Environmental knowledge management: A long-term enabler of tourism development

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HIGHLIGHTS

- Reusing and updating environmental knowledge.
- Environmental knowledge and organisational performance.
- Knowledge management in time of crisis.
- A longitudinal study of Knowledge management.

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ABSTRACT

A review of the literature confirms that there is a need for knowledge management frameworks which support knowledge creation, particularly in those organisations having to operate in a changing environment. Socialisation, externalisation, combination and internalisation continue to be key processes for the creation of knowledge which enables organisations to successfully address environmental challenges. This paper examines the relevance and importance of a SECI model as an enabler of the processes of reusing and updating the environmental knowledge of an organisation. The research reported has confirmed that time is a key component of the implementation of a SECI model in organisations operating in a changing environment. It has been confirmed that such a strategy should focus on the reuse of prior environmental knowledge as a mechanism to establish within the organisation a context where new knowledge management processes are understood and adopted by employees. The paper also examines the relationship between environmental knowledge and organisational performance indicators. These relationships are examined through an empirical study of 87 companies in the Spanish hospitality sector. The results of the study indicate that environmental knowledge at any given time (T) is significant in predicting the knowledge management processes that may be successfully implemented at a later point in time (T + 6 years).

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1. Introduction

Environmental knowledge has become one of the most important intangible assets for organisations in the current competitive environment (Po-Shin & Li-Hsing, 2009). Environmental knowledge can be defined as the degree to which an individual or organisation becomes aware of and concerned with ecological issues (Amey, Dejong, Lin, Chakraborty, & Wiener, 1994). Environmental knowledge may be thought of as comprising stocks of data, information and knowledge resources (environmental memories) that have been gathered and accumulated by an organisation by virtue of its knowledge structures (Chou, Chang, Tsai, & Cheng, 2005).

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While the relationship between environmental knowledge and organisational performance has been addressed by several authors (e.g. Boiral, 2002; Boiral, 2009; Cegarra-Navarro & Martinez-Martinez, 2010), there has been surprisingly little empirical investigation of the effects that environmental knowledge can have on knowledge management process (and vice versa) over a period of time.

Time has traditionally been considered in the management literature as a constant rather than a variable, a belief that Bluedorn (2000) ascribes to people in general. Furthermore, as Bluedorn notes, the understanding of time as a constant is deeply institutionalised, which suggests that most people, most of the time, do not even consider the possibility that time may vary and the effects that this may have on the subject of their study. This suggests that one should speak of ‘times’ rather than ‘time’ (Purser, Bluedorn, & Petranker, 2005). In this study it is assumed that ‘times’ are sequential and enable first creating an environmental knowledge base and then putting the upcoming environmental processes into a familiar context for members of the organisation. The question that arises is whether a knowledge management framework is needed to reuse and update prior knowledge of the environment and if so what can be done to face environmental challenges in the coming years (Cegarra-Navarro, Martinez-Martinez, Ortega-González, & Leal-Rodríguez, 2013). In this regard, the SECI model (socialisation, externalisation, combination and internalisation) provides a good basis to explain the adoption of new environmental knowledge (Nonaka & Takeuchi, 1995; Nonaka, Toyama, & Konno, 2000). This paper offers an empirically tested SECI model which helps identify how prior environmental knowledge in the Spanish hospitality sector could be reviewed and updated through the development of knowledge processes at a later point in time. In the conduct of this research, we have addressed the following questions: Does availability of environmental knowledge at a given time necessarily mean its use at a later point in time? How can hospitality companies update their environmental knowledge resources? By addressing these questions this paper demonstrates that the availability of environmental knowledge at a given time does not necessarily guarantee the effectiveness of environmental knowledge for the purpose of increasing innovation and organisational competitiveness at a later point in time.

The longitudinal study described in this paper involved two observations of the same variables over a period of six years (2008 and 2014). The proposed theoretical framework is presented in the following section. Details of the survey which was used to collect appropriate data to test the model are presented in Section 3 and the results of testing the models are detailed in Section 4. The results and managerial implications are discussed in Section 5 which is followed by the conclusions of the research in Section 6.

2. The proposed research model

2.1. Connecting the Spanish hospitality industry to environmental knowledge

In order to answer the questions above, a model was developed using quantitative data from the Spanish hospitality industry, in particular the section dealing with hotel operation and management. The Spanish hospitality industry is a very relevant sector within the Spanish economy (Cadarso, 2005). The Spanish hospitality industry includes approximately 52.7 million tourists, representing potential revenue of close to 41.61 billion Euros (Domínguez-Vila, Darcy, & Alén-González, 2015), and Spain is currently ranked fourth in terms of international tourist arrivals and second in international tourist receipts (United Nations World Tourism Organization [UNWTO], 2011).

As shown in Fig. 1, the 2008–2014 Spanish financial crisis impact on the tourism industry has become apparent with a decrease of 2% in international tourist arrivals for 2009 and it is currently putting existing business models under pressure (Alegre & Sard, 2015). In this regard, 2008 was the year when the tourist industry did not contribute to the growth of the Spanish economy for the first time since records began. Just the opposite, the income generated by the tourist industry in Spain decreased in 1.1% with respect to 2007 (National Statistics Institute Information Bulletin, 2008). However, while the Spanish economy as a whole has languished since the start of the European sovereign debt crisis in 2008, the Spanish tourism industry has continued to grow strongly (Gómez-Loscos & González, 2014). Revenue from inbound tourism has increased by almost 14% since 2008 – meaning that the tourism industry is now the Spanish’s first largest export earner (Canova & Dallari, 2013), reporting 5.1% of the Spanish gross domestic product (GDP) in 2012 (Gómez-Loscos & González, 2014).

It should be noted, however, that the European Parliament and the Spanish public sector is making continuous efforts to innovate Spanish tourism and increase attractiveness by shifting from standards/basic products in traditional markets to specialised products which address new markets and are tuned on different consumers’ preferences (WTO, 2014). In this regard, sustainable development is one of the world’s most important priorities in the efforts to attain the well-being of mankind (Nouri, Karbassi, & Mirkia, 2008). As Carmona-Moreno, Céspedes-Lorente, and Burgos-Jimenez (2004) state, the environmental policy in hotels is fundamental for its results, as these depend, essentially, on the environment in which hotels are located. Thus, the preservation of the environment becomes a crucial factor influencing hotel operations. Examples of these efforts are new environmental regulations, as 2008/98/EC updated on 14/07/2011, whose aims are to promote high quality recycling (Directive 2008/98/EC).

In the Spanish hospitality industry the growing interest of tourists in the environment has led to the promotion of ecotourism and with it the efforts to develop strategies that focus on the environment (Brockhoff, Chakrabarti, & Kirchgeorg, 1999). The concept of environmental knowledge has been invoked to characterise the way in which organisations align their strategic goals to sustainable development (Wernick, 2003). This means that organisations with environmental knowledge will know what can be done about environmental problems and they understand the benefits of environmentally responsible goals (Frick, Kaiser, & Wilson, 2004). As Po-Shin and Li-Hsing (2009) suggest environmental knowledge involves what people know and are concerned

![Fig. 1. Visitor numbers.](image-url) Modified from Gómez-Loscos & González, 2014: p. 70.
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