

Chapter 5:

ENTREPRENEURSHIP AND THE INNOVATION ECOSYSTEM POLICY LESSONS FROM THE UNITED STATES

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1. INTRODUCTION

Germany and the United States face a common challenge in promoting innovation and entrepreneurship to maintain their leadership in global markets, with the economic growth and employment both societies seek. To this end, innovative policies at national and regional level are needed so that entrepreneurs—our local heroes—can be more successful in bringing the fruits of innovation to commercial reality. There is no prescribed formula to respond to this challenge. To foster the innovation process, public policies have to recognize and facilitate entrepreneurship within the multiple local contexts within which innovation takes place. For policies to be effective, they must focus less on aggregate input measures such as R&D percentages and more on the problems and incentives facing innovative entrepreneurs.

The United States is widely seen as one of the world's most innovative economies. Yet, the U.S. innovation system is not the well-oiled machine, smoothly generating innovation after innovation, as some European observers seem to believe. Indeed, many U.S. analysts doubt that the United States is maximizing its innovative potential. One reason for this perceived underperformance may be a lack of appropriate policy support, given that U.S. policymakers often do not understand the complex nature of the innovation process. They often regard new products simply as an outcome of the natural operation of the market, requiring little or no government role.

Even those familiar with the notion of a *National Innovation System* (NIS) often have a mechanistic (rather linear) view of the innovation process, understating the interactive processes actually taking place in the economy.² The NIS concept is often interpreted to imply that specific inputs into the innovation system can yield specific predicted results. This view is widespread in Europe as well, where there is a recognized need to generate more companies, more growth, and more employment.

The policy solution in Europe has often focused on pumping more money into basic research to fill the research deficit with the United States³ and generate, by 2010, “the world’s most competitive economy.”⁴ Funding basic research is of course essential for a modern industrial economy, but the added euros will not have their desired impact unless policymakers also address the incentives facing Europe’s local heroes within their own cultures and political systems. Without focusing on the institutional framework and incentive for innovation, greater R&D inputs will not translate into the desired outputs of employment and growth (Wessner and Shivakumar 2002).

2. A NATIONAL INNOVATION ECOSYSTEM

A slightly different approach, but one that captures important nuance, is to understand the economy as a national innovation *ecosystem*. This approach can help us understand, first, that the system is not fixed but evolutionary, growing and evolving according to new needs and new circumstances and, second, that this system is susceptible to change as a result of new policy initiatives. The ecosystems approach highlights the complex *inter-linkages* among a variety of participants in an innovation economy (including individual entrepreneurs, as well as corporate actors such as large businesses and universities) and the importance of the *incentives* the various actors encounter as they push towards an “innovation friendly environment.” Innovation, like regional competitiveness, will not be achieved by fiat but rather through a combination of public and private initiatives.

As we will see in the U.S. context below, an ecosystem approach to innovation policy draws special attention to the role of small businesses in economic growth and job creation. The analysis below should help dispel common myths about the nature of innovation and the positive role that government support can play. We also describe how innovative policies, like the U.S. Small Business Innovation Research (SBIR) program, have helped motivate new entrepreneurship and have helped entrepreneurs bridge the gap in early-stage technology funding, bringing as a result new, wealth creating ideas to commercial reality. The ecosystem concept is useful because it highlights both the changes that take place in an innovation system and the need for policy innovations to address the complex challenges that Germany and the United States face in promoting their local heroes in the global village.

3. SMALL BUSINESS AND INNOVATION

It is now widely recognized that small businesses are a key driver of the United States economy.⁵ They have generated sixty to eighty percent of net new jobs annually over the past decade and employ nearly forty percent of