Business – Academia Partnership and the National Research and Innovation Programme 2011-2020

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Enhancing knowledge-based Growth and Competitiveness through ERA and Business – Academia Partnership
• „Particularly in the times of crisis, politicians tend to address primarily the acute, politically most sensitive problems
  – i.e. the short term consequences and
• not the long term causes and roots of problems.
• This is the way how our political process is functioning,
• with the impact of civil society on policy making being far too limited."
Now is the time of crisis ...

• ... and problems are acute:
  – Slovenia borrows 20c for each 1 EUR it spends in the budget
  – Slovenia borrows 1000 EUR per person per year
  – Slovenia has less than 1% growth and pays 6%+ interest rate

• it was like this for the last three years
• it is not sustainable
Long term causes of the problem: high cost and low productivity

- short term solution
  - lower cost
- long term solution
  - increase value

Unit labour cost (ratio of compensation per employee to labour productivity (defined as GDP per person employed); 2005=100

- Germany
- Spain
- Greece
- Ireland
- Italy
- Slovenia

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<th>Year</th>
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Summary

• We will not get out of the crisis **without** austerity.
• We will not get out of the crisis **only with** austerity.
• We will have to **grow out** of the crisis.

• But to be able to have sound growth we must get the house in order first.

• *Restore and maintain sound macroeconomic conditions*, including the sustainability of public finances, one of the most important prerequisites for dynamic private and public investment in innovation.
Summary (2)

• Growth will come from innovation.
• Innovation can be a joint business/academia effort.

• Framework conditions
• Sector specific measures
  – more push
  – more pull
Framework conditions for innovation

Recommendations

In light of these strategic tasks and guiding principles, and taking due account of Slovenia’s innovation-related strengths, weaknesses, opportunities and threats, a number of policy recommendations can be made.

Improving framework conditions for innovation

Appropriate framework conditions are an essential aspect of a country’s overall innovation performance. Framework conditions that affect innovation include macroeconomic stability, many aspects of the regulatory regime and the tax system, intellectual property rights, competition, and openness to international trade and foreign direct investment. As part of an ongoing effort to pay due attention to their impact on innovation, the government should continuously screen these framework conditions with the following main objectives:

- **Restore and maintain sound macroeconomic conditions**, including the sustainability of public finances, one of the most important prerequisites for dynamic private and public investment in innovation.
- **Foster vigorous competition** and adapt regulatory regimes so as to make them conducive to innovation.
- **Continue efforts to reduce the administrative burden on businesses**, including start-ups.
- **Address aspects of financial system and related regulation that could constrain financing of innovative projects in the business sector**.
- **Identify and address other aspects of framework conditions that reduce the incentives or capabilities of SMEs to enter or step up innovation activities**.
- **Examine and address aspects of the business environment which could hold back foreign direct investment in general, specifically with a view to FDI for R&D and other activities of high innovation content**.

Strengthening the human resource base for science, technology and innovation

Slovenia’s education system, notably primary and secondary education, can be considered a solid pillar of the Slovenian innovation system. In the tertiary sector, the diagnosis is somewhat mixed. Tertiary education is beset with various problems including the time students take to complete their studies. The share of tertiary graduates is growing but fails to keep up with the OECD average. The number of science and engineering students and graduates should not lead to complacency in view of demographic trends and changing attitudes. In addition, industrial researchers’ qualifications need to be upgraded as the technological sophistication of Slovenian firms increases. Local talent can be nurtured through ambitious skills policies targeting the workforce, including life-long learning. By lifting existing obstacles and distorted incentives, graduation rates could rise and the duration of students’ studies could lessen. NPHE as well as RISS foresee a number of reforms that are strongly endorsed by this review. The human resource pool also needs to be strengthened through active internationalisation. Permeability between industry and the public research sector needs to be enhanced. The government should:

- **Restore and maintain sound macroeconomic conditions**, including the sustainability of public finances, one of the most important prerequisites for dynamic private and public investment in innovation.
- **Foster vigorous competition** and adapt regulatory regimes so as to make them conducive to innovation.
- **Continue efforts to reduce the administrative burden on businesses**, including start-ups.

Source: OECD review of Slovenia’s innovation policy
Sector specific measures
Figure 2.5. Scientific articles per million population, 1998 and 2008

Note: “Scientific articles” are sourced from journals and conference proceedings and include: articles, reviews, conference papers, conference reviews and notes. Calculations based on the address of the institution to which authors belong, and fractional counts. For Brazil, Chile, Estonia and India, population data come from the International Monetary Fund, World Economic Outlook Database, April 2010.

Source: OECD (2010, p 50), http://dx.doi.org/10.1787/888932332854.
Plenty of Science and Engineering PhDs in Slovenia

Science and engineering graduates at doctorate level, 2009
As a percentage of all new degrees awarded at doctorate level

Source: OECD, Education Database, September 2011; and OECD, calculations based on national sources, May 2011. See chapter notes.
But low mobility of human resources in S&T

Inter-sector mobility of HRST, 25-to-64-year-olds, 2010
As a percentage of HRST changing employer

R&D market is home market
• and the customer is ...
Low internationalization of R&D funding
Plenty of direct government funding of business R&D
Dead End of the Innovation Pipeline

Venture capital investment, 2009

As a percentage of GDP


Business angel networks/groups, 2009

Number of networks and groups

Source: OECD, calculations based on EBAN (The European Trade Association for Business Angels, Seed funds and other Early Stage Market Players), ACA (Angel Capital Association), NACO (National Angel Capital Organization) and AANZ (Angel Association New Zealand), March 2011. See chapter notes.
Low General Barriers to Entrepreneurship Except Taxation

Output: Where is the high-tech export?

Figure 1.7. Shares of high- and medium-high-technology manufacturing exports, 2007

In Summary: Science and innovation profile of Slovenia

Figure 2.9. Science and innovation profile of Slovenia, input and output dimensions

Lessons

• we need
  – more knowledge into business
  – more business into the knowledge sector

• how to do it
  – by the visible hand of the government
  – by the invisible hand of the market

• we need a market for knowledge
  – we have a great market for scientific papers
  – not so great market for anything else
Business – Academia Partnerships

• It takes two to tango.
• Government is only providing the music.
• It should not be the only one paying people to dance.