Developing a local innovation system: the challenge of Trentino

Alessandra Proto
OECD LEED Trento Centre for Local Development

Trento, 28 March 2012
- 520,000 inhabitants in 223 municipalities
- Small area: 2% of national territory
- 42,577 (8.2%) immigrants from 60 countries (2009) (2,715 - 0.6% 1992)
- 70% of lands above 600 metres
- 65% forest
- The primary sector represents 3% of the GDP of Trentino Province, the industry sector 25% and services 72%.
# Trentino Facts & Figures

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<th>Trentino</th>
<th>Italy</th>
<th>EU 27</th>
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<tbody>
<tr>
<td><strong>GDP per Capita (2009)</strong></td>
<td>25 710 €</td>
<td>24 400 €</td>
<td>23 500 €</td>
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<tr>
<td><strong>Unemployment (2010)</strong></td>
<td>4.3%</td>
<td>8.50%</td>
<td>9.90%</td>
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<td><strong>Schooling rate (15-19)</strong></td>
<td>93.30%</td>
<td>90.60%</td>
<td>75.70%</td>
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<td><em>(in 1980: 55.8%)</em></td>
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<td><strong>People at risk of Poverty (2011 - forecast)</strong></td>
<td>11.1%</td>
<td>24.7%</td>
<td>23.1%</td>
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<td><strong>Size of business</strong></td>
<td>4.29</td>
<td>4.07</td>
<td>6.4</td>
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<td><em>(average # of employees - 2008)</em></td>
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Source: Elaboration of Eurostat, Istat, Bank of Italy data
1850-1960: Trentino experienced a devastating hemorrhage of population (1/2 of the population emigrated)
1946: at the end of WW2, a peace treaty between Italy and Austria is signed. The Province of Trento and the Province of Bolzano achieved the status of autonomous provinces:

- legislative power;
- administrative autonomy;
- financial autonomy (92% of taxes on individual and business incomes collected in Trentino is given back by the Central State to the Province. This resources are utilised according to autonomous institutional competencies and local needs.
THE FIRST INDUSTRIALISATION PHASE

- Trentino started from scratch with little industrial tradition (delay with respect to the rest of Italy)
- Main objective: create employment: (reducing emigration)
- No selection of sectors
- Attraction of foreign investors (Michelin, ecc) –
- Big infrastructures
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<td>Per capita public investment in R&amp;D (2009)</td>
<td>261 €</td>
<td>142€</td>
<td>200 €</td>
</tr>
<tr>
<td>Business Demography (2008)</td>
<td>-0.2%</td>
<td>+0.9%</td>
<td>+2%</td>
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<td>Patents (million of inhabitants)</td>
<td>50,6</td>
<td>83,6</td>
<td>113</td>
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Patents (million of inhabitants)
The triple helix model

University core
- Personnel circulation
- Information circulation
- Product circulation

Industry core
- Personnel circulation
- Information circulation
- Product circulation

Government core
- Personnel circulation
- Information circulation
- Product circulation

Field Space
- RIO (regional strategy)
- RII (driving force)
- Collaboration projects
- Collaboration networks

Externalities
- Goods, Tax, R&D investment, Venture capital
- Funding
- Policies and laws

Human resource, Science findings and technology inventions, Spin-offs/start-ups
NEW PLAYERS AND COLLABORATIONS


SIZE OF BUBBLE = Number of scientific publications
THICKNESS OF LINK = Number of co-authorship
...BUT INNOVATION IS NOT “FLAT.”

Patents per million inhabitants, Europe, average 2005-07

Source: OECD (2010), Measuring Innovation: A New Perspective, OECD, Paris based on OECD REGPAT Database and OECD, Regional Database.
Investing in innovation goes beyond R&D. Investment in intangible assets is rising and taking over investment in physical capital (machinery and equipment).
R&D IS CRITICAL TO INNOVATION...

Gross domestic expenditure on R&D, 1994-2008

As a percentage of GDP

Source: OECD (2009), Main Science and Technology Indicators 2009/2, December.
NEW INDICATORS reveal that in Australia and Norway the propensity to introduce a new product is similar whether or not the firm performs R&D.
Innovation – Now more than ever!

Innovation process is a non-linear output and outcome process

Innovation is broader than R&D – it is a system. Policies for innovation, not a narrow set of innovation policies;

Innovation policy is more than budget allocations.

A region’s economic trajectory is shaped not only by local institutions but also by the range of technological and market opportunities available at global level
Thank you!
alessandra.proto@oecd.org