Internationalisation Working Group

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Bologna -Seminar

3rd Cycle Degrees: Competences and Researcher Career

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Background paper and EUA Report (1)

EUA: Doctoral Programmes in Europe's Universities: Achievements and Challenges (2007)

- Doctoral programmes are a key component of discussion on European higher education in global context
- Doctoral training is per se international in nature and sufficient opportunities should be provided for doctoral candidates to engage internationally

➢ the recruitment of more international staff

➢ international workshops

➢ conferences and summer schools

➢ European and international joint doctoral programmes

➢ the use of new technologies

Background paper and EUA Report (2)

- Capacity building: for some institutions and some countries mobility is means of training their own young researchers (lack of critical mass of doctoral candidates, capacities or infrastructure)
- Legal, administrative and social obstacles should be addressed by all partners in the process
- The key elements of international strategy at institutional level

➢ international joint doctoral programmes

➢ encouraging mobility within doctoral programmes

➢ attracting the best doctoral candidates from all over the world ⇔ adjusting to the global competition for talent (attractive research environment, centres of excellence, "word class universities", infrastructures etc.)

Possible topics for discussion

1) **Best ways to include internationalisation as an integral part in all 3rd cycle education (means and obstacles)?**
2) **How to promote mobility in doctoral training and during the researcher career at European, national and institutional level?**
3) How to promote the networking and collaboration of doctoral programmes? The Role of double and joint degrees?
4) Should mobility be a criterion for career advancement?
5) **Examples of good practices of the internationalisation from your country or institution?**

Why international researcher education?

Important academically:

- High quality teaching and advising
- Working with ’big names’
- New connections all over the world
- Excellent research environments and infrastructures
- New information channels
- New ideas, methods, resources and sharing research identity

Why international researcher education?

Important personally:

- Personal experience
- Funding
- Life-long new connections
- New job opportunities

National and institutional benefits:

- Contribution to the creation and diffusion of knowledge (also tacit knowledge) and innovation
- catch-up development
- Access to quality research infrastructure
- Participation in global innovation networks
- Labour-related mobility, (brain drain, brain gain, brain circulation)
- multicultural society, mutual understanding

EU initiatives (1)

European Research Area, launched 2000

The European Research Area: New perspectives. Green paper

=> ***Realising a single market for researchers***

- **An adequate flow of competent researchers** with high levels of mobility between institutions, disciplines, sectors and countries;
- **World-class research infrastructures**, integrated, networked and accessible to research teams from across Europe and the world;
- **Excellent research institutions** engaged in effective public-private cooperation and partnerships, forming the core of research and innovation 'clusters' including 'virtual research communities',
- **Effective knowledge-sharing** notably between public research and industry, as well as with the public at large;
- **Well-coordinated research programmes and priorities**, including a significant volume of jointly-programmed public research investment at European level involving common priorities, coordinated implementation and joint evaluation; and
- **A wide opening of the European Research Area to the world** with special emphasis on neighbouring countries and a strong commitment to addressing global challenges with Europe's partners.

EU initiatives (2)

Better Careers and More Mobility: European Partnership for Researchers

(May 2008)

- Systemically open recruitment
- Meet the social security and supplementary pensions needs of mobile researchers
- Provide attractive employment and working conditions
- Enhance the training, skills and experience of researchers

Report of the High Level Expert Forum on Mobility: making learning mobility an opportunity for all (June 2008)

- Deepening the European convergence process, such as Bologna and the ERA
- Increasing the volume of mobility under the People Programme of FP7, notably Marie Curie action, by 2020 support targeted mobility 50 % of the young research population (370.000 persons)
- Mobility should be a criterion for career advancement

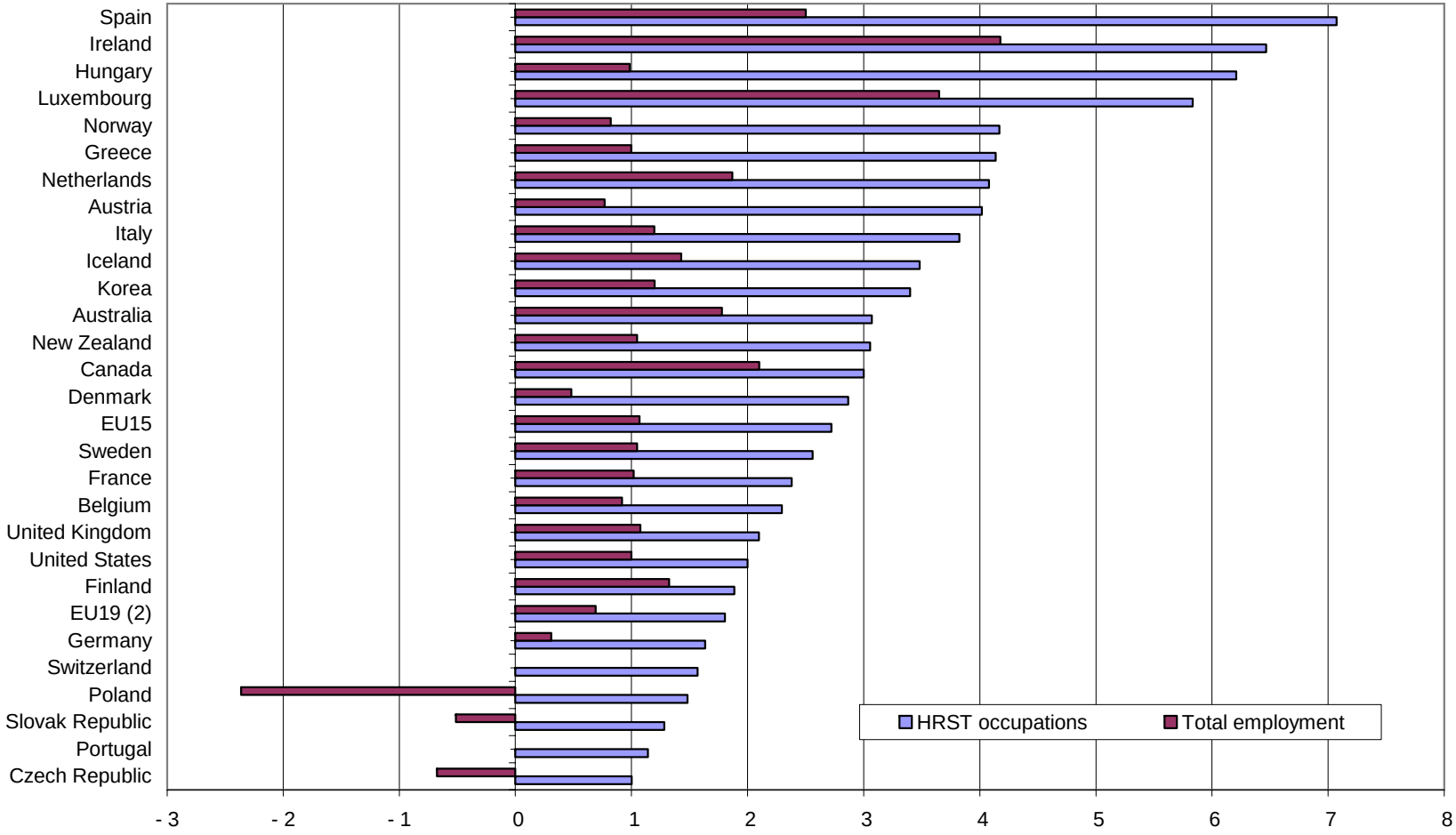
Internationalisation of Science and Technology

Acceleration of ST internationalisation (Source OECD)

- Massive growth in power of information and communication technologies
- A growing proportion of scientific research involves foreign co-authors (20 % of all S&E articles in 2005)
- The labour market of scientist and engineers is becoming more global
- The top 700 R&D spending MNEs have increasingly invested in R&D outside their home country
- A considerable share of R&D is funded from abroad
- International co-operation in invention, as measured by patents, is increasing
- Emerging economies (China, India, Brasilia, Russia) account for a sharply growing share of the world's R&D
- Global challenges (climate change, health, energy, water scarcity, terrorism ect.)

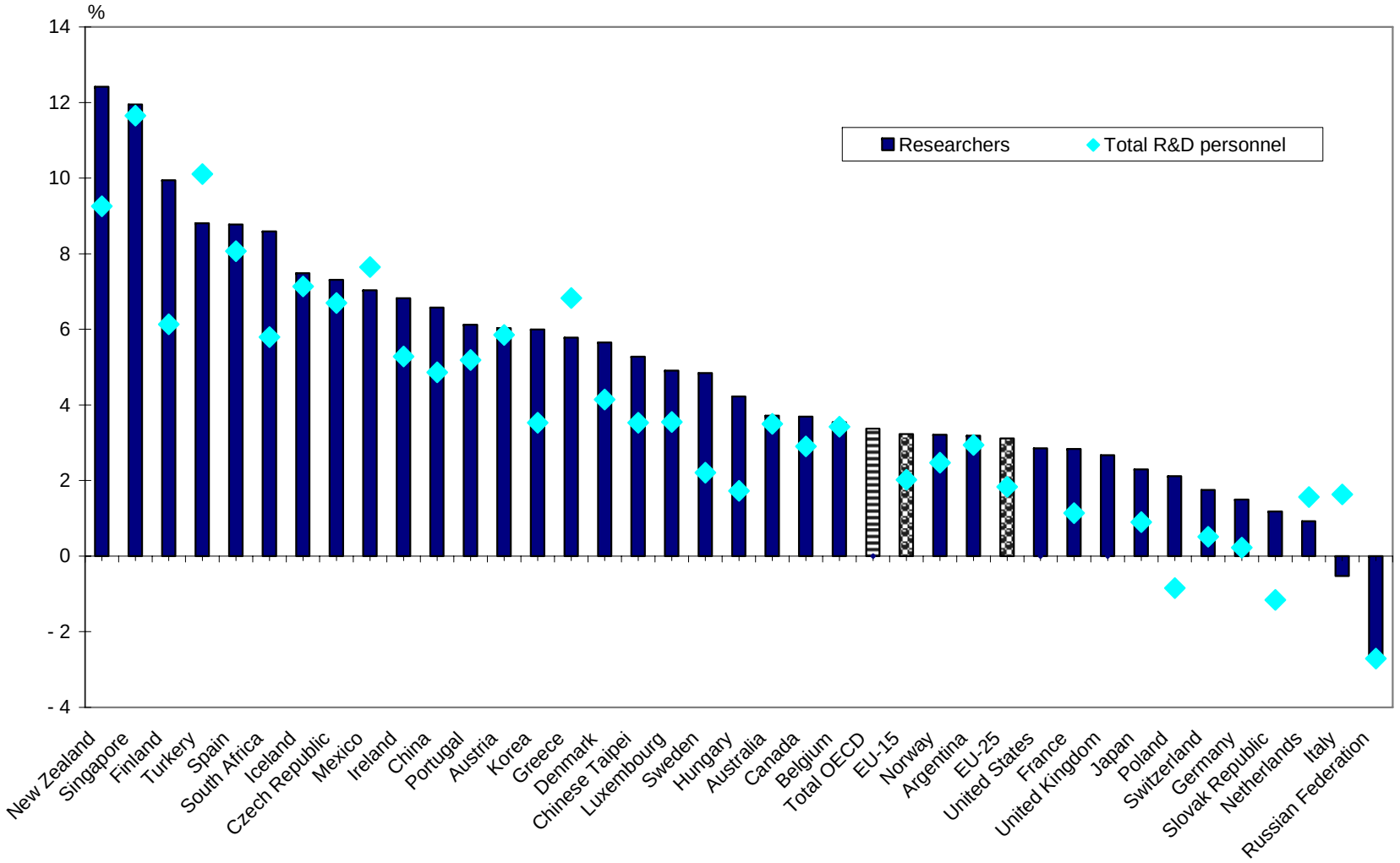
Demand – HRST occupations growing faster than employment

Average annual growth rate HRST occupations and total employment, %, 1995-2004



Strong growth in researchers and R&D personnel

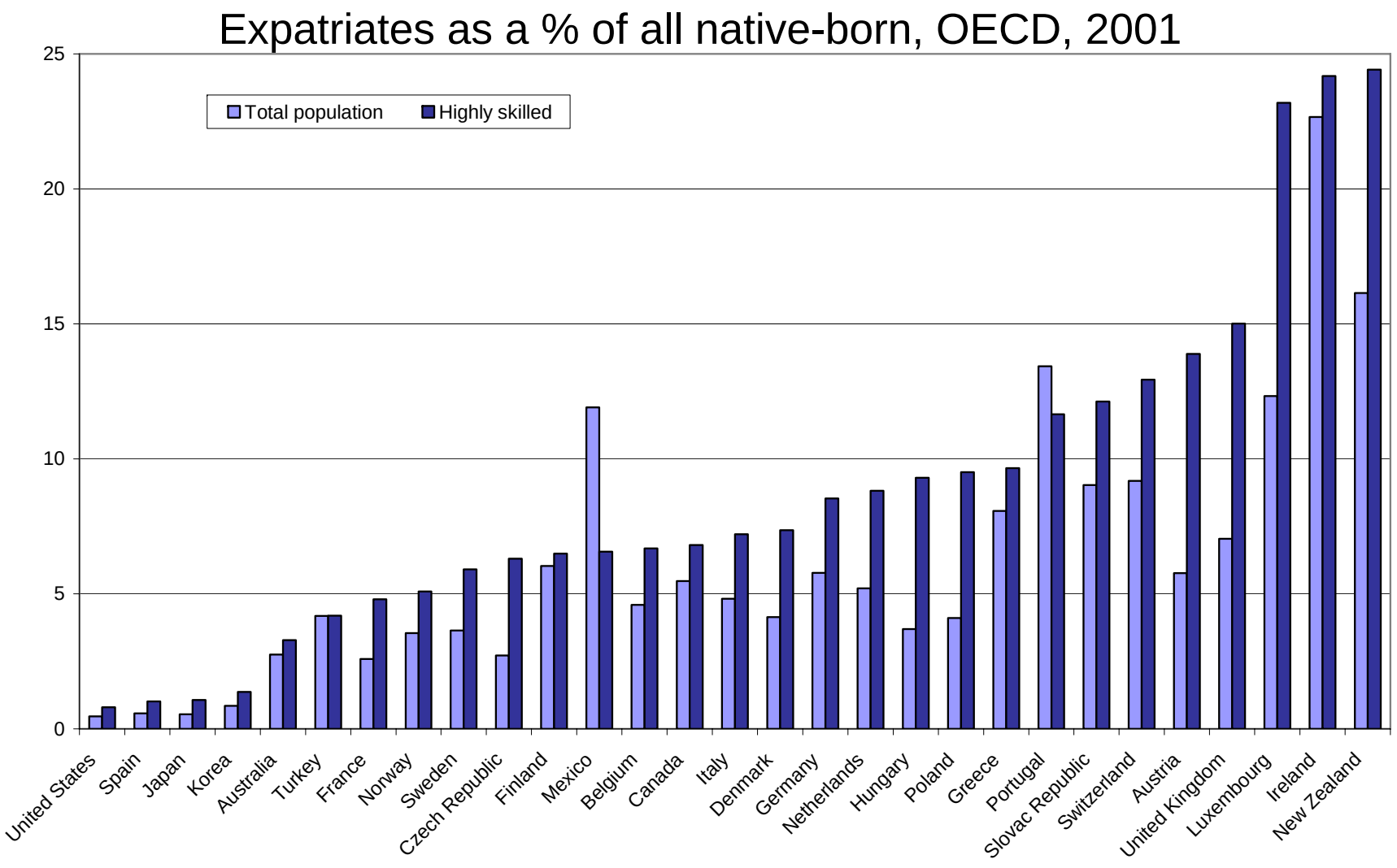
Average annual growth rate, %, 1995-2005,



Maintaining capability

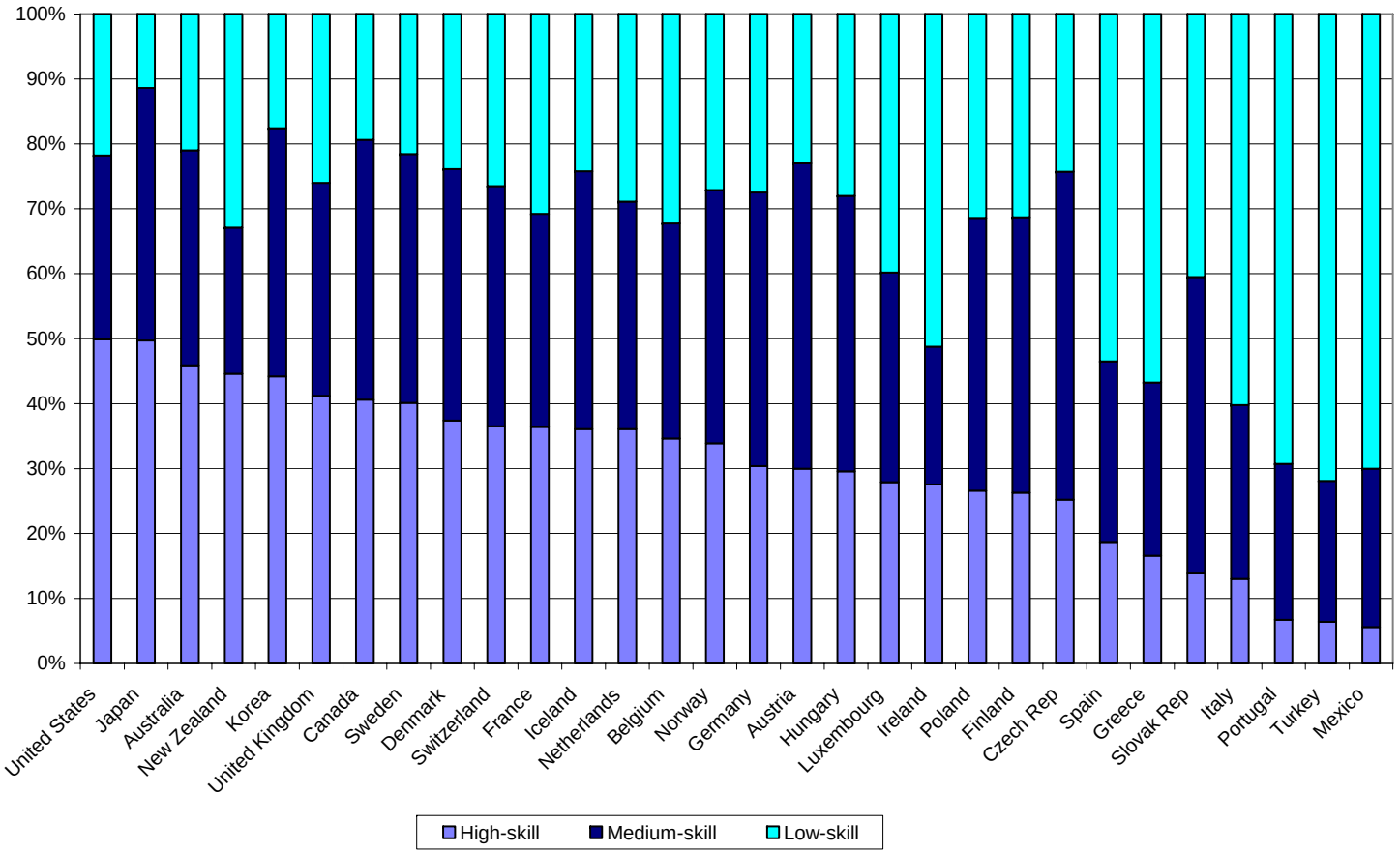
- Demand for researchers and HRST is expected to increase further
  - Total OECD R&D expenditure reached USD 726 billion in 2004, average annual increase almost 10% from 2000
- Demand is also driven by demographic changes
- Supply is affected by the attractiveness of research careers

A large proportion of expatriates are highly-skilled



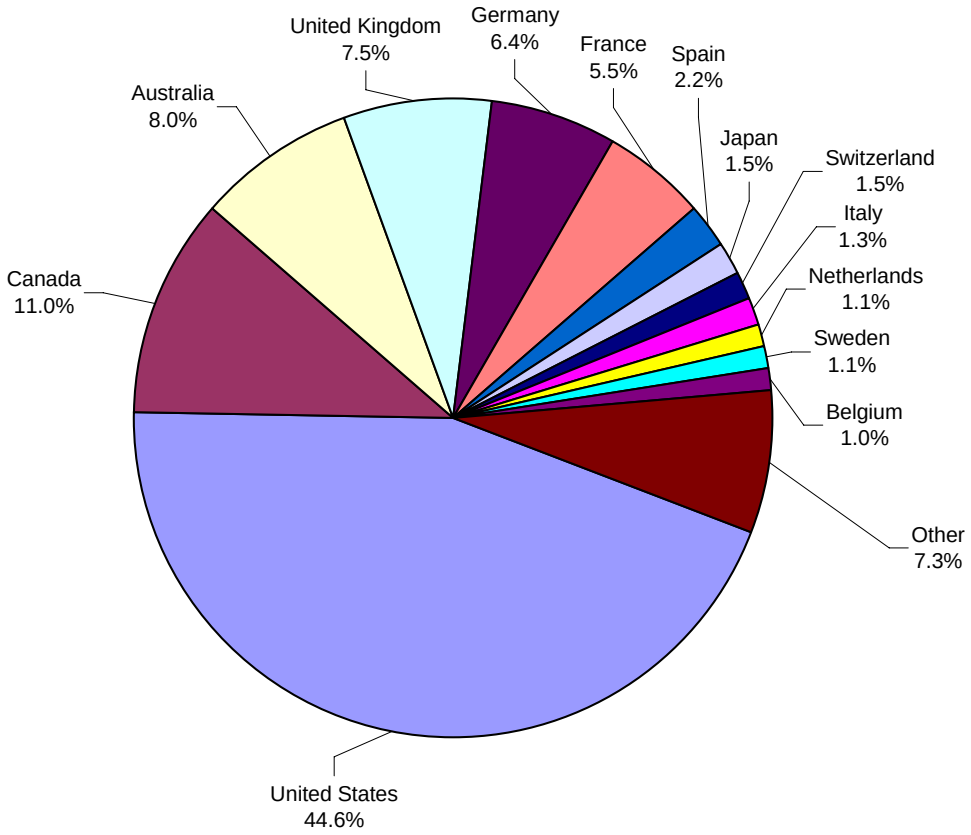
But differences across the OECD

Distribution of expatriates by skill level and country of origin, 2001



Expatriates concentrated in US, EU Canada and Australia

Shares of highly-skilled immigrants in the OECD, 2001



Some OECD countries have high proportions of foreign PhDs

Foreign-born doctoral holders as % of total doctoral holders, by OECD country of residence, 2001