

Knowledge Flows and Technological Trajectories in the Mediterranean Area: Evidence from Patent Citations

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Abstract

The innovation process is a fundamental source of economic growth and recent research in urban economics and economic geography suggests that geographical proximity between innovators may be important to technological innovation. Analysts also claim that the rise of a knowledge-based economy and changes in the organization of the innovation process have actually increased the value of such proximity to innovation. There is still little empirical research on how knowledge flows between developed countries to developing ones and vice versa. A high level of consensus exists regarding the importance of scientific progress and technological innovation for the growth and competitiveness of firms and for the improvement of national economic performance. We investigate the pattern of knowledge flows and technological trajectories, as indicated by patent citations, between North Saharan (NS) countries and South European (SE) countries by exploring the nature of these flows during the period from 1984 to 2003.

The preliminary results show that the patterns of knowledge diffusion for the NS area countries and SE area countries during this period are quite different. We found that, obviously, the SE area countries had a higher number of patents granted in European Patent Office (EPO) than the NS area countries. Furthermore, the technologies registered in SE area countries were evenly distributed across sectors, while in NS countries the technologies registered were in traditional technology fields and they tend to be absent in the mechanical/machinery and the consumer goods sectors. That means that the value of knowledge in SE area countries is more significant than that of NS area countries. Further research is needed to shed more light on what appears to be a high speed knowledge diffusion seen both in forward and backward citations from/to the NS area countries for the industrial sector.

Keywords: Patent Citations, Mediterranean System of Innovation, Technology transfer, North Sahara, South Europe.

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