Chapter 12
Economic Contribution of University Spin–Off: A Regional Study of the Spanish Case

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ABSTRACT

University spin-offs (USOs) are drawing increasing interest among both academic and institutions, given their potential contribution in the economic development. In order to obtain empirical evidence about the impact of Spanish USOs, this chapter analyses the population identified in 2013, revealing a limited impact in the business fabric, into job creation and to generating wealth, but major differences among regions. To identify which factors are related to a greater or lesser impact of USO in the regions they are located, the authors apply a logistic regression data panel for the 2012-2015 period. The results show that some traits of USOs and their parent universities determine a greater number of employees, but the particularities of the environment in which they operate, only affect to USOs belonging to the ITC sector. The findings could support public institutions about the types of policies should be promoted to improve the economic contribution of USOs.

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INTRODUCTION

The importance of higher education institutions in regional economic development has been extensively evidenced in the literature (Drucker and Goldstein, 2007; Caniëls and van den Bosch, 2011). Their direct impact as employers and purchasers of goods and services is further enhanced by their training of human capital and creation of new knowledge through scientific research (Uyarra, 2010; Rodrigues and Melo, 2013). However, for society to be able to effectively benefit from universities’ huge socio-economic potential, research results need to be disseminated, applied and economically exploited (Berggren and Lindholm Dahlstrand, 2009). Hence, since the late 20th century, the governments of developed countries have passed some legislation to stimulate the growth of university research through the establishment of public-private research partnerships, the creation of specialized transfer units, and the setting up of science parks and business incubators (Lockett et al., 2005; Fryges and Wright, 2014). It can be said that the first of these laws is the US Bayh-Dole Act, which granted universities property rights over their inventions, thus providing them with an alternative source of financing other than public funds (Goldstein, 2010). Due to the positive result of this act in US (Hayter, 2015), certain European and Asian countries have adopted similar legislations in order to promote more active participation by universities in technology transfer (Shane, 2004; Mustar et al., 2008; Grimaldi et al., 2011). Spain has been no stranger to this process, and has implemented policies to promote the carrying out of research of excellence “aimed at contributing to the advancement of knowledge, to innovation, to improving people’s quality of life, and to companies’ competitiveness” (Article 41.1. of Spain’s Organic Law on Universities, 2001).

Together with the support of public institutions, the development of the information society and other areas of knowledge, which require continuous technological innovations, have all led to an increase in technology transfer activities from the university to the industry (Rothaermel et al., 2007). In this regard, Etzkowitz et al. (2000) suggest that from different starting points, but worldwide, a pattern of transformation towards an entrepreneurial university is emerging, in response to the increasing importance of knowledge in national and regional innovation systems. Thus, universities’ genuine missions of producing knowledge and subsequently disseminating it through teaching and scientific publications have been complemented by a third mission, where three main facets converge: entrepreneurship, innovation, and social engagement (Vorley and Nelles, 2008). While the triple helix model, where the interactions between universities, industries and government bring to an improvement in innovation processes, the engaged university approach go further, as it advocates the active and initiating role of universities in regional development, being the academic entrepreneurship an important mean to achieve it (Caniëls and van den Bosch, 2011; Fromhold-Eisebith and Werker, 2013).

Even though research can be marketed through patents, licenses and collaboration between universities and industries, the creation of spin-offs (USOs) has been identified with the archetype of the entrepreneurial university (Harrison and Leitch, 2010). Given their perceived importance in the economic and technological development, in the last decades USOs is drawing increasing interest and is sparking political and academic debate (Shane, 2004; Wright et al., 2008; Vincett, 2010, Hayter, 2013). From an academic viewpoint, they have become the focus of many studies which, from different scientific disciplines and under diverse theoretical approaches, address topics related to their creation, their functioning or their economic impact (Mustar et al., 2006; Helm and Mauroner, 2007; Rothaermel et al., 2007).
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