Internationalisation of patents by Public Research Organisations from a historical and an economic perspective

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Within the field of the organisation of science, concerns about how academics generate patents tend to focus on a single set of either national or international patents. The main aim of this research is to study both national and international patenting in order to understand their differences. We have approached this issue from both a historical and an economic perspective, using data from the Spanish National Research Council (CSIC), the largest PRO in Spain. Three periods can be distinguished in the CSIC’s history, according to the political context, namely the dictatorship (1939–1975), the transition to democracy (1976–1986) and democracy (1987–to date). The prevailing legal and institutional framework has marked the way in which patenting by CSIC has evolved in each of these periods. The current situation is one in which there is strong internationalisation of patenting activity, and in this most-recent period we explore trends in some of the economic influences on patenting activity. We conclude that the political and normative context may shape the culture of international patenting at PROs like the CSIC and that increasing technological cooperation has supported this internationalisation. However, very often foreign partners are included in the application in order to extend protection abroad for commercial reasons, so their number may not be a good indicator of inventive activity.

Introduction

University patents have become an important object of analysis because they reflect changes in knowledge production and diffusion; they are an indicator of research results that may be taken into account in the evaluation of merits and a potential instrument for technology transfer. Studies carried out to date have tended to apply a single disciplinary perspective, e.g. historical [MOWERY & SAMPAT, 2001; METLAY, 2006], economic [FELLER, 1990; PAVITT, 1998], or scientometric, etc.
Elsewhere we have shown that similar debates should be extended to the other main knowledge producer in the public R&D system, namely Public Research Organisations (PROs), and that a multidisciplinary approach allows for a richer interpretation of the results [AZAGRA & ROMERO, 2006].

In this paper we apply this philosophy to the study of a question that is little examined in the literature: what are the factors leading academic institutions to patent abroad? While most studies focus their attention on just one set of patents, one of the authors has shown that differences among sets of patents matter in the analysis of how they are generated, e.g. national vs. international patents, since they may lead to normative conclusions [AZAGRA & AL., 2006].

Our object of study will be the Spanish Council for Scientific Research (CSIC), the largest PRO in Spain according to its historical trajectory, its resources, its wide regional implantation and its multidisciplinarity across research units. It is also very active in patenting, currently accounting for more than 10 percent of Spanish patent applications.

**Patent internationalisation processes**

Sovereign states legislate on intellectual property rights. Inventors can apply for a patent through their respective national patent offices. Most developed countries now allow universities to apply for patents and license them.

The traditional way to protect knowledge abroad is to apply for a patent in the foreign country concerned, which requires a separate administrative procedure in each country. To simplify this process, some countries have signed international treaties allowing applications for patents in their territory to be made through a common procedure. Citizens of the participating countries can designate in which of these countries they want protection, including their own.

A country’s decision to promote internationalisation by means of a treaty is a specific regulatory change which deserves attention. The aim is not to increase the number of patents per se but to facilitate patenting abroad. However, this option may make patenting more attractive to applicants, thus increasing the number of patents overall.

Most European countries participate in two main pacts of this kind. The first is the Patent Cooperation Treaty (PCT) [WASHINGTON, 1970], which gave rise to the so-called PCT patent. The second is the European Patent Agreement (EPA) (Munich, 1973), which gave rise to the so-called European Patent.1 Applications are made through the International Office of the World Industrial Property Organisation and the

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1 This should not be confused with the existing project of enabling a single patent for all members of the European Union.