



The OECD Innovation Strategy – Lessons for the ERA

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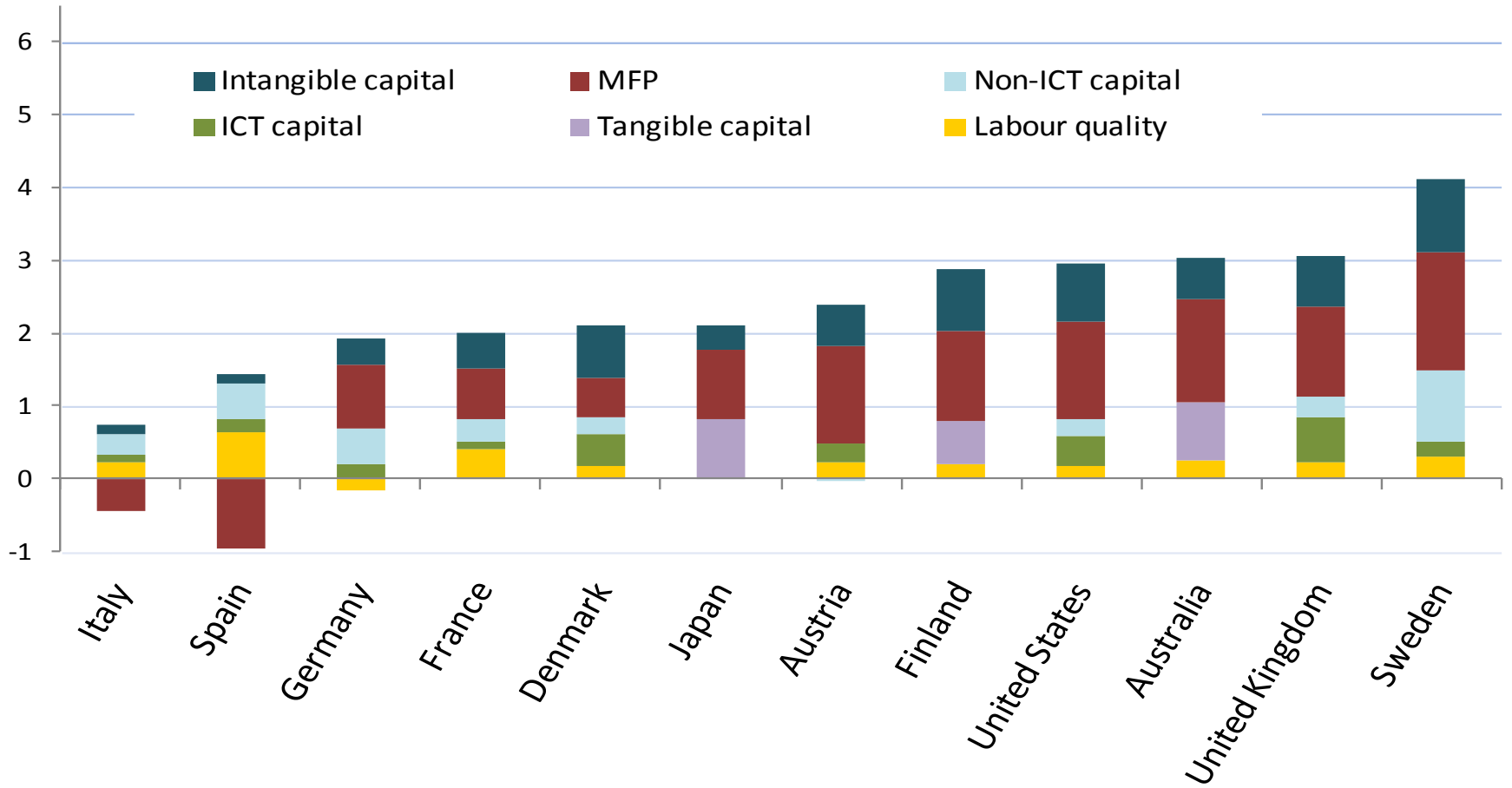
Today's Themes

- 1 - Why STI matters and should be supported**
- 2 - The changing nature of innovation – cooperation, globalisation, people and knowledge management**
- 3 - Governance challenges**
- 4 - Some implications**

1 - Why STI matters and should be supported

Innovation is key to growth...

Contributions to labour productivity growth, 1995-2006, in %



* Investment in intangibles and multi-factor productivity growth account for between two-thirds and three-quarters of labour productivity growth.

...constitutes the major gap in GDP between OECD and emerging economies.

Decomposition of cross-country differences in GDP per capita into their determinants, 2005

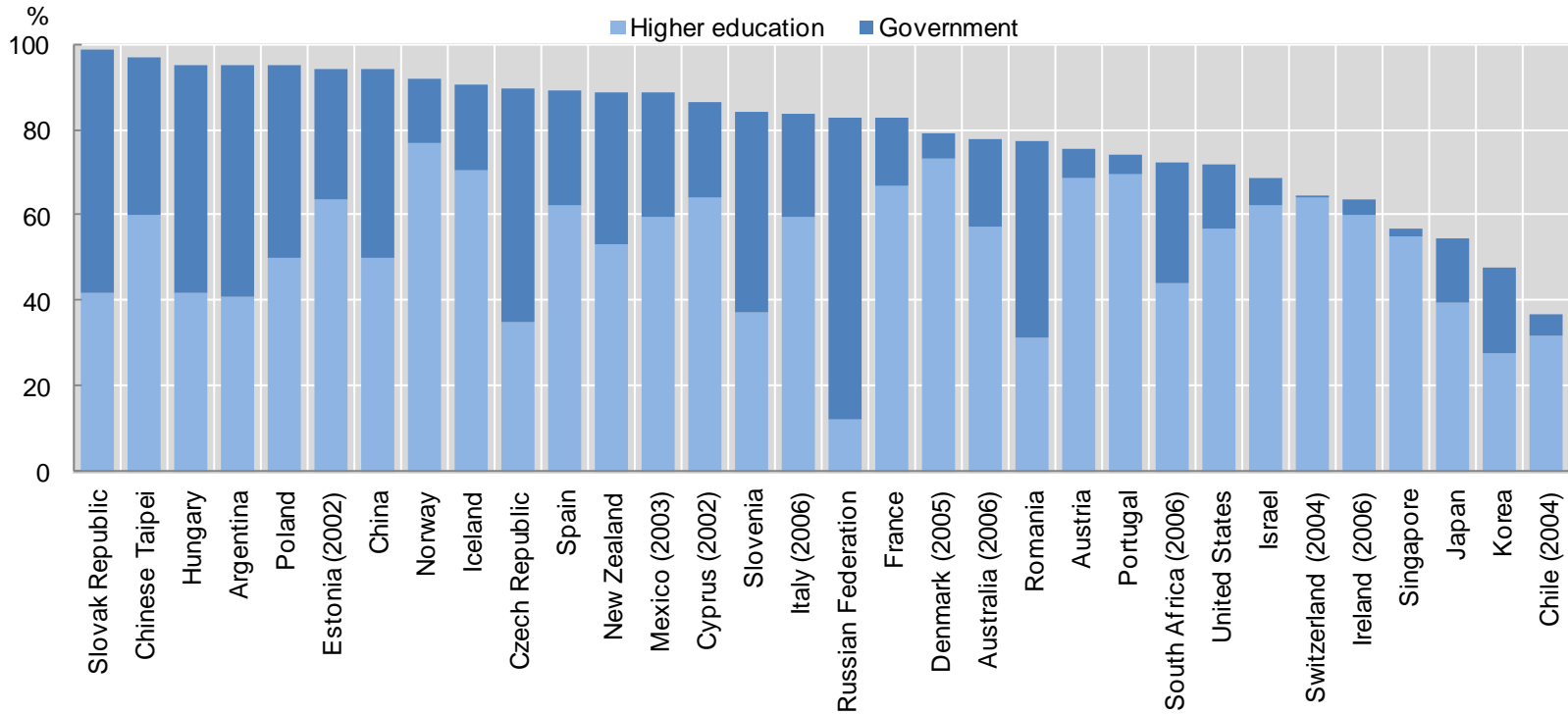
(United States = 100)

	GDP PPP per capita	TFP	Human capital	Physical capital	Employment
United States	100.0	100.0	100.0	100.0	100.0
Canada	83.5	72.0	103.3	105.8	106.0
Japan	72.6	52.6	100.4	130.7	105.1
China	9.8	13.6	57.3	105.2	119.5
India	5.2	12.7	47.7	98.3	87.1
Brazil	20.5	29.3	70.1	103.1	96.8
Russian Federation	28.6	31.5	84.9	97.4	99.3
EU27 + EFTA	64.7	67.8	91.2	114.1	91.3
Total World	22.8	27.9	64.2	104.2	95.8

Source: OECD.

Public investment is key

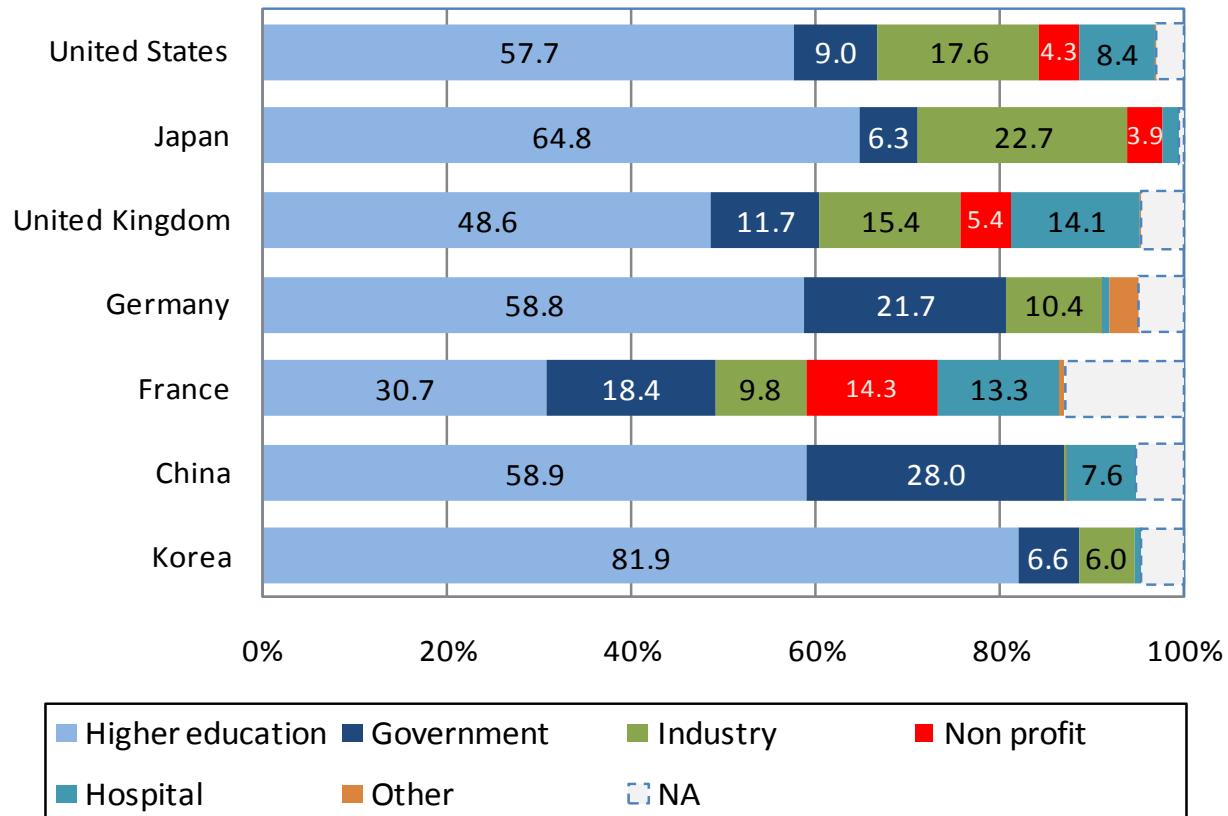
Basic research performed in the public sector, 2007
Percentage



Biotech reliance on Science...

Reliance of patents on science citations

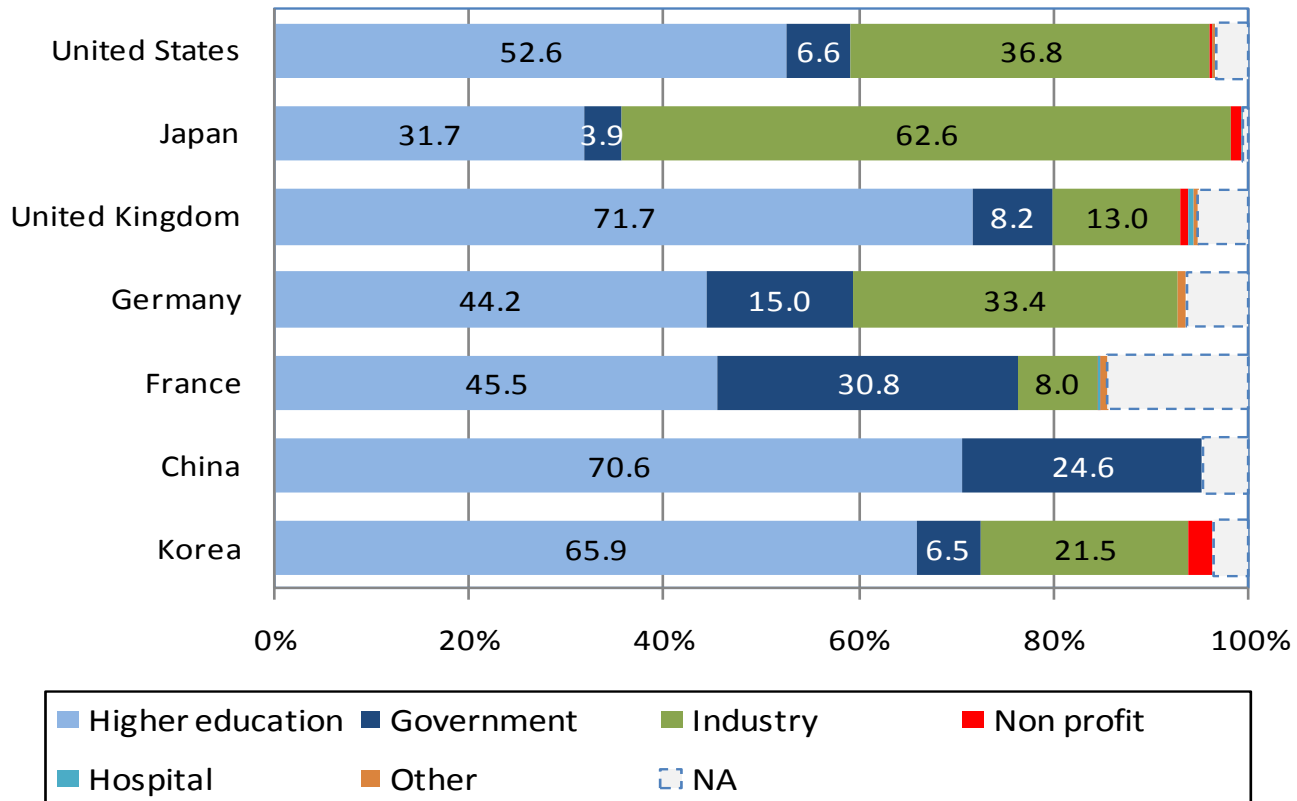
(biochemistry papers cited by pharmaceutical patents)



Semiconductor reliance on science....

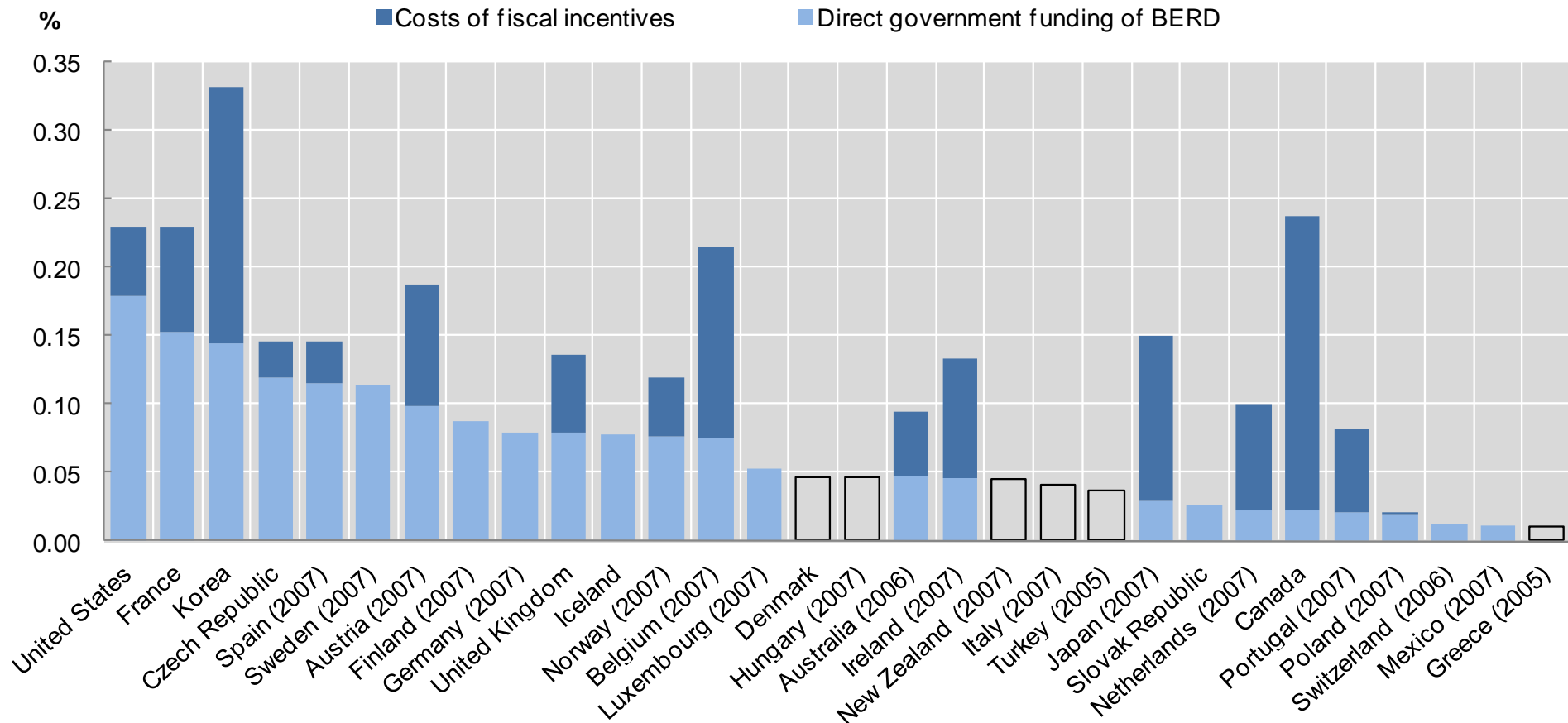
Reliance of patents on science citations

(applied physics and semiconductors)



Direct and indirect government support to business R&D (BERD), 2008

As percentage of GDP



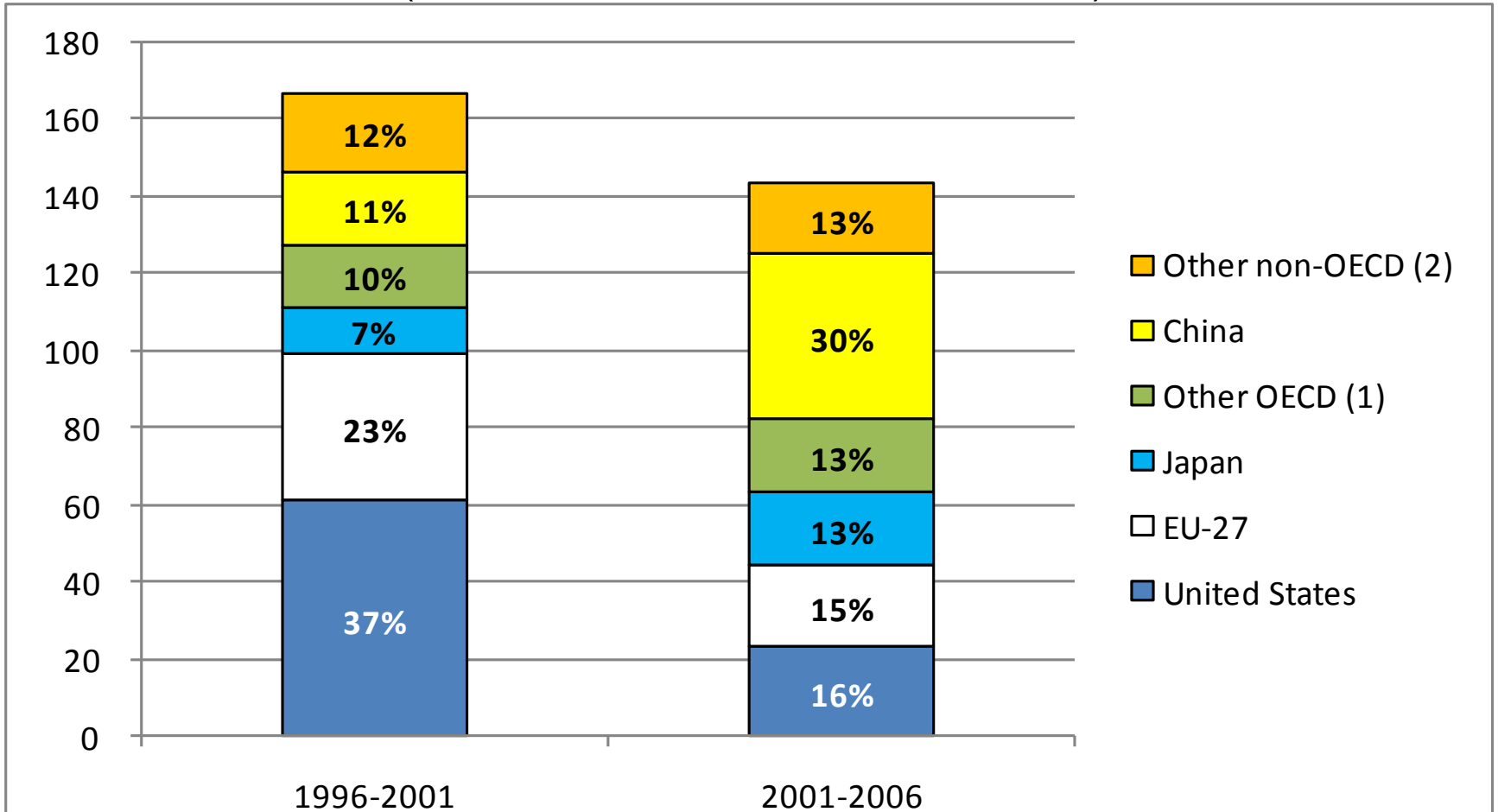
Source: OECD, NESTI 2009 R&D tax incentives questionnaire, based on national sources, some of which may be preliminary.

Note: Countries with a non-shaded bar provide R&D tax incentives but the cost of these incentives is not included yet (waiting to receive estimates).

2 - The changing nature of innovation – cooperation, globalisation, people and knowledge management

As new global players have emerged.....

Contributions to growth in global R&D, 1996-2001 and 2001-2006
(in billion constant US PPP and %)



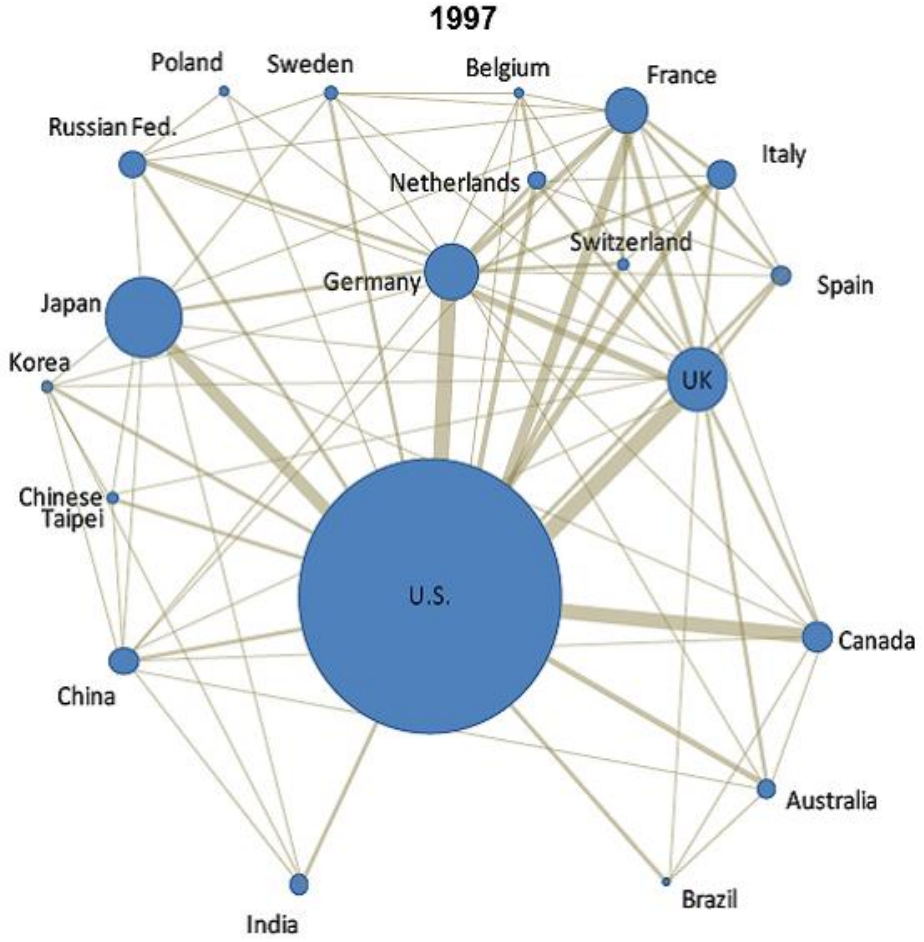
Note: (1) Australia, Canada, Iceland, Korea, Mexico, New Zealand, Norway and Turkey
(2) Argentina, Brazil, India, Israel, Russian Federation, Singapore, South Africa, Chinese Taipei

Source: OECD.

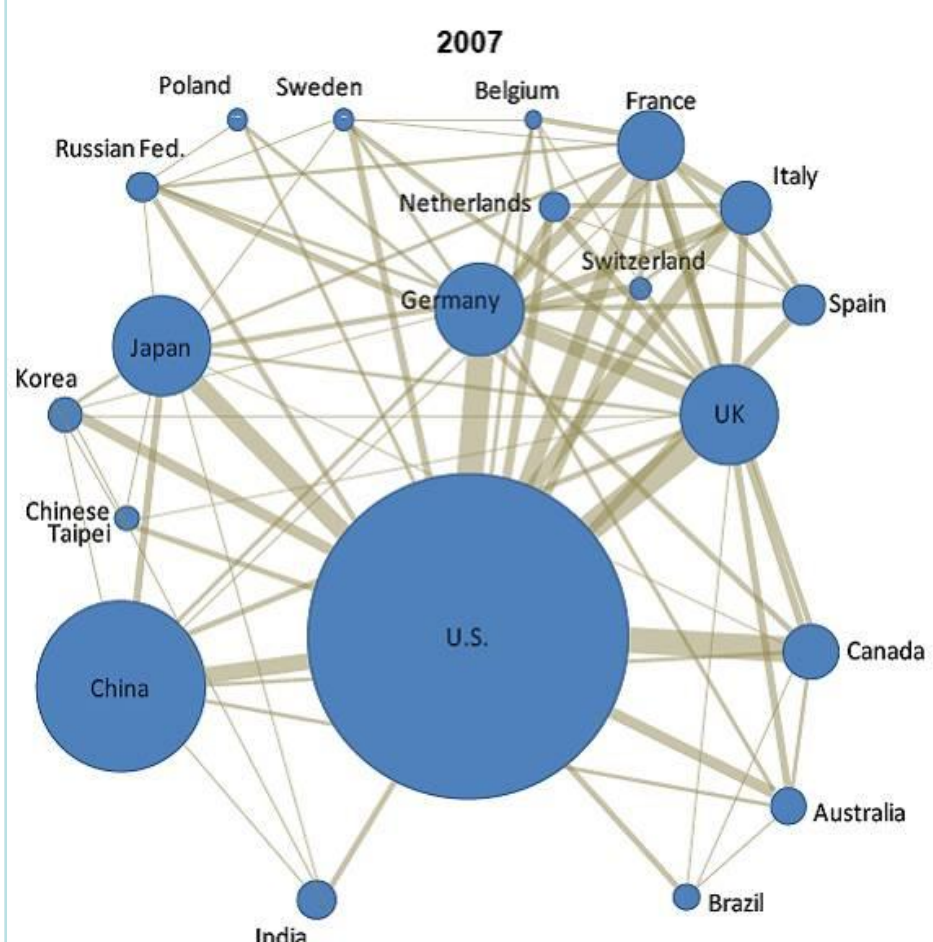
Co-operation in science is increasing

co-authored S&T articles (whole count), 1997 and 2007

1997

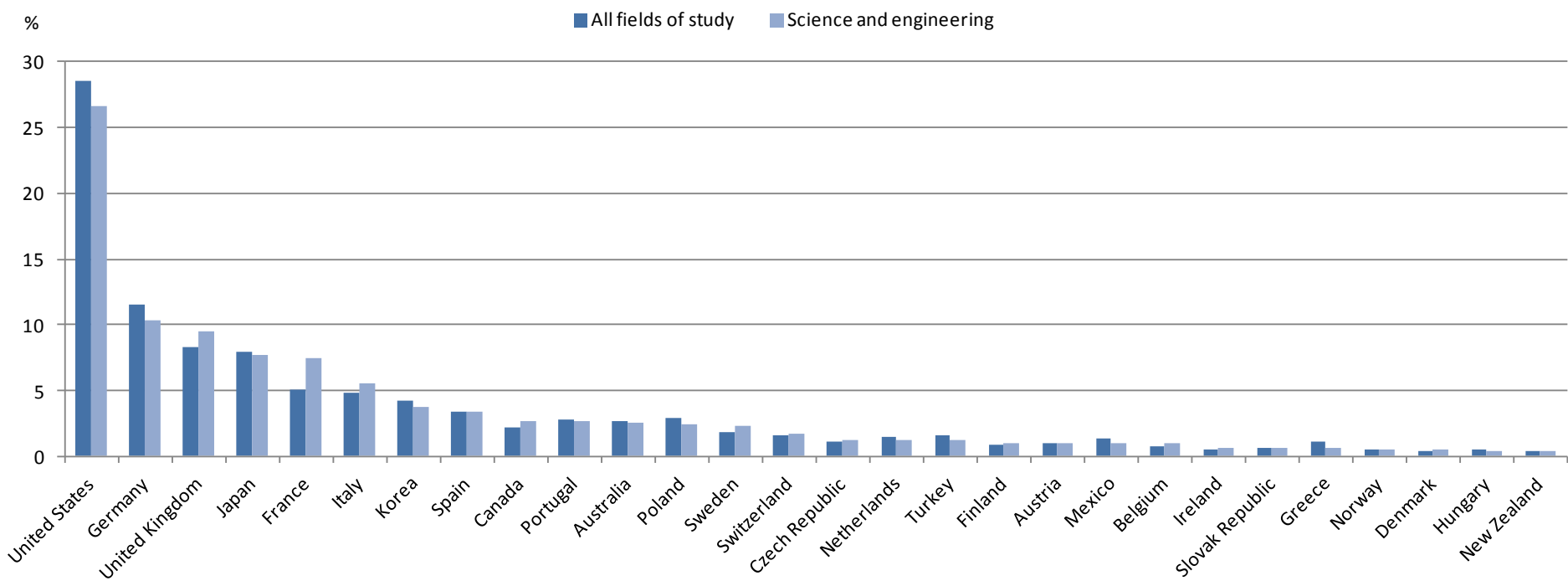


2007



.... demand for graduates is unabated

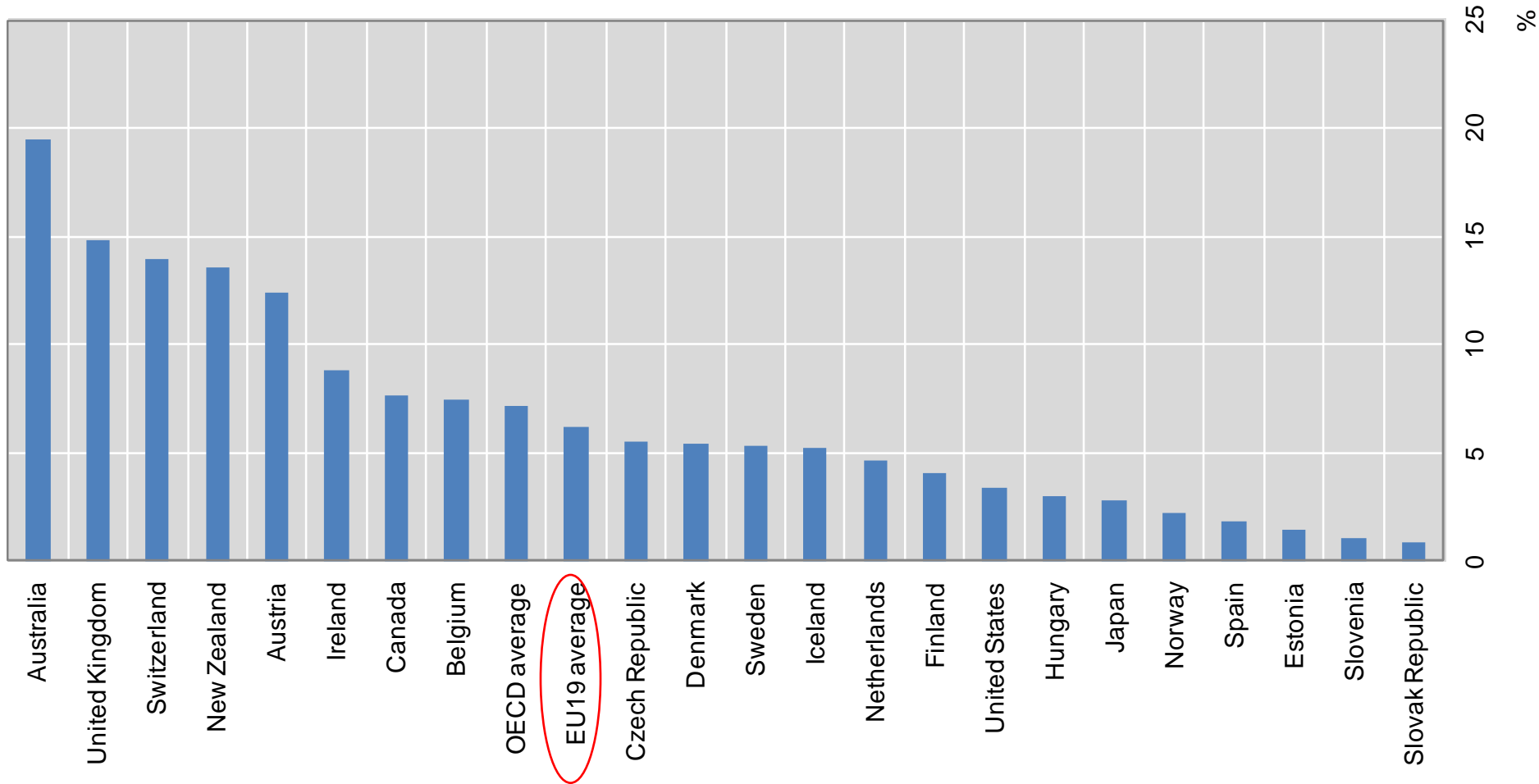
Doctoral graduates as a percentage of total OECD new graduates at doctorate level



Source: OECD (2009), *Education at a Glance 2009: OECD Indicators*, Paris

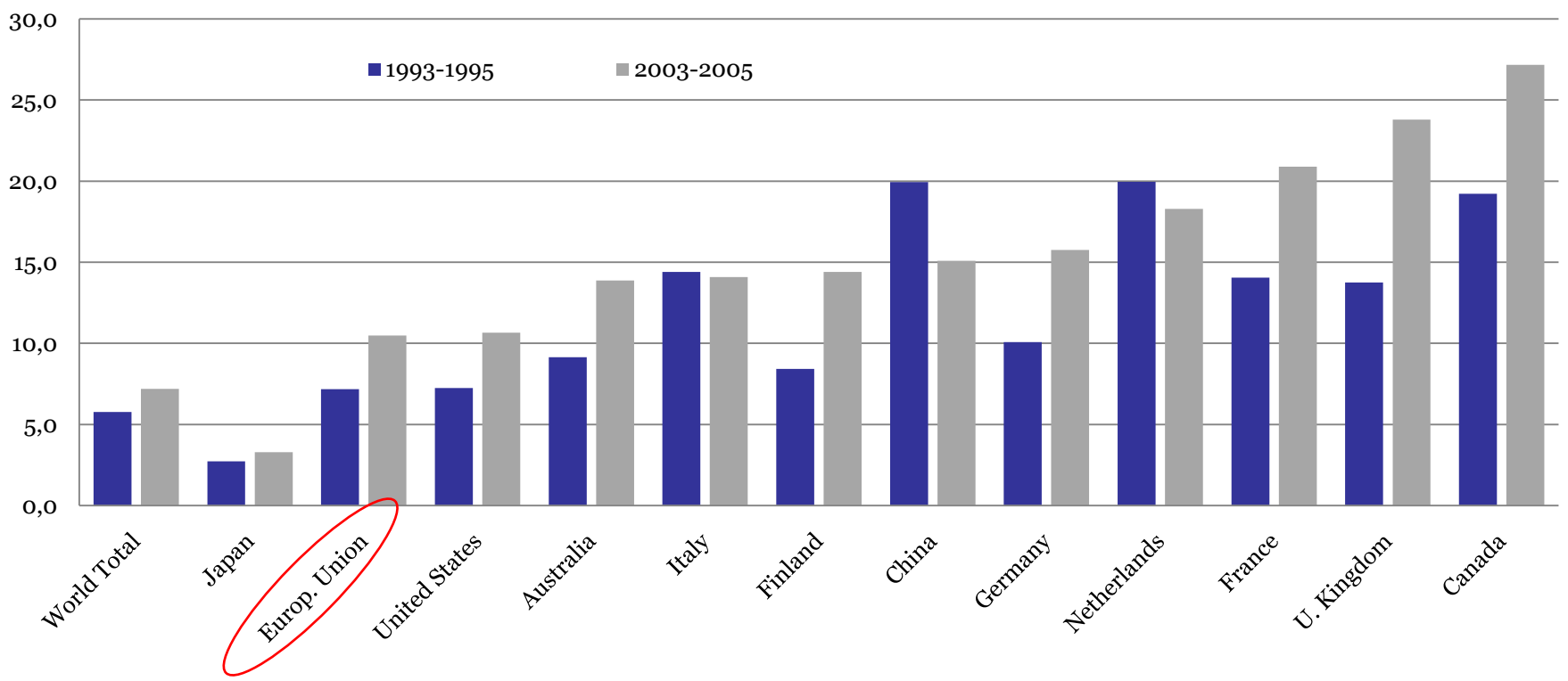
... with mobility playing an important role.

International students, 2007
As a percentage of all tertiary enrolment



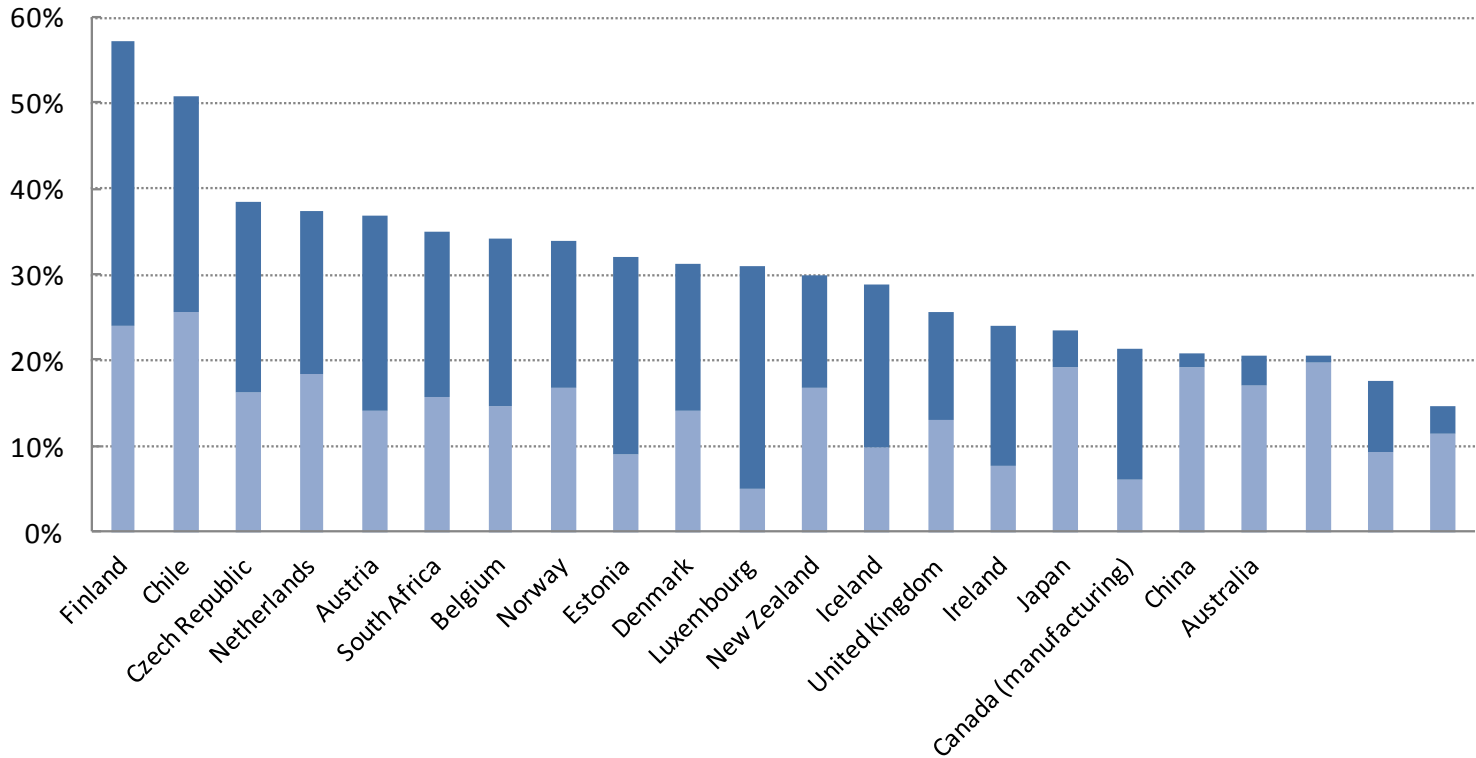
... and innovation increasingly happens across borders

Share of patents with foreign co-inventors (%)



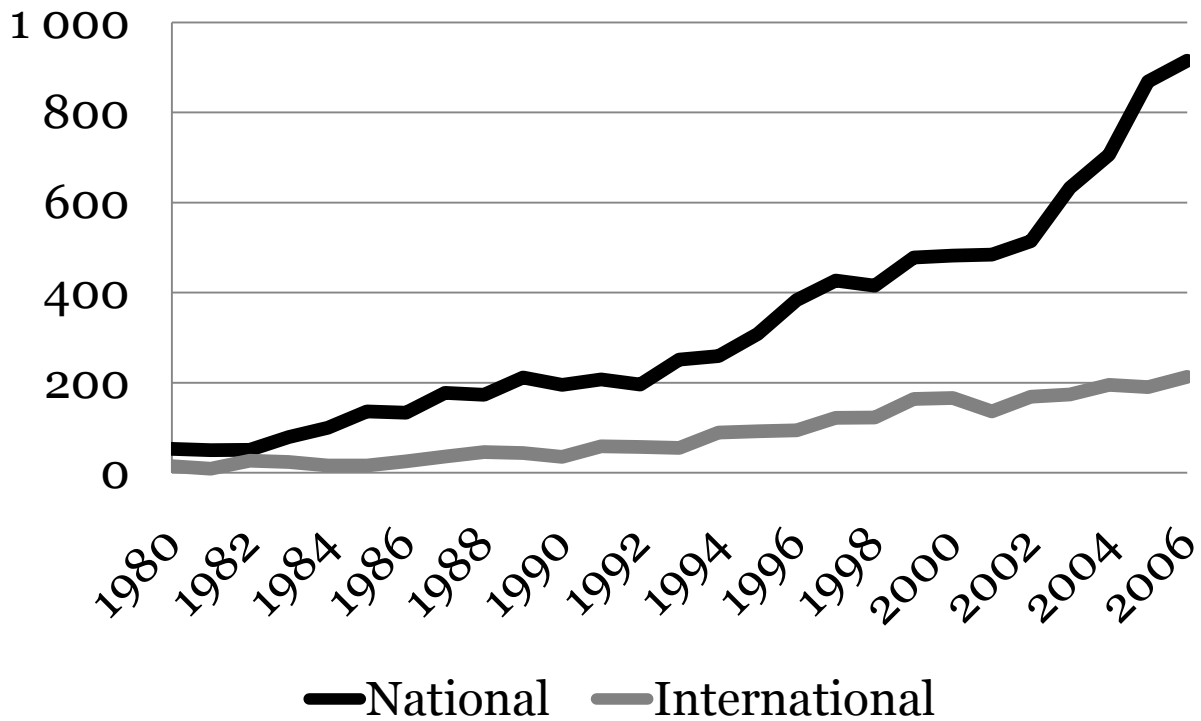
...involves collaboration...

Firms with foreign and national collaboration 2004-06 (or latest)
As a percentage of innovative firms



Co-ownership of Innovation is growing

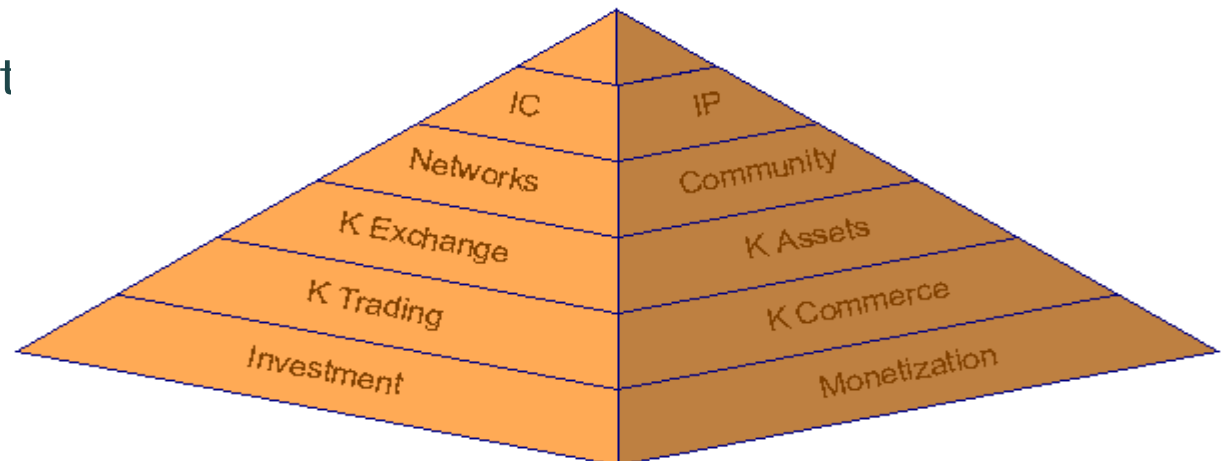
Between Businesses and PROs...
numbers of co-owned patents



...so new models are emerging for creation and exchange of knowledge

Knowledge Networks and Markets encompass a number of different mechanisms, or marketplaces, where buyers and sellers exchange a variety of knowledge intensive goods and services.

E.g.: IP
exchanges, patent
Brokering
services



3 - Governance challenges

7 factors to adapt governance to the post-crisis world....

1. Not one single policy but a combination of actions to strengthen supply and foster demand: **policies for innovation.**
2. **Goal alignment** across government - strong political leadership and a joined strategic vision;
3. **Priority setting:** selection v diversity;
4. Need to clearly delineate **local, regional & national roles** to avoid duplication, and build coherence.
5. Adapt to **interdisciplinarity and convergence**
6. Need for **measurement and evaluation** frameworks to support policy
7. A chance to rethink the **global architecture** for STI governance

Some implications ...

- Don't cut **R&D support** coming out of the crisis. Recovery will depend on it in the medium term.
- Understand and utilise national innovation systems within the evolving **networked model of innovation**
- **Protect investment in intellectual assets** and create new models to share and leverage such assets
- **Mobility matters** – European demographics are inescapable. The networked model feeds on it.
- Current systems of prioritisation and **governance need to evolve** post-crisis – prioritisation, evaluation & subsidiarity,
...and...
- Need to design institutional structures that **facilitate multilateral co-operation in STI for global challenges**

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