Knowledge networks and internationalization of innovative activity across European and Neighboring countries

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Abstract

The recent resurgence of growth studies has clearly established that technological progress and knowledge accumulation are among the most important factors in determining the performance of regional and national economic systems. In particular, it is clear that the success of lagging poor countries is strongly influenced by the capacity to absorb knowledge and technologies from rich industrialised countries. Nonetheless, few empirical studies have tried to analyse directly knowledge flows between the group of advanced and the group of developing economies, mainly because of the lack of adequate indicators.

In this paper we propose original, exploratory evidence on the characteristics of knowledge flows of European Neighbouring Countries (ENC) based on a statistical databank, set up by CRENoS, on patenting and citations at the European Patent Office and at the Patent Cooperation Treaty according to the place of residence of either the inventors or the applicant. We consider the 16 European Neighbouring Countries and their relationships with European Union, with the United States, with Japan and with other ENC’s. We also use data provided by WIPO, which distinguish patents at National Patent Offices according to the residence of applicant. We, therefore, use four proxies for knowledge flows across countries, the former three are based on patent at PCT and EPO whilst the latter refer to National Patent Offices.

a) in- and out-flows of patent citations
b) cooperation links due to partnerships in the inventive activity
c) relationships between applicants and inventors
d) non resident patents at National Patent Offices

The analysis is mainly descriptive and aims at unfolding the main characteristics of this phenomenon.