

PORTUGAL 2007

Lisbon Research and Policy Workshops
on
"Science, Technology and Social Change"

Workshop 1

**High Tech Entrepreneurship:
Implications for Science Policy and Education**

Jointly organized with the CMU-Portugal Program,
PhD Program in Technological Change and Entrepreneurship

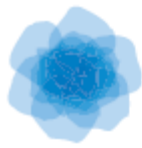
Date: 5-6 July 2007

Venue: Museu das Comunicações, Portuguese Communications Foundation, Lisboa

Innovation and entrepreneurship are increasingly seen as the key elements of a nation's and region's ability to grow and prosper. Silicon Valley, the most dynamic region in the world today in terms of growth and innovation, was propelled forward mainly by new technology and the creation of startups - Apple, HP, Google, and Intel, to name just four. At the same time, companies are also becoming global enterprises. Firms in America and Europe engage in services, manufacturing, and research throughout the world. Others are going beyond their borders to procure products and services at lower prices, often from new companies or subsidiaries in countries like China, India or Mexico. Even certain kind of highly skilled work is migrating to lower cost regions. Well educated engineers and computer scientists from Bangalore or Shanghai are competing for jobs that traditionally went to their counterparts in Europe and the US. For example, by the end of 2007, China and India's share of global R&D staff is projected to jump from 19% to 31%.

Advanced regions such as Europe and the US are thus grappling on how to continue to develop and thrive in this environment. For example, it is expected that future engineers and scientists trained in this regions will need more than traditional technical skills. They will need to learn how to leverage, engage in, and manage innovation. They will also need to understand how globalization is reshaping opportunities and challenges. At the same time, there is an increasing interest in having more fundamental answers to a set of questions that are at the core of the innovation and entrepreneurial process:

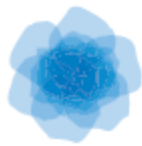
- Where do Entrepreneurial firms come from and what determines their success? There has been substantial progress in answering this question. For example, in many industries, a substantial contingent of entrants is founded by employees of incumbent firms in the same industry. Moreover, these "spinoffs" perform distinctly better than other *de novo* entrants. Invariably, more successful firms spawn spinoffs at a higher rate and spawn better-performing spinoffs. But this are still fragments of a more comprehensive answer that is still yet to emerge.
- What types of firms devote the most effort to innovation, in what kinds of innovation activities do firms specialize, and what factors condition their success at innovation? We know that, as industries evolve, firms tend to specialize their activity and innovative effort in parts of the value chain. Moreover, vertical specialization can promote the diffusion of technology, entry into the industry, and a shortening of the industry lifecycle. We have also learned that codifiability of knowledge, patent protection, and modularity



are key if separate firms are to conduct activities that previously were performed together. But, again these are instances of a broad perspective that is yet to emerge.

- How can regions develop capabilities in new areas? In recent years certain “high-tech” industries have developed in countries not traditionally at the forefront of innovation. A quintessential case is the rise of the software industry in India, Ireland, and Israel. Though partly explained by theories of comparative advantage, we are far from having a complete view of the drivers and lessons from to these developments.

This workshop seeks to discuss current issues in entrepreneurship and innovation research, which has been the topic of scholarship and research in a variety of academic fields. Its interdisciplinary nature reflects the multifaceted, complex social and economic phenomena of the question. The workshop will be oriented to guide and direct policy makers to understand the issues, the debates, and the most important questions of what is known and has been established from areas which are at the frontier of research. Emphasis will be given to improve our understanding of issues associated with the training of engineers, scientists and managers in a way that promotes innovation and the commercialization of technology, while fostering the science and technology base. A dialogue will be established among researchers and policy makers in Europe and America.



Thursday July 5, 2007

Registration: 16:00

Session 1: 16:30-19:30

Chair and Introduction: Manuel Heitor, MCTES, PT

Speakers:

- A. Roy Thurik, Erasmus Univ. Rotterdam, NL
- Steven Klepper, Carnegie Mellon University, USA
- Rui Baptista, Instituto Superior Técnico, PT

Initial Discussion by:

- Paulo Rosado*, Outsystems, PT
- Jose Mata*, Fac. Economia, Universidade Nova de Lisboa, PT
- António Gomes Mota*, ISCTE

Visit to the Portuguese Communications Foundation: 19:30

Reception and Dinner

Friday, July 6, 2007

Session 2: 9:00-10:45

Chair: David Audretsch, Max Planck Institute of Economics e Indiana University

Speakers:

- Ashish Arora, Carnegie Mellon University, USA
- Simon Parker, University of Durham, UK

Initial Discussion by:

- Joaquim Paiva Chaves*, A.P. Business Angels PT
- Nuno Arantes e Oliveira*, Alfama
- Carlos Noeme*, Inst, Superior Agronomia, UTL, PT

Coffee Break: 10:45-11:15

Session 3: 11:15-13:00

Chair: Ashish Arora, Carnegie Mellon University, USA

Speakers:

- David Hounshell, Carnegie Mellon University, USA
- Frédéric Delmar, EM Lyon, FR

Initial Discussion by:

- Nuno Carvalhosa, Portugal Telecom, CMU-Portugal Program
- José Manuel Mendonça*, Fac. Eng, Univ. Porto e INESC, PT
- Teresa Mendes*, IPN, Universidade de Coimbra, PT

Lunch: 13:00-15:00

Session 4: 15:00-17:00

Chair: Steven Klepper, Carnegie Mellon University, USA

Speakers

- David Audretsch, Max Planck Institute of Economics, DE

Final Discussion of the Workshop led by:

- Francisco Veloso, Carnegie Mellon University, USA
- Pedro Oliveira, Universidade Católica Portuguesa, PT
- Manuel Mota*, Universidade Minho, PT
- Isabel Grilo, European Commission

Closing: Manuel Heitor, MCTES, PT

Reception: 17:00

* To be confirmed