

Introduction

Technological innovation is a key competitive advantage for manufacturing and service firms, and consequently is supposed to be an important driver of their economic performance. Nevertheless, several firms do not engage in innovation activities (e.g. 56% of Italian firms and 73% of French firms) and others are not able to introduce product or process innovation despite their efforts (e.g. 4% of Italian firms and 6% of French firms). Actually, the development of innovation is challenging, expensive and uncertain. It requires qualified skills, a large amount of financial resources and information as well as risk attitude. Thus, it is likely that firms feel themselves constrained when involved in the innovation development process. Sometimes the difficulties that firms face, or forecast to face, during the development of innovation may deter them from innovation activities even if they are aware of the relevance of technological progress.

The negative impact that firms' low competitiveness and innovativeness could have on local development and welfare push Governments into allocating several resources to public subsidies for innovation aimed at enhancing private innovative effort or at supporting firms in facing the difficulties coming out during the innovation development. However, these public supports are not always effective (Gonzalez et al., 2005; Clausen, 2009). It is therefore important for policy makers to improve their understanding of the key processes that lead to successful innovation.

This study would like to help them by providing insights about the determinants of the factors that constrain firms innovation capability or deter them from engaging in the development of technological innovation. Most of previous empirical work on this topic has been concentrated on innovating firms and less attention has been paid to which are the differences between innovators and non-innovators. However, based on the results of D'Este et al (2011) that obstacles to innovation are experienced and learned through the engagement in the innovation activities, we would expect a different perception of inhibitors by firms not engaged in innovation activities as well as different drivers of the obstacles to innovation perceived by them. Thus, this study aims at filling up the gap by identifying differences between drivers of barriers that result in delay or failure to introduce innovation and those that deter firms from committing to innovation.

Using CIS4 - Community Innovation Survey in France and in Italy we investigate the determinants of obstacles to innovation across different firm's innovation profiles, defined according to their attitude towards innovation activities and the related outputs. Firms are classified into *Innovator*, *Innovative active* and *Non-innovative active*. During the period 2002-2004, *Innovators* are firms that introduced at least one product or process innovation. *Innovative active* firms are defined as firms that did not introduce an innovation, but was engaged in innovative activities. *Non-Innovative active* firms are defined as enterprises simply indifferent to innovative activities altogether (see Appendix A).

This study examines both internal and external barriers. Taking into account the potential complementarities among them, it concurrently analyses what affect the perception of obstacles to innovation related to cost, knowledge and market.

The structure of the paper is as follows. Section 2 provides a summary of previous empirical evidences about the nature and relevance of factors that hamper innovation development or prevent firms' efforts in innovative activities. Section 3 reports the findings of the descriptive statistics and econometric analyses on the dataset set up by the combination of the fourth waves of the Community Innovation Survey (CIS) carried out in France and in Italy. Section 4 provides policy implications of the findings and, finally, the last section depicts concluding remarks.

1. Literature review: obstacles to innovation and innovation profiles

Companies perceive several obstacles which may discourage them from undertaking innovation activities or which make more difficult to achieve the results. Such barriers may arise from the uncertainty that affect technology innovation that is to say the unpredictability, particularly, over how a specific course of action may lead to harm, and how this can be avoided. Further hampering effects are related to the lack of information about technology and market that are relevant to address innovative activities but whose collection is time-consuming, expensive and difficult. Other impediments are linked to organizational rigidities within the enterprise and institutional constraints. Moreover, during innovation development it could happen that financial resources are not enough to cover the high investments required by innovation projects. Thus, four sets of barriers are identified and usually studied: cost factors, knowledge factors market factors and regulation factors.

Previous studies on obstacles to innovation are mainly aimed at understanding their impact on firm's attitude towards R&D activities (Asso and Vito, 2010; Blanchard et al., 2011; Mohnen and Röller, 2001; Savignac, 2006; Segarra-Blasco et al., 2007; Hyttinen and Toivanen, 2005; Mohnen et al., 2008; Wziatek-Kubiak and Peczkowski, 2011). Minor attention has been paid to the determinants of obstacles to innovation (Baldwin and Lin, 2001; D'Este