



# MEASURING INNOVATION

COURSE: INNOVATION DEVELOPMENT IN  
COMMERCIAL BANKS

PRESENTED BY FARKHOD ODILOV



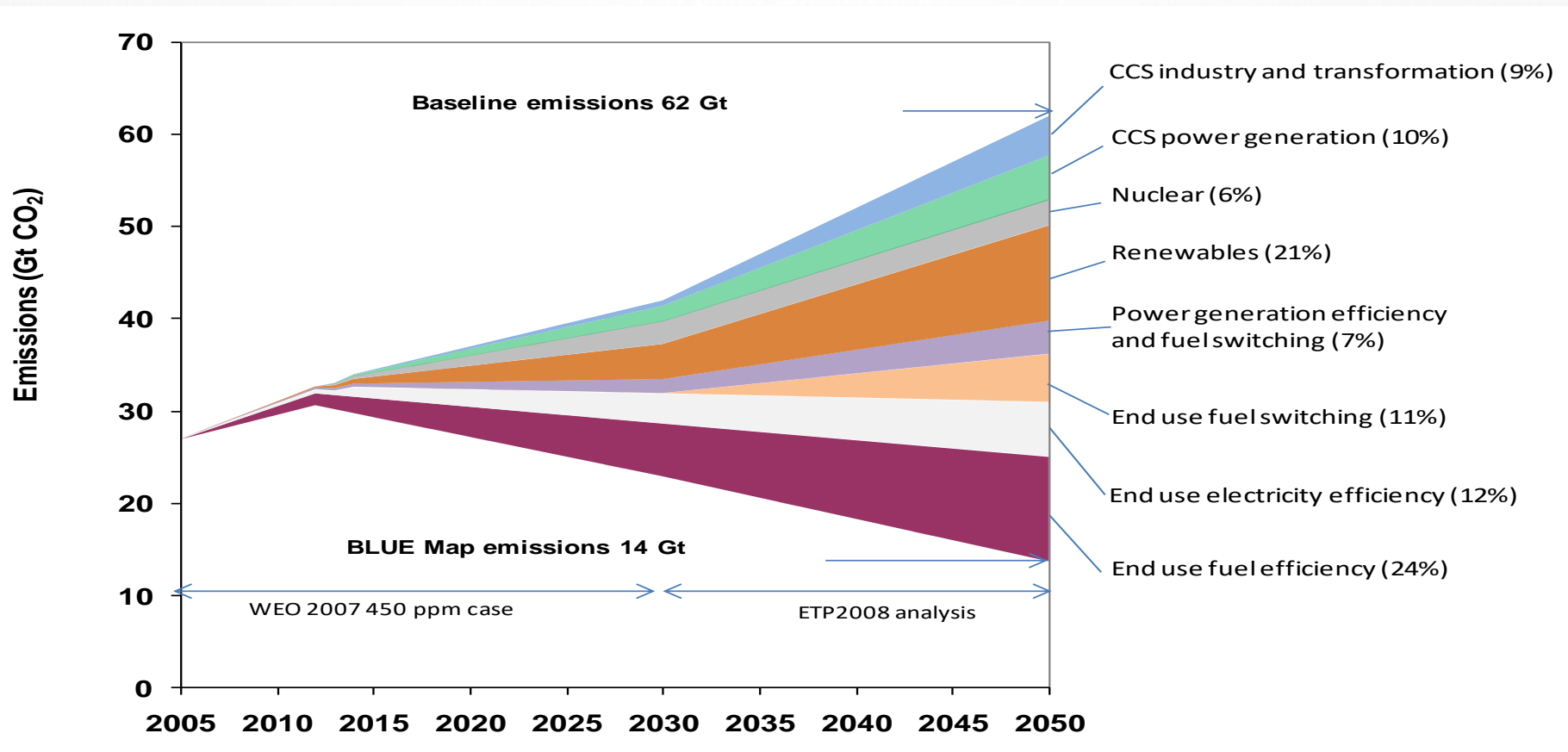
# A Pre-crisis drop in productivity...

## Labour productivity growth in the OECD area, 1981-2007

Annual growth rate, percentage

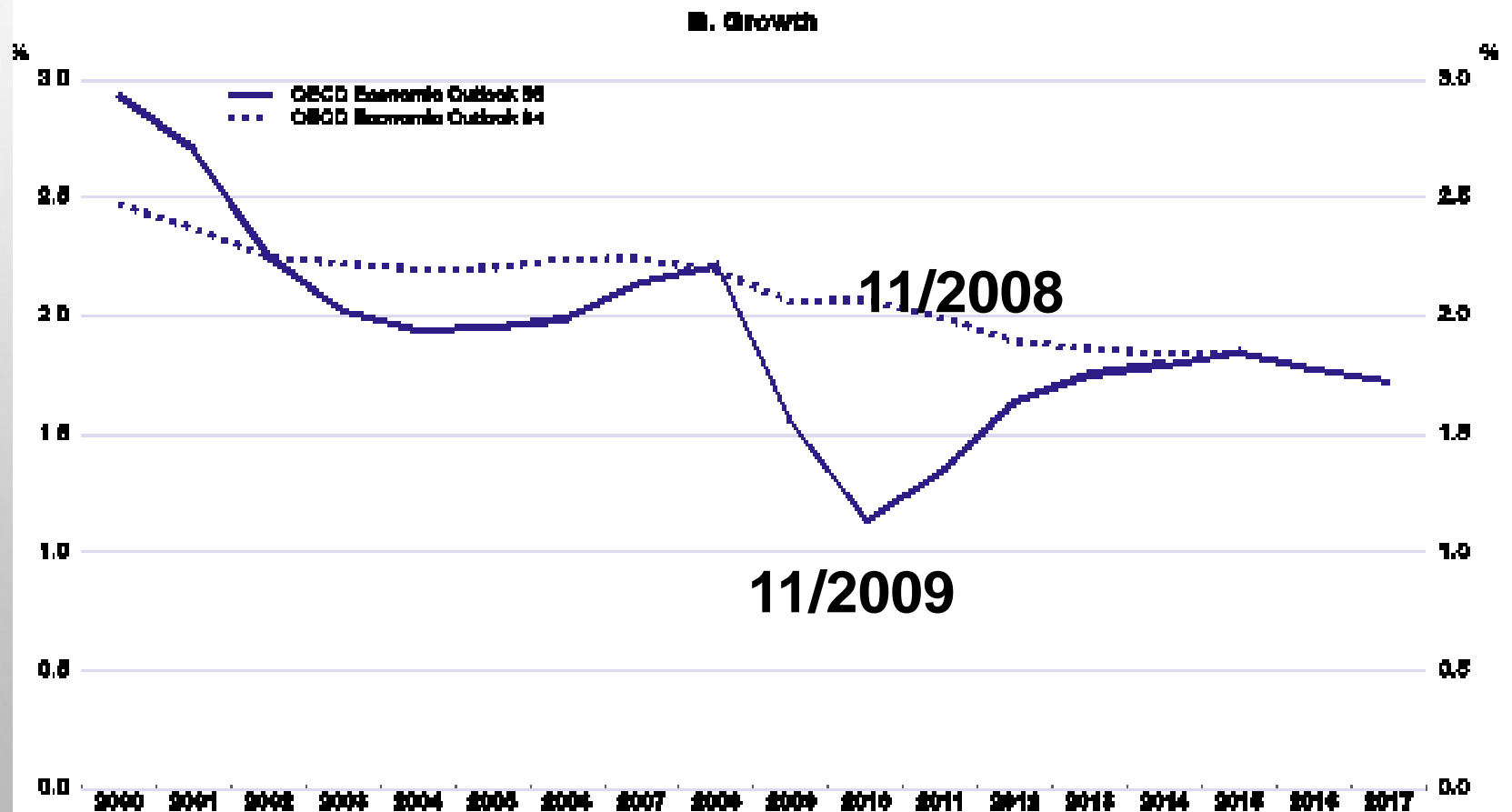


# ...combined with huge global challenges...



# ...and the lasting effects of the crisis.

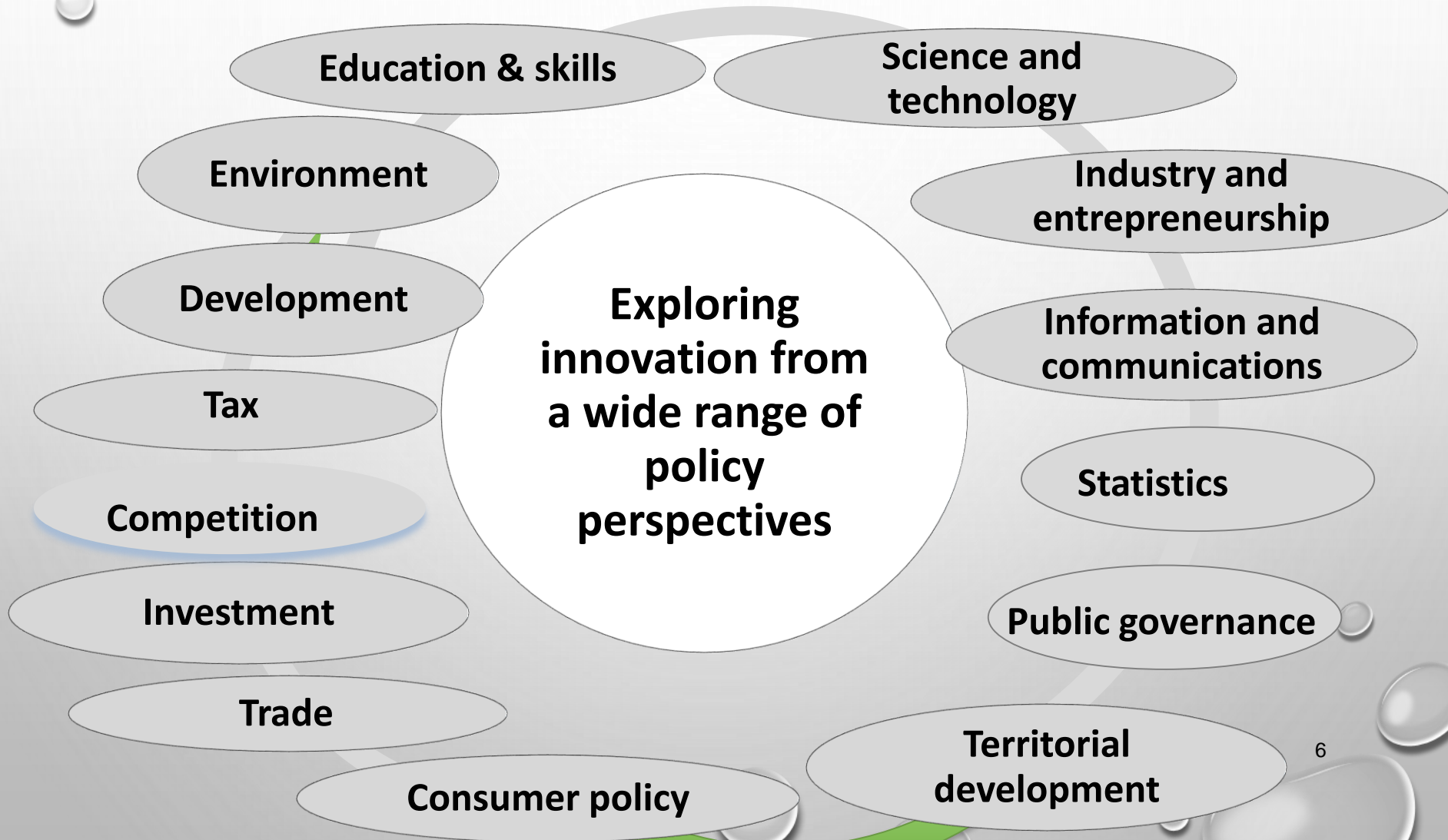
## Revised OECD projections: November 2008 vs. November 2009



# What is OECD's Innovation Strategy?

# A “horizontal” approach

Cutting across policy areas



# A series of products

- A short **Ministerial paper** setting out the challenges and priorities for action on innovation, combined with a set of policy principles
- An **analytical report**, providing evidence on the main innovation drivers and processes and policy recommendations
- *Measuring Innovation*, presenting a set of **policy-relevant indicators** that will enable countries to position themselves on a range of policies and innovation outcomes, and proposing a forward looking **measurement agenda**
- In-depth **thematic reports** on key issues
- The beginnings of a **policy handbook**, that will enable countries to examine their own performance and system, and provide **tools and examples** to take action.

The background of the slide is a light gray gradient. It is decorated with several realistic water droplets of various sizes, scattered primarily along the top and bottom edges. The droplets have highlights and shadows, giving them a three-dimensional appearance.

**What are some of the implications  
for countries?**

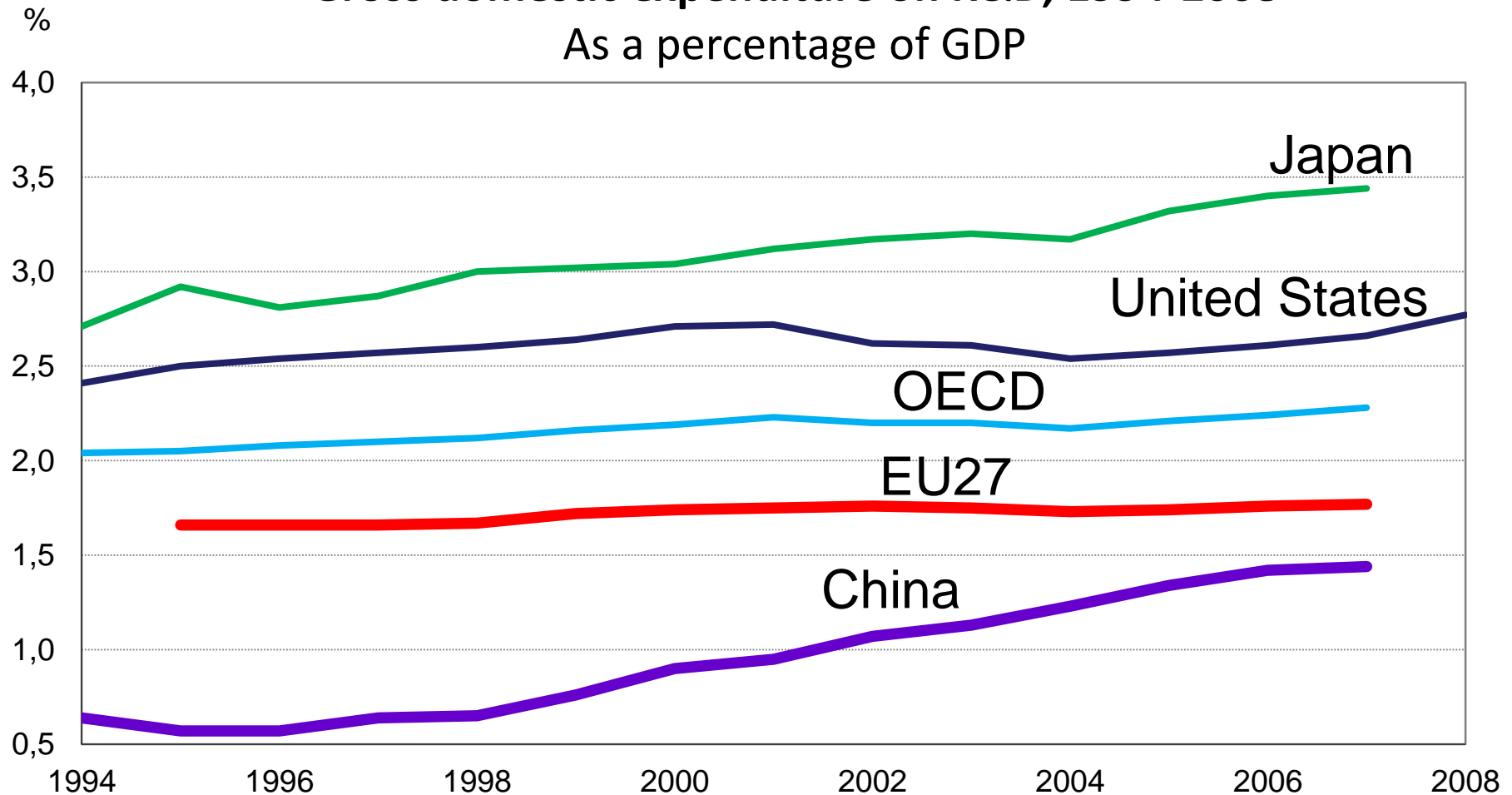


**Finding 1:**  
**Innovation today involves the  
interaction of a system**

*R&D is only one element*

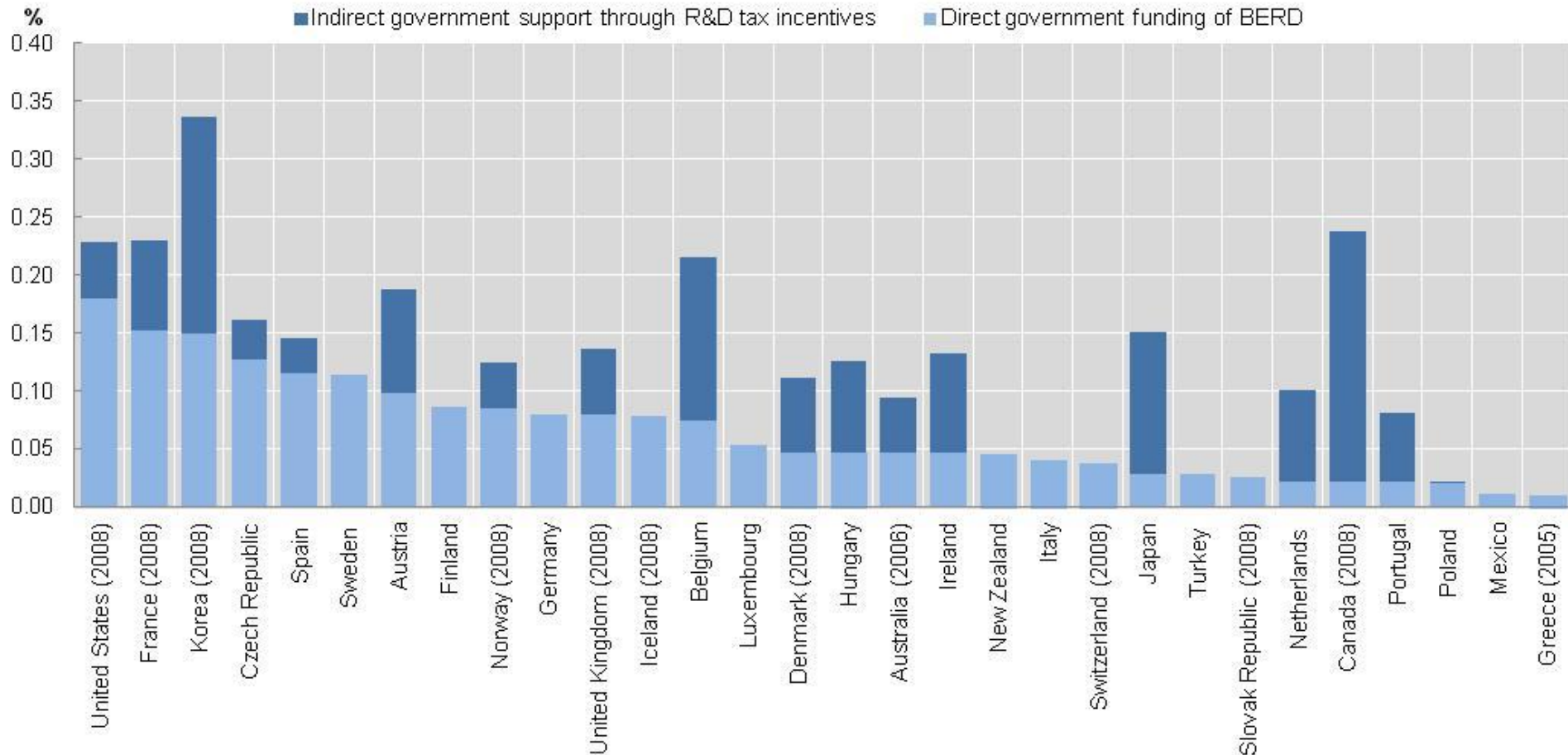
# R&D is critical to innovation...

**Gross domestic expenditure on R&D, 1994-2008**  
As a percentage of GDP



...and is the main focus of public support.

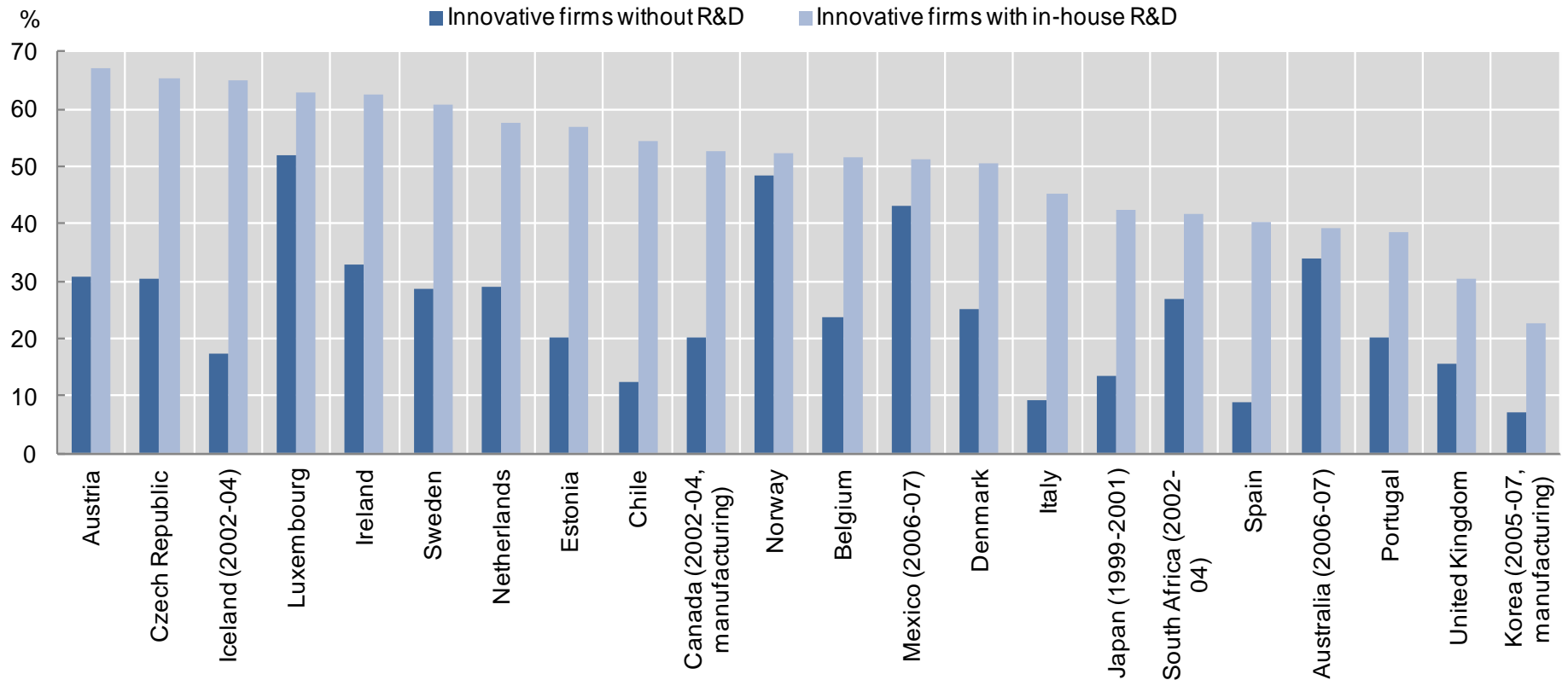
## Direct and indirect government funding of business R&D and tax incentives for R&D, 2007



# But innovation is more than R&D

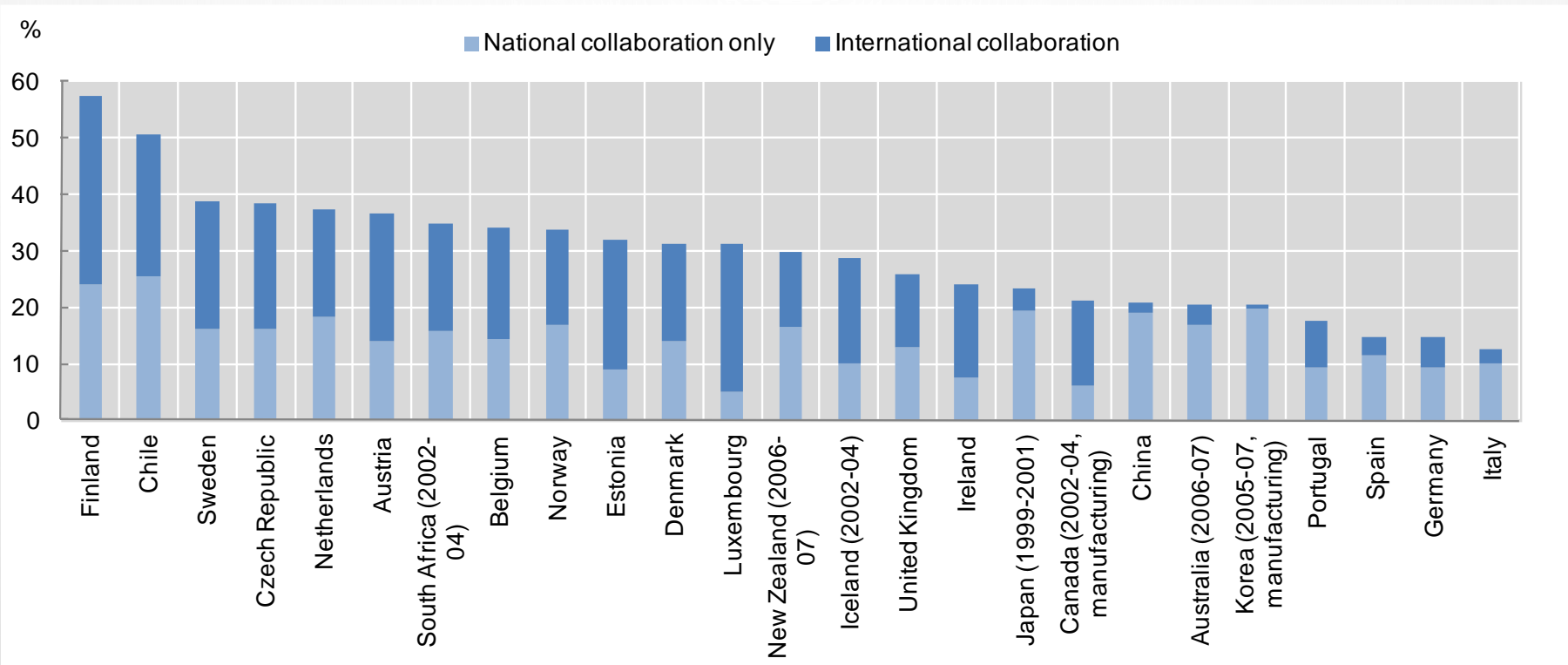
## New-to-market product innovators, 2004-06

As a percentage of innovative firms by R&D status



# Firms collaborate with each other

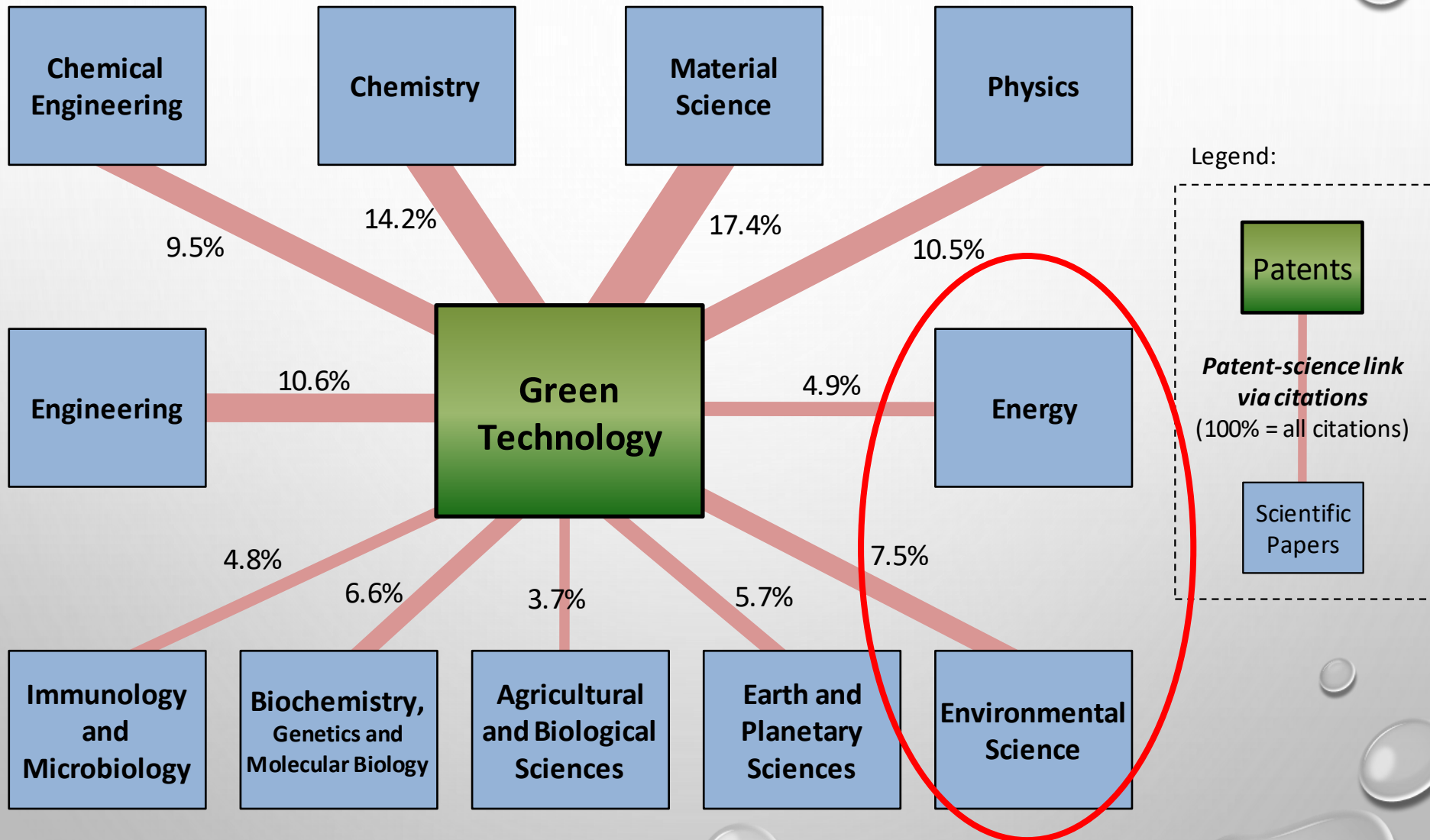
## Firms with national/international collaboration on innovation, 2004-06 As a percentage of innovative firms



Source: OECD (2010), *Measuring Innovation: A New Perspective*, OECD, Paris based on OECD, Innovation microdata project.

# Innovation is multidisciplinary...

## Scientific publications cited by "green" patents

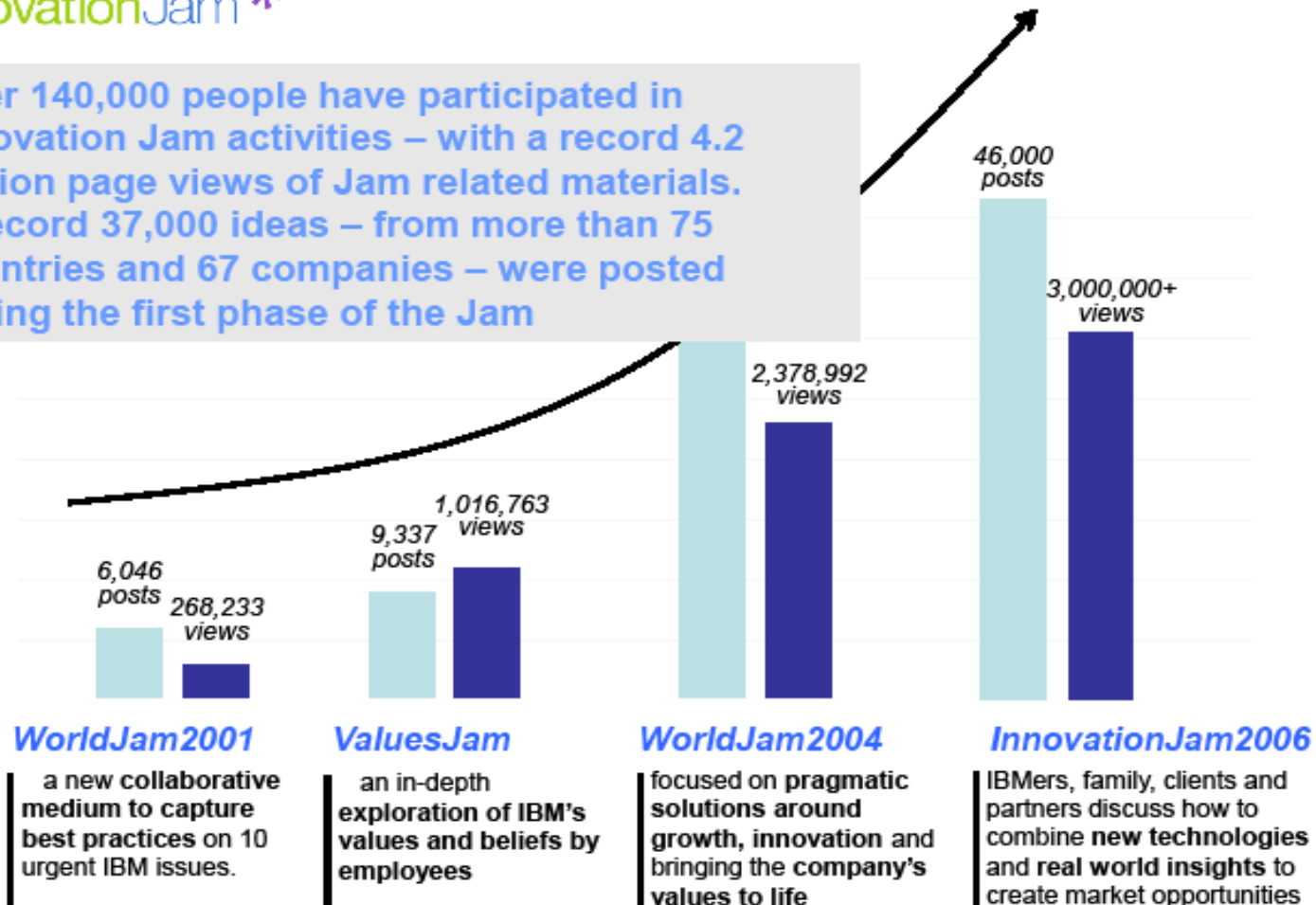


# ...and the Internet has been a catalyst.



## InnovationJam\*

Over 140,000 people have participated in Innovation Jam activities – with a record 4.2 million page views of Jam related materials. A record 37,000 ideas – from more than 75 countries and 67 companies – were posted during the first phase of the Jam



## Policy Message 1:

Policies need to be upgraded to reflect that innovation is a system

**Strong innovation performance relies on a well-functioning system:**

- Involving both “push” (supply R&D and HRST) and “pull” (demand) factors (markets, consumers; standards; public procurement);
- Linking the elements of the system (labour mobility; University / Industry; diffusion; MNE & SME).

# Policy Message 1 bis:

## Governments should foster platforms and markets that strengthen the system

- **ICT as a platform** that lowers the barriers to innovation, network formation and collaboration (Broadband);
- **Provide access to public data** (e.g. Maps, weather, publicly funded research data);
- **Develop markets and networks for knowledge** that can service many actors (e.g. market for patent licenses).

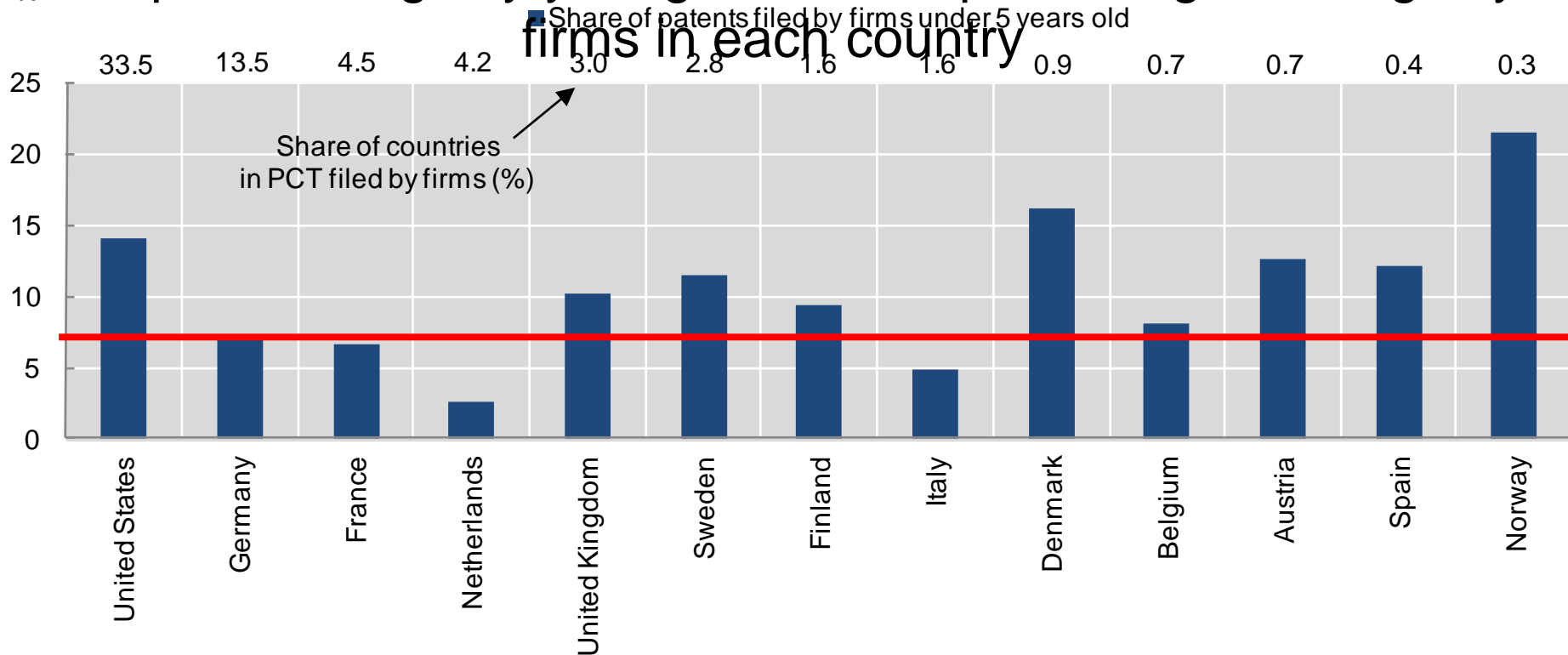
# **FINDING 2: THE MIX OF ACTORS IS CHANGING**

- **NEED TO BROADEN OUR PERSPECTIVE FROM:**
  - **MULTINATIONAL ENTERPRISES;**
  - **PUBLIC RESEARCH ORGANISATIONS &  
UNIVERSITIES;**
  - **THE G7.**

# New firms are very important to innovation...

## Patenting activity of young (<5 years) firms, 2005-07

Share of PCT patent filings by young firms as a percentage of filings by firms in each country

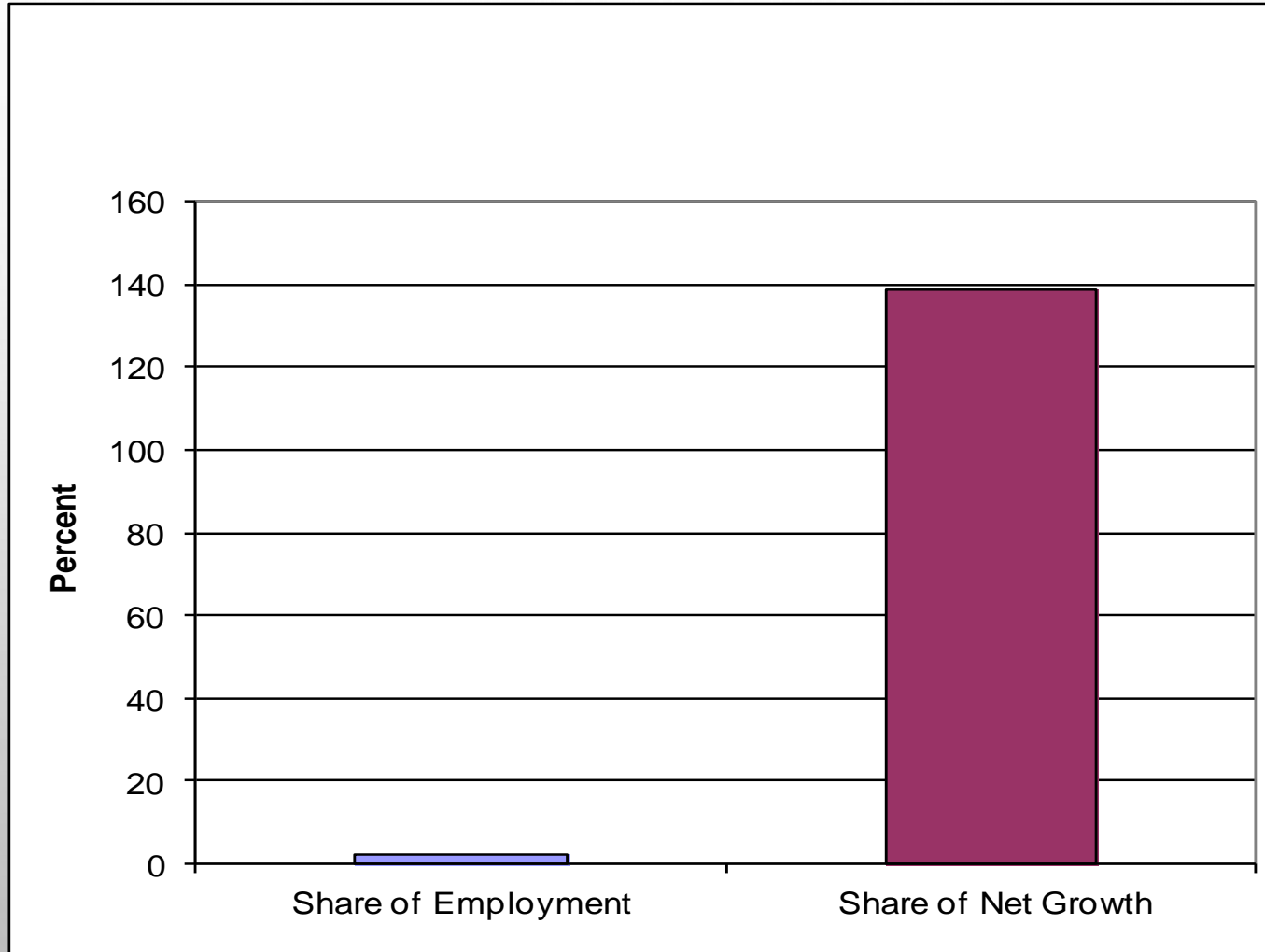


Source: OECD based on OECD, HAN Database, October 2009 and ORBIS© Database, Bureau Van Dijk Electronic Publishing.

Note: Data refers to patent applications filed under the Patent Co-operation Treaty (PCT) with a priority in 2005-07. Patent counts are based on the country of residence of the applicants. The share of young firms is derived from the set of patent applicants successfully matched with business register data.

## ...and job creation.

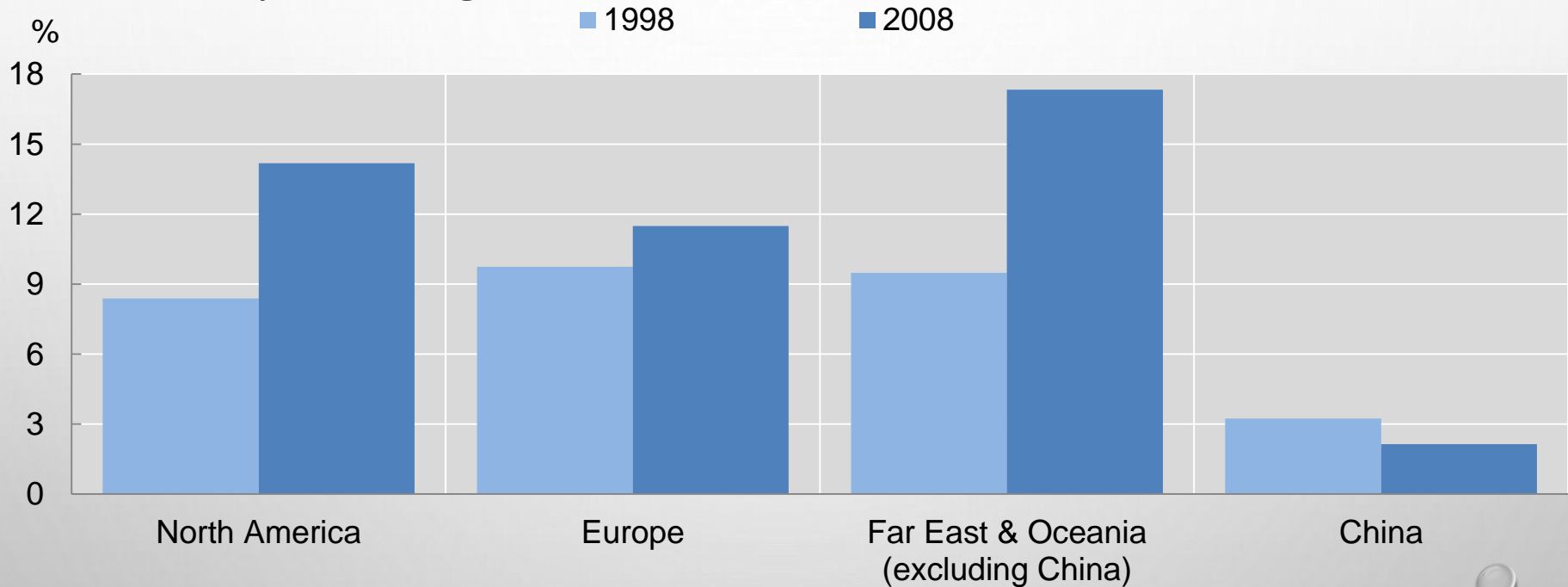
**Contribution of business start-ups to overall employment and the net employment growth (US, 1992-2005)**



# And new players are emerging, spreading innovative capabilities...

## Scientific collaboration with BRIC countries, 1998 and 2008

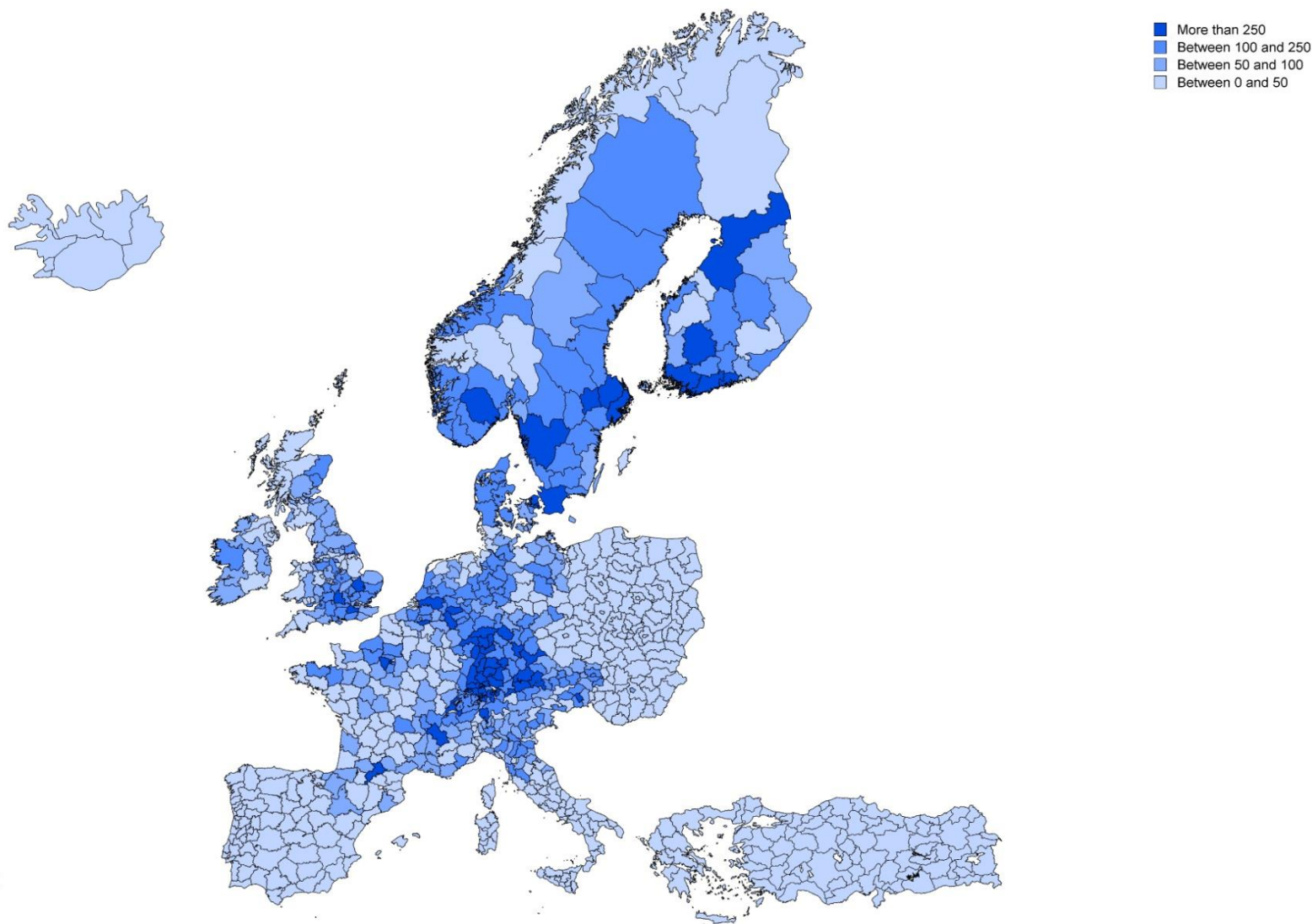
As a percentage of total international co-authored articles



Source: OECD (2010), *Measuring Innovation: A New Perspective*, OECD, Paris based on Scopus Custom Data, Elsevier, December 2009.

...but innovation is not “flat.”

Patents per million inhabitants, Europe, average 2005-07



## Policy Message 2: Develop a *Strategy* for Innovation

- A “**horizontal**” approach:
  - Leadership & long-term vision;
  - Co-ordination via the budget;
  - Seek coherence: young  $\neq$  small;
  - Division of labour with regions: build on indigenous strengths; seek a critical mass.
- **Evaluate & monitor** through improved measures (measurement agenda);
- Strengthen **multilateral co-operation** of STI.

# Finding 3: Innovation is already a fundamental economic investment...

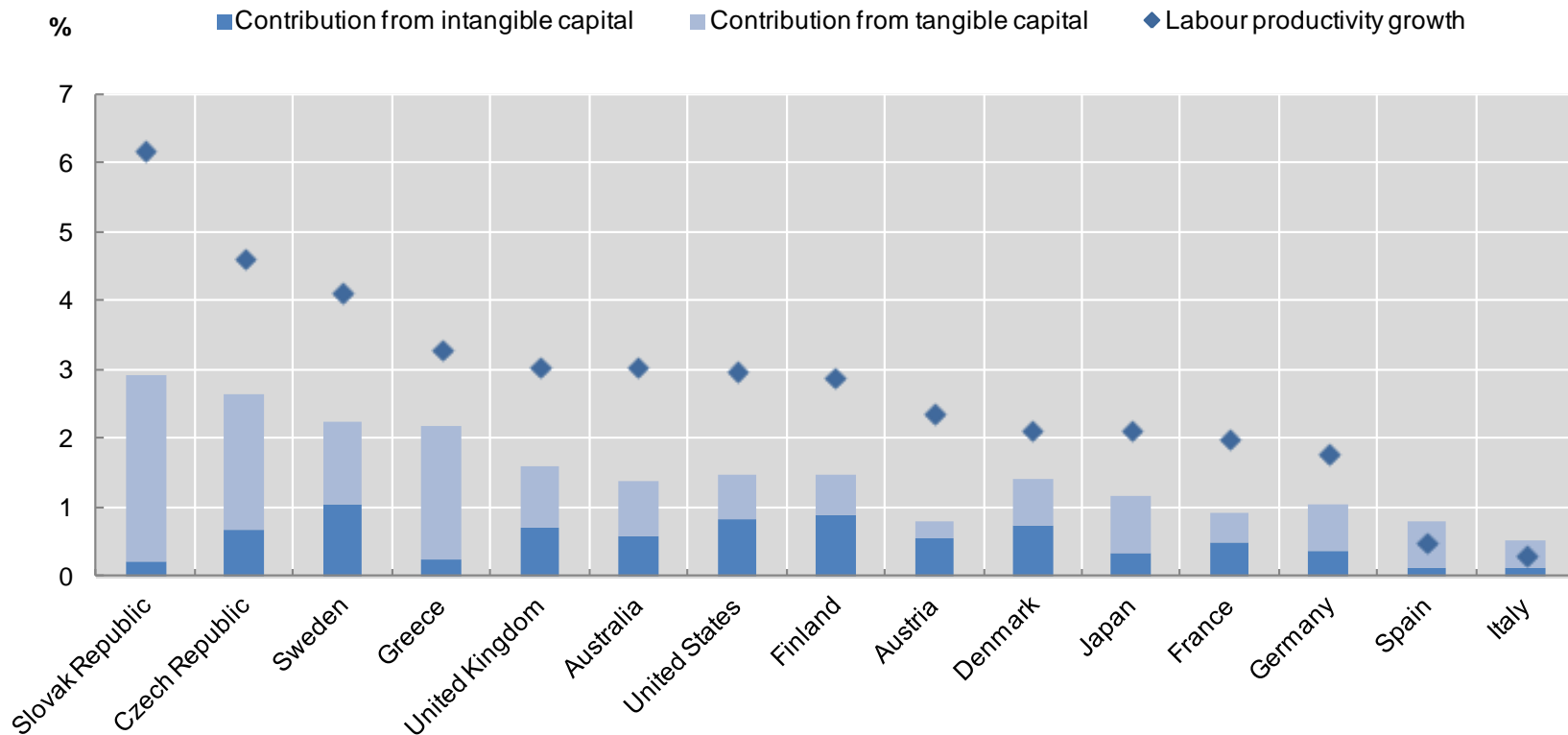
## Investment in fixed and intangible assets as a share of GDP, 2006



# ...and a driver of growth.

## Innovation accounts for a large share of labour productivity growth

Percentage contributions, 1995-2006, in %



Source: OECD, based on research papers, 2009.

# 21<sup>st</sup> Century Innovation: the iPod

The Apple iPod = 299\$ of Chinese exports to US



## Distribution of the value added

- 299 US\$
  - 75\$ **profit** to US (Apple)
  - 73\$ **wholesale/retail** US (Apple)
  - 75\$ to Japan (Toshiba)
  - 60\$ 400 parts from Asia
  - 15\$ 16 parts from the US
  - 2\$ assembly by China
- iTunes Music Store (2003)
  - 70% digital market share
  - Big 5 recording companies

## Policy Message 3: Innovation: “Now more than ever”

- **“Stay the course”**: continue to support long-term investments in innovation (basic R&D);
  - Not an “on / off” incremental investment, but accumulative
  - Cutting spending could limit growth and the ability to address global challenges
- **Not all policies require large public investment**
  - *Reform and streamline* existing policies; remove barriers;
  - Use demand-side measures (procurement, standards);
  - Inject innovation into the public sector (e-Gov).
- **Better understand the broader role of innovation and its impact on economic growth**

# **CONCLUSION OR “WHAT ARE SOME OF THE TAKE-AWAYS?”**

- INNOVATION – NOW MORE THAN EVER.**

# CONCLUSION OR “WHAT ARE SOME OF THE TAKE-AWAYS?”

- **INNOVATION IS BROADER THAN R&D – IT IS A SYSTEM.**  
POLICIES FOR INNOVATION, NOT A NARROW SET OF  
INNOVATION POLICIES;

# CONCLUSION OR “WHAT ARE SOME OF THE TAKE-AWAYS?”

- INNOVATION POLICY IS **MORE THAN BUDGET ALLOCATIONS.**
- **BETTER MEASURES** TO REFLECT THE CENTRAL ROLE OF INNOVATION TO THE ECONOMY. **NEW DATA** THAT:
  - CONFIRM SOME OF OUR INTUITION (COLLABORATION)
  - CHALLENGE SOME PRIORS (SMALL VS. YOUNG; DRIVERS OF GROWTH)
  - SET OUT AN IMPORTANT MEASUREMENT AGENDA.

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