Chapter 24

The Portuguese University: Knowledge Leverage towards Innovation

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ABSTRACT

This chapter presents an evolutionary analysis, at the Portuguese and European levels, that features Higher Education centred on the University’s Mission, the building and importance of National Innovation System, and related dynamics. The university should fulfil the fundamental role related with creation, preservation, and dissemination of knowledge and generate skills and key competences to respond to increasingly more complex problems in a rapidly changing environment, as well as to enable multidisciplinary approaches that are in the university’s own and peculiar nature, and which is fostered by the relationships with the systems that drive the interaction with the target communities. Referring to the last quarter of the 20th century, the chapter outlines the emergence of the “Research University” in the context of the slow but progressive increase in value of Science and Technology and Research and Development, with the organization of the related National Systems in order to be able to foster innovation.

BACKGROUND

The innovation approach and its management is not dissociable from knowledge production and its efficient dissemination, use and transformation, wherein the main actors in this process are “the University”, the interface “University/Target Communities”, the institutions, the organizations, and all other agents that interact with the academia, as well as the State.

This issue was addressed in the research developed between 2009 and 2011, focusing on Information an Information Management in institutional contexts. The University was selected as the main context of a study that included the emergence of the “Research University” in Portugal, in the last quarter of the 20th century, alongside the recognition of the value of Science and Technology (S&T), Research and Development (R&D) and Research & Development + Innovation (R&D+i)
The Portuguese University

/ RDI), with the building of the National S&T System (NS&TS) and the evolutionary path that will lead to the National Innovation System (NIS).

The analysis outlines the secular institution of the University facing a society which, on a global scale, has assigned to the university an increasingly central role and participation in it and interaction with social, economic and political dynamics.

The University is expected to generate knowledge, skills and key competences to respond to increasingly more complex problems in a rapidly changing environment, as well as to enable multidisciplinary approaches that only the University can develop and implement, by “building upon a diversity” which characterizes it, and which is fostered by the relationships with the various systems that drive the interaction with the target communities.

In fact, the University is called to participate in new educational/learning models, to form more and better graduates, masters, PhDs, to guarantee lifelong learning, and to participate actively in the new “informational mode of development”. The latter is based on centralizing information and knowledge as primary sources of productivity and competition: on the “new knowledge based economy”, on the improvement and development of the national economy, on enhancing interaction with the community, which is translated into one word, “change/shift”, applied at two levels:

- Promoting the shift within it;
- Leveraging the shift on the outside.

A shift which is not separable from the globalization phenomena and consequent internationalization that characterizes the times in which we live. A shift that begins within our own University, but depends on the strategies that come as a result as the national suitability to the defined policies, from the start, at the European Union level, competing with actors such as the United States and Japan, and, naturally, increased, at a national level, with the regional specificities brought in by the proliferation of Universities in the 1970s and 80s, which should not be forgotten.

A scenario in which the University’s systemic referential should not be forgotten, namely its positioning in view of the various national systems, mostly very recent but already subject to constant (re)constructions, which are:

- The Educational System (ES) and the Higher Education (sub)System (HES);
- The Scientific System (SS) or: the Science and Technology System (S&T), or National Scientific System, or National Scientific and Technological System, or National Science and Technology System (NSS, NS&T, NS&T), depending on the context of use;
- The Innovation System or “Research, Development and Innovation System” (IS/RDIS);
- The Business System itself (BS).

Thus, from the research made, namely related to the retrospective analysis and empirical study, we will seek to present, in a concise way, the Portuguese reality in terms of the government, academic and business life, a triad that seems to correlate with the application of the “Triple Helix Model”, proposed by Etzkowitz and Leydesdorff in 1998.

Although this is not its intended goal, this model is a reference for the study done, in the way that it is at the basis of the 2nd academic revolution beginning in mid-20th century. It was related to the development and complex process of scientific research, its broader opening to the “market” – industrial and agricultural – and consequent increase in value of the RD&T transfer, leveraging a gradual transformation of the University and its increasing connection with society/economy, building the fundamental strategic axis that integrates the three vectors referred above in

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