

*Networks of innovation and exchange of innovative labour: regional development based on trans-regional synergy and collaboration*

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The dynamic globalisation of new markets intensifies the competition between economic locations and regions, which try to enhance their market position by using their individual advantages in factor endowment. Advantages in factor endowment can arise from (i) immobile factors such as physical infrastructure and institutions -- both implying the consequence of geographic disparities -- or (ii) mobile factors such as (skilled) labour force, published knowledge, and financial capital. This is why theoretical approaches towards regional, national or global systems of innovation with their inherent preference for the orientation of innovative actors on a given location or region have recently been complemented by studies emphasizing mobile factors (such as labour mobility, networks of cooperation in research, development and production, and recruitment patterns of companies and research institutions) transcending this static geography of innovation and pointing towards a spatially dynamic understanding of processes of innovation.

The future of a biotechnology firms hinges greatly on networks that enable them to enhance their success in cutting-edge research, product development, and the recruitment of scientific and managerial personnel. Just to start up a new biotechnology firm and get it going, the need for knowledge, resources in the main research disciplines takes networking. In addition to this small biotechnology firms need to collaborate due to the variety of competencies it takes to handle the multiple technological tasks that are required in maintaining the development of biotechnology products. The high number and concentration of research institutes eases the recruitment of scientists and provides a degree of job security for workers already employed in a region. A well-organized network of academic-industry links also facilitates retention of scientific manpower. It is important to see that regions are not isolated nor is the development of new technologies or products exclusively related to a particular location. In contrast, it is the collaboration, the exchange of knowledge and the different competencies that merge when it comes to new opportunities based on scientific findings and new technological applications. So, migration of knowledge across regions, countries and continents is an important element of any kind of advanced industrial developments; and particularly important in science-based development. Only regions that recognize the strategic importance of researchers and related patterns of recruitment can participate in such processes of knowledge migration forming continental networks of regions, and, with regard to the new life sciences and biotechnologies of a wider transatlantic nexus of US and EU regions.