

A Framework to Foster Innovation-Driven Enterprises Creation in the University, the Case of Monterrey Region in Mexico.

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Abstract

Emerging countries face a series of challenges on their agenda, one of them being the socio-economic development of their region. One well-known way to create a competitive economy is by introducing innovative technologies, products, or services. Entrepreneurship can be classified into small and medium enterprises and innovation-driven enterprises (IDE). Three main actors can boost IDE's creation by looking at the triple helix model: industry, government, and the university. In this research, the university plays the leading role in promoting the creation of these companies. Conceiving a new company by transferring technology from an academic institution is known as a university spin-off. However, this practice has not been studied in depth in emerging countries. Therefore, this research focuses on shedding some light on how the entrepreneurial university can foster the creation of these companies.

The steps in this process were (i) identifying the significant elements for the creation of innovation-driven companies with a literature review and a validation of the elements with the Fuzzy Delphi method, (ii) modeling the current process of spin-off creation in two universities in the Monterrey region using the Total Interpretive Structural Modeling tool, (iii) and analyzing the current situation in the region to show key points in the creation of policies to support university decision-makers.

The results show the current process of the two largest universities in the region, one private and one public, from which key points can be extracted. Similar aspects are the relevance of the entrepreneurial vision of the university and the applied research in the following stages of the process. Also, the high influence the context has on the applied research carried out by the universities. A third common aspect was that the technology transfer strategy mechanism was the first entity receiving the applied research and defined whether the project could be commercialized via university spin-offs. If so, it was transferred to the support mechanisms for the creation and development of the company, for example, incubators and accelerators, among others. Moreover, access to capital was exhibited as an opportunity for both universities, wherein the private university, this element was not found in the system, and for the public university, the manner of accessing these financial resources was through funds that supported research and development activities, being a conflict in the creation of a company because it is non-profit capital. A call for the region was the lack of culture towards technology commercialization; in both universities, it was not yet strong enough to drive the system, and it appears to be in the shaping stage. In this way, the foundations were laid with this research, for the entrepreneurial university in an emerging country to understand their technology transfer channels, and to adapt them to their context.

Keywords

University Spin-off, Entrepreneurial University, Technology Transfer, Research Policy.

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Alejandro Téllez Girón Barrera is an Industrial engineer working on his M.Sc. in Manufacturing Systems at the Tecnológico de Monterrey. He is researching innovation-driven entrepreneurship and university's spin offs development. He has worked in Spain and Mexico.

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