Chapter 20
Determinants of Organizational Innovation: The Case of Portuguese Firms

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ABSTRACT
The aim of this chapter is to examine the determinants of organizational innovation. To study the relationship and influence that the determinants have on organizational innovation the authors use data from CIS 4 for Portugal. The results of the logit model indicate that firm size, geographic scope, patents, process innovation, product innovation, R&D, internal source, market source and institutional source positively affect the propensity to introduce organizational innovation. Furthermore, the services are more likely to introduce organizational innovation than manufacturing firms. The results also support the argument that organizational innovation expands the development of product innovation and process innovation, promotes the increase of productivity and economic growth, and is a driver of competitive advantage.

INTRODUCTION
Innovation is the key to economic growth and the main source of competitive advantage (Wolfe, 1994; Yamin et al., 1997; Evangelista et al., 1997; Hage, 1999; Ravichandran, 1999; Fagerberg & Godinho, 2003; OECD/Eurostat, 2005; Damanpour & Wischniowsky, 2006; Johannessen, 2008; Lam, 2011; Ganter & Hecker, 2013), it is important for the continuity of society and business in all sectors of economic activity (Evangelista et al., 1997; OECD/Eurostat, 2005; Khan et al., 2009), and it has undergone significant changes over time (Yamin et al., 1997; Fagerberg, 2003; Bruland & Mowery, 2004).

According with OECD, innovation is divided into four types: product innovation, process innovation, marketing innovation and organizational innovation (OECD/Eurostat, 2005).
Determinants of Organizational Innovation

In the current economic context, where firms face more challenges, organizational innovation stands out due to its objectives as cost reduction and performance improvement in comparison with the introduction of a new product and/or process, which requires large and immediate investments with distant financial returns (Faria & Mendonça, 2011). Organizational innovation is considered in the literature as a necessary condition for organizations to adapt to new contexts resulting from external transformations, and it still works as a vehicle to facilitate the development of technological innovation, it effectively being decisive for the sustainable development of societies (Lam, 2004).

The present study aims to identify and analyze:

1. The determinants of organizational innovation, and
2. The influence of those determinants with intensity of organizational innovation.

We analyzed the determinants derived from the organizational context (firm size, patents, and technological innovation), sources of knowledge and the competitive environment (geographic scope). This study also comprehends the relationship between organizational innovation and firm performance.

To achieve these objectives, research hypotheses were tested based on a quantitative approach, using econometric models, logit and ordered logit.

Beyond this section, this article is divided into five sections: Literature review and hypotheses; Data and methodology; Results; and Conclusions, limitations and suggestions for future study.

LITERATURE REVIEW AND HYPOTHESES

Organizational innovation is a driver to create interest in many areas, where economics and management are the most evident examples. This type of innovation has a wide and diverse literature, however, is still an issue in development, inconsistent and inconclusive (Wolfe, 1994; Lam, 2004). There is not a clear definition and a way to directly measure their results (Yamin et al., 1997; Lynch, 2007; Lam, 2011). Wolfe (1994) argues that there can be no single theory to explain the general organizational innovation, in view of its extensive complexity, thereby increasing the difficulty of studying this concept.

According to the OECD (2005) organizational innovation, also known as non-technological innovation is:

... the implementation of a new organizational method in the firm business practice, workspace organization or external relations.

This innovation must be new to the organization (Damanpour & Evan, 1984; Lam, 2004; Mol & Birkinshaw, 2009), and it should result from strategic decisions (Damanpour & Evan, 1984). Typically, this concept does not include mergers or acquisitions.

There are aspects that hinder the characterization of organizational innovation. For example, the different types of innovation have influential relationships and complementarities with organizational innovation, and it is not always clear to distinguish the types of innovation involved in a particular application. Some literature recognize that there is a relationship between organizational innovation with the other types of innovation, such as: technology innovation (Sanidas, 2004), marketing innovation (Weerawardena, 2003; Naidoo, 2010), administrative innovation (Jiménez-Jiménez & Sanz-Valle, 2011; Walker et al., 2011) and institutional innovation (Subramanian & Nilakanta, 1996; Morgan, 2007; Yoshikawa et al., 2007).

Firms choose to adopt organizational innovation in order to improve the quality of products or services, improve production flexibility, increase capacity, reduce labor costs, and increase productivity (OECD/Eurostat, 2005; Armbruster et al., 2008).
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