

# Chapter 19

## Knowledge Transfer between Universities and Knowledge Intensive Business Services: An Empirical Study

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### ABSTRACT

*In this chapter, the authors study the importance of regional entrepreneurship as well as the characteristics of location, and show that the basis for creation of new firms is knowledge, thus giving emphasis to broadcasters (spillovers) of knowledge coming from universities and other R&D institutions. Thus, the knowledge generated arises from the collaboration between companies and public research institutions (Audretsch & Lehmann, 2005). Here, the authors specifically address the KIBS to the extent that they are creators, users, and transmitters of intensive knowledge. This shows the importance of the study of cooperation between universities and firms, especially KIBS. In this sense, the empirical results demonstrate that cooperation between KIBS and universities occurs independent of their location (rural or urban) and typology (professional or technological). The authors furthermore find that rural KIBS have increased their levels of graduate employment faster than their urban KIBS peers.*

### INTRODUCTION

Knowledge is the product of universities that thereby contribute towards fostering productivity and innovation, factors fundamental to boost-

ing development and regional competitiveness (Martin, 1998; Muller, 2001; Howells & Tether, 2004; Toivonen, 2004; Koch & Stahlecker, 2006; Tolstoy, 2009). The rising number of studies on the importance of entrepreneurship at the regional

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level, as well as the characteristics of location, reveal how the key to founding new companies would seem to be knowledge and hence throwing the spotlight on knowledge spillovers generated by universities and other research and development (R&D) institutions. Furthermore, some of the knowledge generated emerges out of cooperation between companies and public research institutions (Varga, 2000; Audretsch & Lehmann, 2005; Riddel & Schwer, 2003). According to Acs et al. (2006), entrepreneurial activities are tending to be ever higher in standard with investment in new knowledge remaining relatively high while companies, especially new companies, simultaneously making recourse to true sources of knowledge (universities and R&D). Meanwhile Varga (2002) studies the location of knowledge spillovers as a type of economic agglomeration and a means of contributing to regional economic development and as such deserving priority within the context of political practices. Furthermore, Roura (2009) holds how the employment of individuals who have completed higher education reflects on the development and competitiveness of regions. Entrepreneurship also plays a role in regional development as first defended by Schumpeter (1934, 1939, 1942). The entrepreneur represents the primary driving force behind economic development. Indeed, entrepreneurship is able to roll out the innovation enabling profits to be obtained through assuming the risks inherent to creativity. Furthermore, such entrepreneurialism, particularly in the case of new companies, and especially high technology and/or knowledge intensive activities, may originate inside universities with many student engaged in developing projects in the course of their studies, which they later go onto implement and commercialise (Smilor, Gibson & Dietrich, 1990; Steffensen, Rogers & Speakman, 2000; Feller, Ailes, & Roessner, 2002). According to EIRMA (2007), the importance of the transfer of knowledge and cooperation between companies and universities is of great value due to

its major input into the development of regional competitiveness.

Correspondingly, interest in Knowledge Intensive Business Services (KIBS) has steadily risen ever since such companies were identified as generating added value to the economy (Acs, 2002; Autio & Acs, 2007; Henrekson & Johansson, 2010). In this way, KIBS are perceived as being of great strategic importance given that they are in the vanguard of innovation practices as well as constantly carrying out practices of overall great importance to the development and diffusion of knowledge (Tether & Tajar, 2008; Acs, Braunerhjelm, Audretsch, & Carlson, 2009). As renderers of knowledge intensive services, the presence of KIBS in a specific location is frequently considered as an important leverage of regional industrial competitiveness (Muller & Zenker, 2009). From the perspective of many authors, there is a clear correlation between the employment rate accounted for by KIBS entities and the level of productivity of non-KIBS companies in the regions hosting the former (Dall'erna, Percoco, M. & Piras, 2007; Delmar & Wennberg, 2010). However, there are also studies that take this viewpoint further and differentiate between the KIBS universe breaking down such companies into the professional and the technological with the latter deemed to display a greater propensity to employ individuals with higher education than professional KIBS (Frell, 2006; Corrocher, Cusmano & Morrison, 2009).

According to Malecki et al. (2004), KIBS essentially opt for locations in urban centres as these inherently prove the most propitious to business innovation and networks boosting regional levels of competition. Nevertheless, Sheamur and Doloreaux (2008) encounter a downturn in the numbers of KIBS companies in urban agglomerations in favour of rural areas.

Correspondingly, and in parallel with the sheer scale of the relevance attributed by the literature, this research seeks to study the dichotomy between

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