



# OECD's Innovation Strategy: Key Findings and Policy Message

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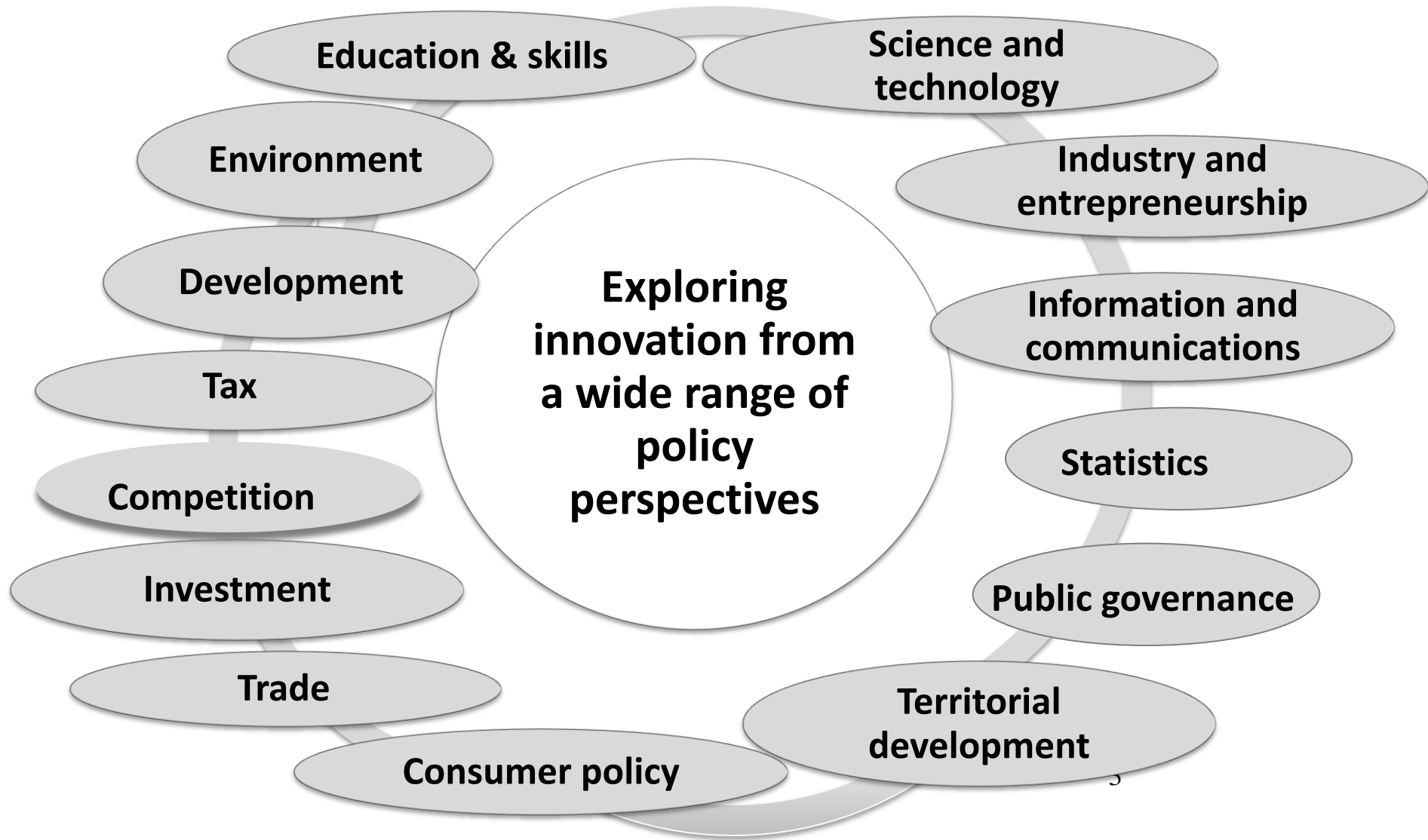


# Outline

1. The OECD Innovation Strategy
2. Why innovation matters today
3. Why policies for innovation need to adapt
4. Key policy messages from the OECD Innovation Strategy
5. Some broader messages
6. Conclusions and further work

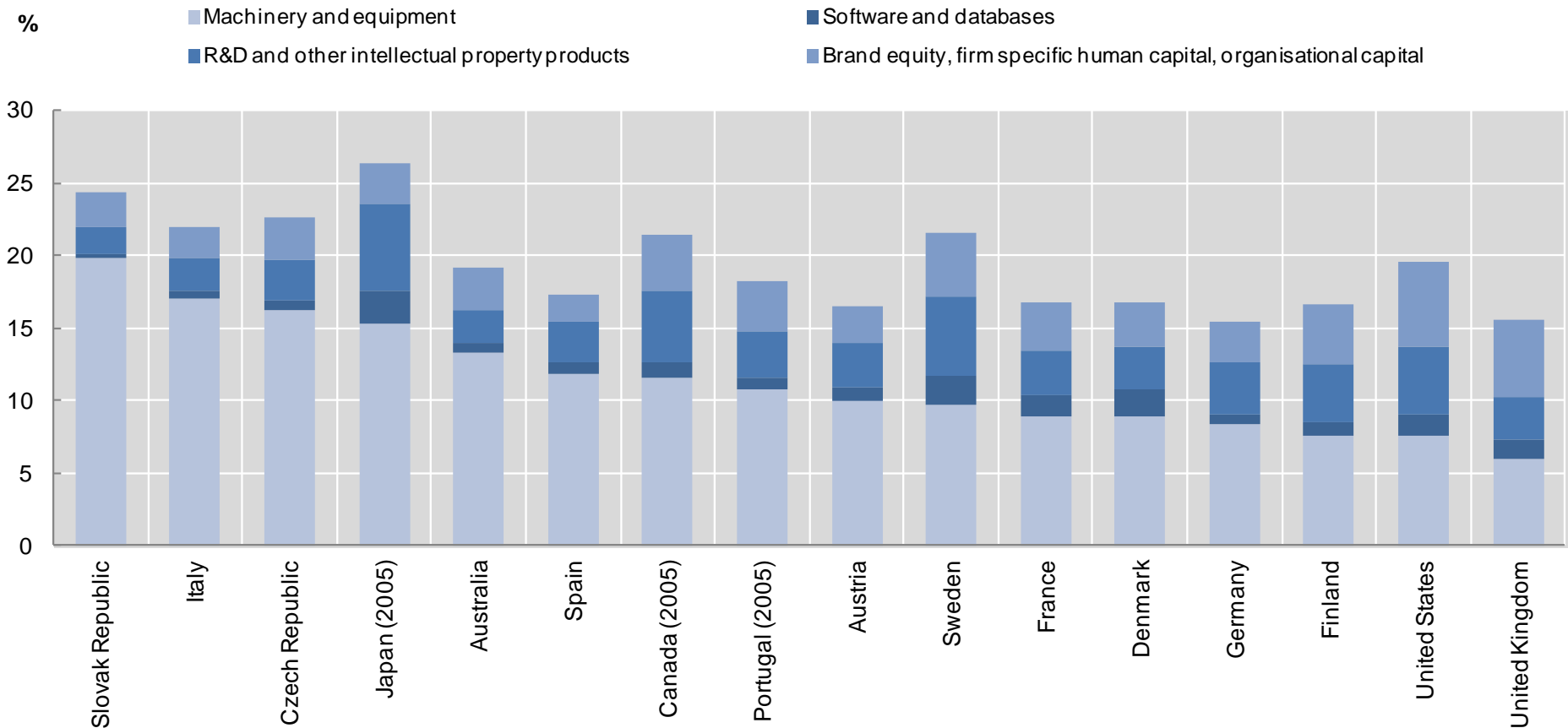
# A “horizontal” approach

Cutting across policy areas



# Why Innovation? Because it is already a fundamental economic investment...

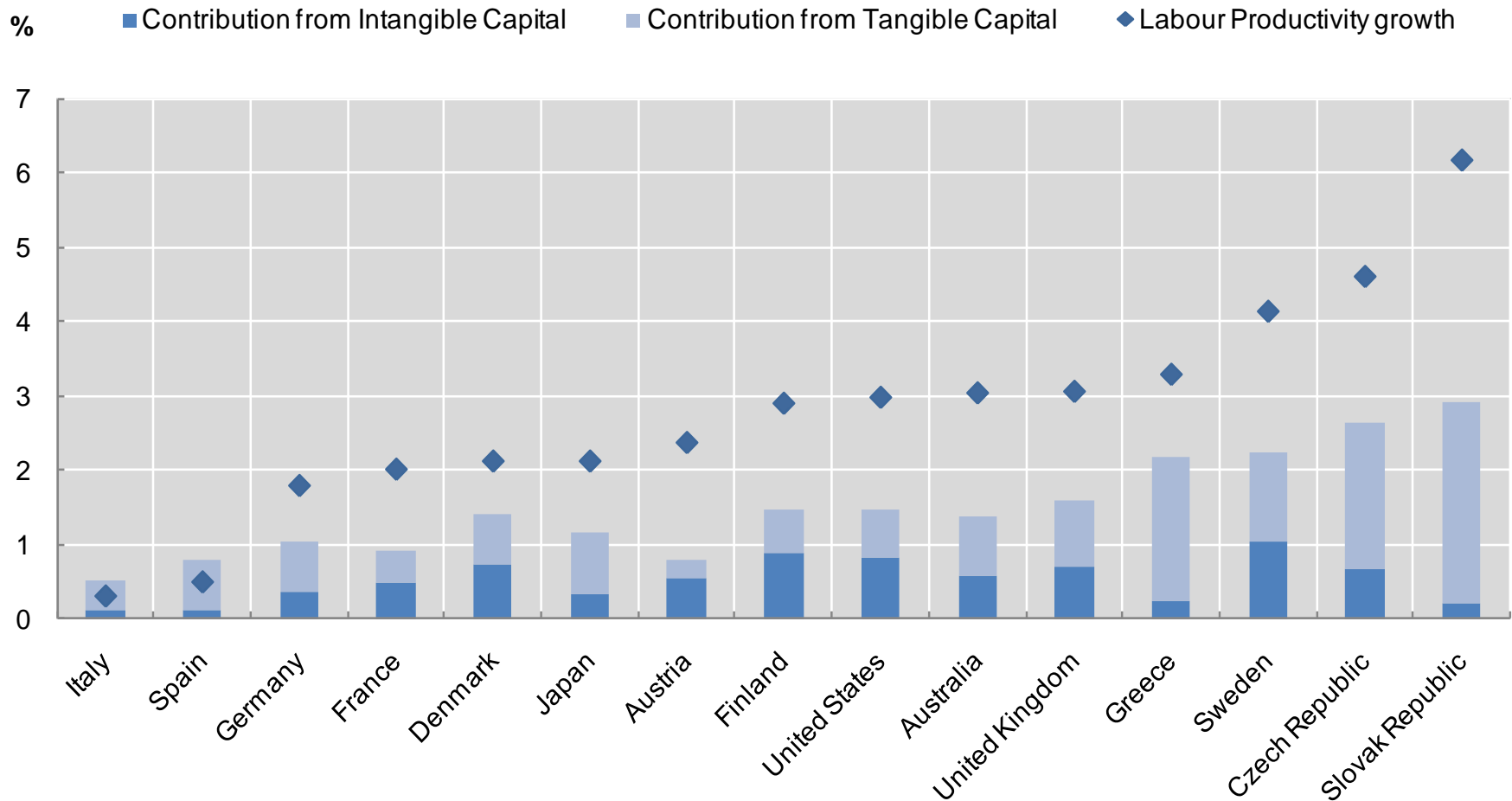
## Investment in fixed and intangible assets as a share of GDP, 2006



# ...and a driver of growth.

## Innovation accounts for a large share of Labour Productivity growth

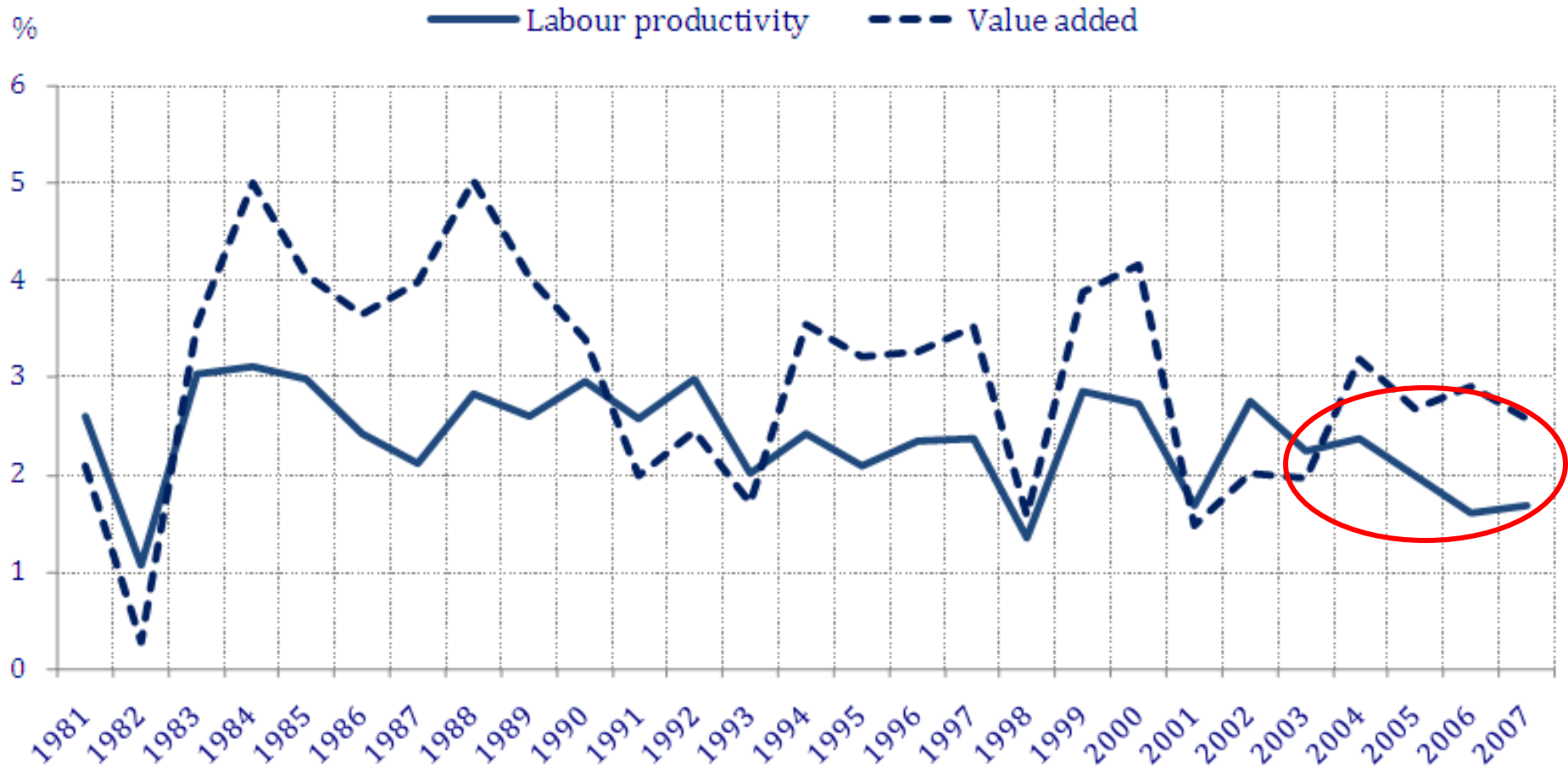
Percentage contributions, 1995-2006, in %



# ..., that may help restore lagging productivity growth ...

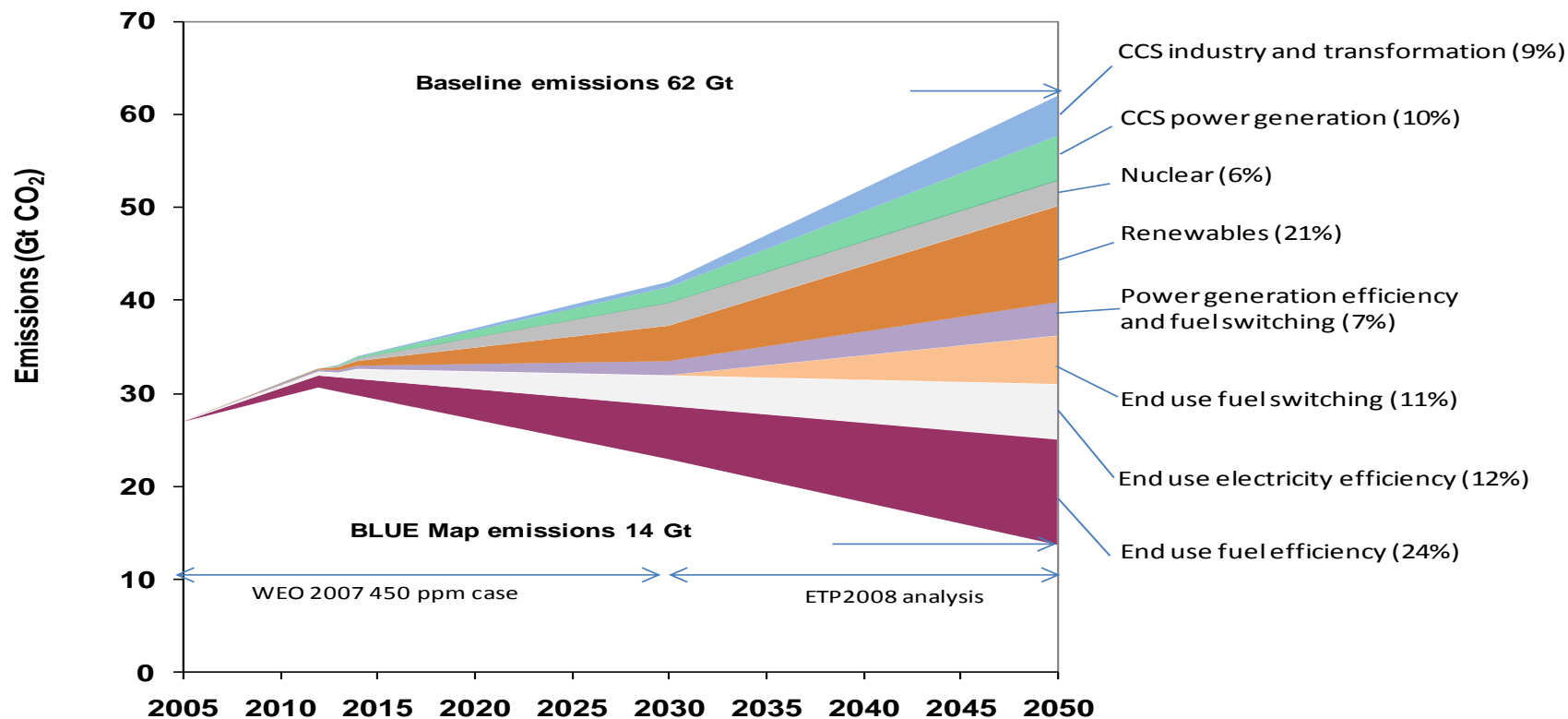
Labour productivity growth in the OECD area, 1981-2007

Annual growth rate, percentage



# ... and can help address global challenges such as climate change

## Potential technological contributions to CO<sub>2</sub> emission reductions



Note: WEO refers to the IEA's 2007 World Energy Outlook.

Source: International Energy Agency, Energy Technology Perspectives 2008: Scenarios and Strategies to 2050.

### 3. Policies for innovation are often ill adapted to innovation today

The **what**, **how** and **who** of innovation has changed!

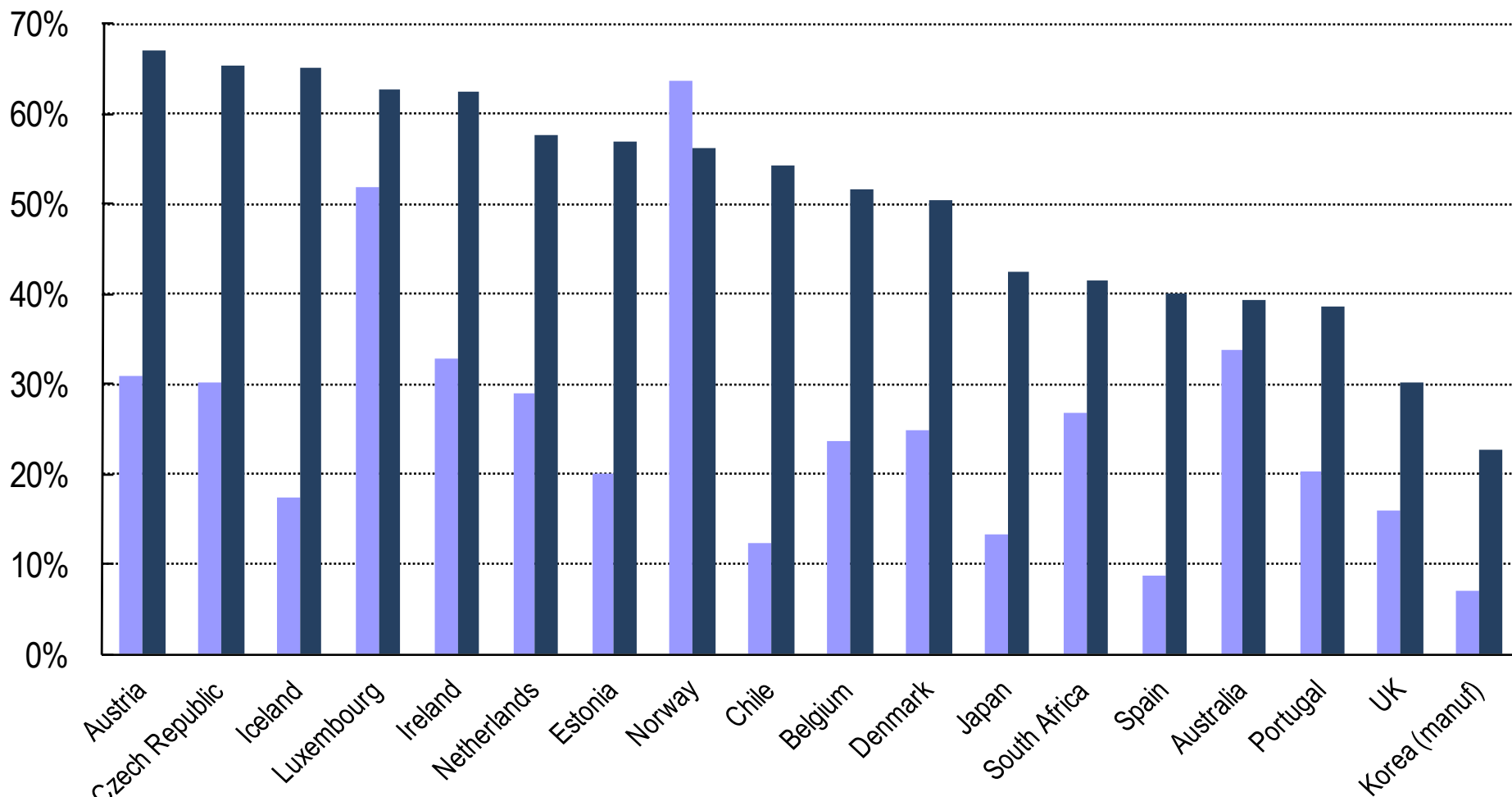


# The what: innovation is more than R&D ...

## “New to market” product innovators with and without R&D, 2004-06 (or latest)

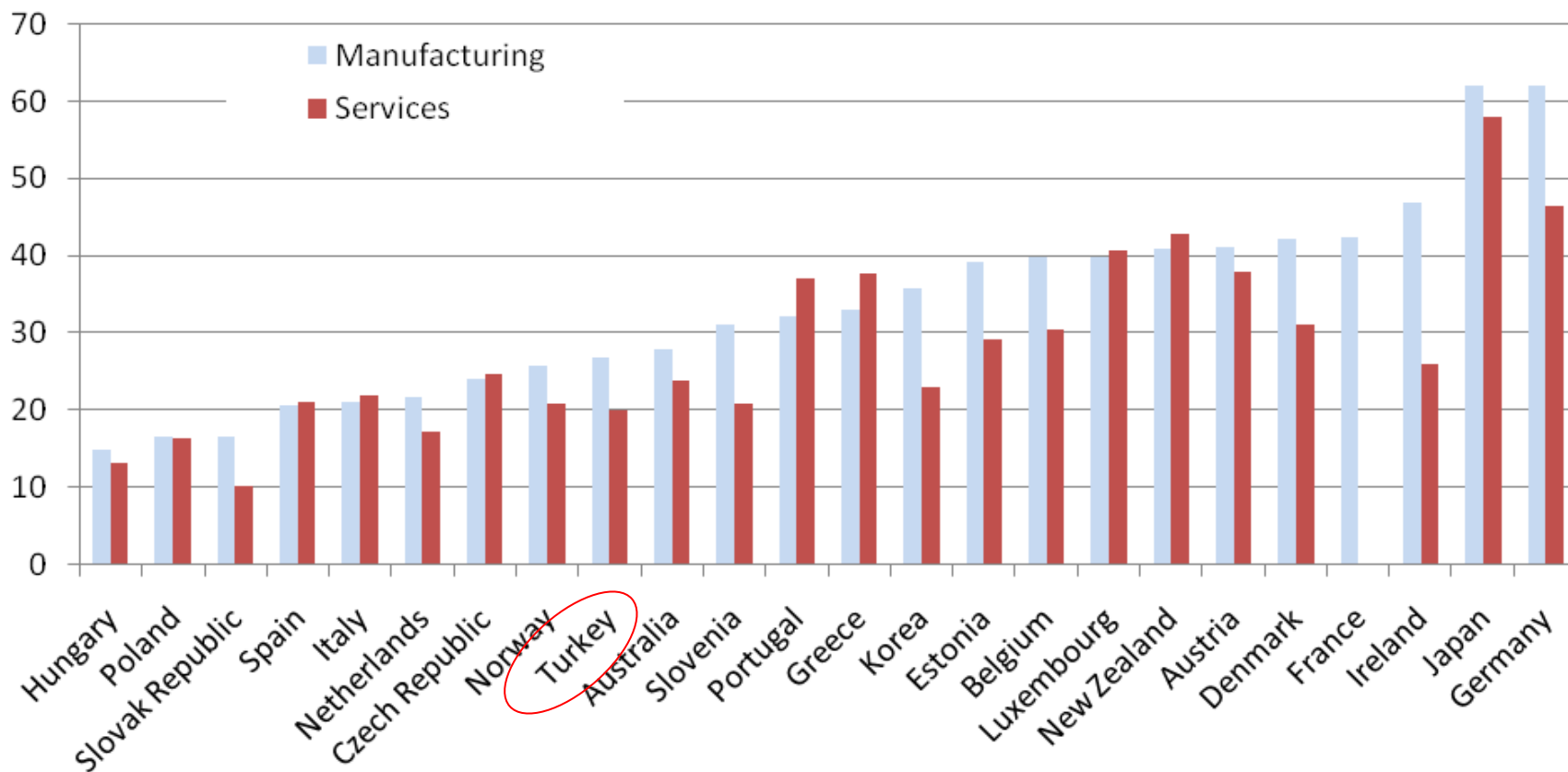
As a percentage of innovators

■ Innovation (no R&D) ■ In-house R&D



# ... and technology is only one approach to value creation

Non-technological innovators by sector, as a percentage of all firms, 2004-2006



# The How: Firms today no longer innovate in isolation ...

## **Then: Closed Innovation**

❑ Approach: “not invented here”

❑ Innovation:

- Strategy independent of overall business strategy
- Performed in-house
- Internal pool of innovators

❑ Outputs:

- Incorporated in firm's products and services.
- Product revenues finance next cycles of in-house R&D

## **Now: “Open” Innovation**

❑ Approach: “proudly found elsewhere”

❑ Innovation:

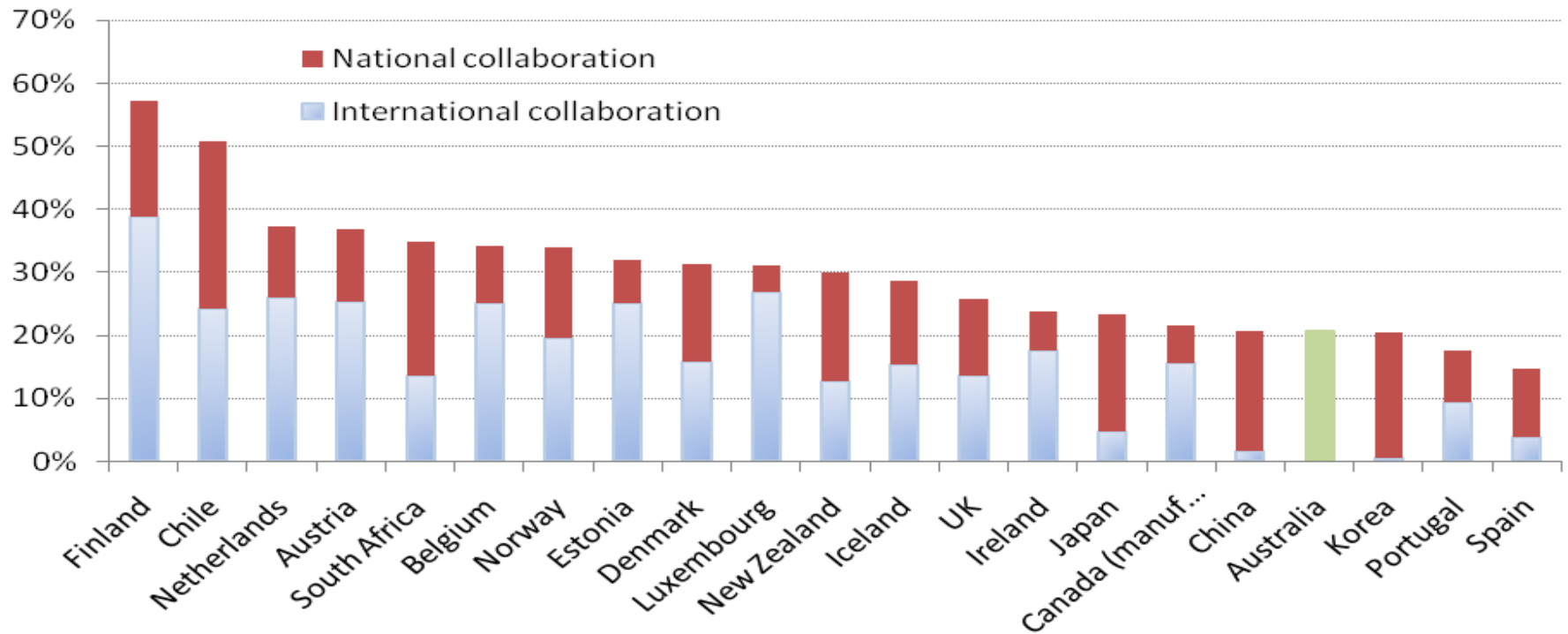
- Business strategy drives targets
- Technology developed cooperatively or acquired
- Work with many innovators and users/consumers
- Leverage own IP

❑ Outputs:

- Both internalized and externalized (*licensing, spin-offs, venturing*)

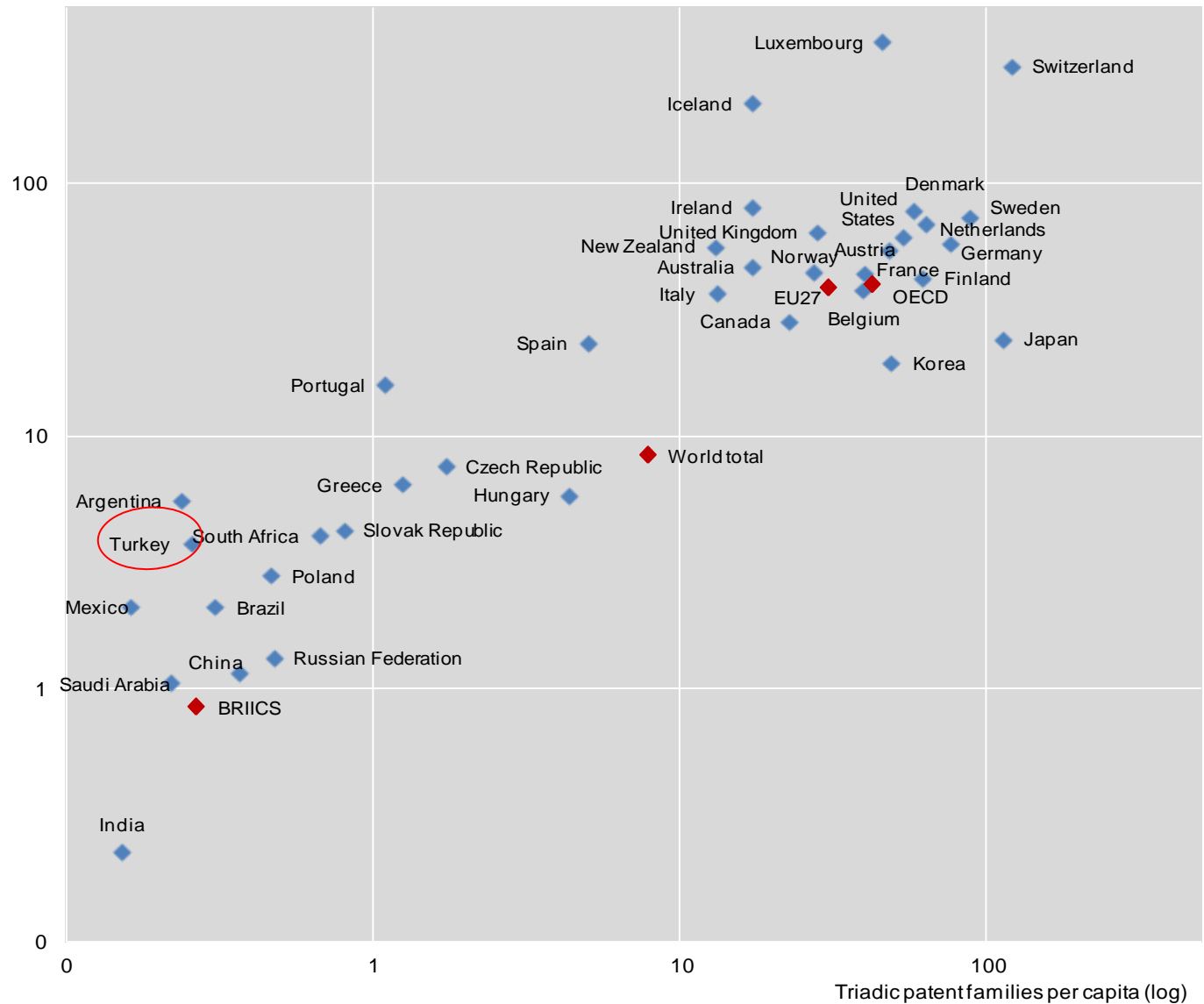
# ... and increasingly cooperate across borders.

Companies collaborating on innovation, as a percentage of all firms, 2004-2006



# As more countries become involved in innovation ...

Cross-border trademarks per capita (log)

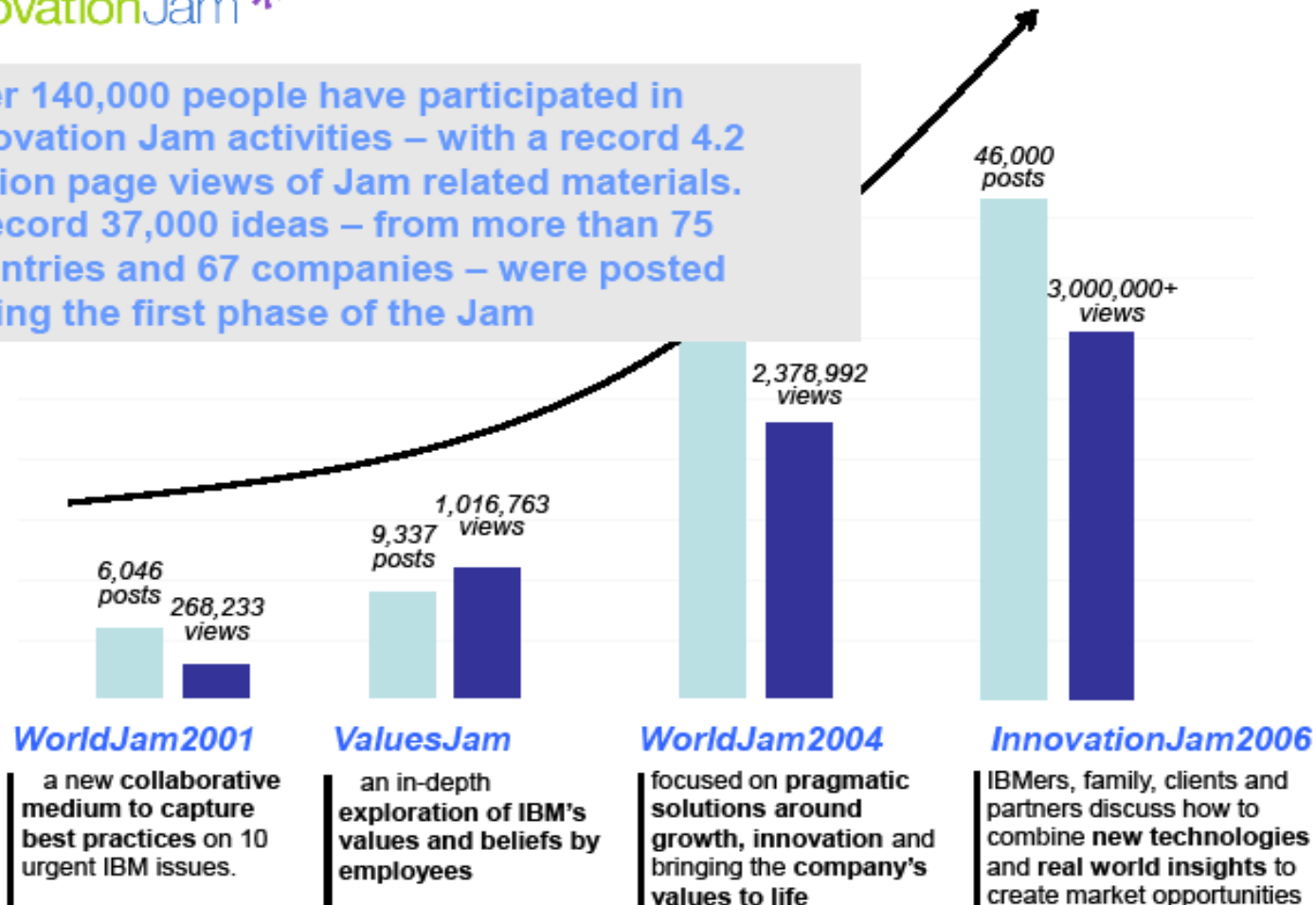


# ...and the Internet has enabled much greater participation in innovation.



## 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



## 4. Key messages from the Innovation Strategy

- Innovation is a pervasive driver of change and value creation:
  - More than science and technology – also design, business models, organisational changes
  - More than high-tech manufacturing – also in services
  - More than firms and research institutions – also non-governmental organisations, the public sector, users and consumers
  - Involving people throughout the economy
  - Involving supply and demand, “pull” and “push” policies.
- **A broad strategy is needed – requires joining up a range of policies**

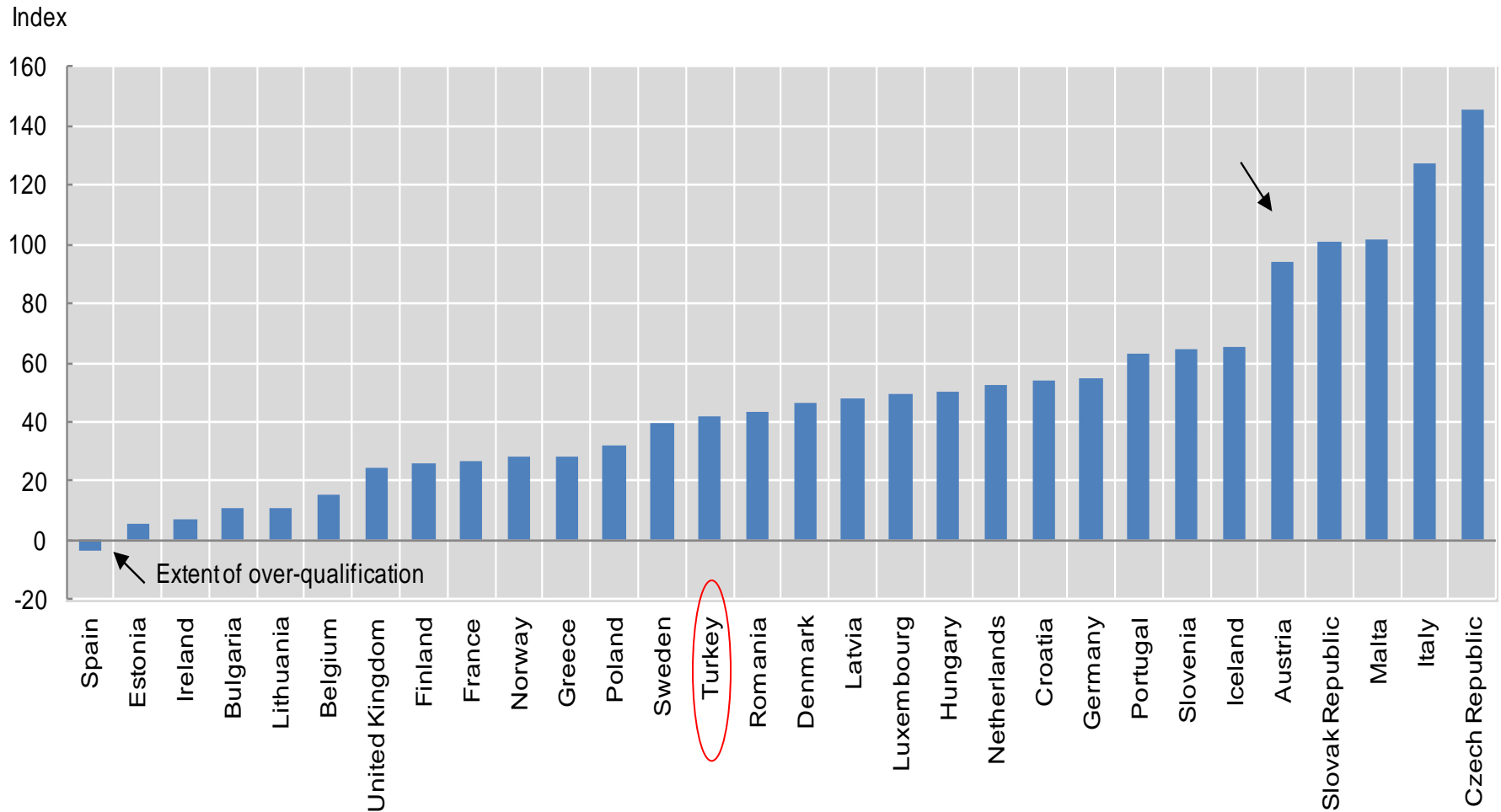
## a) Empower people to innovate

- Innovation is not only driven by scientists and engineers, but depends on people in many roles:
  - Entrepreneurs, key to idea generation and commercialisation
  - Workers, key to workplace innovation
  - Users and consumers, influencing the direction of innovation
  - Global talent spreading hands-on knowledge
- Implies:
  - A broad and inclusive agenda for education and training
  - A well-functioning labour market that enables mobility and organisational change.
  - Policies that empower and enable consumers to engage



# Human resources are a priority

**Employees in high-skill occupations as a percentage of those with at least a university degree**



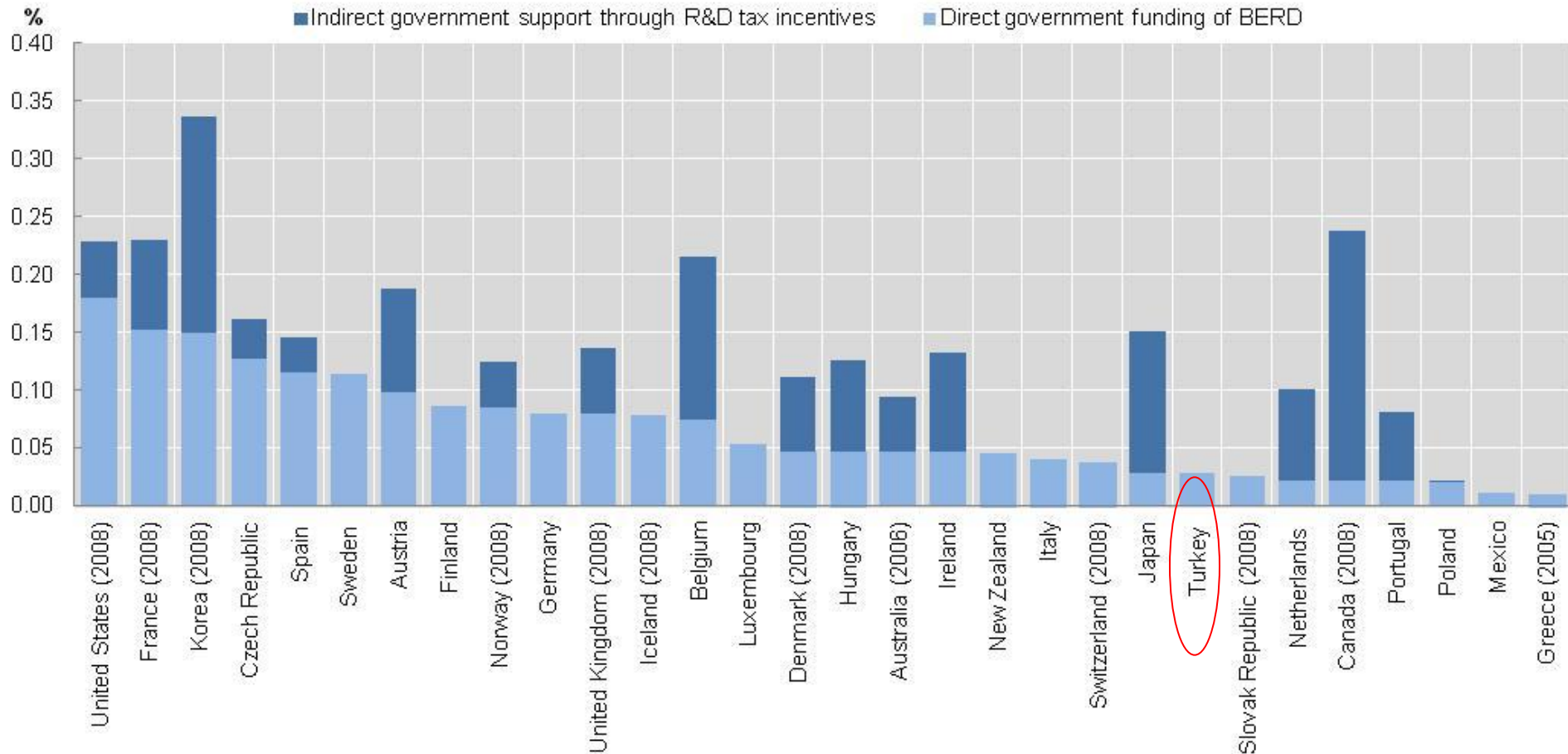
Source: OECD (2010).

## b) Unleash innovation in firms

- Firms and an encouraging business environment are the key drivers of innovation:
  - Encouraging **entrepreneurship** – in new and existing firms
  - Supportive **framework conditions** (tax climate, competitive markets, openness to trade and investment, stable macro-economic policy, supportive regulation)
  - Strong **private funding for innovation** – well-functioning financial markets, including for risk capital, well-designed government support to address gaps
  - **Markets that encourage and diffuse innovation** –this may require government action, e.g. tax policy, regulatory reform, innovative public procurement

# R&D is the main focus of public support.

**Direct and indirect government funding of business R&D and tax incentives for R&D,  
2007 or latest available year  
As percentage of GDP**

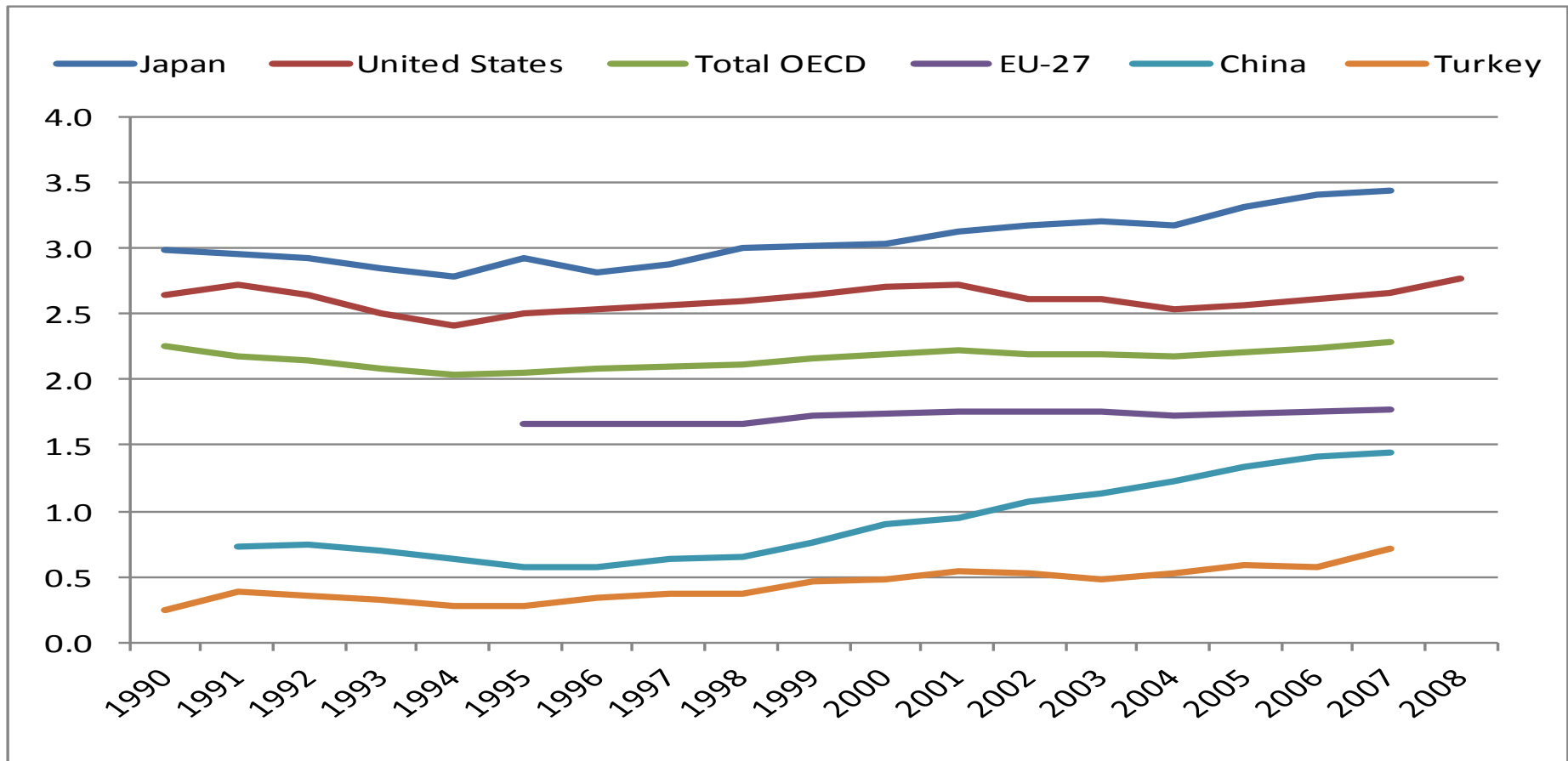


## c) Investing in knowledge and reaping its returns

- Innovation requires public and private investment in knowledge creation and diffusion:
  - Excellent and effective **public research**
  - A modern and reliable **knowledge infrastructure**, including policies to foster ICT and other general purpose technologies
  - Well-functioning **knowledge networks and markets** that help generate knowledge and IP and generate value from it
  - Strategies to foster innovation in the **public sector**
  - How assets are combined is increasingly key.

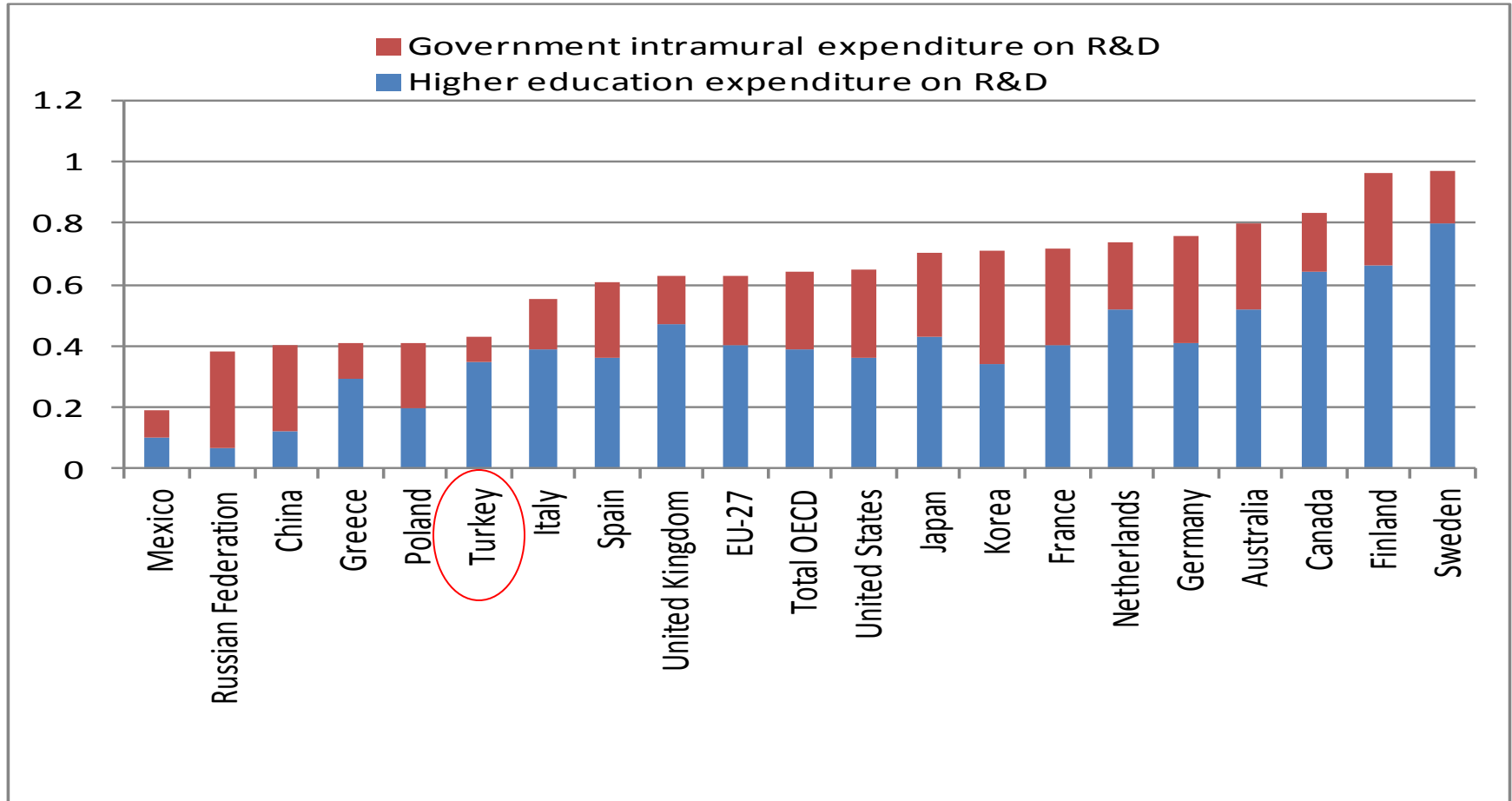
# R&D is critical to innovation...

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



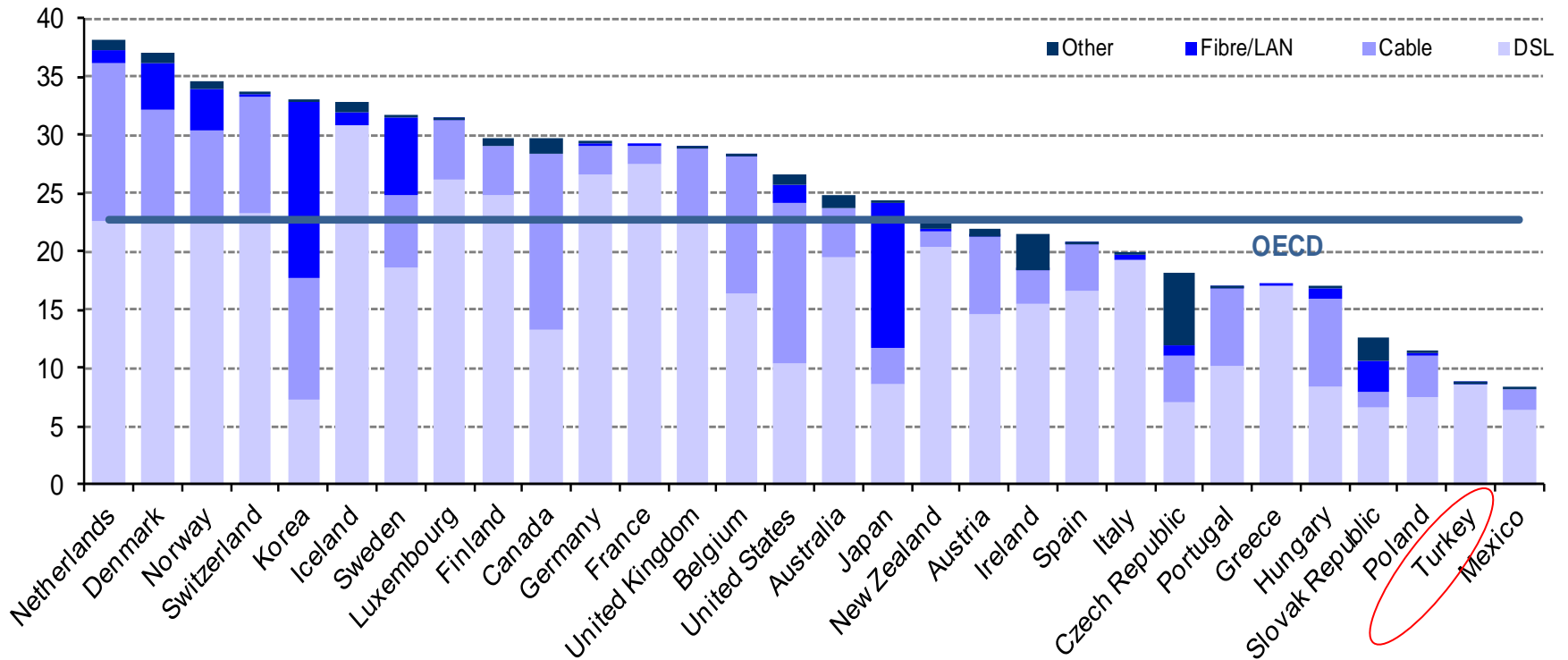
# ... and also requires strong and effective public R&D

HERD and GOVERD as a percentage of GDP, 2008



# Broadband networks are of growing importance to innovation

OECD Broadband subscribers per 100 inhabitants, by technology, June 2009



## d) Governance is key

- Not one single policy but a combination of actions to strengthen supply and foster demand: **policies for innovation.**
- Need for strong political leadership and a joined strategic vision;
- Need to clearly delineate local, regional & national roles to avoid duplication, and build coherence.
- Need for measurement and evaluation frameworks to support policy.



## 5. Some broader messages

### Policies for supply and demand:

Responding to a changing Why of innovation: Policies for innovation need to focus on meeting the demands of society.

- The objectives of innovation (growth, sustainability, health, ...) are achieved through diffusion and take-up
- Most public policy is aimed at the creation of knowledge.
- Need to better join up “push” and “pull” policies:
  - Stronger creation of knowledge and better diffusion and take-up
  - Empowering people to create knowledge and apply knowledge
  - Protecting IPR and creating value from IPR

## **Seizing benefits at the local level:**

- Setting priorities and creating excellence and critical mass
- Strengthen and capitalise on local strengths: knowledge institutions, people, services, social factors, culture, etc.
- An open environment
- Develop a joint vision and strategy for long-term investment

## **The roles of government and business:**

- The role of markets can be strengthened to unleash demand: e.g. through getting prices right, regulatory reform, smart use of public procurement, consumer involvement, ..
- At the same time, governments play an important role in driving innovation in the post-crisis environment
- Need for a true public-private partnership

## Long- and short-term actions:

- Policies for innovation are mainly focused on strengthening growth and addressing challenges over the long term
- But some implications in exiting from the crisis:
  - Investment in the long-term sources of growth, such as R&D, is important, also as private investment may lag
  - Support for new firms important, also for employment creation
- Not all policies require additional public investment, e.g.:
  - Removal of barriers to innovation
  - Fostering of markets for innovative products and for knowledge
  - Better use of public procurement
  - Tax reform to support innovation and green growth

# 6. The Innovation Strategy today

- A short **Ministerial paper**, setting out the challenges and priorities for action, including a set of policy principles
- **An analytical report**, providing evidence on the main innovation drivers and processes and policy recommendations
- A **compendium of policy-relevant indicators** that will enable countries to benchmark themselves on a range of policies and measurements
- 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.

## ... and tomorrow

- Further work will involve:
  - Implementing and monitoring action
  - **Country reviews**
  - Moving ahead on the measurement agenda
  - Addressing remaining questions
  - Focusing on specific questions, e.g. green growth and innovation.

# For further information

OECD website

[www.oecd.org/innovation/strategy](http://www.oecd.org/innovation/strategy)

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