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Innovation Policy – New Insights, New Directions

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OECD
BETTER POLICIES FOR BETTER LIVES

Outline

1. Why care about innovation?
2. Investment in knowledge-based capital and the role of KBC in global value chains
3. Specific innovation policies
4. Strengthening business dynamism
5. The importance of skills and talent
6. Benefiting from the digital economy
7. Some conclusions

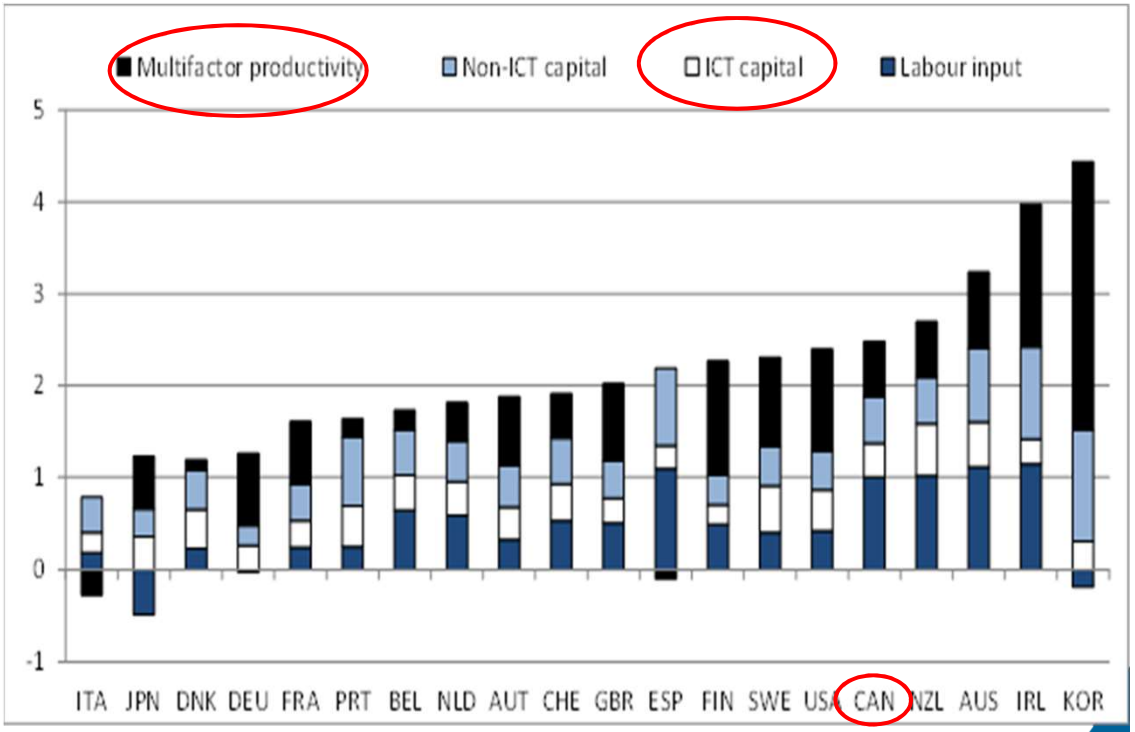
1. Why care? Because innovation is one of the main drivers of growth

Innovation key **driver of growth**, through:

1. Technology embodied in fixed capital, e.g. ICT
2. Investment in knowledge-based capital (next slide)
3. Productivity growth due to innovation (MFP)
4. Creative destruction

Innovation's role **will have to grow in future**, e.g. due to ageing.

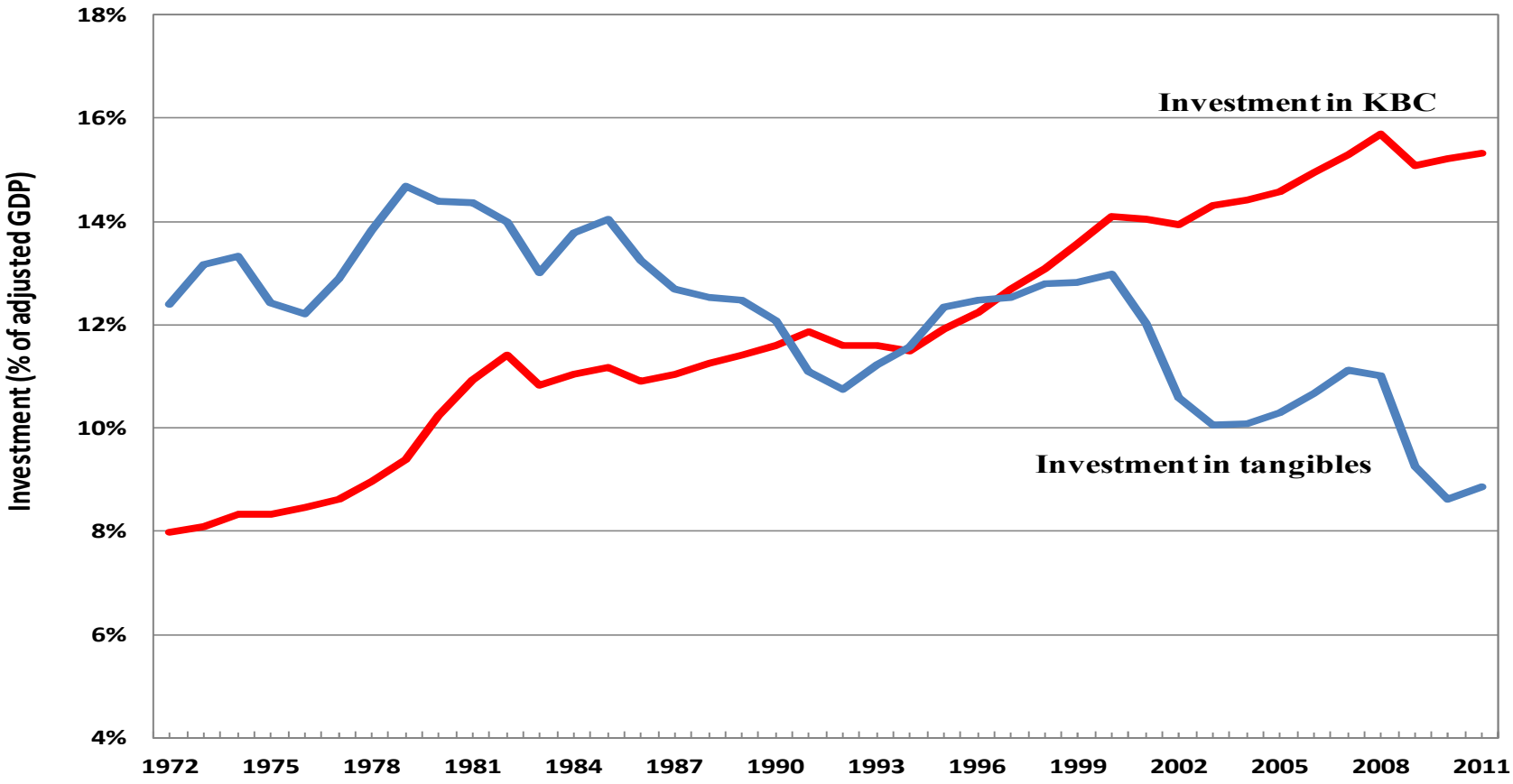
Figure 1. Contributions to GDP growth
Total economy, annual percentage point contribution, 1995-2013



Source: OECD Productivity Database, January 2015, and OECD (2015a), OECD Compendium of Productivity Indicators, 2015.

2. With a growing share of business investment involving knowledge-based capital …

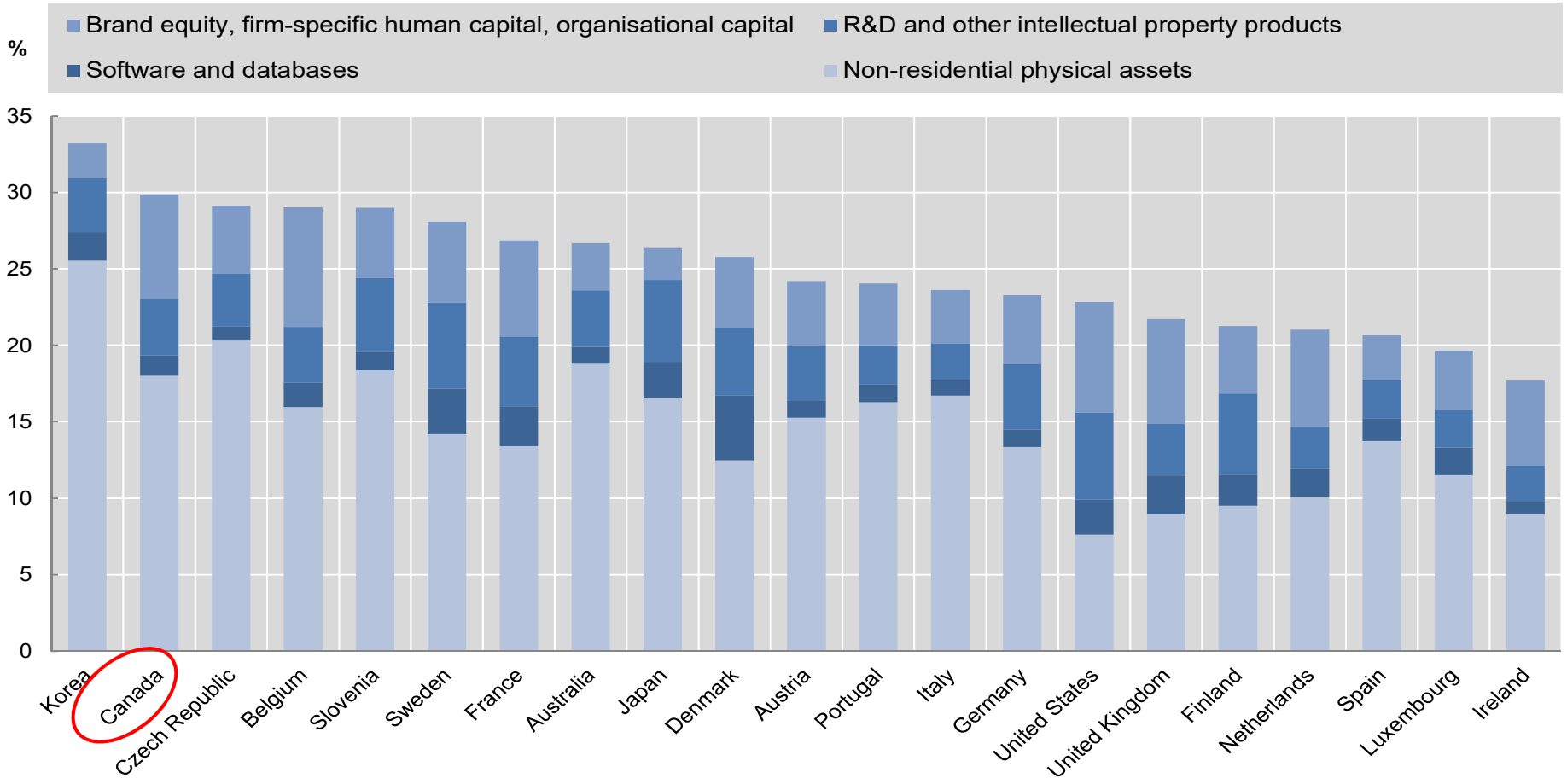
Business investment in KBC and tangible assets in the United States
(% GDP, 1972-2011)



Source: Corrado et al. (2012).

… which accounts for over half of all business investment in several OECD countries …

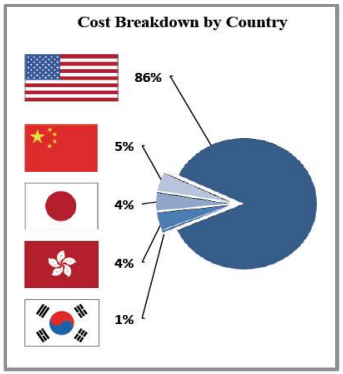
Business investment in KBC and tangible assets (as % of business sector value added, 2010)

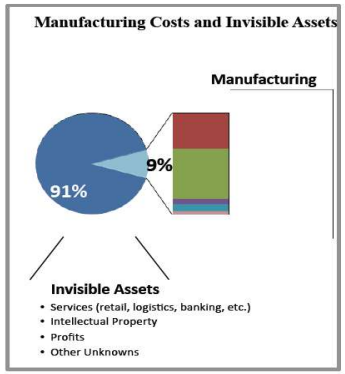


Source: OECD calculations based on INTAN-Invest, Eurostat and multiple national sources.

… and which is increasingly central to value creation and product differentiation …

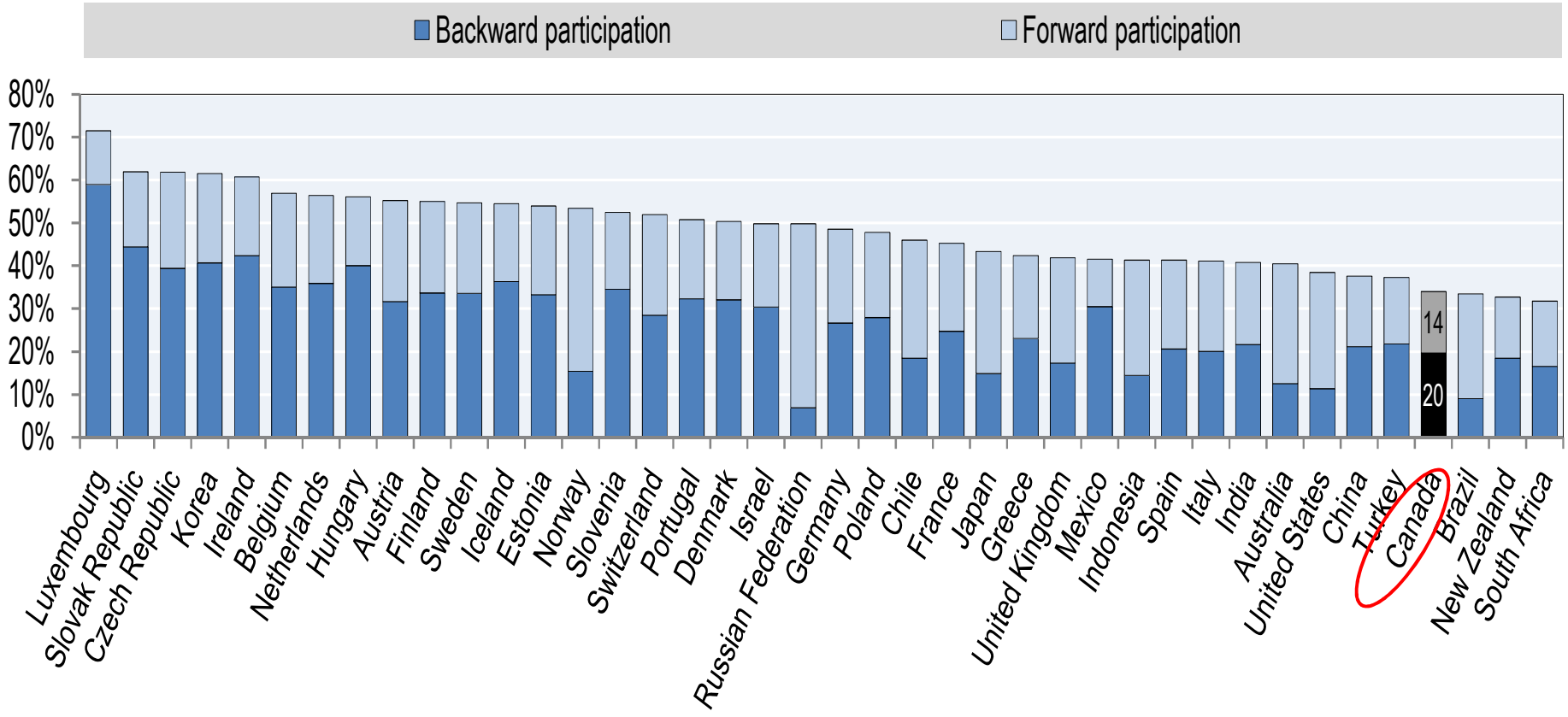
A SUIT… MADE IN CHINA, SOLD IN UNITED STATES





… including in the context of global value chains …

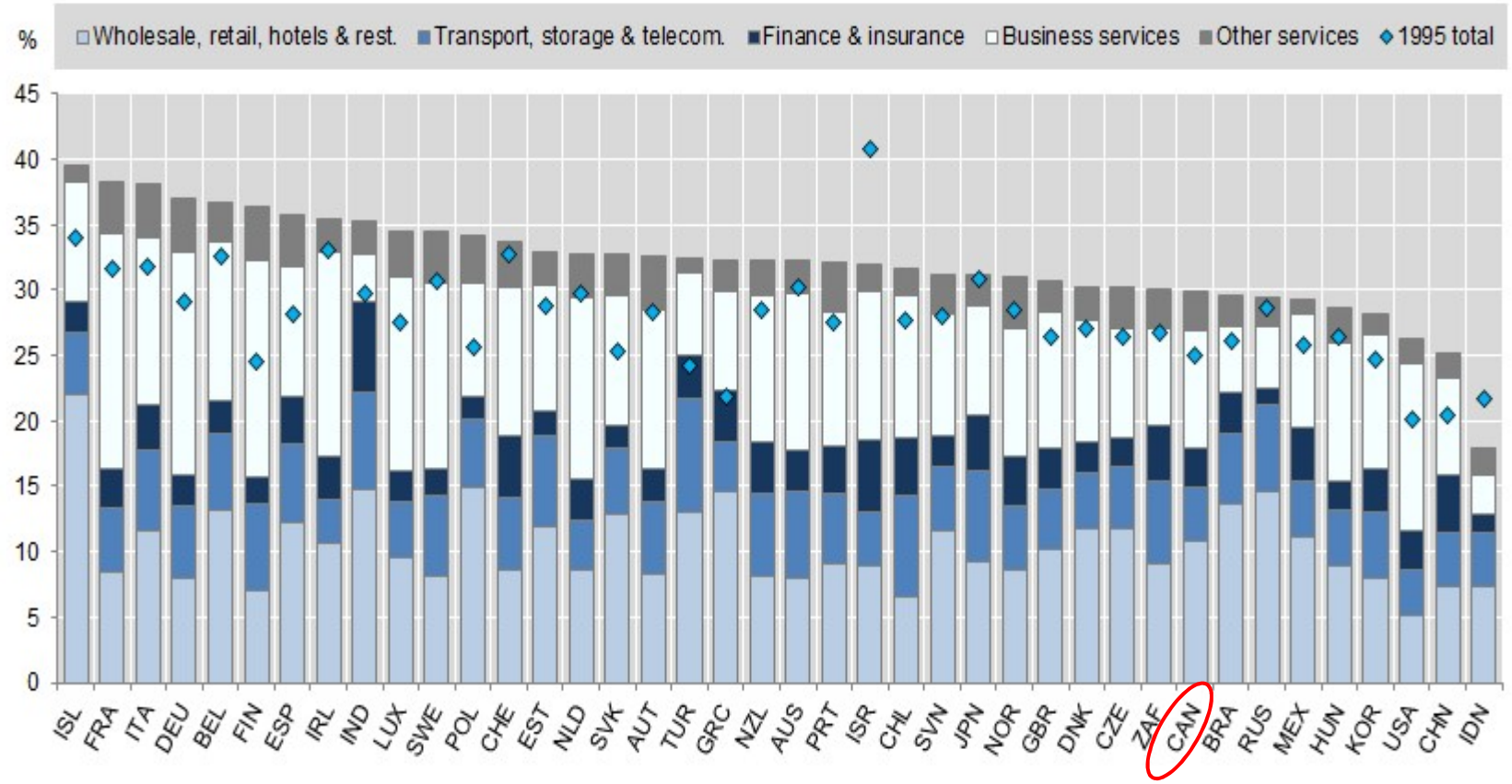
Canada participates less in global value chains than most other OECD countries, 2009



Source: OECD-WTO, Trade in Value Added database,

… where services account for a growing share of manufacturing exports …

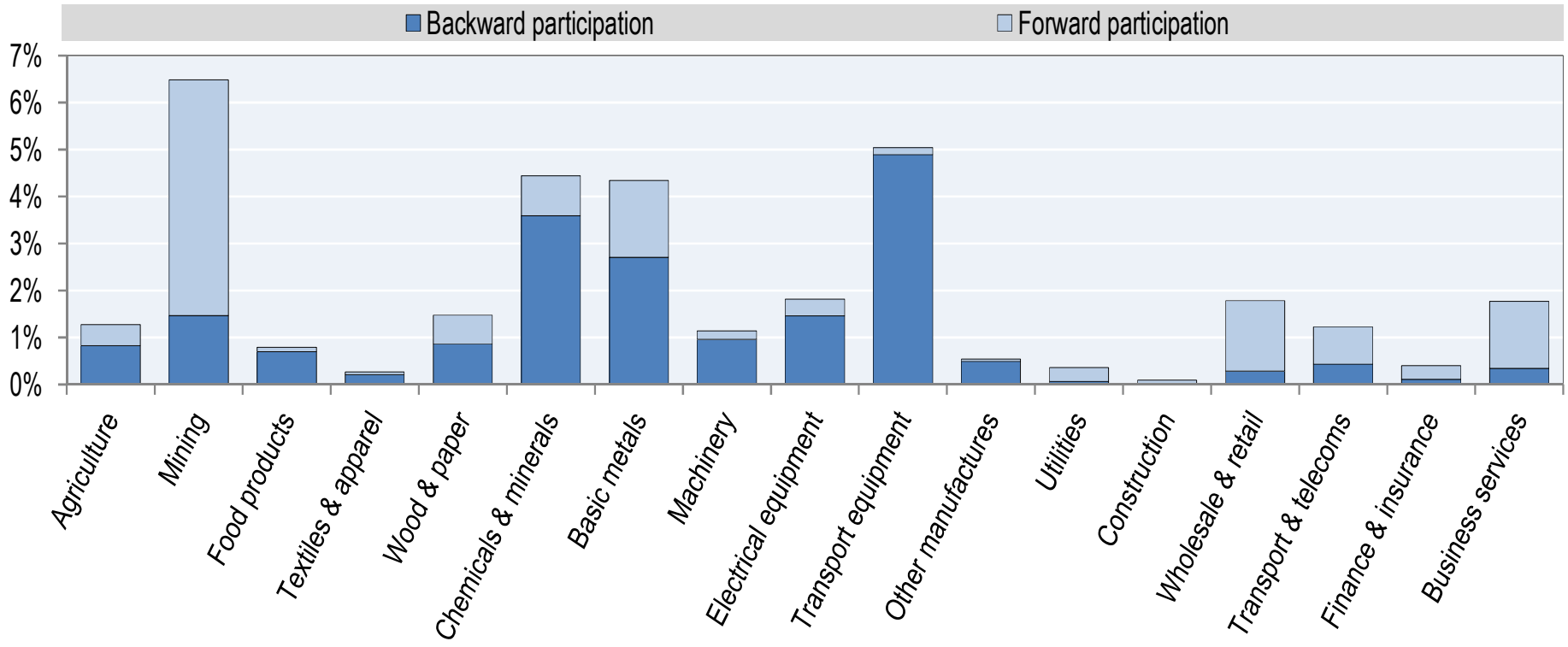
Services value added in manufacturing exports, 2009



Source: OECD-WTO Trade in Value Added (TiVA) database.

… and Canada has some specific strengths

.. mostly through the supply of mining inputs to other exporters, and in relying on imported intermediates in some manufacturing sectors



Source: OECD-WTO, Trade in Value Added database,

Policies insights related to investment in KBC

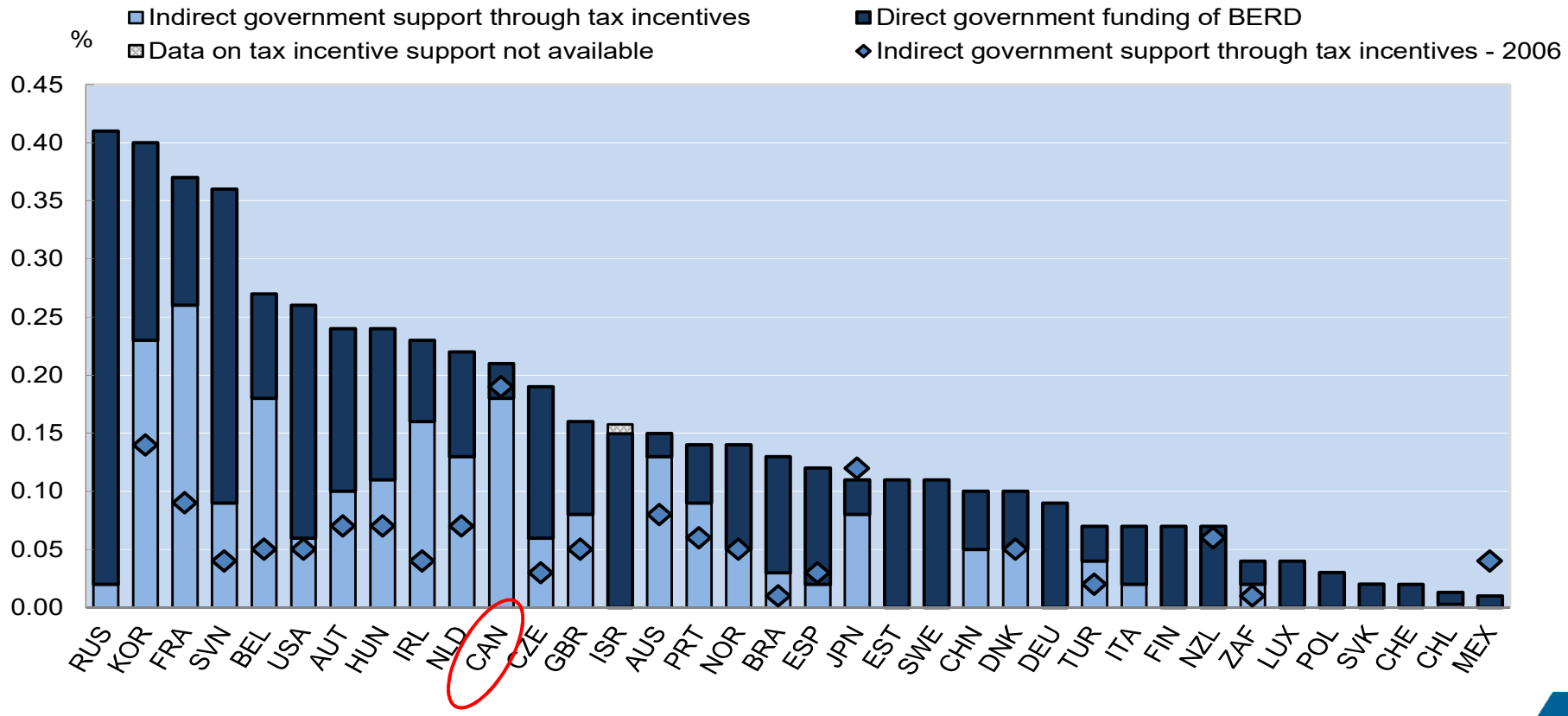
- **Sound framework policies**, e.g. competition, enabling the shift to more knowledge-intensive activities.

- **As knowledge grows in importance, so does IPR** – are our IPR systems still up to the task?

- **Public investment to support private investment**, e.g. R&D, education and broadband networks.

3. The innovation policy mix matters …

Direct funding of business R&D and R&D tax incentives,
as a percentage of GDP, 2012

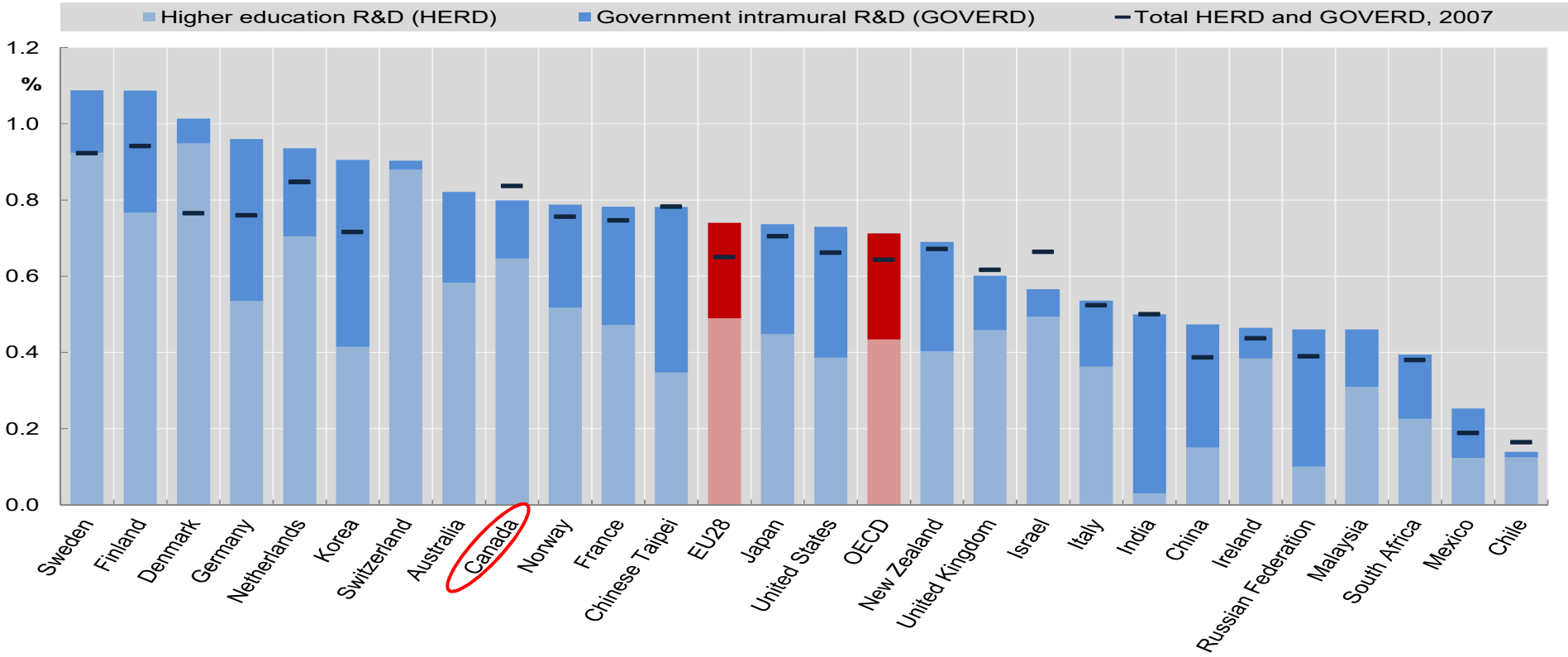


Source: OECD R&D Tax Incentive Indicators, www.oecd.org/sti/rd-tax-stats.htm

… as does investment in public research

Public R&D expenditure by type of research system

HERD and GOVERD, as a percentage of GDP, 2012, and total HERD and GOVERD in 2007



Source: OECD Main Science and Technology Indicators Database, June 2014, www.oecd.org/sti/msti; Eurostat and UNESCO Institute of Statistics, June 2014.

Policy issues: Balance and design

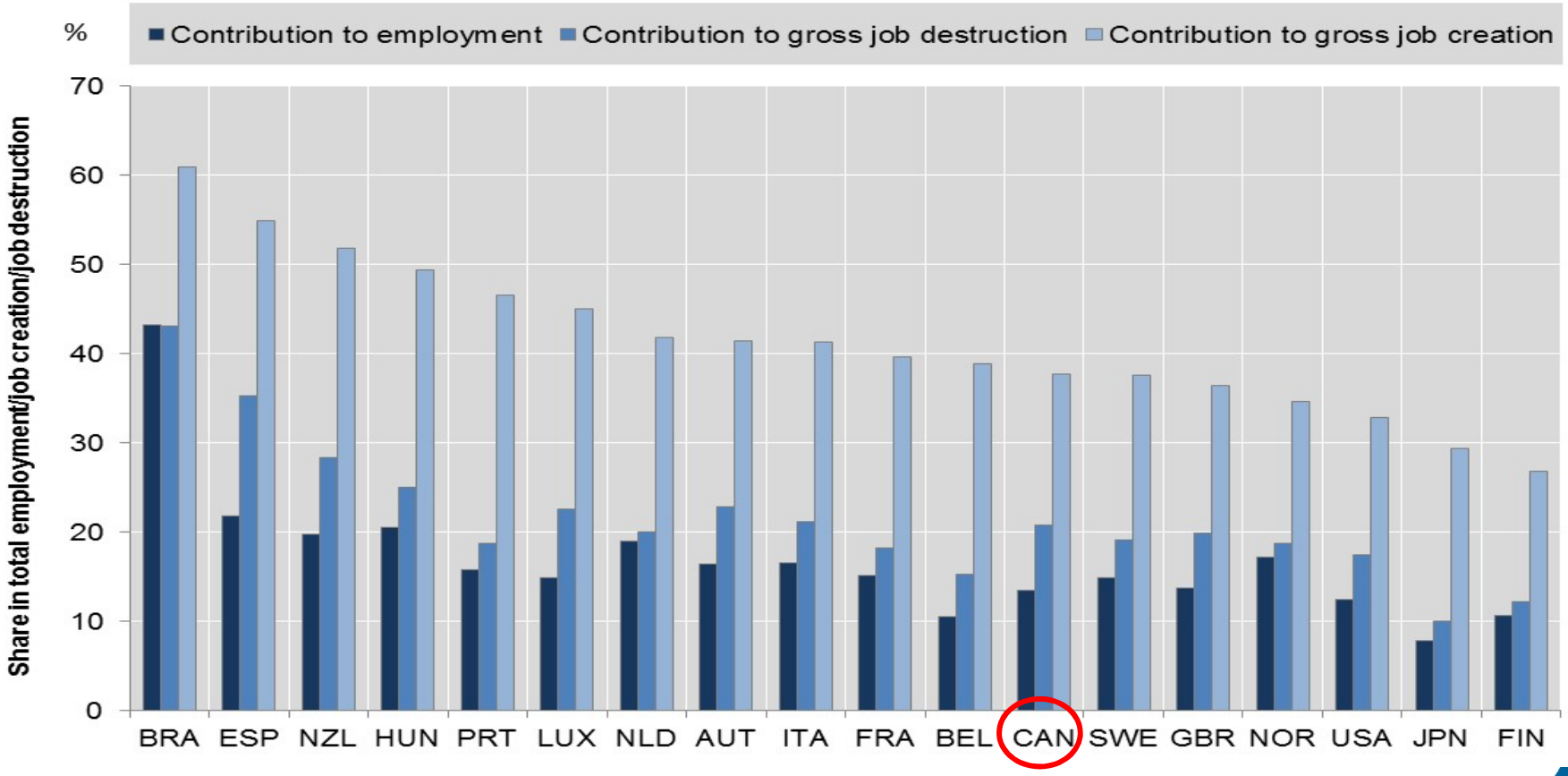
- Focus on achieving high social returns and building on international good practice
- Improve the design of R&D tax incentives, to ensure they provide value for money:
  - Some policies, e.g. R&D tax credits, can slow down reallocation and productivity growth in a country if they favour incumbents relative to startups (design is key)
  - R&D tax incentives might be primarily subsiding incremental innovations amongst incumbents, as opposed to new to the market innovations associated with young entrepreneurial firms
- Balance indirect support for business R&D with well-designed direct support, e.g. UK example of Catapult Centres
- Still need for long-term and stable investment in public research – risk of too much focus on the short term.

Some general lessons on government support

- **Remove barriers to innovation** before providing support (i.e. “don’t push on a string”)
- **Clarity in objective(s)** – such that success and failure can be assessed in an non-discretionary manner
- **Keep the outsiders and the unborn in mind** – i.e. resist political economy pressures from insiders
- **Evaluate** (preferably *ex ante* and *ex post*) – and incorporate evaluation in policy cycle
- Ensure public bears **risk which is “proportionate”** (enough to matter, not too much to lead to moral hazard)
- **Plan for exit** – and make plan known
- **Incentives/subsidies**: Should be provided only to “new” activities

4. Business dynamism matters - young firms create new opportunities …

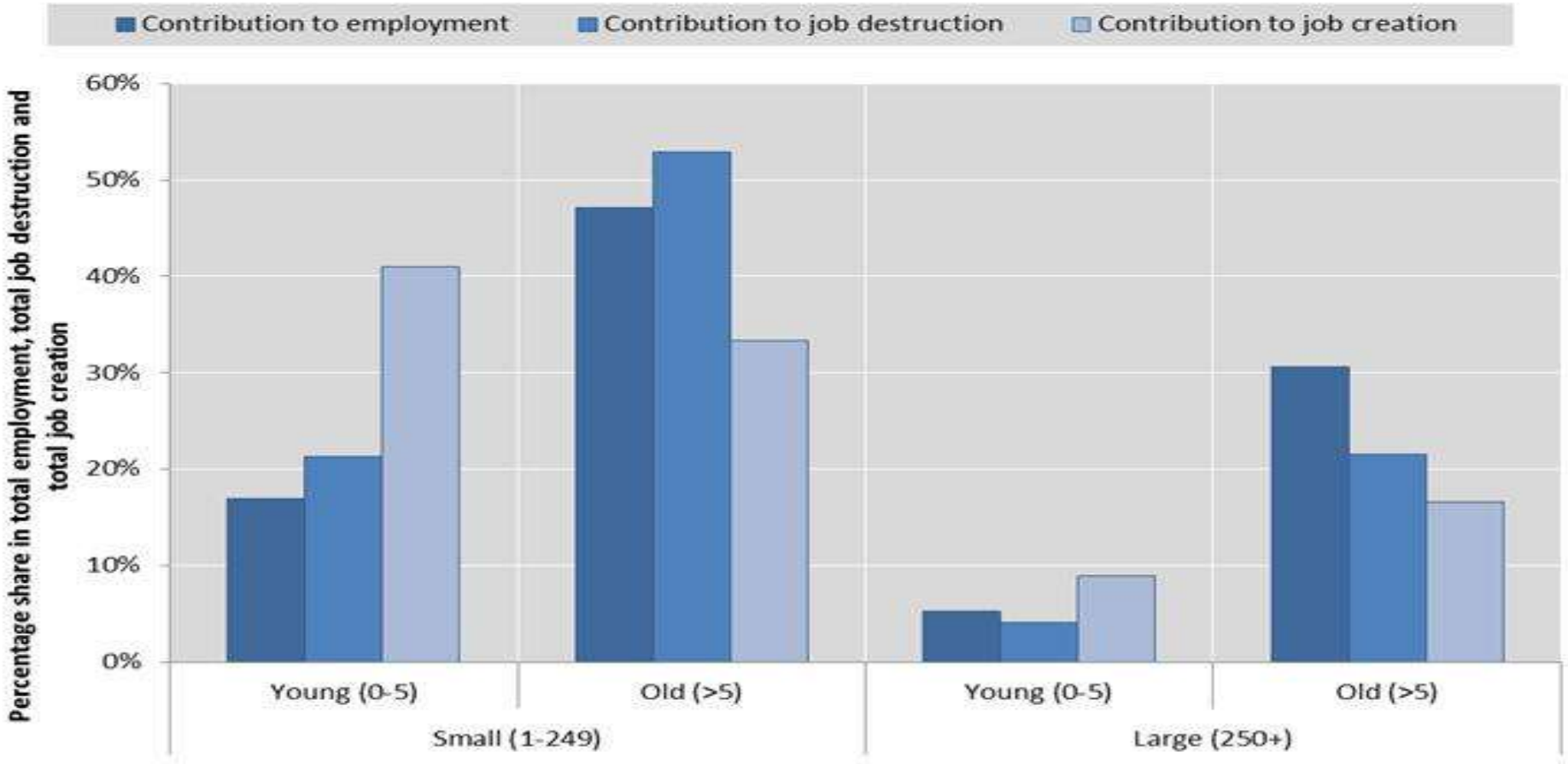
Contributions of young firms to employment, job creation and job destruction, 2001-2011



Source: Criscuolo, Gal and Menon (2014), www.oecd.org/sti/dynemp.htm

… and not SMEs in general

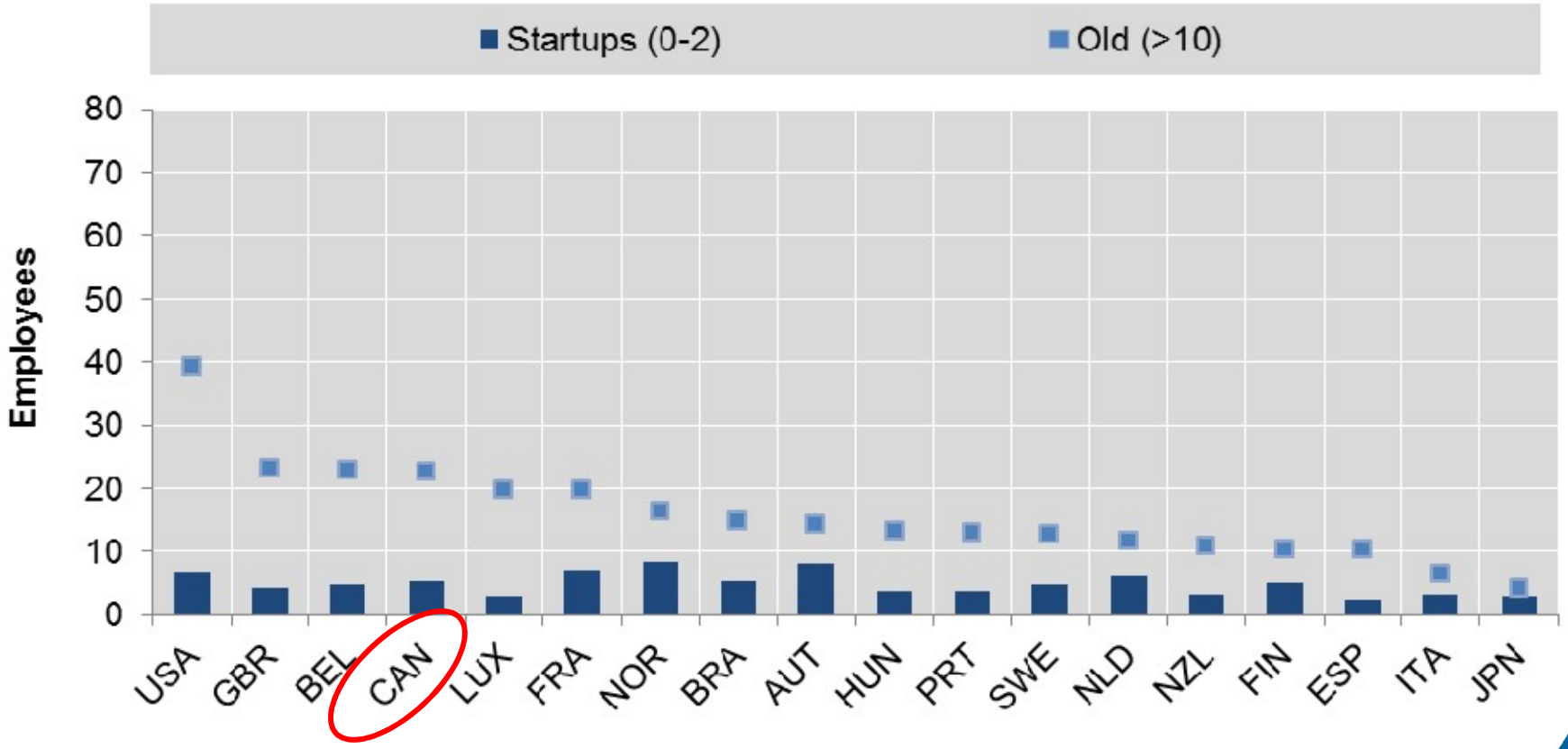
Average over 18 countries, 2001-2011, in %



Source: Criscuolo, Gal and Menon (2014), www.oecd.org/sti/dynemp.htm

But growth of firms is a challenge in many OECD countries …

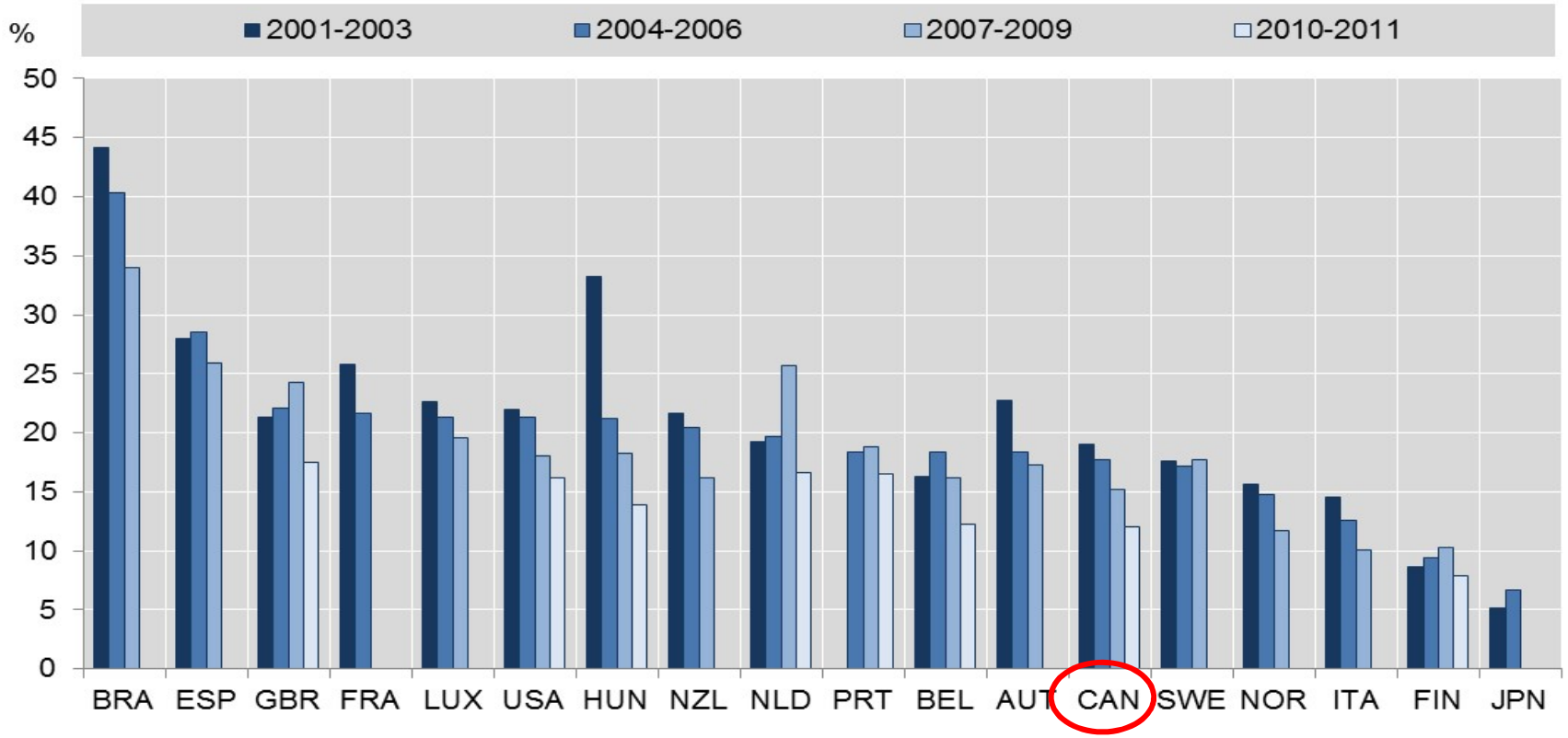
Average size of start-ups and old firms, in persons employed, services sector



Source: Criscuolo, Gal and Menon (2014), www.oecd.org/sti/dynemp.htm

.. as the share of start-ups is declining in most countries

Share of start-ups among all firms



Note: As a percent of all firms in the total private business sector. Startups are firms aged from 0 to 2. Data for Japan refers to establishment in the manufacturing sector.

Source: Criscuolo, Gal and Menon (2014), www.oecd.org/sti/dynemp.htm

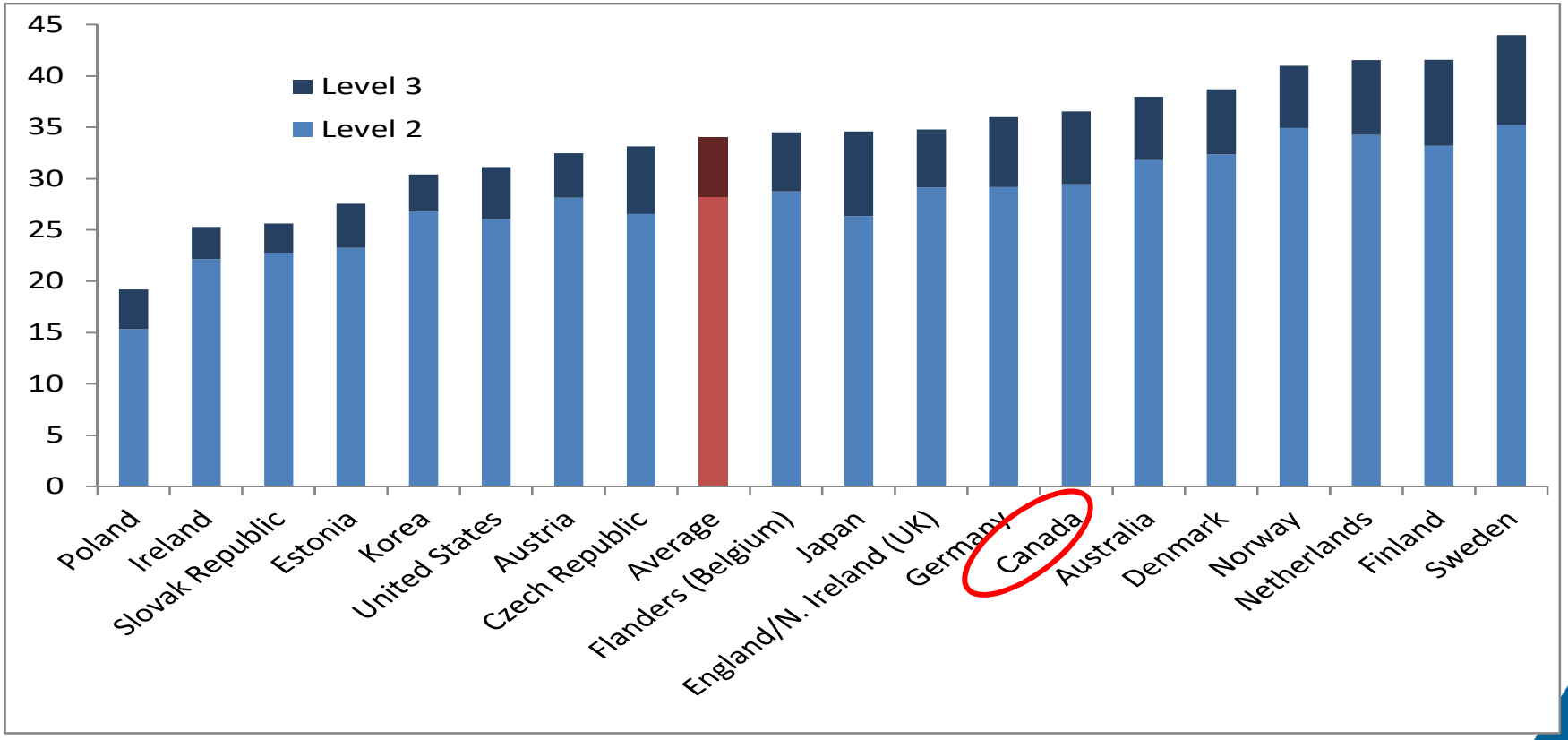
How can policy strengthen business dynamism?

- **Enable experimentation and firm growth**: Reduce barriers to entry (e.g. red tape), growth (e.g. size-specific regulations), and exit/failure of firms (e.g. penalising bankruptcy legislation, overly strict employment protection legislation).
- **Level the playing field for innovative firms**: Some policies favour incumbents and MNEs (e.g. R&D tax credits).
- **Strengthen the innovation system for innovative firms**, e.g. through enhanced access to (risk) capital, network development, mentoring of entrepreneurs, skills development, etc.
- **Reduce trade barriers**, so firms can scale more easily across borders.
- **Celebrate entrepreneurship**.

5. Skills are a major challenge for innovation

Less than 40% of adults have the skills to succeed in a technology-rich environment

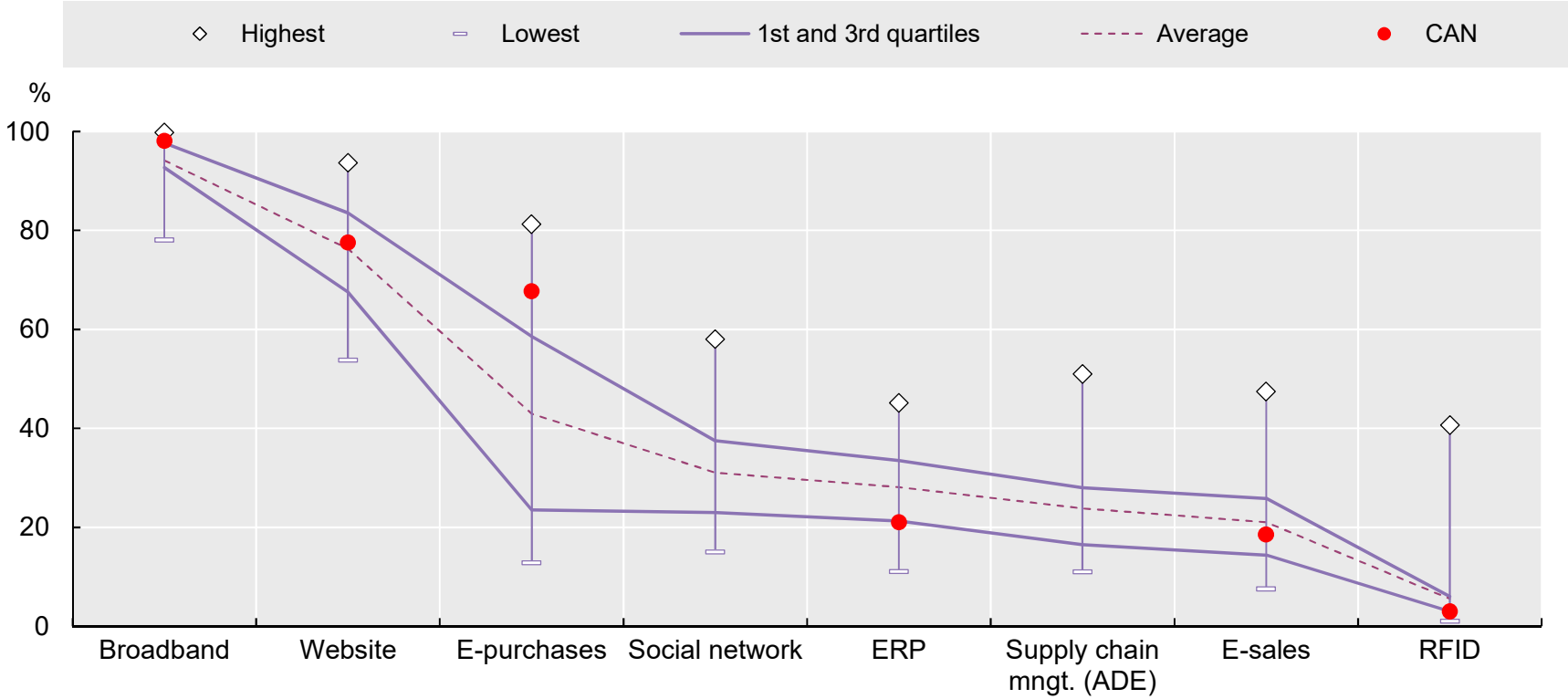
(Percentage of 16-65 year-olds scoring at proficiency levels 2 and 3)



Source: OECD Survey of Adult Skills, October 2013.

6. The digital economy still has much potential for the future …

Diffusion of selected ICT tools and activities, 2013
(as percentage of enterprises with 10 or more employees)



Source: OECD (2014), Measuring the Digital Economy: A New Perspective, http://dx.doi.org/10.1787/888933148510

Conclusion

1. **Policies for innovation, not just innovation policies**: Innovation relies on a wide range of policies – don't focus only on the ones specific to innovation.
2. **Key areas of action include:**
   - Improving our frameworks for investment in knowledge-based capital
   - Public investment in the basics – research, education, broadband networks
   - Effective innovation policies, modelled on good practice
   - Enabling business dynamism and creative destruction
   - A strong focus on skills for the future
   - Seizing the benefits of the digital economy
3. **And: Focus on governance, evaluation and implementation.**

Thank you

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