

## **Socio-cultural circumstances to establish university spin-off companies**

*Anna Szopa, PhD, Jagiellonian University, Krakow Poland*

Academic entrepreneurial activity is a vital source of innovation, employment and economic growth (Carree and Thurik, 2003; Parker, 2004; van Stel et al., 2005). With the innovation turn of the 1990s, during which universities created high-quality spin-off companies governments increasingly viewed entrepreneurship and innovation as a solution to many social and economic problems, there has been considerable growth in new research from psychological and economic points of view.

The creation of new companies from university- the process of 'spinning-off' companies has received attention from a range of perspectives in recent years. They are not only to create innovative products or services, they also contribute to the productivity and creativity (Hayter, 2013). The effects of academic spin-offs activity are well identified in stories of the origin of Silicon Valley and the San Francisco Bay Area and more recently in the information technology and biotechnology industry (Chiesa and Piccaluga, 2000). The role of particular universities, such as Stanford, Harvard and Massachusetts Institute of Technology in the USA or Cambridge in the UK, in these processes is also well documented (Wessner, 2013). There is no doubt that spin-offs are seen as a valid means of knowledge and technology transfer under certain conditions. In spite of this transfer, the influence of social and cultural factors remains understudied. Therefore this paper is dedicated to examining the social and cultural factors involved in university spin-offs' activity.

The aim of presentation is to look and exam the social and cultural factors involved in university spin-offs' activity. I used a qualitative case study approach. Data was collected from sixteen spin-off companies representing various industries: pharmaceuticals, biotechnology, medicine, chemistry, nanotechnology, and information technology. The start-ups were chosen as representative of academic start-up companies whose main focus is innovation, and therefore constitute a good sample for the study of socio-cultural aspects. The final cases were chosen after initial analysis of the spin-offs founded at two American universities: University of Maryland, and University of Central Florida. Three main methods were used (in accordance with the principle of methodological triangulation): interviews, observation and document analysis. Ten high-level management figures were interviewed, including company founders, presidents, vice-presidents and managers. The interviews lasted approximately 1 hour and were recorded and written out in transcript form, with the transcripts coded for the main themes. I posed open-ended questions about the characteristics of socio-cultural factors. The interviews were accompanied by observations from the CEO's and the team. Additionally I have analyzed documents, such as websites, press releases, etc.

My study pointed out the main factors influencing the culture created by academic spin-offs and investigated the role of spin-offs as a source of socio-cultural aspects of innovation processes. There is no doubt that university spin-off companies play important role in this system. They create, store and transfer the knowledge, skills and artifacts, which define new technologies. University spin-offs are being increasingly internationalized (as measured, for example, by the proportion of industry R&D expenditures financed from foreign sources, the number of international alliances, etc.). Examined spin-off companies internationalize their research and development function through international technical alliances, international technology transfer, international trade of capital goods and international flows of scientific personnel. Therefore their technology has become increasingly globalized. Scientific international cooperation flows tend to be more intense than technological ones. Through international technological cooperation and the cross-border adoption and adaptation

of institutional forms and practices cooperative alliances give university spin-offs access to a wider range of solutions to technological problems. Forming cross-border alliances is one of the most important means for firms to enhance their innovative capability.

Examined university spin-off companies provide also a ground for inter-sectors collaboration; encourage mobility and cooperation among faculties, students and business employees. Industry people share their wisdom and experience with university researchers and faculties and students have opportunity to be engaged entrepreneurial projects, and share their knowledge. Due to university spin-offs activities both groups learn from each other. University spin-off companies foster an entrepreneurial spirit, stand linkages between industry and universities, and remain a platform for educating the skilled employees of the future (Gomez Gras et al., 2008). Much of the success of major system-building efforts derives university spin-offs' ability to bring together two diverse cultures: groups of researchers from universities and professionals from industry, and due to their commitment extend the innovations encourage the development of interorganisational linkages and personal networks through which new technologies and knowledge can be shared and created (O'Shea et al., 2008). Since university spin-offs compete on the world markets in more differentiated segments of the industry and on the basis of own global strategy, spin-offs possess own marketing and serving international networks along with growing reputation abroad.