Chapter 7

Barriers to Academic Entrepreneurship in Knowledge Based Spinoffs: Evidence from Spanish Research Groups

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ABSTRACT

In this chapter, we will discuss the role of knowledge as a strategic resource for companies. Universities focus on knowledge development as the main result of their research groups activities; but really few exploit this intangible resource through knowledge-based spinoffs (KBSOs), given some internal barriers that hinder the academic entrepreneurship activity. In order to identify them, is performed an exploratory analysis with a population of 130 research groups belonging to social science and Humanities areas Faculties of Autonomous University of Barcelona. The results confirm the conclusions presented in previous studies regarding existence of two types of barriers to enterprise: structural and operational. Also, it evidences the existence of different types of research groups, and how the size, research area and principal researcher’s academic status affect the way that barriers to academic entrepreneurship are perceived, as well as both transfer processes and entrepreneurial activity that are developed.

1. INTRODUCTION

The prestige of universities depends increasingly on their generation of high-quality research and later their success in transferring and commercially exploiting it, through property rights, patents, or spinoff creation. (Bozeman et al. 2013; Tartari & Breschi, 2012). This two-fold ability—is key to modern universities’ survival, in that it helps improve their ability to self-finance and generate resources and value for their local territory.

Empirical evidences show how the research results’ nature is important in the success of the transference process, especially regarding of

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academic spin-offs creation. O’Shea (2005) examines spinoffs rate at 141 US universities from 1995 to 2001 and evidences how research results of technological and experimental sciences have a positive and statistically significant effect on spinoff formation rates.

Nowadays, research groups of social sciences and humanities (SSH) fields develop a significant part of the academic research activity (Bordons et al., 2010). Knowledge, as a principal research result, cannot be transferred through classic means, such as intellectual property rights or patents, as is typical in technology and experimental sciences. Universities lack parallel mechanisms to protect and commercialise their research results. Consequently, most of these research results get transferred or exploited in firm-institution agreements or through the creation of academic knowledge-based spin-offs (KBSOs).

This kind of firms, -knowledge based- seem to be a relatively interesting option, especially in some countries, like in Spain, characterized by a service-based economy, and weak industrial base. The creation of knowledge-based businesses, promotes value creation as well as regional economic and social development (Bathelt et al., 2010).

But the Spanish universities’ long tradition of creating technology-based firms (TBFs) contrasts with the uncertain of how they can exploit the knowledge research results. The lack of experience and absence of a legal framework make difficult to determine how universities should go about creating and managing these new business initiatives. Beyond the common problem of roles undefined for teaching staff, and a general lack of action procedures, some university-specific factors also might hinder the process of KBSO creation (Nederhof, 2006).

In this sense, the number of KBSOs created by Spanish research groups varies considerably from one university to another. Universities with an entrepreneurial tradition and spirit, as well as a goal of generating activity, skilled labour, or added social value, tend to drive such initiatives. Despite some relative success in these initiatives though, academic and research staff continue to perceive internal barriers to entrepreneurship in universities.

Giving this situation, this paper seeks to contribute to the KBSOs generation understandings. There exists a gap in the study of the main barriers in the entrepreneurship activity in that discipline. In the first section, we locate where these barriers reside and identify whether their influence differs with the personal and material characteristics of the transfer unit. As Owen-Smith and Powell (2001) note, scientists’ perceptions of difficulties are crucial to understanding their willingness to participate in knowledge transfer activities. If academics are unwilling to participate, knowledge transfers between universities and society would be unlikely. Thus, by understanding academics’ perceptions of and behaviours toward the internal barriers to spin-off creation, we can gain insights into the nature and drivers of academic entrepreneurship activity.

Some recent studies offer evidence of barriers to academic entrepreneurship (Bozeman et al., 2013; Clarysse et al., 2011; Tartari et al., 2012). Most of them focus on technology transfers, but these works show that the primary barriers originate from: (1) the characteristics of a particular university and (2) the way the university deals with the transfer process. Using these potential barriers as a starting point, we analyse how perceptions of them differ, depending on the characteristics of the research group. We also consider whether and how these characteristics might determine the entrepreneurial intensity of a research group.

2. INTERNAL BARRIERS TO ENTREPRENEURSHIP

Clarysse et al. (2011), Tartari et al. (2012) and Bozeman et al., (2013), among others, show that academic researchers believe their universities limit their knowledge transfer processes. These
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