

# Identifying Barriers of LLL and Their Removal

## Getting the Context Right

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# Structure of the presentation

- European challenges

Importance of „Knowledge Triangle“ for EU competitiveness

- How the CR builds the „Knowledge Triangle“

# European challenges

- **Context re-visited?**
- **„Knowledge Triangle“ building blocks**
- **Lessons learned**

# Our problems are global

- Problems EU in environment, economy, energy, health, security are problems of the planet
- Governments can not solve it alone
- Mobilizing intellectual forces
- Building scientifically literate society to survive.

**Need to change the emphasis and pace of  
our debate**

# We live in time of changes do we reflect that?

- Exponential changes in technology and sciences
- Deep changes in structure of our society
- Changed roles and Shifted significance

**Must be mirrored in our discussion on the European Research Area**

# We live in time of changes do we reflect that?

- **How we socialize**
- **How we access information**
- **How we work**
- **How we collaborate**

# Knowledge Triangle building blocks

- Education, innovation, R&D building blocks of the EU competitiveness.

**But must function effectively**

# Lessons learned

## **Education, innovation, R&D**

Motivation, collaboration and openness, spread  
in entire ecosystem

**EU competitiveness depends vitally on our  
ability to lead the changes**

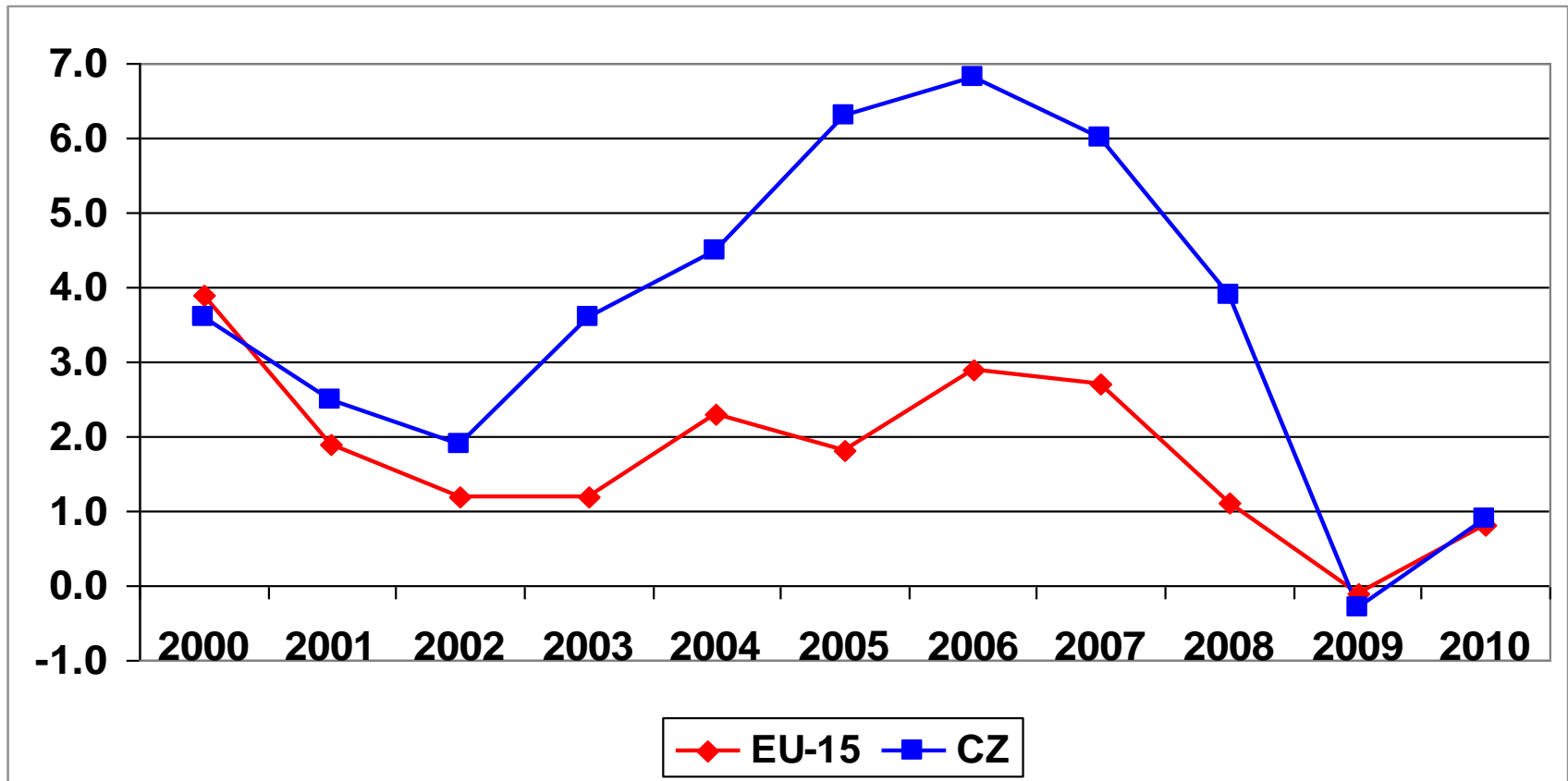


# CZ R&D&I Reform - case study

- Economic conditions
- Educational reforms
- R&D&I Reform

# Czech Republic: Growth through quantity

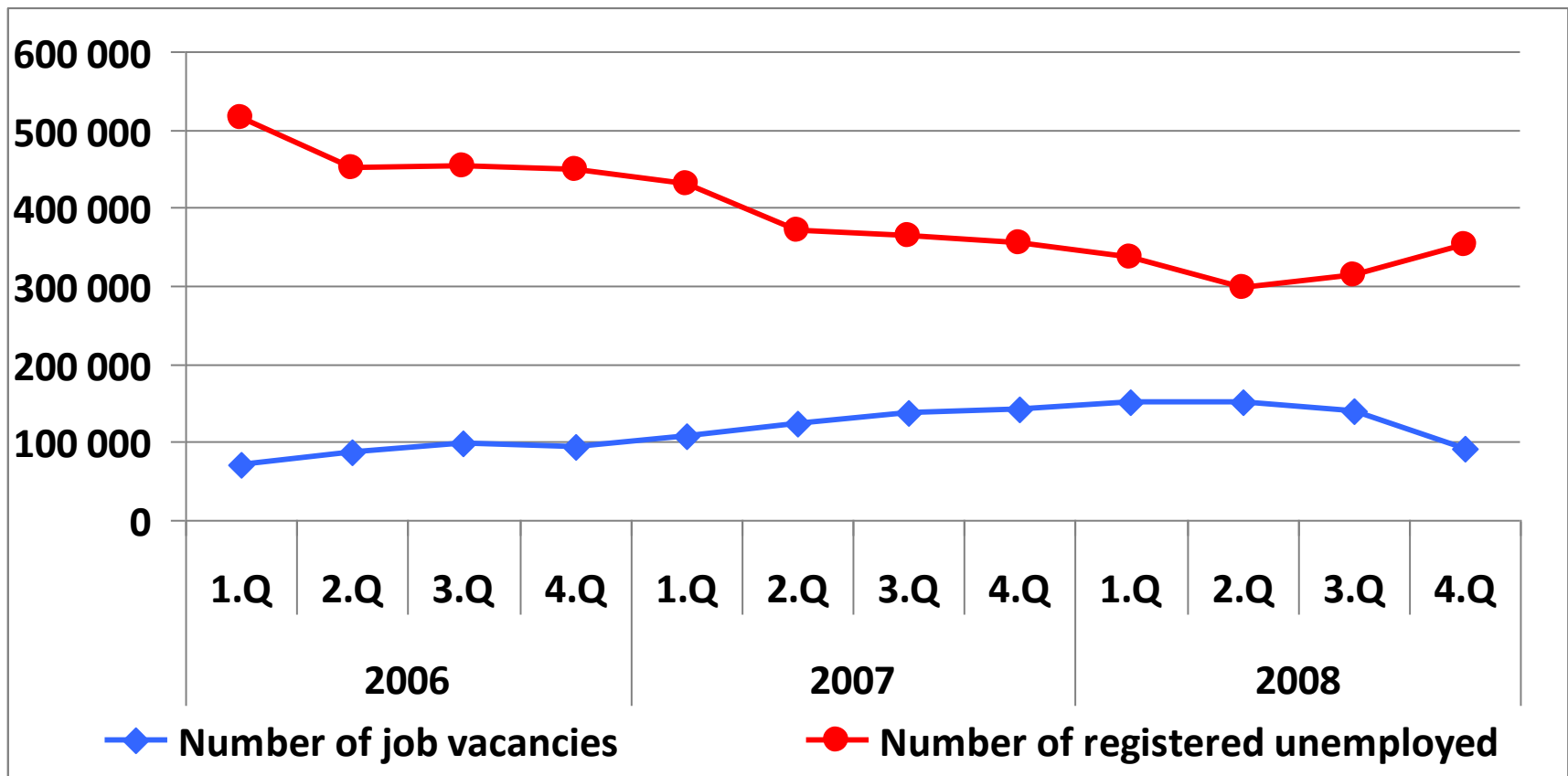
1999-2008: Strengthening the industry through FDI and investment incentives  
Dynamic GDP growth more than doubled EU-15 performance in 2005-2008



Note: GDP growth forecast in % for 2008-2010 for EU-15: Eurostat,  
for Czech Republic: Czech National Bank

# Impacts on the Czech labour market

- 2007-2008: Result of rapid economy growth: demand for engineers, scientists, technicians and craftsmen highly exceeded their supply
- Reversal in second half of 2008, additional drop of employment expected in 2009

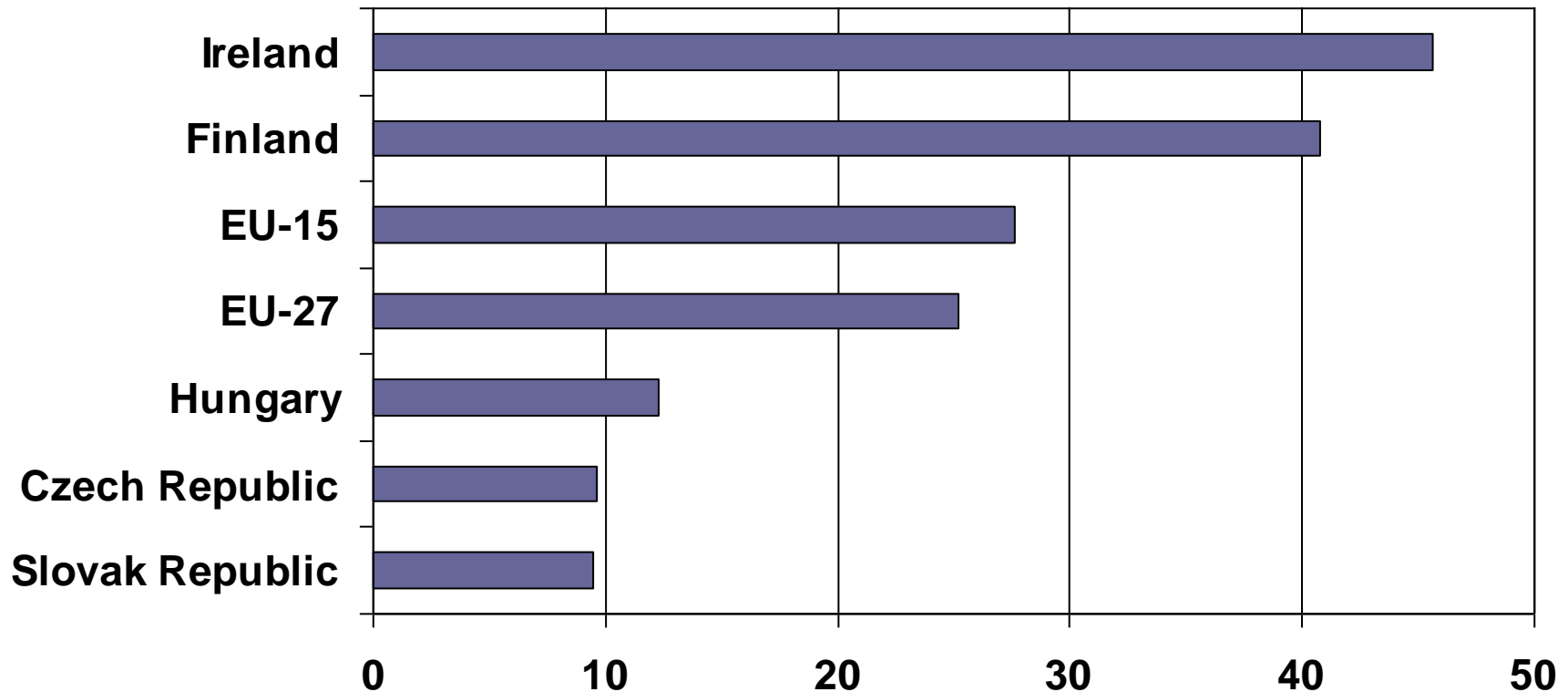


# What future trends will shape the face of Czech economy?

- Further rise of higher educated technical professions
- New trends in demand for qualified workforce with interdisciplinary knowledge
- There will be continuous insufficiency of highly educated IT experts – major limitation of qualitative growth
- Pressure on structure of industry – from assemblies to firms with high added value
- Czech export orientation on new emerging markets
- Simple production shift to low costs countries
- „Middle Chain“ - even Czech businesses will have to learn how to use outsourcing more widely
- Shared services centres – their transformation or withdrawal in longer run?

# Do we have HR for growth through quality in next years?

The proportion of people with tertiary education in the medium-tech and high-tech manufacturing in 2007 in selected EU countries (in %)



# Why Reforms are necessary?

- Czech Republic is one of the **most expensive developing countries** in terms of production workers wages – four times expensive than China, twice as Balkan countries, by half than Slovakia or Poland
- We now **lose many of our competitive advantages**, that helped us to grow in the past
- Global competition will become stronger in next years and big employers especially in industry in the Czech Republic will be endangered mostly – **motivation of less developed countries to catch up the West is much stronger than ours**
- Czech Republic will grow rich in next years – hopefully – and inevitably, part of industrial production, but also **less knowledge intensive services will withdraw.**
- **THIS MUST BE SEEN AS AN OPPORTUNITY FOR QUALITATIVE GROWTH OF CZECH ECONOMY AND ITS LABOUR FORCE – WE HAVE TO PREPARE FOR IT AND MAKE THE BEST OF IT!**

# Why is R&D Reform necessary?

- ❑ Current output of R&D and innovation for the Czech economy and society is **not satisfactory enough**.
- ❑ Existing **funding system is obsolete and inefficient** – it is no more able to fund effectively and timely R&D, including the use of EU funding resources.
- ❑ **Ongoing fragmentation** of Czech R&D; the system does not adequately recognize excellency and also priorities are more or less missing – result is an increasing **country lagging behind** in many R&D areas.

# Why is Education Reform necessary?

- Finance
- Quality.
- Diversification



**THANK YOU FOR YOUR ATTENTION**