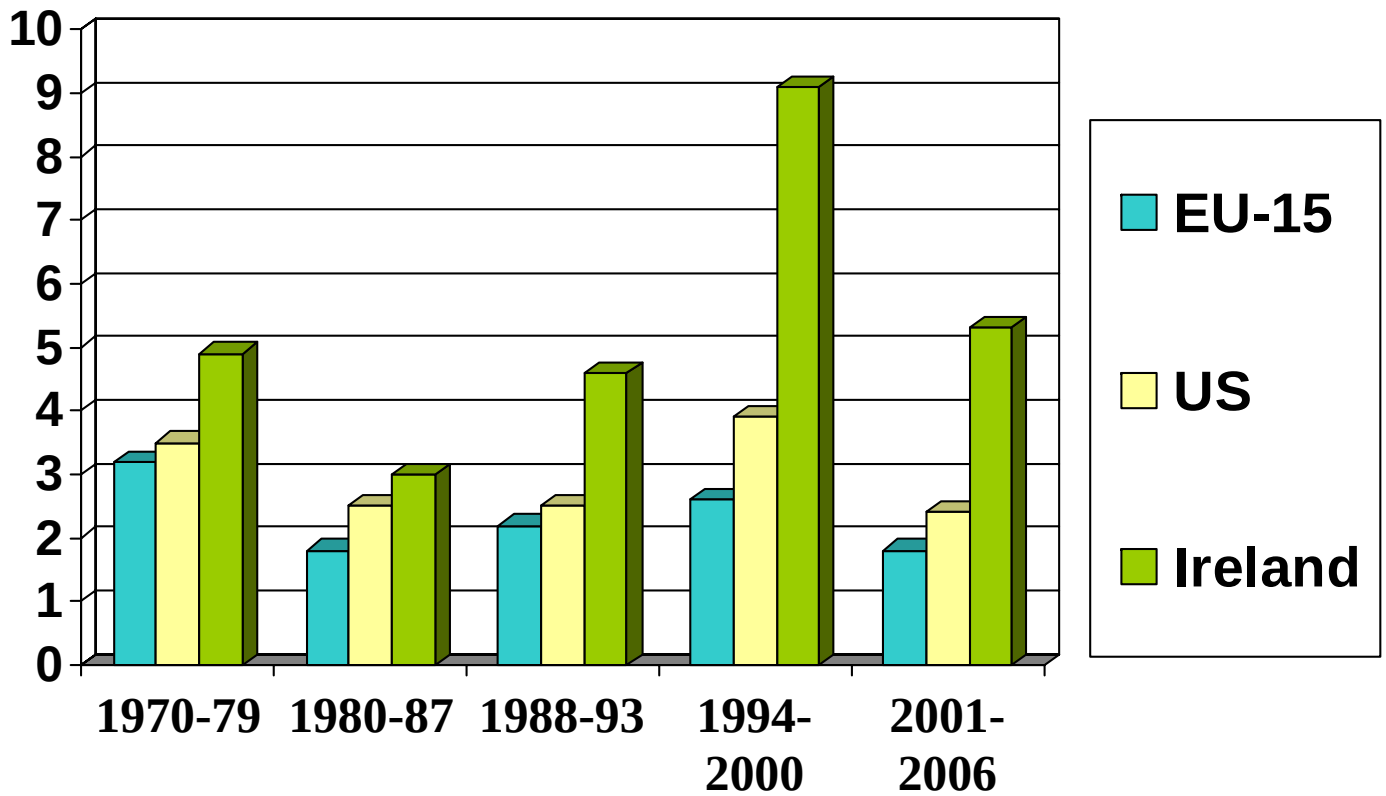
1997



2004

Ireland's Economic Growth 1970-2006

Average Annual % Real GDP Growth



Source: *Eurostat*

Ireland Campus

Other ICT Leaders

5,500 staff: manufacturing and services center for Europe, Middle East and Africa (EMEA)

4000 staff: R&D, manufacturing; software; banking; e-business; technical support

3500 staff: software development; technical support; manufacturing; global e-procurement portal

1800 staff: EMEA operations; R&D; localization; internet hosting

Economic Impact of Foreign Direct Investment

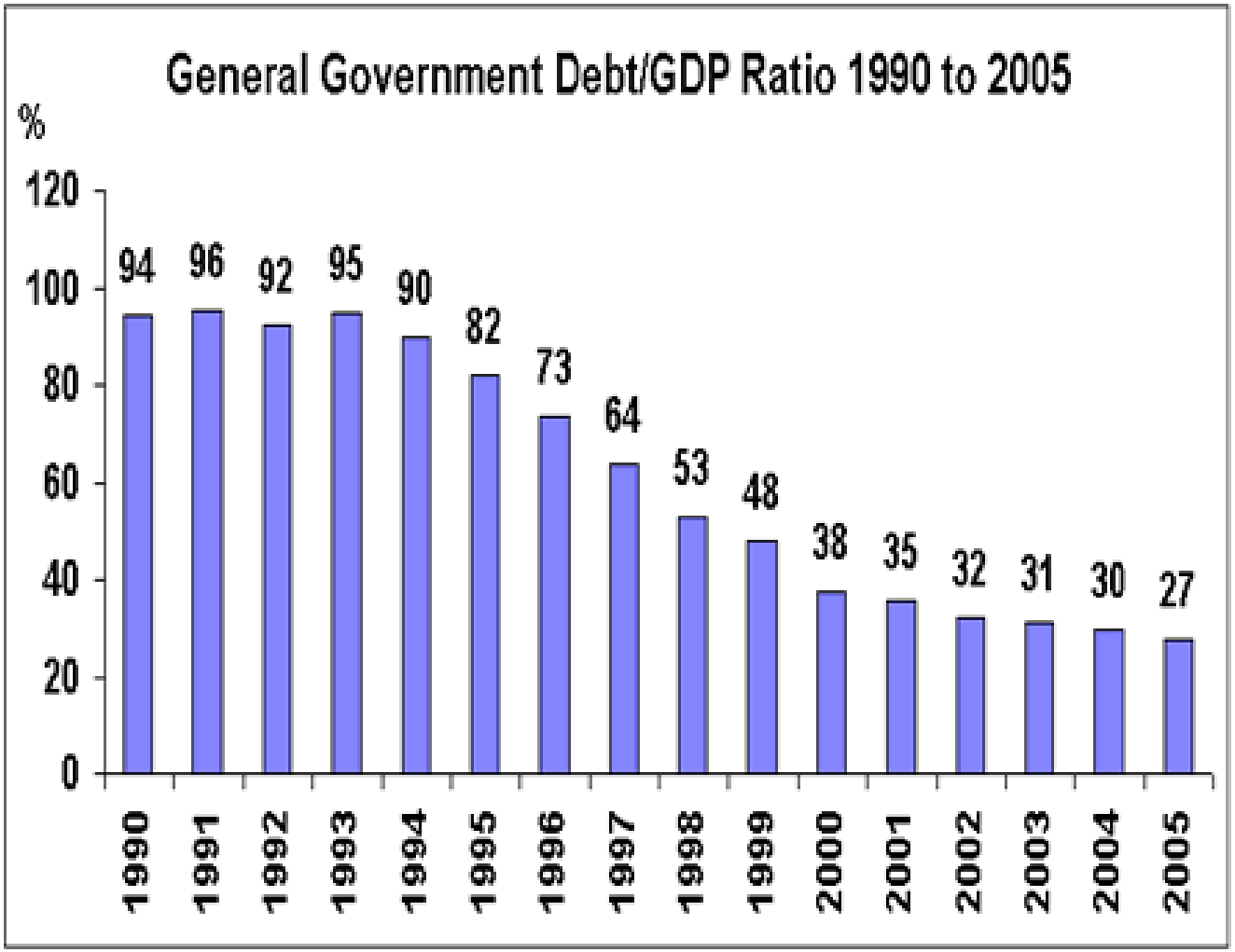
	€ billion 2003	€ billion 2004	€ billion 2005	% Change 2004-2005
Sales	72.469	73.872	77.371	4.7%
Exports	68.574	69.819	73.769	5.7%
Direct Expenditure in the Economy of which	15.874	15.510	14.922	- 3.8%
Payroll Costs	5.269	5.615	5.724	1.9%
Irish Materials	4.441	3.733	3.438	- 7.9%
Irish Services	6.164	6.162	5.760	- 6.5%
Direct Expenditure as % of Sales	21.9%	21.0%	19.3%	–

Source: Based on the Annual Business Survey of Economic Impact, co-ordinated by Forfás and administered by the survey unit of the Economic and Social Research Institute (ESRI).

Note 1: The survey is based on manufacturing and internationally traded services companies with 10 or more employees (excluding regulated financial services companies).

Note 2: Results are based on companies responding to the survey in 2006 (grossed-up to reflect non-respondents). Results can vary from previous estimates due to revisions made by companies and differences in the profile of respondents from one survey period to the next.

Significant Debt Reduction



New FDI Jobs by Sector

Sector	2002	2003	2004	2005	2006
Pharmaceuticals & Healthcare	1,522	1,490	1,443	1,154	1,065
Information & Communications Technologies (ICT)	2,615	2,457	2,815	3,147	3,386
Engineering	609	580	514	419	385
Miscellaneous Industry	684	314	150	412	377
International & Financial Services	5,071	4,558	6,050	6,900	6,633
Total	10,501	9,399	10,972	12,032	11,846

Source: Forfás Annual employment survey 2006

Note 1: New jobs are all new first time jobs and jobs filled in companies recovering their employment levels from cutbacks in previous years.

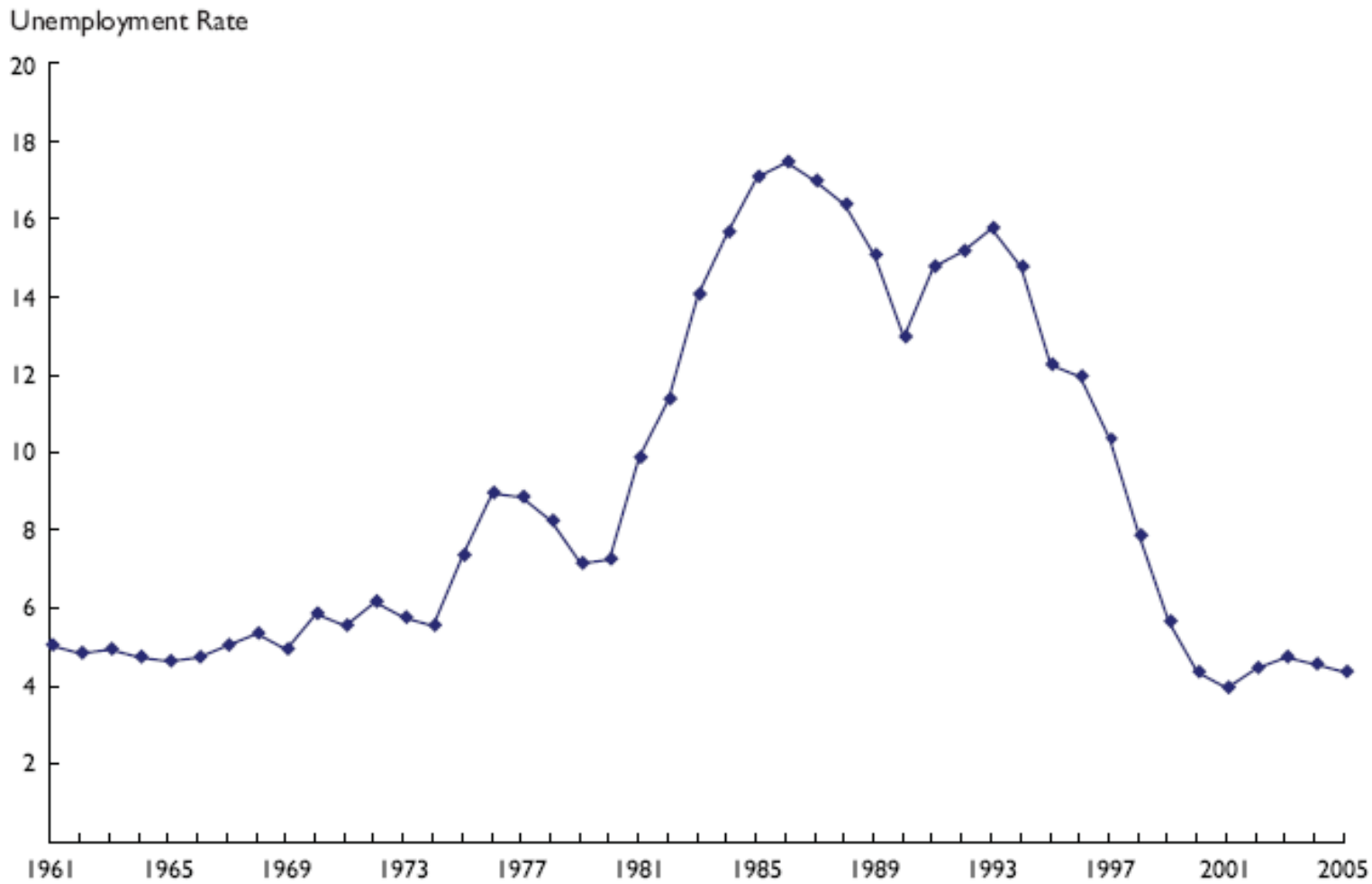
Note 2: Sectors are defined by NACE code, which is the standard statistical classification of economic activities in the EU.

Employment in Multinational Companies

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
New Jobs Filled	14,582	15,812	17,738	22,802	12,847	10,501	9,399	10,972	12,032	11,846
Number of Companies	1,089	1,152	1,258	1,250	1,176	1,097	1,066	1,025	1,009	980
Full-time Employment	108,588	117,447	126,094	140,784	136,167	131,528	128,320	129,101	131,692	135,487
Net Change in Full-time Employment	9,707	8,859	8,647	14,690	- 4,617	- 4,639	- 3,208	781	2,591	3,795
% Net Change	+ 9.8%	+8.2%	+7.4%	+11.7%	- 3.3%	- 3.4%	- 2.4%	+0.6%	+ 2.0%	+2.9%
Job Losses	- 4,875	- 6,953	- 9,091	- 8,112	- 17,464	- 15,140	- 12,607	- 10,191	- 9,441	- 8,051
Job Losses as % Total Jobs	- 4.5%	- 5.9%	- 7.2%	- 5.8%	- 12.8%	- 11.5%	- 9.8%	- 7.9%	- 7.2%	- 5.9%
Other Employment	13,465	15,159	15,573	14,641	11,938	12,322	14,710	17,106	17,455	16,607

source: Forfás Annual employment survey 2006.

Unemployment Rate

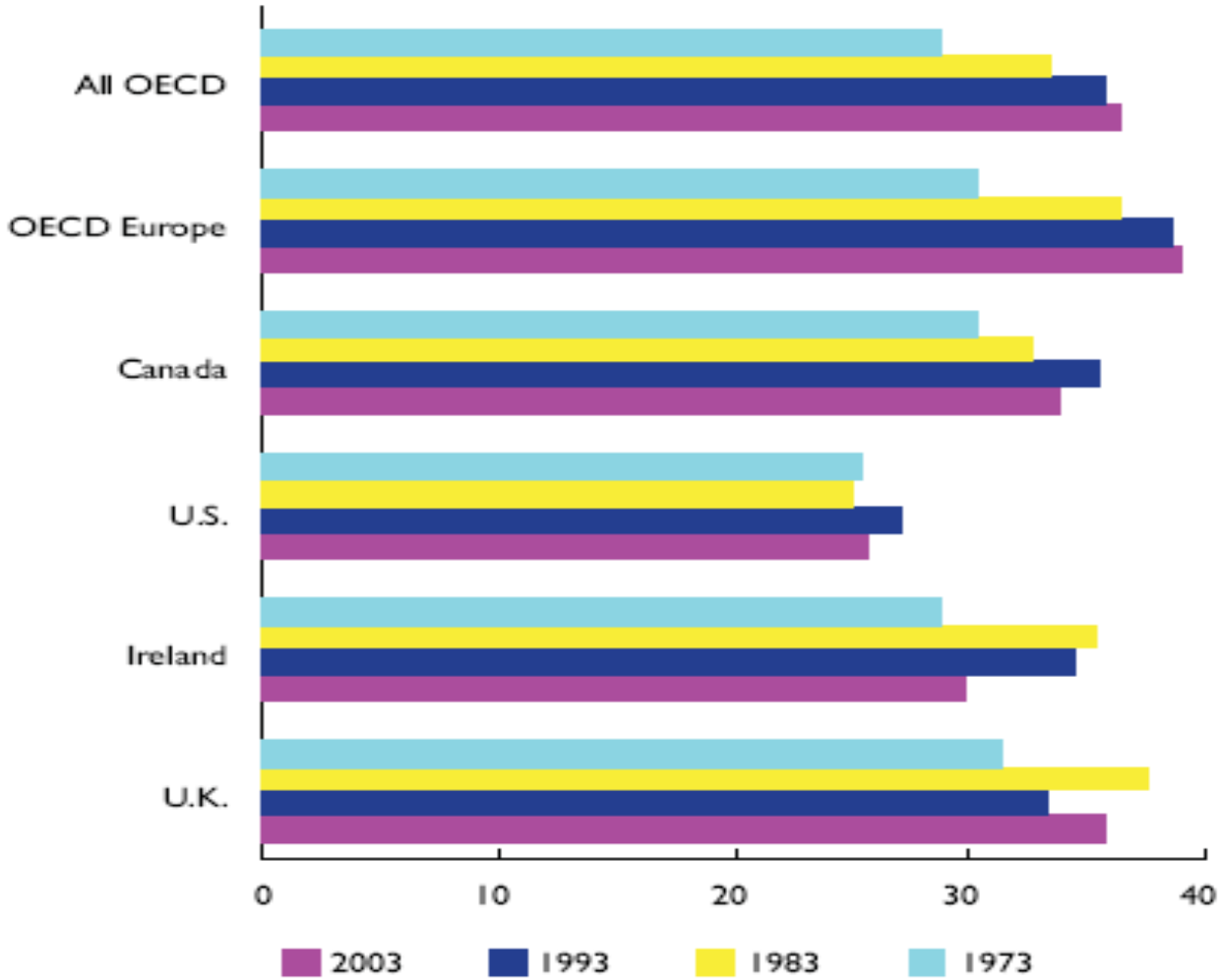


Origin of FDI Multinational Companies

Origin	No. of Companies	Total Employment
US	470	95,515
Germany	122	1782
UK		356
Rest of Eu		2,504
Asia Pacif		2,991
Rest of th	37	2,339
Total	980	135,487

WHY DO THEY COME TO IRELAND ?

Total Tax as a Percentage of GDP, 1973 - 2003



Source: Organisation for Economic Co-operation and Development, Revenue Statistics of OECD Member Countries, 1965–2004.

Cost per Job Sustained

Constant 2006 Prices

	1991-1997	1992-1998	1993-1999	1994-2000	1995-2001	1996-2002	1997-2003	1998-2004	1999-2005	2000-2006
IDA Ireland (€)	20,218	19,319	17,021	15,841	15,776	17,925	17,620	15,641	13,759	12,485

source: Forfás annual employment survey 2006

Note: The cost per job sustained is calculated by taking into account all IDA Ireland expenditure to all firms in the period of calculation. only jobs created during and sustained to the end of each seven year period are credited in the calculations.

Foreign Direct Investment (FDI)

Challenges:

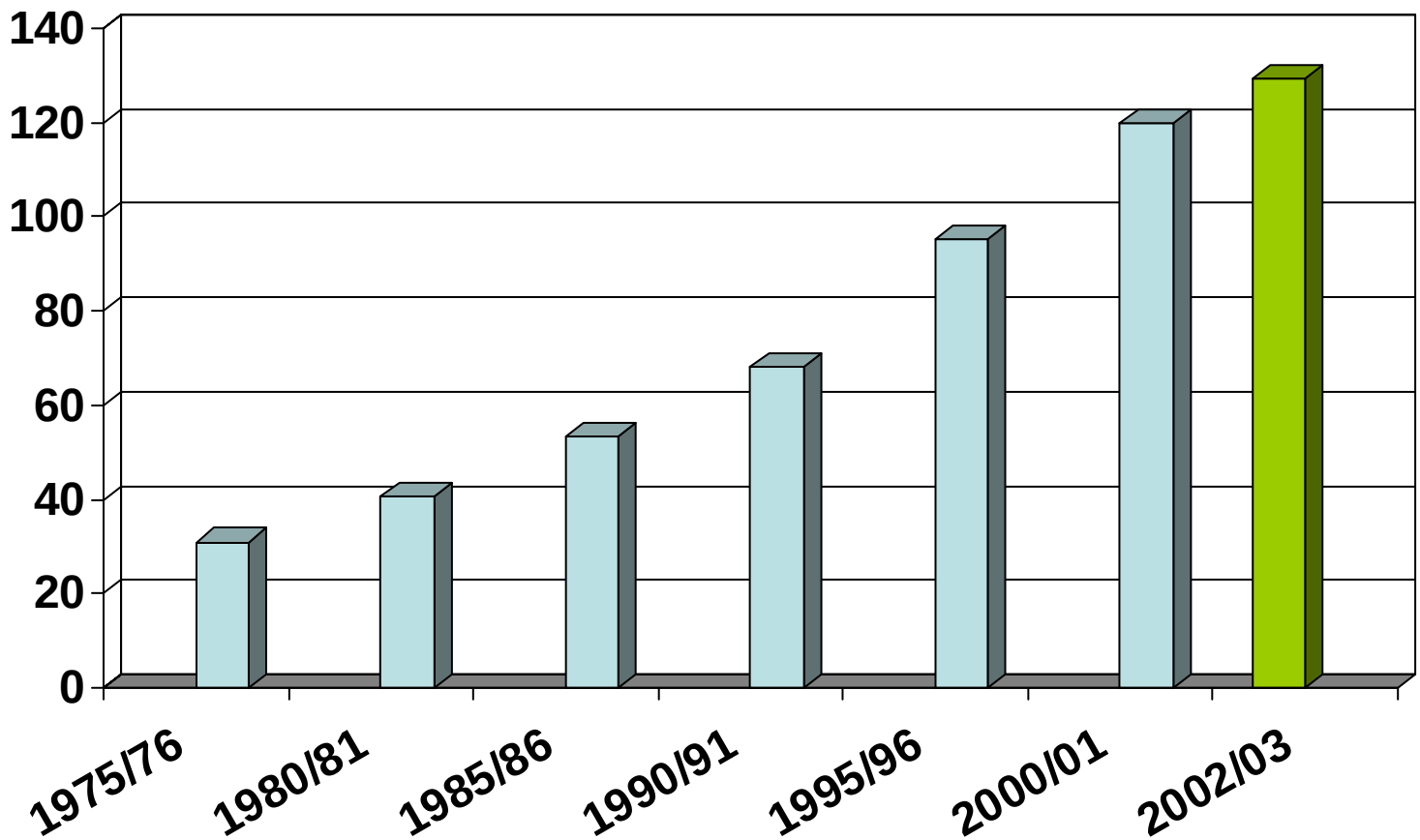
- We compete for FDI with city-regions elsewhere with populations of 1 million or more
- Ireland's regions are small in comparison
- Critical mass is essential and gateways and Hubs are key:
  - Availability of skills and expertise
  - Top class educational and research facilities
  - Access, especially with airports / motorways
  - World class business services
  - Social, cultural and 'quality of life' assets
- We must think and act regionally, not locally

Foreign Direct Investment (FDI)

Ranking of What Investors Seek:

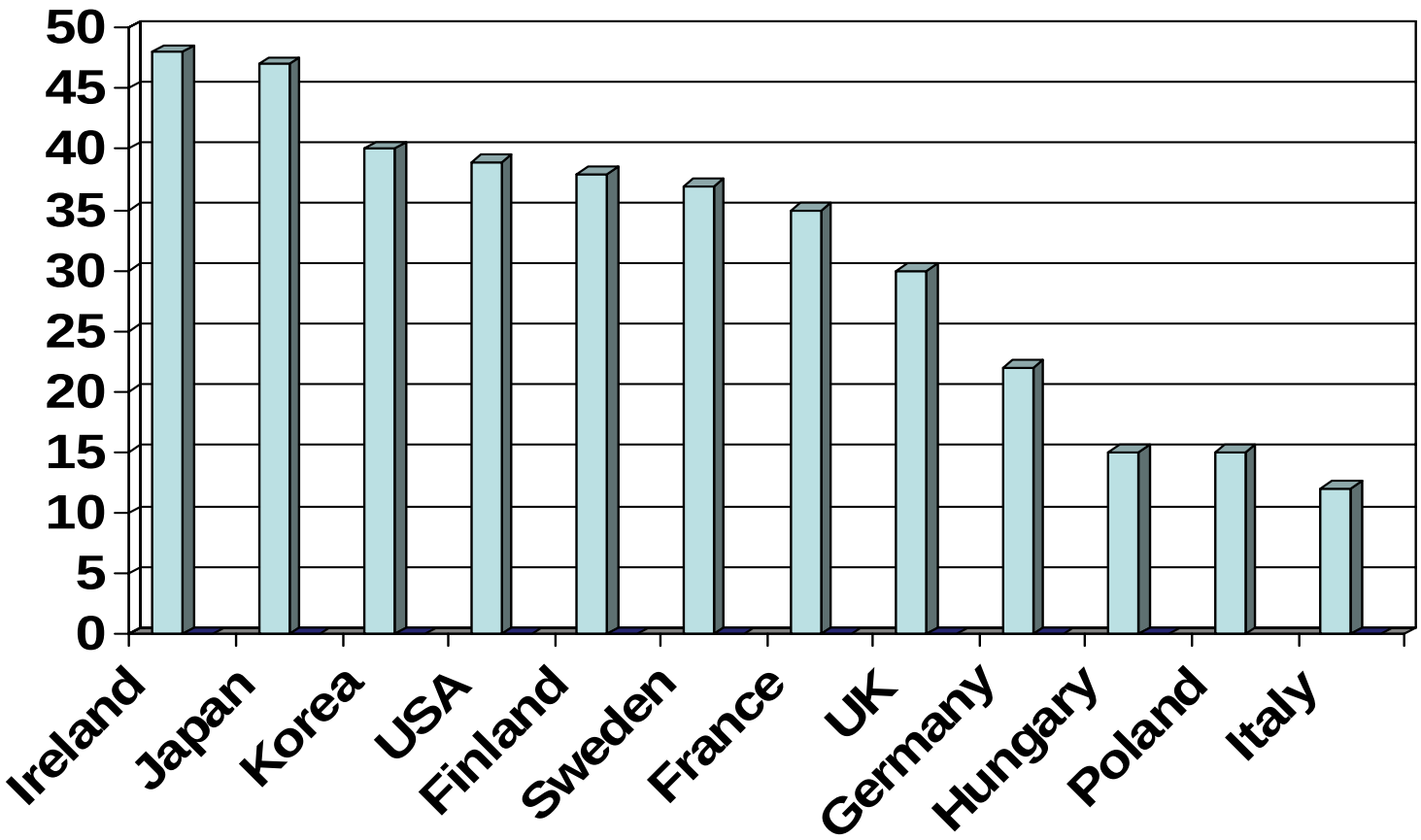
- The right people and skills – in abundance
- The right infrastructure:
  - access, energy, telecoms
  - environment and waste
  - property solutions
  - business services
  - attractive lifestyle and amenities
  - clusters of similar and supporting businesses
- The right attitude

Full-time Third level students:
1975/76 to 2002/03 in thousands (000)



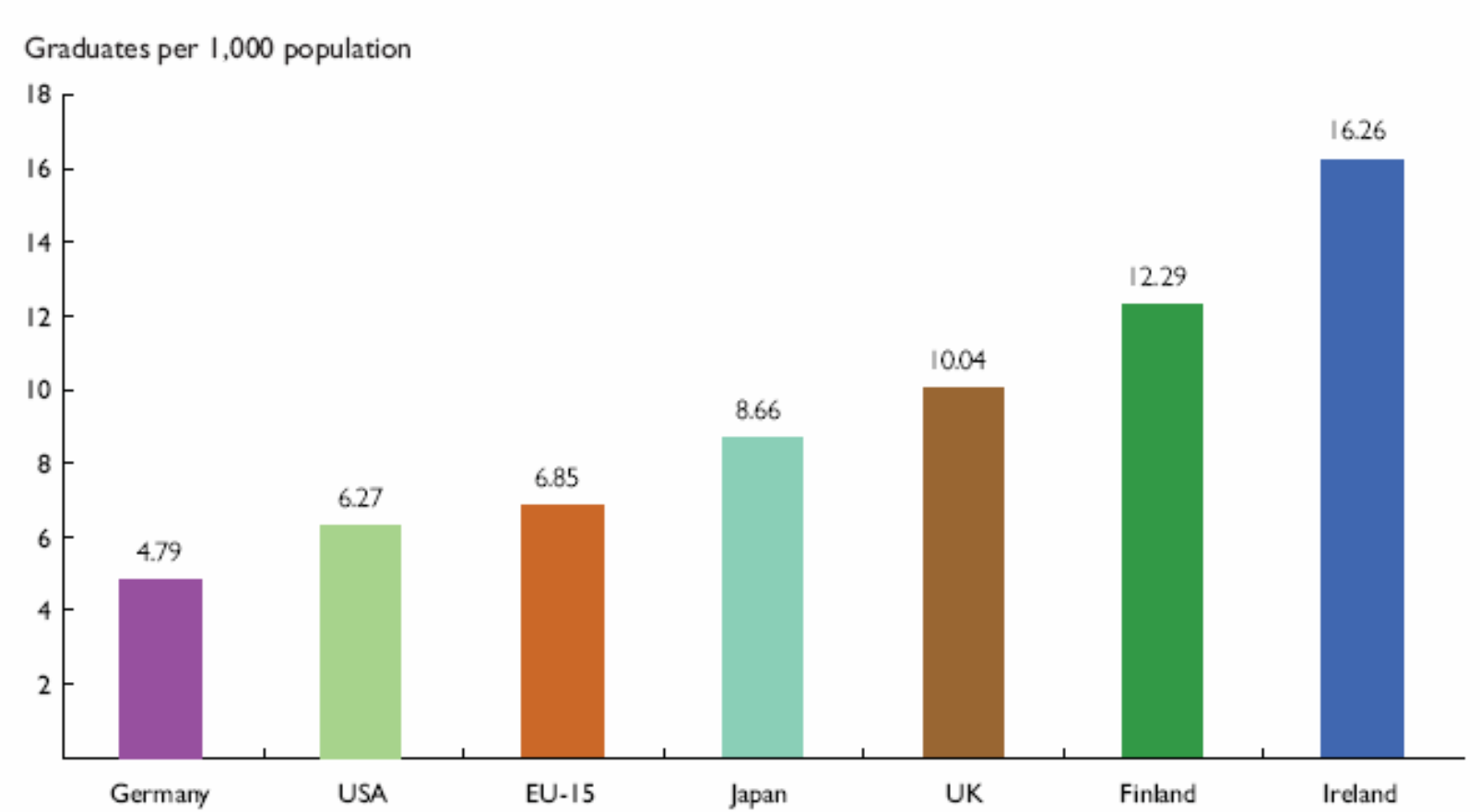
Source: ***Higher Education Authority***

% Population aged 25-34 having at least Third Level Education



Source: *OECD Education at a Glance 2002*

Science and Engineering Graduates Age 20-34 in 2000

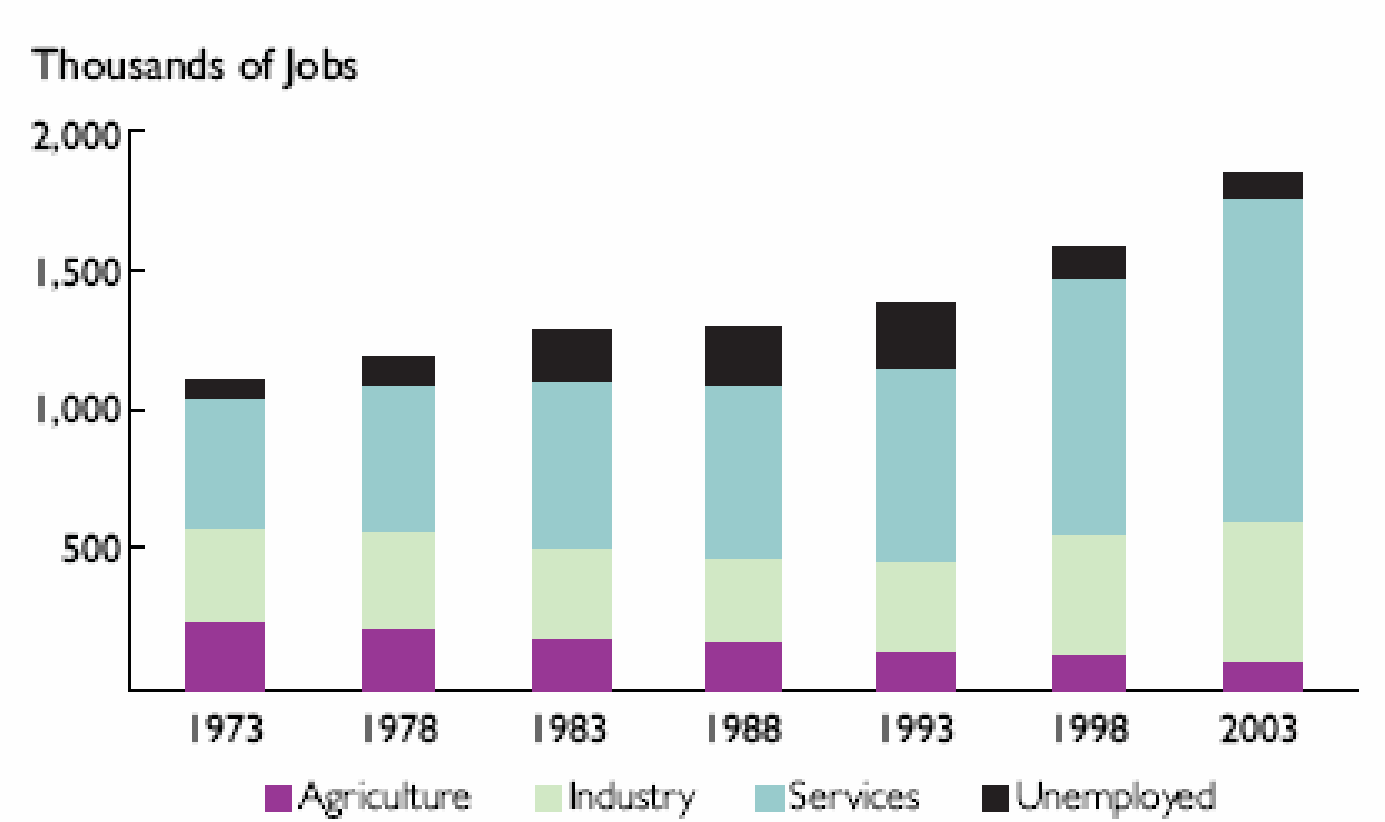


Source: European Commission, *Third European Report on Science & Technology Indicators, 2003*, March 2003, at *europa.eu.int/comm/research/press/2003/pdf/indicators2003/reist_2003.pdf* (February 15, 2006).

“The Future will be Different”

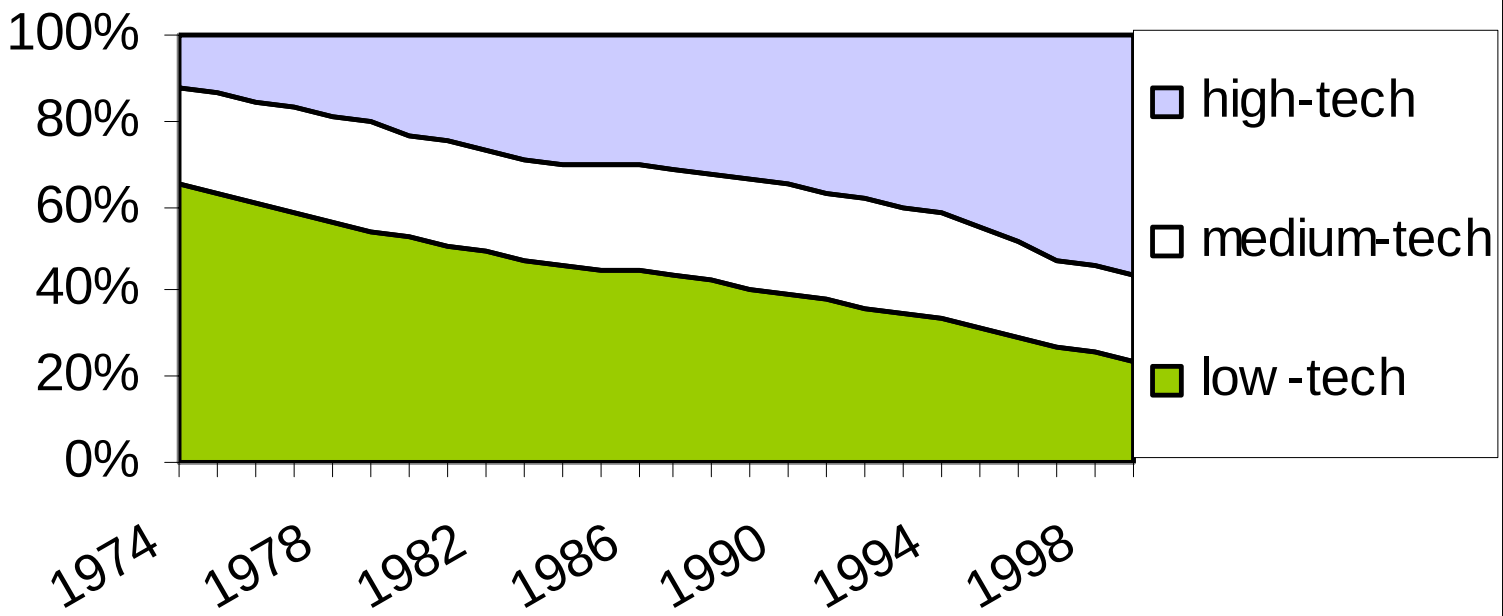
- **Globalisation, technology and digitisation**
- **Changes in economic conditions**
- **New business models and virtual companies – new patterns of investment**
- **New aspirations and expectations in society**
- **Higher value activities and higher skills**
- **More sophisticated and complex jobs**
- **Premium on flexibility and responsiveness**

Employment by Sector and Unemployment, 1970 - 2003



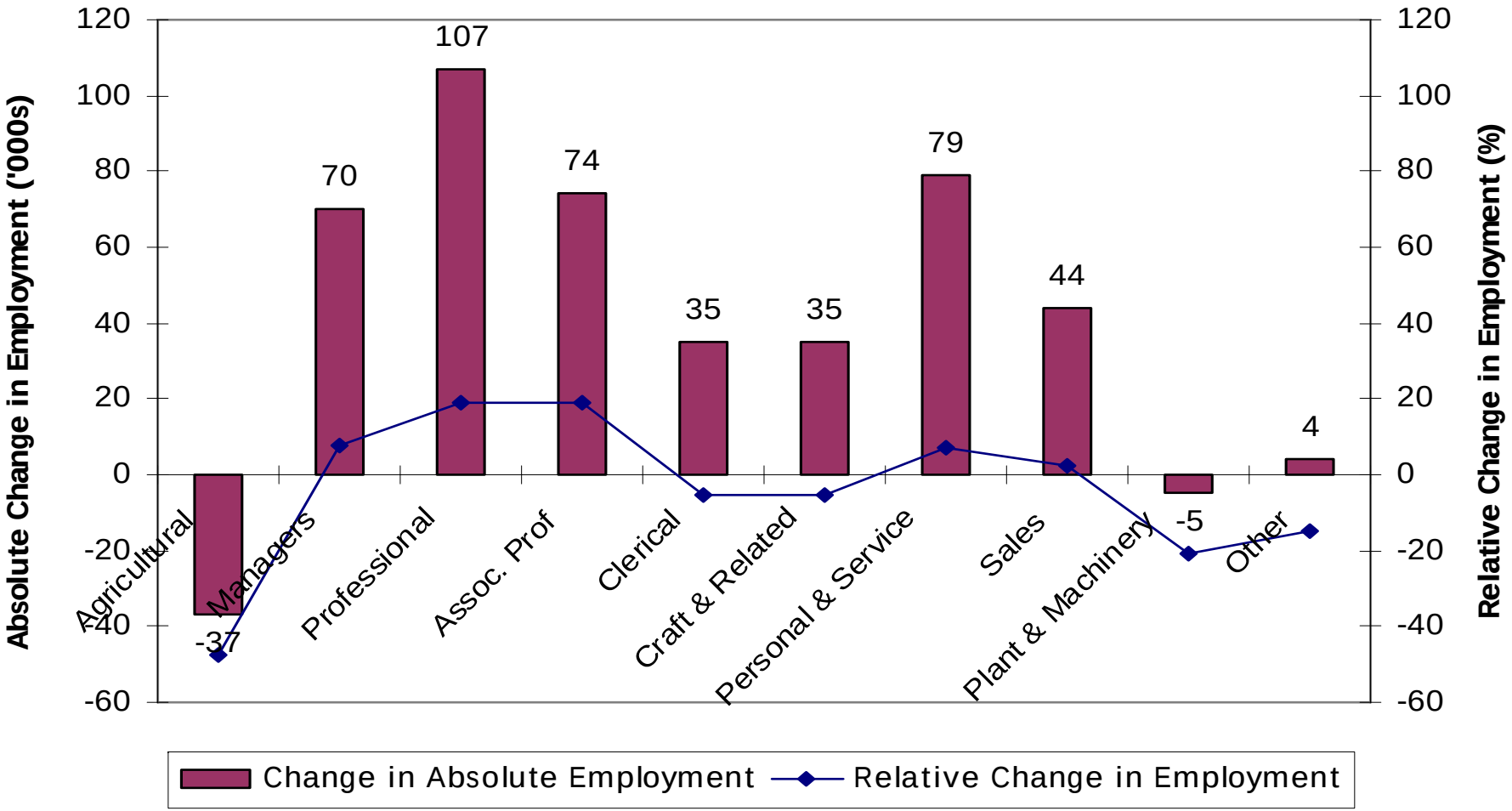
Source: Irish Central Statistics Office

Employment in High Tech



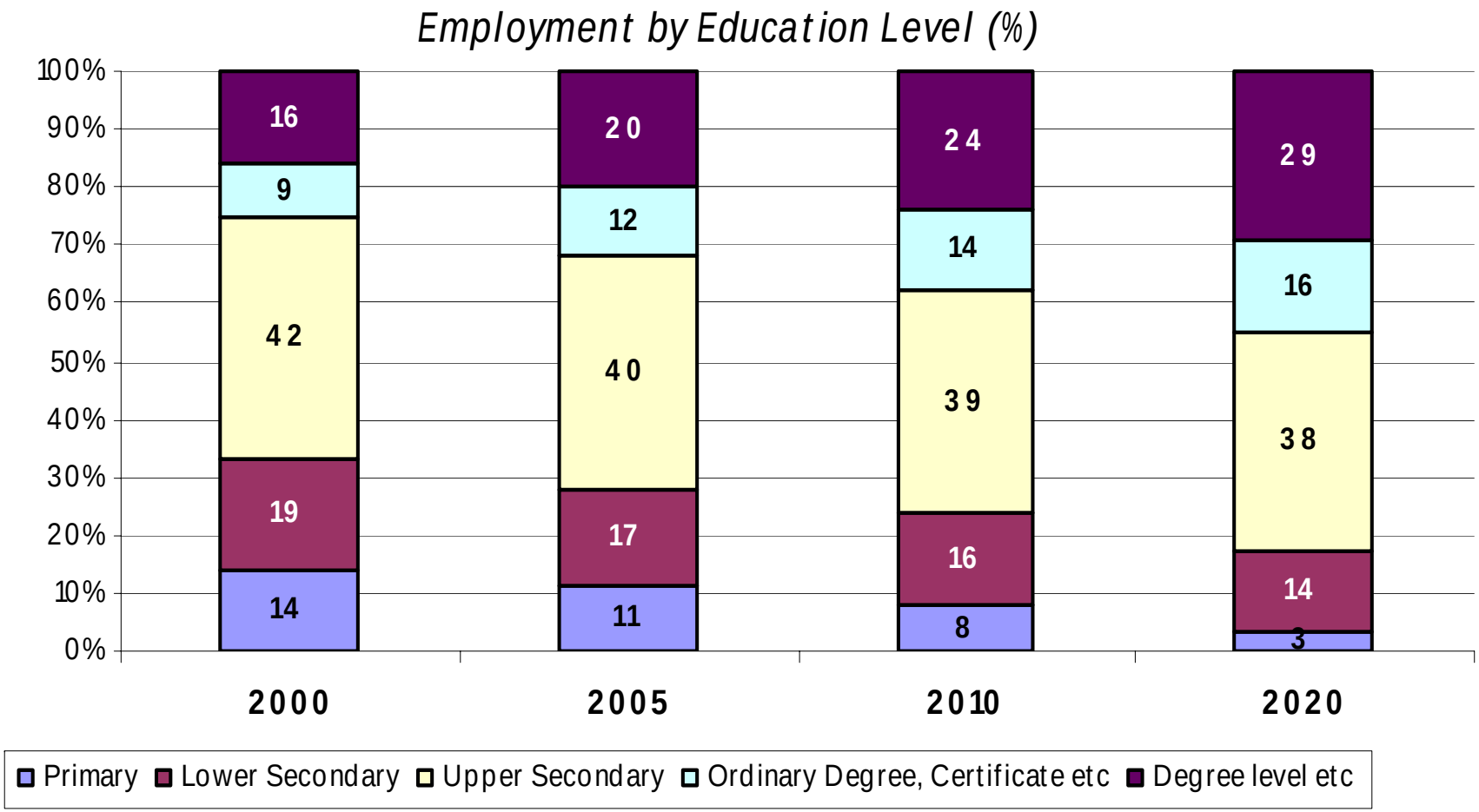
Source: “Third Level Education, FDI and Economic Boom in Ireland” – Frank Barry, forthcoming in *International Journal of Technology Management*

Change in absolute and relative employment by occupation from 2005 to 2020



Source: EGFSN, ESRI

Employment Demand Projections



***Martin Shanahan:* Ireland's Future Skills Needs to 2020 -**
National Qualifications Authority of Ireland Conference 22nd November 2006

National Skills Strategy: Key Targets

- **Second Le … ate retention rate needs … lt 80%)**
- **Ireland sh … opulation aged 20 - 24 wit …**
- **The progr … % over the period to 2 …**
- **478,000 individuals will need to progress by at least one level of educational attainment above their current highest level. Approximately 28,000 will have to progress by two levels or more.**

Source: Expert Group on Future Skills

- Binary system of Universities and Institutes of Technology (with some private providers)
- Approximately 80,000 and 64,000 students in 7 Universities and 14 Institutes respectively
- Most Institutes less than 40 years old
- Universities and Dublin Institute of Technology make their own awards; others under Delegated Authority or through Higher Education Training and Awards Council (HETAC)
- Increasing emphasis on ‘Fourth Level’ (PhD)
- As of February 2007 all Universities and Institutes under the same authority of the Higher Education Authority