Chapter 12
The Role of Innovation Management

ABSTRACT

This chapter presents some of the most relevant aspects of the economics of innovation, as well as those of the technology and innovation management field, which are of crucial relevance to the role of innovation management in solving the complex relations subjacent to the “R&D-innovation-growth-nexus.” Its main purpose is to place the task of innovation management into a central role in the management of the enterprise, especially the management of the digital (or digitalized) enterprise. Moreover, as the management of innovation, either of a product (good or service) or a process (technological, organizational, or marketing) is rapidly becoming a business imperative, it is important to understand how Information and Communication Technologies (ICTs) are transforming the enterprise’s innovation or are being transformed by innovation. The chapter ends with a brief treatment of some aspects of the innovation management in practice.

1. INTRODUCTION

In Chapter 11 of this book it is shown, amongst several issues concerning economic growth and the growth of the enterprise, that the empirical research literature on the ‘R&D-innovation-growth-nexus’ (as highlighted by Andersson et al., 2012) does not provide a clear picture of the returns to R&D and innovation efforts, and that the results at the micro level are not easily translated into a macro (or nation) level.

As this book attempts to argue, if the enterprise is the most adequate unit of observation of the issues of innovation and technological change (and not the nation), a proper understanding of how the architectural characteristics determine the governance issues of the enterprise, and by its turn, such issues affect its growth measurable conditions (which, in a feedback movement, may affect governance and architecture positions), as defined by the Architecture-Governance-Growth (AGG) model, then innovation management has an important role to play in clarifying the ‘missing links’ of the ‘R&D-innovation-growth-nexus’.

Therefore, this chapter presents the most relevant aspects of the economics of innovation, as well as those of the technology and innovation management field, which are of crucial
relevance to the role of innovation management in solving the complex relations subjacent to the “R&D-innovation-growth-nexus”. At the end of the chapter a brief discussion of some aspects of innovation management in practice is presented.

2. BACKGROUND

*Economic progress means essentially putting productive resources to uses hitherto untried in practice, and withdrawing them from the uses they have served so far. This is what we call “innovation”.* (Schumpeter, 1928, 378)

This is the epigraph of the first issue of the ‘*European Journal of Innovation Management*’ when it was launched in 1998. The journal was paying tribute to the Austrian economist Joseph Schumpeter, one of the most influential economists of the 20th century, and the one who is most associated to the role of innovation in the economy. That journal (though not the first in this field – the first one seems to be the ‘*Journal of Product Innovation Management*’, launched in 1976) offers a forum for the rapid dissemination of new knowledge in the field of innovation studies. It publishes, rigorous, evidence based research that advances the state-of-the-art and has direct implications for policy and business practice.

The field of innovation management is the discipline of managing processes in innovation (as the above mentioned journals reflect). It can be used to develop both product and organizational innovation. Innovation management includes a set of tools that allow managers and engineers to cooperate with a common understanding of goals and processes. The focus of innovation management is to allow the organization to respond to an external or internal opportunity, and use its creative efforts to introduce new ideas, processes or products.

In replying the question of ‘*why publish a handbook*’, Scott Shane, the editor of ‘*The Handbook of Technology and Innovation Management*’, published in 2009, argues that four changes necessitate a new book to summarize the field and make suggestions for future research directions. A summary of his account concerning these four changes is the following:

- First, research has confirmed several important empirical regularities that scholars need to understand to develop accurate theories;
- Second, certain aspects of the management of technological innovation have taken on greater importance in recent years than they had in the past. Scholars need to be aware of these developments to keep abreast of the state of the art of the field;
- Third, new theories have been written that better answer questions about the management of technological innovation than did previous theories. For instance, in recent years scholars have begun to look at product development through the lens of problem solving, which has led to new and different insights into the product development process; and
- Fourth, several tools to manage technological innovation have been developed, and they do not all work equally well. To develop the next generation of tools, scholars need to understand why some tools work better than others.

By highlighting the most salient aspects of the economics of innovation and those of the technology and innovation management field, the purpose of this chapter is to place the task of innovation management into a central role in the management of the enterprise, especially the management of the digital (or digitalized) enterprise. Moreover, as the management of innovation, either of a product (good or service) or a process (technological, organizational, or marketing) is rapidly becoming a business imperative, it is important