Chapter 13
A Tale of Different Realities: Innovation Capacity in the European Union Regions

Pedro Nuno Rebelo Pavão
University of the Azores, Portugal

João Pedro Almeida Couto
University of the Azores, Portugal

Maria Manuela Santos Natário
Polytechnic of Guarda, Portugal

ABSTRACT

This chapter aims to identify the determinants that affect innovation capacity at regional level in Europe. It proposes modelling the territorial innovation capacity and identifies relevant factors with influence on the innovation capacity at a regional level. The chapter uses the Regional Innovation Scoreboard database and cluster analysis to detect behavioral patterns in terms of innovation performance in European regions. The results show that innovation capacity is related to regional governance, and particularly regional autonomy, regional control of innovation policy, influencing the affectation of structural funds, and the region's location within the European Union. Cohesion policy criteria is also a significant factor, demonstrating the adequacy of the European regional policy's new programming regarding innovation policy. These results point to the importance of the participation of regions in formulation, and implementation bottom-up strategies to develop innovation dynamics and develop partnerships with other public and/or private actors.

INTRODUCTION

Innovation is currently the basis for global competitiveness (Natário, Couto, Braga, & Tiago, 2012). Innovation allows regions to increase their productivity and investment attraction, thus sustaining the steady progress of its quality of living standard.

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Countries aiming to stimulate their innovation capacity must establish a permanent compromise, and be actively involved with their institutions and organizations, invest in education and training, adopt openness values, and commit to investment and collaboration. At a regional level, the study developed by Natário et al. (2012) proved that education, funding, and the innovation process are relevant factors. Thus, at a regional level, education must be stimulated to promote regional policy for the public funding of research and development (R&D) and promote innovation projects with shared coordination between companies.

What other aspects, however, should be considered as relevant factors with influence over the innovation capacity at a regional level?

A wide range of explanatory factors, or determinants, of the degree of regions' innovation can be compiled, based on literature and theoretical concepts. Assuming that a region's degree of innovation is reflected by its capacity for innovation and innovation dynamics, this study aims to evaluate the factors influencing the regional capacity for innovation among the different regions in Europe.

Thus, the primary goal of this study is to compare the European regions, to verify underlying clusters, and identify the distinguishing features between these. To achieve that purpose, various factors were analysed, including the innovation capacity, in terms of the innovative behaviour of small- and medium-sized enterprises. The various regions' innovation capacities were identified and differentiated between, with the ultimate goal of distinguishing more innovative from less innovative regions.

BACKGROUND

The national innovation capacity concept was first defined by Furman, Porter and Stern (2002), and its primary objective was to identify the source of differences between countries, with regard to visible innovation production by reflecting on the economics of innovation, systems analysis and innovation clusters. The concept of national innovation capacity in the work of Furman et al. (2002) relies on three vectors: (i) endogenous growth, based on the ideas of Romer (1990); (ii) the theory of industrial clusters, based on the competitive advantages of nations, developed by Porter (1990); and (iii) the research developed in national innovation systems (NIS) by Nelson (1993), Dosi, Freeman, Nelson, Silverberg, and Soete, (1988), and Edquist (1997).

In recent years, several authors focused on enriching the analysis, and clarifying the concept of innovation capacity using different approaches (Howells, 2005; Schiuma & Lerro, 2008; Natário, Couto, Tiago, & Braga, 2011b).

Managerial Approach

Suarez-Villa (2003) analysed the relationships among inter-organizational networks and innovation capacity, from which a new kind of organization, called 'experimental undertaking', emerged. Natário et al. (2011b) referred to the study of Belderbos, Carree, and Lokshin (2004), which analysed the impact of R&D in cooperation with the company's innovative performance in terms of job creation and innovation productivity, to consider the countries of the community innovation survey (CIS).