Chapter 1
A Framework for Longitudinal Analysis of University Spin-Offs

Fernando Almeida

https://orcid.org/0000-0002-6758-4843
INESC TEC, Faculty of Engineering, Oporto University, Portugal

Eugénio Cunha
INESC TEC, Faculty of Engineering, Oporto University, Portugal

ABSTRACT

The creation of university spin-offs plays a fundamental role in the technology transfer process between universities and the business field. Universities have developed for themselves internal processes within their technology transfer offices in order to collect this information. However, this data is only available locally and often outdated. Furthermore, the number of frameworks that allow the study and simultaneously access to this data in an integrated way is still small on a global scale, and in Portugal, there isn't a repository which contains this information. This study proposes the establishment of a framework for longitudinal analysis that could identify and characterize the evolution and performance of Portuguese university spin-offs. The repository is built exclusively in open source technologies and offers the potential to characterize and analyze the evolution and performance of university spin-offs in different perspectives, such as individual factors; organizational factors; institutional factors; and scientific, educational, and commercial outputs.

INTRODUCTION

Today's most advanced economies are based on the greatest availability of knowledge. The competitiveness of the society, people or companies is based on their ability to access to knowledge, in order to meet the challenges of contemporary society. In this new paradigm, universities perform a central role, because they are important producers of new knowledge that have direct and indirect impact in the educational formation of society and competitiveness of companies.

At the same time, frequently, the knowledge created within universities will have a commercial application and a commercial value which can be exploited through commercialization activities (Perkmann et al., 2013). Nevertheless, only fairly recently universities have serious invested in expanding to this new role. Universities have been playing a critical role in society because alongside their traditional roles as training and research institutions, they also help to foster economic and social development. But this economic role has been primarily a function of their first two roles – the training and education of students and the generation of new knowledge. The Universities that in many parts of the world have started to invest in the creation of internal mechanisms aimed at supporting academic entrepreneurship in its different forms (Fryges & Wright, 2014) have witnessed that these internal, university-level mechanisms and policies have contributed significantly to the professionalization of activities that encourage the exploitation of research results (Baldini et al., 2014). In addition to the traditional mandates of teaching and research, knowledge transfer has become a third mission in which academic institutions engage.

In general, the concept of the third mission encapsulates many of the rising demands of the university to take a more visible role in stimulating and guiding the utilization of knowledge for social, cultural and economic development (Carot et al., 2012). In order to embrace the third mission, universities needs to readapt and reorganize in order to perform new activities, such as IPR and patenting, licensing, carry out entrepreneurship training, internal incubation, support spin-off creation and help them in the market (Reichenfeld, 2010).

In this paper, we propose the establishment of a framework for longitudinal analysis of University spin-offs in order to facilitate the mission of knowledge transfer offices that, could they easily identify and characterize the evolution and performance of university spin-offs along several years of analysis. This is the first repository for longitudinal analysis of university spin-offs in Portugal that offers great potential to characterize, discuss and mitigate open issues in literature related to several dimensions of spin-offs analysis. Furthermore, the repository is exclusively built on open source technologies, can be accessed by Web and mobile devices and offers interactive features that let users easily understand the main events and occurrences associated with each university spin-off. The paper is organized as

22 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage: www.igi-global.com/chapter/a-framework-for-longitudinal-analysis-of-university-spin-offs/238948

Related Content

MCDM for Candidate Selection in E-Voting
Rasim Alguliyev, Ramiz Aliguliyevand Farhad Yusifov (2019). *International Journal of Public Administration in the Digital Age (pp. 35-48).*
www.irma-international.org/article/mcdm-for-candidate-selection-in-e-voting/225797

Walk to Health: The Transtheoretical Model for Behavior Change Applied to Exercise
Paula Millerand James O. Connelly (2020). *International Journal of Public and Private Perspectives on Healthcare, Culture, and the Environment (pp. 1-11).*
www.irma-international.org/article/walk-to-health/258278

Web 2.0 Usage by Saudi Female Students for Information Sharing in Public Sector University a Pilot Study
Saqib Saeed, Hina Gulland Sardar Zafar Iqbal (2017). *International Journal of Public Administration in the Digital Age (pp. 79-90).*
www.irma-international.org/article/web-20-usage-by-saudi-female-students-for-information-sharing-in-public-sector-university-a-pilot-study/181609

Computing Technologies and Science Fiction Cinema
Rocío Carrasco-Carrasco (2019). *Advanced Methodologies and Technologies in Government and Society (pp. 73-83).*
www.irma-international.org/chapter/computing-technologies-and-science-fiction-cinema/215852

Use of Robots to Help Students With Diverse Needs: Concepts, Opportunities, and Challenges
Aye Tuna (2021). *Handbook of Research on Policies, Protocols, and Practices for Social Work in the Digital World (pp. 74-90).*
www.irma-international.org/chapter/use-of-robots-to-help-students-with-diverse-needs/279538