Innovation Networks Anchored into a Regional Scale: Looking for Smart Specialization Tendencies in the Portuguese Centro Region.

Paula Ribeiro, Teresa Sá Marques, Hélder Santos
CEGOT/FLUP (Centro de Estudos em Geografia e Ordenamento do Território / Faculdade de Letras da Universidade do Porto)

The aim is to explore the regional and sub-regional innovation ecosystems located at the Portuguese Centro Region (NUTS II e III), and their multi-dimension and multi-scale connections.

The innovation ecosystems are generated and sustained through knowledge networks connecting different actors, cutting across different geographical scales. They generate the framework for knowledge co-production and translation actions sustaining the innovation process. Through the time, it generates a process of co-specialization and complementarities interactions between different actors located inside and outside of the regional innovation system. In this interpretation, the regions are seen as dynamic entities, in permanent process of building innovation paths composed by a variety of knowledge trajectories that sometimes can be related, but others can be unrelated. These related and unrelated regional knowledge capabilities, built through the time, are the starting point for the smart specialization policy strategy. How can we reinforce the intertwining process of these regional trajectories and link them to other knowledge pools outside the region to increase the regional innovation performance is a smart specialization policy challenge.

To analyze the geographical dimension of the innovation process, we apply the social network analysis. By collecting the innovation projects developed through inter-organizational cooperation and supported by the last European founding for the period of 2007-2015, we have organized a database of all projects encompassing at least one organizational actor located at the Portuguese Centro Region. We explore different dimensions of proximity in our analysis:

• For the geographical proximity we use the location of each organization;
• For the organizational proximity we use the organizational relations intensity;
• For the knowledge proximity we use the relations between scientific areas and economic activity sector of knowledge application.

By these we aim to:
• Identify the key innovation actors inside the region and those outside connected with them;
• Explore the different inter-regional polarization levels of the actors and their cooperation relationships;
• Explore the regional and sub-regional specialization tendencies of the innovation process;
• Identify the technological areas leading the innovation process and the variety of economic activity   sectors   implicated;
• Identify the multi-scale nature of the organizational interactions in this innovations projects;
• Contribute to characterize the regional capabilities were the smart specialization strategies can be rooted.
We conclude by presenting a few policy implications for the smart specialization strategy.

Asheim, B.; Coenen, L. (2005). Knowledge bases and regional innovation systems: Comparing Nordic clusters. Research Policy, 34.

Bathelt, H.; Glückler, J. (2011). The Relational Economy Geographies of Knowing and Learning. Oxford: Oxford University Press.

Marques, T.; Sa, H.,Ribeiro, P. (2015). Redes de inovação económica ancoradas no arco metropolitano de Lisboa (2007-2013). In J. M. Ribeiro, F. Moura, & J. Chorincas, Uma metrópole para o Atlântico. Lisboa: FCG.

Steiner, M. (2011). Regional knowledge networks. In P. Cooke, B. Asheim, R. Boschma, R. Martin, D. Schwartz, F. Todtling, Handbook of Regional Innovation and Growth. Cheltenham: Edward Elgar.