



**BOOK REVIEW: THE FOUNTAIN OF KNOWLEDGE: THE ROLE OF UNIVERSITIES IN ECONOMIC DEVELOPMENT.**

**Breznitz, Shiri M. Stanford University Press. 2014.**

**Mariam SABER<sup>1</sup>**

Professor Breznitz's book *The Fountain of Knowledge* examines the more limited subject of commercialization of biotechnology research at Yale and Cambridge Universities. The main assembly for this book is technology transfer officers and university administrators in the biosciences. Economic geographer Breznitz collected data on interviews, essays and reports about regional economies, universities and companies. She conducted 69 in-depth interviews in Cambridgeshire and 46 in New Haven, Connecticut, between 2003 and 2008 with updates in 2013.

The book begins with a review of the universities' traditional roles in research and teaching and sees the pay back the community as the third role in modern universities. In her "Tale of two renowned universities", Cambridge ranked tenth in the Times Higher Education World rankings for 2013 and tenth in the Yale rankings. Breznitz is recording the Cambridge mission to contribute to the community at the highest level of international excellence. At the same time, she notes the policy of noncontrolling between the commercial exploitation of academic know-how and the links with industry in general. Yale has been portrayed as having a historical culture that is not generally associated with the community and especially with the industry at the beginning of the 1990's.

The second chapter on technology transfer research literature is divided into external factors and internal factors. Among the most notable external factors are the government's legislation, the state-funded intellectual property policies and the duties and appropriations expected from tax incentives. Environmental factors describe relationships between institutions on national and regional levels. Internal factors include culture, policy and organization.

The most important historical and national frameworks of the two countries described in Chapter 3 are through land-subsidized universities that focus on applied research, the requirements of the Lois Morrill United States federal government from 1862 to 1890, and the contrasting late entry of government funding for research after the second world war in the UK Chapter 4, Yale University, tracks the incredible revival of research and renewal of the community led by President Richard Levin from 1993 to 2013. From a dangerous campus to a reconstructed city, and with the help of venture capital near Stamford-Greenwich, Yale University has become a focal point for the biotechnology industry with one or eight spin-offs every year after 2003. On the other hand, in Chapter 5, the University of Cambridge, with its decentralized collegial organization and its vast mission of general excellence, has fewer clear policies on transferring technology. Two colleges in Cambridge have set up their own science parks, several charities provide significant funding, and the government also provides substantial funding for research. The Cambridge phenomenon of the mid-1980s is for high technology cluster around Cambridge, but the annual number of biotechnology production centers is low after 2003.

---

<sup>1</sup> She works as an economist at a private company in Rabat, Morocco, [mariamssaberr@gmail.com](mailto:mariamssaberr@gmail.com)

In comparing the two cases in Chapter 6, Breznitz focuses on three factors of organizational change: intensity, speed, and inclusion. The high intensity change at Yale has included involvement in the university and its administration and extended to the community. At Cambridge, the process of technology transfer was widespread and there were changes in response to external relations and funding. According to Breznitz, the changes have taken place at the level of the central administration, but they have not been coordinated with departments or colleges, or with parties outside the university, such as venture capital firms, science parks and local companies. The pace of change was fast at Yale University and lasted for three years. A series of changes occurred in seven years at Cambridge but because of this prolonged period it seemed confusing. The change to Yale included the creation of an office to support collaboration between university, New Haven City and Connecticut State in an attempt to influence local economic development. Changes in Cambridge technology transfer were internal to the university and did not include other regional actors. Breznitz continues to confront other Stanford technology transfer offices, MIT and Georgia Tech, and concludes that there is no secret recipe, but the important factors and best practices that can guide decisions.

Overall, Breznitz states that it is important to realize that universities are heterogeneous and complex organizations. She then criticizes the "third role" of universities, the marketing of technology. Issues of university identity and of academic freedom are countered by the argument that funding follows initial research, so that science is not altered by the link to business needs and financial gain. A potentially more controversial issue is made that if technology commercialization of technology is to be sustainable, it must become part of the faculty promotion and tenure process. No comment was made on how this could happen, for example, if it could be entered as an investigation and / or service, or in a new and different category. Finally, the book closes with this note: that universities are fountains of knowledge and that they need to be encouraged to continue to teach and conduct research, while making a positive contribution to their local economies but the economic contribution should not be their main mission.