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A knowledge management approach to organizational competitive advantage: Evidence from the food sector

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Case study

Summary This paper uses a comparative case study approach to investigate how two small Italian food producers manage their knowledge. The first company under consideration is mainly focused on marketing, while the second on the technology knowledge domain. This paper enriches the existing literature by documenting examples of how companies can successfully manage organizational knowledge on the basis of their relative knowledge domain. This research claims that not only knowledge domain but also innovation behavior seem to be the contingencies that mostly impact on knowledge management system features. In fact, the different combinations of the two variables have deeply different requirements in terms of knowledge management.

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Introduction

Knowledge has been recognized as an important source of competitive advantage and value creation (King and Zeithalm, 2003), as an indispensable ingredient for the development of dynamic core competencies and, more generally, as a determinant factor for firms with global ambitions. Moreover, knowledge that firms acquire is a dynamic resource that needs to be nourished and managed carefully. Although this is true for all industries, it is particularly relevant to all those traditional sectors where compa-

nies have to cope with globalisation, mature markets, increased customer service, cost reduction and changing purchasing behaviors. The food industry is among these and, due to its great impact on employment and economic output (Menrad, 2004), it has alerted the managerial and academic communities to understand the importance of how to create and effectively use knowledge based resources.

According to Murdoch and Miele (1999), the food industry is increasingly bifurcating into two main systems of production: on one hand, standardized, specialized production processes responding to economic standards of efficiency and competitiveness; on the other hand, localized, specialized production processes focused on environmental, nutritional, taste or health qualities. Although distinctions can be made between the two above-mentioned food systems from a theoretic standpoint, some case studies do show

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that there are no clear boundaries between them. For example, [Murdoch and Miele \(1999\)](#) provide two case studies that illustrate the complexity of contemporary food production in Italy. The first regards a large egg producer that gradually moved from standardized, generic egg production towards new 'natural' and 'animal-friendly' products dedicated to specific consumer groups. The second case involves a group of small organic producers that partially standardized their production processes. Other authors (e.g. [Alfranca et al., 2003](#)) claim that strong differences in terms of profit pools, innovation strategy and implementation exist and call for studies that point to within-industry differences.

Small and medium-sized enterprises (SMEs) dominate the European food industry. Italy exemplifies this situation as 90% of total companies are SMEs and only 7% have more than 20 employees (according to [Federalimentare ISMEA, 2005](#)). The food sector in Italy represents the second most important industry in terms of sales, 14% of which refers to export. The food industry is often categorized as a traditional, low-skilled, labour intensive and low-tech sector, where R&D activity is limited and patenting is rare (see e.g. [Avermaete et al., 2004](#); [Foresti, 2005](#)).

Most innovations in the food industry come into being by applying and transferring knowledge from other sectors, as also confirmed by the flows of outbound and inbound patents in the sector (see e.g. [Baldi, 2005](#)). It is an industry where traditional knowledge (including cultural manifestations, production technologies, agricultural knowledge and literature) has great importance. Moreover, strong efforts are made, sometimes successfully, to use and protect this knowledge. Unfortunately, some contributions (e.g. [Occelli, 2005](#)) demonstrate that European policies and programs regarding safety and control, along with the forces of globalisation, seem to have a negative effect on that attempt to preserve knowledge.

This paper aims to offer new insights on how SMEs in the food industry manage, exploit and nourish their knowledge in order to gain a competitive advantage. It is worth noting that the focus here is on the relationship between knowledge management (KM) and competitive advantage, regardless of whether this passes through technological innovation, radical changes or a combination of these factors. The reason for this fine distinction is that the literature on innovation mainly tends to stress that innovation primarily occurs in reference to technology (see e.g. [Nelson and Rosenberg, 1993](#)) and that change is more significant than continuity. Contrary to this tendency, food producers are not necessarily avid technology users and they tend to focus mainly on continuous improvements of products, often line-extensions or me-too products, rather than on change. Some authors (e.g. [Kanter, 1999](#)) validate this choice by taking an even more cautious view of the impact of innovation on competitive advantage due to the high level of uncertainty involved that does not guarantee success.

This paper will present a brief theoretical background on methods and systems that can help companies in knowledge management, with a special focus on SMEs. Secondly, the research methodology will be described. Thirdly, empirical evidence from the cases will be provided; next, the results will be discussed and, finally, some conclusions will be drawn.

Theoretical background

The framework for knowledge management

In order to investigate how organizations manage, exploit and nourish their knowledge, this paper uses a framework for the analysis of organizations as knowledge systems ([Holzner and Marx, 1979](#)) composed of a collection of four knowledge processes: creation and/or acquisition (hereafter creation/acquisition); storage and retrieval; transfer and sharing; and application. The model, even though it dates back to the late 1970s, is still considered as a reference point for the knowledge management literature and provides a starting point for more recent models (e.g. [Pentland, 1995](#); [Alavi and Leidner, 2001](#)). In fact, many of the frameworks developed widely overlap.

It is worth underlining that the concepts of knowledge and information tend to be used interchangeably throughout the literature and praxis ([Kakabadse et al., 2001](#)). For example, information management captured on corporate databases is often considered an example of corporate knowledge and knowledge management. Although information and data management are important pillars of knowledge management, knowledge management encompasses broader issues – in particular, the creation of processes and behaviors that allow people to transform information within the organization and create and share knowledge. Thus, knowledge management must encompass people, process, technology and culture.

Mindful that data and information management are integral to, but not exhaustive of knowledge management, the knowledge processes introduced above are briefly described here.

- Knowledge creation/acquisition is the process of generating knowledge internally and/or acquiring it from external sources. It is worth noting that the effective acquisition of knowledge from external sources depends on the ability of the firm to recognize the value of new external information, assimilate it and apply it to commercial ends. [Cohen and Levinthal \(1990\)](#) label this capability a firm's absorptive capacity, which is largely a function of the firm's level of prior related knowledge. According to this perspective, what is just information for some constitutes valuable knowledge for others and vice versa.
- Knowledge storage and retrieval refers to the processes of knowledge structuring and storing that make it more formalized and accessible.
- Knowledge transfer and sharing refers to the processes of transferring, disseminating and distributing knowledge in order to make it available to those who need it.
- Knowledge application can be defined as the process of incorporating knowledge into an organization's products, services and practices to derive value from it.

Knowledge management systems

In order to make these knowledge processes possible, different configurations of technical, organizational and managerial choices must be designed. Essentially, this is what is

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