Territorial pattern of innovation

2.3 million researchers and professionals have been engaged 2009 in the EU in the conception or creation of new knowledge, products, processes, methods and systems, and in the management of the projects concerned.

Orientation of innovation

Production

Process

Marketing

Knowledge and innovation are recognized to be the strategic assets to build a “smart growth” in Europe. The identification of regional specificities in patterns of innovation is essential to build targeted normative strategies for policy goals.

The geography of innovation is complex, the capacity to turn knowledge and innovation into regional growth is different among regions. The orientation of regional innovation shows distinct hotspots related to production, processes and marketing. But, how does the European pattern of innovation looks like.

At first, there are strong knowledge producing regions, which are whether science based or more applied science oriented. Their endogenous innovation takes place in scientific networks. The local conditions are present to support the creation of knowledge, the local diffusion, the transformation into innovation and the widespread local adoption.

Then come the regions specialized in a smart technological application or smart and creative diversification. They have high product innovation rates and high creativity to translate external basic and applied science knowledge into innovation.

Last but not least you find the imitative innovation regions with in fact low knowledge and innovation intensity. There, creative actors look for lacking knowledge in the external world to adapt already existing innovation.

Translation into policy means for the first group R&D incentives to inventors attraction and the mobility of high skilled labour. For the regions in the second group incentives for creative applications through co-operative research activities or search for new technological solutions will suit best. For the last group of regions, incentives for the development of creative projects with multinational corporations might foster the economic base.

The notion of territorial patterns of innovation, in fact, questions the view equating knowledge to innovation, that implicitly drives the current policy efforts of making Europe the most competitive knowledge-based economy by raising investments in R&D up to 3% of GDP as stated in the EU2020 strategy.

In fact, R&D is more efficiently used in those regions that considerably invest in R&D, which are science-based, applied science oriented or, to a lower extent, in smart technological application area. Regions with a low level of R&D spending little benefit from further investments in this respect, needed are investments in intangible assets.
Gross domestic product 2009 (in billion euro)

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<th></th>
<th>3544.7</th>
<th>3428.5</th>
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<tbody>
<tr>
<td>Percentage</td>
<td>28.8%</td>
<td>27.9%</td>
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Gross domestic expenditure on R&D in % of gross domestic product 2009

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<th>2788.7</th>
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<tr>
<td>Percentage</td>
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Gross domestic expenditure on R&D 2009 (in billion euro)

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<th>67</th>
<th>49.8</th>
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<tr>
<td>Percentage</td>
<td>26.7%</td>
<td>19.9%</td>
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Regional types of innovation

- European science-based area
- Applied science area
- Smart technological application area
- Smart and creative diversification area
- Creative imitation area

Orientation of innovation

- Product innovation
- Process innovation
- Marketing and/or organizational innovation