

Summary of the Interim Report of the ESPON project on Knowledge, Innovation, Territory (KIT)

The aims of the KIT project are:

1. to show the present spatial trends of the knowledge economy;
2. to explain the territorial elements behind these spatial trends;
3. to measure the impact of different forms/patterns of innovation on regional economic performance;
4. to build ad-hoc innovation policy actions that go beyond the thematically and regionally neutral and generic orientation of R&D funding investments.

This Interim Report concentrates on the first of these aims. It reveals that Inner London is Europe's leading region for knowledge-intensive services, while Cumbria is shown as the UK's only "Low Tech Region".

Categorising the regional aspects of the Knowledge Economy

Sixty-two regions hosting "science-based" or high technology sectors are considered as regions helping the transformation of the economy, and labeled "**Technologically advanced regions**". Seventeen of these are in the UK, 21 in Germany, and the others in Belgium, France, Switzerland, Finland, Denmark and Sweden.

A second typology of regions is identified, based on a function-based approach, which stressed the importance of functions like R&D and high education. These "**Scientific regions**" host large and well-known scientific institutions, and are concentrated in the centre and in the north of Europe, most of them in Western countries. It is interesting to find that the region with the highest % of employees in R&D sectors is North Eastern Scotland (UK) (5.71%), but Highlands and Islands (0.18%) is the region showing the lowest %.

Thirdly, "**Knowledge networking regions**" are based on ability to transform information and inventions into innovation and productivity increases, through co-operative or market interaction. These regions are concentrated in the centre of Europe as well as in the Scandinavian countries.

Patterns of Innovation

Innovation shows rather different spatial patterns depending on the type of innovation. **Product innovation** is characterised by a strong spatial concentration. The core of product innovative activity in Europe is carried out in German, Scandinavian, Swiss and British regions, with a few notable exceptions outside these areas. Concentrated spatial patterns characterise product innovation trends not only between countries, but also within countries, where capital regions are especially strong.

Process innovation has a completely different spatial pattern, with on average higher values in Southern European countries, namely, Cyprus, Spain, France, Greece, Italy, Malta, and Portugal than in the rest of the Europe.

Overall the UK (except for Berkshire, Bucks and Oxfordshire, Surrey, East and West Sussex, Hampshire and Isle of Wight, and Gloucestershire, Wiltshire and the Bristol and Bath area) does rather poorly on a measure of regions that combines both product and process innovation. In general regions with higher tendencies to innovate in product also innovate in process, so the UK discrepancy is surprising and begs questions. If innovation is measured as “product and/or process” the UK fares much better.

A quite different perspective on innovation is provided by the **marketing and organizational innovation** (quality, energy and environmental improvements etc.), which is much more evenly distributed across the ESPON space. Meanwhile, a core of **innovative activity in green technologies** is found in continental Europe, Scandinavian countries and the UK.

The global dimension

The report also points out that the competitiveness of emerging countries like China and India will in soon be moving from low-tech goods to innovative high-value functions and Europe will soon have to compare its research activity performance not only with the US but also with these emerging economies. Such countries appear to have a spatial concentration of R&D in order to exploit economies of scale. This prompts the suggestion that a debate about a European Research Area needs to be re-launched.

Summary

Some regions are able to produce their internal knowledge, translate knowledge into innovation, and obtain the maximum efficiency and effectiveness from innovation adoption in terms of growth (the so called “linear model”). Other regions exist that are able to innovate by getting the knowledge required from other regions. Finally, regions exist that are able to innovate through a creative imitation of already existing innovations. These different patterns of innovation are supported by different local conditions.

In short, there is more to the Knowledge Economy than R&D, and approaches to regional and local economic development should recognize this, and build on regional contexts and strengths.

Lead Partner: BEST – Politecnico di Milano.

Other partners: Cardiff University; LSE; University of Cagliari; University of Barcelona; Bratislava University.

Related ESPON projects: CAEE, TIGER, and ESPON 2006 projects on telecommunications (1.2.2), Information Society (1.2.3) and territorial impacts of EU R&D policy (2.1.2).

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Contact: ann-gritt.neuse@espon.eu