

## Chapter 2

# Competitiveness of the Hotel Industry: A Knowledge Management Approach

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### ABSTRACT

*The principal goal of this study is to identify the role of knowledge management organizational processes as a determinant of competitiveness in the hotel industry, particularly how knowledge management strategies centered on the source (internal and external) and knowledge (tacit and explicit) have a positive impact on the competitiveness of hotels. Authors use a quantitative approach based in an email survey applied to 55 Portuguese hotels. Results show that the knowledge management strategies oriented to source and type of knowledge are critical for hotels' competitiveness and obtaining competitive advantages. This will help hotel managers better understand how to align the knowledge management strategies in order to improve hotel competitiveness. This chapter is among the first research into the links among knowledge management strategy, based on knowledge source (internal, external) and type (tacit, explicit) and hotel competitiveness, an integrated framework.*

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## INTRODUCTION

Globalization, the companies' transformation, the emergence of the digital company, and the evolution of the tourism and hospitality industry represent four powerful drivers of change, which is modifying business environments worldwide (Laudon & Laudon, 2002; Wu & Lin, 2009; Salem, 2014). Knowledge management arose in the last decade of the twentieth century to become one of the most debated management concepts (Hallin & Marnburg, 2008). A company's value increasingly incorporates intangible assets, allowing them to create competitive advantages and differentiate themselves from competitors, to ultimately succeed through knowledge and its management.

The hotel industry is one of the main components of tourism. As such, being one of the most promising sectors in Portugal, it requires strategies that can increment the country's economic growth. In Portugal the commercial balance of travel and tourism (% of GDP) has been growing from 3.6%, in 2013, to 5.9% in 2018 (63.9%), and the exportations (% of GDP) has been increasing by 51.9% (5.4% in 2013 and 8.2% in 2018).

Between 2013 and 2017, the number of hotels in Portugal grown 26.0% (1,039 in 2013 and 1,309 in 2017) and the number of overnight stays increased 52.6% (26,100,320 in 2013 and 39,827,049 in 2017), which contributes to a higher level of competition in this industry.

Therefore, hotels should focus on clients' needs and desires, as well as on recognizing internal factors that can boost their competitiveness. Hence, hotels should implement adequate strategies, such as knowledge management, to face markets' strong competitiveness and, consequently, improve their performance, increase occupation rates and make profit. The dynamism and agility required by hotels are only viable if compatible with a full and active organizational memory, in which knowledge is created, fluently circulates and naturally grows (Fraj, Matute, & Melero, 2015).

Despite not being considered as knowledge-intensive, hotels sell services whose processes require knowledge. Thus, the knowledge of both the organization and its employees is crucial to follow the markets' evolution and the shifts in clients' needs. The knowledge of the workforce or the knowledge of the organization that is expressed in routines and databases, among others, are elements that effectively develop the business in a competitive environment (Latilla et al., 2018). In the same way, a learning and innovation-oriented mindset is crucial for the competitiveness of the hotels (Fraj et al., 2015). Hotels' performance can be improved by identifying and sharing useful knowledge (Davenport & Prusak, 1998). However, in the hospitality industry, knowledge management has not reached the same scale of empirical research as in other fields (Cepeda-Carrion & Cillo, 2019; Hallin & Marnburg, 2008; Ragab & Arisha, 2013; Salem, 2014). Therefore, the main goal of this study is to identify the role of knowledge management organizational processes as a determinant of competitiveness in the hotel industry. As secondary objectives, we intend to evaluate how knowledge management strategies focused on the source (internal and external) and knowledge (tacit and explicit) may have an impact on the competitiveness of hotels.

The proposed methodology is based on a survey answered by hotel directors in Portugal, which collected data on knowledge management processes and competitiveness.

This study will make two relevant contributions. Firstly, we fill a research gap by providing both theoretical and empirical supports for the links among knowledge management strategy, based on knowledge source (internal, external) and type (tacit, explicit) and firm competitiveness in one integrated framework. Secondly, this research was applied in hotel industry, a sector with intense competition and growth.

The rest of this paper is organized as follows: Section 2 presents the theoretical framework and the development of the research model. Section 3 describes the methodology used in the work. Section 4 presents the results. The discussion of results and conclusions are presented in Section 5 and finally in Section 6 the limitations of the study and future lines of research are pointed out.

## **THEORETICAL BACKGROUND AND RESEARCH MODEL**

### **Knowledge Management**

The definition of knowledge has a high range from the practical to the conceptual and philosophical and from a restricted range to a wide range (Anand, 2011). For Nonaka and Takeuchi (1995) knowledge is a justified belief in the truth, which is a function of a special position, perspective or intention; implies an action, being specific to a given context and dependent on unique points of view, personal sensitivity and experience. Davenport and Prusak (1998) define knowledge as a fluid mix of shared experiences, values, contextual information and the specialized knowledge that provides a framework for its use for incorporation into new experiences and information. For Erden, Von Krogh and Nonaka (2008) the concept of knowledge is linked to a belief justified in the truth, that is, individuals need to justify the veracity of their observations based on the observations of the world, and it is the ability to define a problem and act accordingly. Knowledge is constituted as a mixture of consciousness, perceptions and feelings that define and make products unique, exclusive, innovative and timeless, as well as a source of organizational competitive advantage (Latilla et al., 2018). Regarding the accessibility of knowledge, Nonaka and Takeuchi (1995) divide knowledge into two groups, tacit knowledge and explicit knowledge. Tacit knowledge, the most complex form of knowledge, is developed and internalized by the knower over a long period of time, it is almost impossible to reproduce in documents or database, it incorporates accumulated knowledge, it is not easily articulated and it corresponds to a cognitive dimension which reflects an image of reality and a vision of the future (Alavi & Leidner, 2001; Barley, Treem, & Kuhn, 2018; Ibrahim & Reid, 2009; Nonaka & Takeuchi, 1995; Wang, Wang, & Liang, 2014). The explicit knowledge, formal and systematic, corresponds to knowledge that can be easily communicated through words, numbers, codes, formulas, etc. (Alavi & Leidner, 2001, Anand, 2011, Barley et al., 2018, Davenport & Prusak, 1998), Du Plessis (2007), Durst & Edvardsson, 2013, Grant, 1997, Nonaka & Takeuchi, 1995, Wang, Wang, Cao, & Ye, 2016; Wang et al., 2014).

Knowledge management refers to the strategic value of knowledge oriented to practices that lead an organization to succeed (Barley et al., 2018), focusing on the creation and distribution of knowledge in organizations through technologies such as the internet, intranets and e-mail (Alvesson & Kärreman, 2003), covering a variety of processes, practices and systems present in organizational contexts designed to gain value through the application and use of knowledge (Barley et al. 2018, Teece, 1998). Knowledge management is a management function that creates or locates knowledge, manages the flow of knowledge and ensures that knowledge is effectively and efficiently used for the organization's long-term benefit (Gloet & Terziovski, 2004). This should be structured and planned approach to explicitly and systematically manage the creation, sharing, collection and use of knowledge as an organizational asset in line with its business strategy, to increase a company's capacity, as well as speed and effectiveness in delivering products or services for the benefit of customers (Anand, 2011; Du Plessis, 2007).

An appropriate knowledge management strategy is important to ensure that a company creates, acquires, accesses and uses knowledge in a timely manner (TH Kim, Lee, Chun, & Benbasat, 2014), it must be aligned with the organizational process, the culture and the implementation of information technology related to knowledge management (Bagnoli & Giachetti, 2014, Choi, Poon, & Davis, 2008), dealing with issues of technical and structural management in an organization (Singh, 2018). An appropriate knowledge management strategy leads to competitive advantages and better organizational performance.

One of the most relevant knowledge management strategies is based on the source of knowledge and can be disaggregated into two dimensions: an interior-oriented and externally oriented strategy (Bagnoli & Giachetti, 2014, Choi & Jong, 2010, Choi et al., 2008; Coombs & Hull 1998, TH Kim et al., 2014, Singh, 2018). The development of internal knowledge and access to external knowledge exhibit two relevant facets of the development of corporate knowledge (De Clercq & Dimov, 2008). In the internal orientation strategy, the emphasis is placed on the creation, sharing and accumulation of knowledge within an organization (Wang et al., 2016) and ways in which knowledge can be captured from existing sources and technological systems to support the decision (Choi et al., 2008; Singh, 2018). An organization can not only act in the process of knowledge created and shared within its boundaries, but also absorb and employ the knowledge outside the organization (Bagnoli & Giachetti, 2014, De Clercq & Dimov, 2008; et al., 2016), namely by researching secondary data sources, drawing on experts and consultants, and entering into strategic cooperation agreements with clients and other organizations, namely suppliers and competitors (Singh, 2018).

Another approach to the knowledge management strategy focuses on knowledge and follows the division of knowledge postulated by Nonaka and Takeuchi (1995): tacit knowledge and explicit knowledge. Knowledge management strategies focus on the two perspectives - explicit transmissible and codifiable knowledge or tacit background knowledge (Nonaka and Takeuchi, 1995). The explicit-oriented knowledge strategy attempts to improve work efficiency through the coding and use of knowledge through IT infrastructures (Choi et al., 2008; Singh, 2018; Wang et al., 2016), while the strategy oriented towards tactical knowledge pays more attention to knowledge that cannot be dissociated from its behavioral component (Keskin, Akgün, Ayse Günsel, & Imamoglu, 2005; Zhong & Song, 2008), activated through person-to-person contacts and socialization processes (Choi & Jong, 2010, Choi et al., 2008, Keskin et al., 2005, Wang et al., 2016).

## **KNOWLEDGE MANAGEMENT IN HOTEL INDUSTRY**

Due to the hospitality industry being knowledge-intensive as a consequence of the intense use of technology and the essence of the product and service, based on the interaction between the employees and the customers (Chalkiti, 2012, Hallin & Marnburg, 2008; Marco-Lajara, Claver-Cortes, Úbeda-García, García-Lillo, & Zaragoza-Sáez, 2019; Salem, 2014) - nowadays, exist diversity research in the hospitality industry (Bouncken, 2002, Chalkiti, 2012; Ferrary, 2015; Hallin & Marnburg, 2008; TT Kim & Lee, 2013; Marco-Lajara et al, 2019; Martínez-Martínez, Cegarra-Navarro, & García-Pérez, 2015; Nieves & Diaz-Meneses, 2018; Pusck, Kramer, Bandeira & Freire, 2019; Salem, 2014, Shaw & Williams, 2009, Sigala & Chalkiti, 2015; Yang, 2015; Yang & Wan, 2004). In the hospitality industry, knowledge is related to the company's customers, products and services, operational work procedures, problem-solving and competitors' situation and behavior (Shamim, Cang, & Yu, 2017, Shaw & Williams, 2009; Yang & Wan, 2004).

Knowledge management in the hotel sector is centered on a structured and planned approach, oriented to systemically manage the flow of knowledge as an organizational intellectual asset (Bouncken, 2002; Shamim et al., 2017), continually improving the knowledge of employees about customers unique needs (Shaw & Williams, 2009). Knowledge management plays a key role in the success of hotels and in gaining competitive advantages (Bouncken, 2002; Martínez-Martínez, et al. (Hallin & Marnburg, 2008; Shaw & Williams, 2009), and in the development of quality standards for hotels (Hallin and Marnburg, 2008). (T. T. Kim & Lee, 2013), with the creation of new products/services or in the promotion of the offer of customized tourist experiences to customers (Tzortzaki & Mihiotis, 2012). The establishment of knowledge sharing, and maintenance is fundamental to the best knowledge management practices (Shamim et al., 2017), being relevant to the technological and non-technological infrastructure, not forgetting that sometimes and only can be found in the head of the people (Yang, 2015).

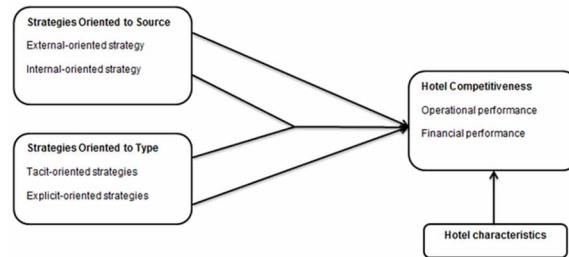
In order to implement knowledge management strategies, a survey of existing and necessary knowledge sources and types should initially be carried out (Bouncken, 2002; Tzortzaki & Mihiotis, 2012). Hotels are currently increasingly dependent on their competence to possess internal and external knowledge, making knowledge a critical resource for competitiveness and obtaining competitive advantages for innovation and differentiation of its competitors (Bouncken, 2002; Marco-Lajara et al., 2019, Shaw & Williams, 2009, Wilkea et al., 2019). The fundamental knowledge for the provision of the hotel service is based on the internal knowledge of its employees, the cooperation between them and the synergistic complementarity of knowledge (Bouncken, 2002, Sigal & Chalkiti, 2015, Tzortzaki & Mihiotis, 2012). The strategies of management of internal knowledge in the hotel industry are based on the creation, transfer and distribution of intra-organizational knowledge have an emphasis on the accumulation and preservation of the knowledge of its employees and the technological systems and on the existence of redundant knowledge maintained between different employees of hotels (Bouncken, 2002). The internal knowledge management, together with the creative processes of the employees have a decisive role in the incremental innovations of the sector, namely in creating experiences beyond the expectations of the clients, trying to anticipate their needs (Marco-Lajara et al., 2019; Sigala & Chalkiti, 2015; Tzortzaki & Mihiotis, 2012). In general, hotel employees have extensive knowledge of the sector, sometimes acquired in competitors and is often overlooked, since managers sometimes focus on collecting information from customers, suppliers, and competitors who are prone to ignore employees' knowledge (Yang, 2015). Hotel managers and staff, because of proximity and direct contact with customers are more likely to acquire knowledge of these, as knowledge flows are more direct and faster, allowing for more in-depth information about their desires, needs and preferences and market trends (Nieves & Diaz-Meneses, 2018, Salem, 2014, Wilkea et al., 2019). These knowledge flows are a potentiator of the generation of ideas and incremental innovations, since the knowledge and suggestions provided by clients are related to the hotel's current services, practices, tasks or activities (Nieves & Diaz-Meneses, 2018; Wilkea et al. al., 2019). Hotel managers and staff, because of proximity and direct contact with customers, are more likely to acquire knowledge of these, as knowledge flows are more direct and faster, allowing for more in-depth information about their desires, needs and preferences and market trends (Nieves & Diaz-Meneses, 2018, Salem, 2014, Wilkea et al., 2019). These knowledge flows foster the generation of ideas and incremental innovations, since the knowledge and suggestions provided by clients are related to the hotel's current services, practices, tasks or activities (Nieves & Diaz-Meneses, 2018; Wilkea et al., 2019). Currently, some of the customer-oriented knowledge acquisition processes are obtained through central information and reservation systems (Bouncken, 2002). The systematic involvement of hotels in strategic cooperation networks aimed at creating and transferring knowledge within the tourism sector, is a key

factor in the diversification of business and the generation of radical innovative ideas. (Nieves & Diaz-Meneses, 2018; Shaw & Williams, 2009; Tzortzaki & Mihiotis, 2012; Wilkea et al., 2019). The external social relations of managers and hotel staff are a source of external knowledge of hotels, and contacts with various communities (outside the company) and exposure to diverse information and perspectives develop creativity by contributing to innovation (Sigala & Chalkiti, Wilkea et al., 2019). In addition, the management of external knowledge obtained through the cooperation networks of companies in this industry should mitigate the uncertainty of totally uncontrollable events and adapt to external changes, diversifying opportunities, anticipating trends and, above all, encouraging the transfer of knowledge through the organizational structure (Nieves & Diaz-Meneses, 2018). However, for an effective transfer of external knowledge, it is necessary for the hotel to have internal structures that allow the dissemination and sharing of this knowledge (Nieves & Diaz-Meneses, 2018).

Tacit and explicit knowledge also has the dominant role in hospitality service operations (Bouncken, 2002; Chalkiti, 2012, Hallin & Marnburg, 2008, Salem, 2014 and Shaw & Williams, 2009). The implicit orientation to the processes illustrates the relevance of tacit knowledge in the hotel industry (Hallin & Marnburg, 2008; Salem, 2014), which is a dynamic and constantly changing environment (Hallin & Marnburg, 2008). For an effective creation, sharing and use of tacit knowledge, proximity is essential for the development of strong levels of trust and common values, since they require direct and reciprocal interaction (Bouncken, 2002; Shaw & Williams, 2009). In the hospitality sector, this flow of personal knowledge is carried out through direct communication, meetings between the management team and the rest of the workforce, sharing of emails, training and practical experiences in the work context, which gives trainees the possibility to observe, imitate and test skills and to incorporate routines (Bouncken, 2002, Hallin & Marnburg, 2008, Salem, 2014). When employees have a high level of experience and skills, they tend to increase the efficiency and the productivity of other colleagues and hotels can manage their tacit knowledge through the creation of employee profiles or the creation of corporate lists of employees with the specification by a specific area of knowledge (Salem, 2014). An effective tacit knowledge management strategy is essential for hotels to create innovative products and to be able to successfully develop in the constantly changing tourism market (Bouncken, 2002, Shamim et al., 2017, and Shaw & Williams, 2009). The ability to motivate employees with high levels of skills to convert their tacit knowledge, namely the knowledge of specific tasks, into knowledge acquired explicitly documenting and with a repository increasing the memory and organizational knowledge of the hotel (Shamim et al. 2017, Shaw & Williams, 2009). Likewise, the possibility of intense communication with the client strengthens the relevance in the hotel industry of the existence, for the operations, of explicit knowledge management (Salem, 2014). The explicit management of knowledge is extremely relevant for hotel chains when they need to re-acquire the knowledge developed from the experience of others through the spatiotemporal boundaries (Chalkiti, 2012) and in particular in the explicit description of all routines for hotels to be almost capable of operating independently of specialized human knowledge (Salem, 2014). However, technology transfer, which implies a high level of tacit knowledge, can fail if it is managed at a distance, since it requires a close and fluid connection between those who transfer knowledge and those who receive it, so explicit knowledge is necessary to restore and disseminate knowledge in hotel chains with globally dispersed hotels and can be a way to avoid problems of high turnover and instability of work in the industry (Chalkiti, 2012, Salem, 2014). For hotels, a hybrid strategy is recommended, since some tacit knowledge, namely routines embedded in services, can only be transferred through direct personal relationships and innovation arises also from the simultaneity of explicit and tacit knowledge management (Bouncken, 2002; Salem, 2014).

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Figure 1. Research model



## Research Model

The literature review reveals that a correct organizational knowledge management strategy oriented to the source of knowledge (internal and external) and to the type of knowledge (tacit and explicit), particularly in the hotel industry, increases the achievement of competitive advantages and organizational performance. Figure 2.1 shows the research model.

## METHODOLOGY

### Data Collection

The population of this study includes all Portuguese hotels. The unit analysis of this study was the hotels and the data collection were done through a structured questionnaire, which was answered by the Hotel Managers. In terms of the sampling strategy, an electronic data survey was sent to the emails included in a database of 700 Portuguese hotel directors' contacts. Data were collected in February and March 2019, 55 hotel managers answered the questionnaire, producing a response rate of 7.9% and corresponding to 4.2% of hotels located in Portugal. The sample consisted of one one-star hotel and other with two-star, 8 three-star hotels, 26 four-star hotels and 19 five-star hotels.

### Measurement

For the delineation of the questionnaire, existing scales were used and adapted to align them with the context of the hotel industry. All items in the survey are evaluated with a seven-point Likert-type scale ranging from 1 to 7. Measures of tacit-oriented knowledge management and explicit-oriented knowledge management was based on scales developed and validated by Z. Wang et al. (2014). Scale of external-oriented knowledge management and internal-oriented knowledge management was based on measures developed and validated by Choi et al. (2008) and Z. Wang et al. (2016), and scales of operational performance and financial performance was developed and validated by C. L. Wang et al. (2015) and Z. Wang et al. (2016). The full measurement items are displayed in Appendix.

To account for differences between hotels, hotel age, hotel integrated in a group (No; Yes); client origin (% Foreign), region location (Norte, Centro, Lisboa, Alentejo, Algarve, Autonomous Region of Madeira; Autonomous Region of the Azores) and category (1 to 5 stars) were included in our research model as a control variable. These variables were selected because of its potential impact on firm performance.

## **Data Analysis**

To describe the sample considered, the descriptive statistics (means and standard deviations) of the variables included in the research, as well as the respective correlations, were computed. With regard to the modeling of the knowledge management strategies and control variables that influence the company's competitiveness, it was used multiple linear regression. For the estimation of the standard errors of coefficients we used robust standard errors to eliminate possible problems of heteroscedasticity. In all the regressions, the existence of variables with potential multicollinearity effects through variance inflation factors (VIF).

All data were analyzed with IBM-SPSS software version 25.0 (IBM Corporation, New York, USA).

## **RESULTS AND DISCUSSION**

About hotel sample description, 36.4% (20) were located in the Lisbon region, 23.6% (13) were located in the Algarve and 12.7% (7) in the Autonomous Region of Madeira, the three main Portuguese tourist regions. The hotels had been operating on average for 20.1 years, 56.4% (31) hotels were integrated into a hotel group and, on average, 66.2% of the guests came from international markets.

Table 1 show the results referring to descriptive statistics (mean and standard deviation), Pearson's correlations between all the variables used in the study and VIF of predictor variables.

In relation to the factors that have impact in hotel competitiveness, modeled through multiple linear regression (Table 2), the model I and model V shows that hotel's age have a significant impact in operational performance (Model I:  $B = 0.02$ ;  $p < 0.05$ ; Model V:  $B = 0.01$ ;  $p < 0.05$ ), as well as, in model V, the antiquity of the hotel has a significant impact on financial performance ( $B = 0.01$ ;  $p < 0.05$ ).

Regarding strategies oriented to source of knowledge, Intern-oriented knowledge management present a significant impact in operational (Model I:  $B = 0.54$ ;  $p < 0.05$ ; Model IV:  $B = 0.90$ ;  $p < 0.05$ ) and financial performance (Model I:  $B = 0.64$ ;  $p < 0.05$ ; Model IV:  $B = 1.92$ ;  $p < 0.05$ ), as well the Extern-oriented strategy express a statistical effect in operational (Model I:  $B = 0.29$ ;  $p < 0.05$ ) and financial performance (Model I:  $B = 0.11$ ;  $p < 0.05$ ; Model IV:  $B = 0.36$ ;  $p < 0.05$ ). The higher the orientation for these strategies, the higher is the competitiveness of hotels. This results support that hotel services are based on close contact between the employee and the client, the management of internal knowledge, specifically the creation, sharing and accumulation of knowledge and the ways in which knowledge can be captured from as well as the use of existing sources and technological systems, plays a decisive role in hotels gain a competitive advantage (Bouncken, 2002; Marco-Lajara et al., 2019; Shaw & Williams, 2009; Sigal & Chalkiti, 2015; Tzortzaki & Mihiotis, 2012 Wilkea et al., 2019). The management of external knowledge also plays an important role in achieving superior performance. A greater fluidity in the extraction of the clients' knowledge allows to obtain a more detailed information about their needs (Nieves & Diaz-Meneses, 2018; Salem, 2014; Wilkea et al., 2019) and the existence of strategic alliances to create and transfer knowledge within the tourism sector has an impact on the competitiveness



of hotels (Nieves & Diaz-Meneses, 2018; Shaw & Williams, 2009; Tzortzaki & Mihiotis, 2012; Wilkea et al., 2019). It should be emphasized that for an effective transfer of external knowledge, it is necessary the hotel have the internal conditions that make it possible to create, transfer and use knowledge (Nieves & Diaz-Meneses, 2018).

As regards to strategies oriented to type of knowledge, tacit knowledge management present a significant influence in operational (Model IV:  $B = 0.41$ ;  $p < 0.05$ ) and financial performance (Model I:  $B = 0.39$ ;  $p < 0.05$ ; Model IV:  $B = 0.37$ ;  $p < 0.05$ ), and Explicit-oriented strategy expose a statistical effect in operational (Model I:  $B = 0.29$ ;  $p < 0.05$ ) and financial performance (Model IV:  $B = 1.16$ ;  $p < 0.05$ ). The higher the orientation for these strategies, the higher is the competitiveness of hotels. These results show that the explicit-oriented and tacit-oriented knowledge management also has the dominant role in hospitality service operations (Bouncken, 2002; Chalkiti, 2012, Hallin & Marnburg, 2008, Salem, 2014 and Shaw & Williams, 2009). The implicit orientation to the processes illustrates the relevance of tacit knowledge in the hotel industry, which is a dynamic and constantly changing environment (Hallin & Marnburg, 2008; Salem, 2014). An effective tacit knowledge management strategy is essential for hotels to be able to successfully develop in the constantly changing tourism market (Bouncken, 2002, Shamim et al., 2017, and Shaw & Williams, 2009). The explicit management of knowledge is extremely relevant for hotel chains when they need to re-acquire the knowledge developed from the experience of others through the spatiotemporal boundaries and particularly the explicit description of all routines for hotels to be almost capable of operating independently of specialized human knowledge (Chalkiti, 2012; Salem, 2014). For hotels, a hybrid strategy is recommended, since some tacit knowledge, namely routines embedded in services, can only be transferred through direct personal relationships and innovation arises also from the simultaneity of explicit and tacit knowledge management (Bouncken, 2002; Salem, 2014).

Finally, the interaction terms between strategies oriented to source and type of knowledge shows that exist a statistically significant impact of interaction between internal and tacit orientations (Model V:  $B = 1.58$ ;  $p < 0.05$ ), external and tacit orientations (Model V:  $B = 1.58$ ;  $p < 0.05$ ), external and explicit orientations (Model V:  $B = 1.78$ ;  $p < 0.05$ ). These results show that there is a multiplier effect on the competitiveness of hotels resulting from the use of combined knowledge management strategies oriented to the source and type of knowledge.

## **CONCLUSION AND DISCUSSION**

There is also an emerging research agenda on knowledge management within the hotel sector. The principal goal of this study is to identify the role of knowledge management organizational processes as a determinant of competitiveness in the hotel industry, particularly how knowledge management strategies centered on the source (internal and external) and knowledge (tacit and explicit) have positive an impact on the competitiveness of hotels.

Our results show that the knowledge management strategies oriented to source and type of knowledge are critical for competitiveness and obtaining competitive advantages.

To improve competitiveness hotels, need trusts internal knowledge when faced with troubles, encourages employees to bring forwards work-related suggestions and cultivates professionals from inside. The hotels need to collaborate with external institutions or organizations in R&D, to solve problem with the help of external experts, to acquire new knowledge from outside media such as internet to gain new knowledge from customers and alliance. Our results have implications in terms of hotel knowledge

Table 1. Mean, standard deviation (SD), correlations between the variables and VIF

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12
(1) Operational Performance	4.82	0.93	NA											
(2) Financial Performance	4.83	1.21	.786*	NA										
(3) Hotel age	20.13	18.21	.265	.193	<b>1.29</b>									
(4) Integrated in a group	0.56	0.50	-.011	.091	.018	<b>1.57</b>								
(5) Algarve	0.24	0.43	-.071	-.022	.077	-.028	<b>1.50</b>							
(6) Lisboa	0.36	0.49	-.059	-.039	-.156	.132	-.421*	<b>1.85</b>						
(7) Category (stars)	4.11	0.85	.132	.029	-.045	-.363*	-.021	.037	<b>1.32</b>					
(8) International market (%)	66.22	25.14	.051	.036	-.269*	.389*	-.019	.361*	-.023	<b>1.78</b>				
(9) External	5.22	1.06	.815*	.615*	.231	-.049	-.087	-.142	.111	.108	<b>6.71</b>			
(10) Internal	4.69	0.99	.713*	.458*	.059	-.044	-.073	-.070	-.025	.113	.666*	<b>2.64</b>		
(11) Explicit	4.91	0.94	.343*	.307*	.138	-.098	-.078	.054	-.008	.044	.364*	.275	<b>1.29</b>	
(12) Tacit	4.81	1.24	.442*	.174	.171	-.129	.033	-.117	.115	.125	.792*	.411*	.428*	<b>3.77</b>

Note: \*  $p < 0.05$ ; NA – Not Applicable

management practices, emphasizing that the decision makers in this industry should have a high focus on the consideration of external and internal factors of the company when formulating knowledge management strategies.

Respectively to strategies connected to knowledge type, the hotel employees need frequently to share knowledge based on their experience, expertise and lessons from past failures, and to collect knowledge of know-where or know-whom from others based on their experience and expertise. The hotel workforce needs to share existing reports and official documents with members of my organization, to collect reports and official documents from others in their work, to have knowledge sharing mechanisms, to have a variety of training and development programs and to have skills in IT systems for knowledge sharing. To facilitate strategies based on explicit knowledge, hotel managers should establish the organizational structures and processes needed to stimulate the exchange of codified and work-related knowledge. As tacit knowledge is more difficult to control, these decision makers should activate strategies aimed at tacit knowledge management, namely consider the creation of work-based teams, rewarding workers based on collective performance and organizing activities with the goal of team building.

Hotel industry managers should potentiate the synergies of tacit/explicit oriented and internal/external oriented knowledge management strategies, and these should be aligned to improve the performance of the company.

Despite all the virtuosities of our study, limitations are inevitable. The methodological design with cross-sectional data collection cannot be used to uncover potential causalities between source and type-oriented knowledge management strategies, so a methodology based on longitudinal data collection

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Table 2. Linear regressions (estimated coefficients)

	Model 1		Model 2		Model 3		Model 4		Model 5	
	OP	FP	OP	FP	OP	FP	OP	FP	OP	FP
Hotel age	0.02*	0.01					0.00	-0.01	0.01*	0.02*
Integrated in a group	-0.06	0.20					-0.06	0.06	0.13	0.40
Algarve	-0.06	-0.54					0.08	0.36	0.05	-0.04
Lisboa	-0.39	-0.35					0.22	0.37	-0.02	0.24
Category (stars	0.15	0.10					0.04	-0.09	0.17	0.15
International market (%)	0.01	0.01					0.00	0.00	0.00	
Internal			0.54*	0.64*			0.90*	1.92*		
External			0.29*	0.11			0.26*	0.36*		
Tacit					0.20	0.39*	0.41*	0.37*		
Explicit					0.29*	0.05	0.12	1.16*		
Internal x Tacit									-0.46	-0.01
Internal x Explicit									0.38	1.58*
External x Tacit									0.52	1.38*
External x Explicit									-0.36	1.77*
R <sup>2</sup>	17.5%	8.4%	71.6%	38.2%	22.4%	9.7%	66.5%	61.2%	66.5%	61.2%
Adjusted R <sup>2</sup>	7.2%	3.0%	70.5%	35.9%	19.0%	5.6%	57.4%	50.7%	57.4%	50.7%

Note: \* p < 0.05; OP – Operational Performance; FP – Financial Performance

should be employed in future research. Second, the data used in this study, particularly those of operational and financial performance, were collected from the perceptions of hotel managers, which may lead to some bias in the results, and future research may collect objective indicators for performance from the company. Finally, our research refers to a specific sample of a country (Portugal), and may limit our conclusions, implying future research to test our research model in different countries or sectors to improve the generalization of our results.

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## **APPENDIX**

### **Measurement Items**

#### **External-Oriented Knowledge Management**

1. Our company collaborates with external institutions or organizations in R&D
2. Our company tends to solve problem with the help of external experts
3. Our company prefers acquiring new knowledge from outside media such as internet
4. Our company emphasizes gaining new knowledge from customers and alliance

#### **Internal-Oriented Knowledge Management**

1. Our company prefers internal knowledge in R&D
2. Our company trusts internal knowledge when faced with troubles
3. Our company encourages employees to bring forwards work-related suggestions
4. Our company cultivates professionals from inside

#### **Tacit-Oriented Knowledge Management**

1. Employees in my organization frequently share knowledge based on their experience.
2. Employees in my organization frequently collect knowledge from others based on their experience.
3. Employees in my organization frequently share knowledge of know-where or know-whom with others.
4. Employees in my organization frequently collect knowledge of know-where or know-whom with others.
5. Employees in my organization frequently share knowledge based on their expertise.
6. Employees in my organization frequently collect knowledge from others based on their expertise.
7. Employees in my organization will share lessons from past failures when they feel that it is necessary.

#### **Explicit-Oriented Knowledge Management**

1. Employees in my organization frequently share existing reports and official documents with members of my organization.
2. Employees in my organization frequently share reports and official documents that they prepare by themselves with members of my organization.
3. Employees in my organization frequently collect reports and official documents from others in their work.
4. Employees in my organization are frequently encouraged by knowledge sharing mechanisms.
5. Employees in my organization are frequently offered a variety of training and development programs.
6. Employees in my organization are facilitated by IT systems invested for knowledge sharing.



## ***Competitiveness of the Hotel Industry***

### **Operational Performance**

1. Customer satisfaction of our company is better than that of key competitors
2. Quality development of our company is better than that of key competitors
3. Cost management of our company is better than that of key competitors
4. Responsiveness of our company is better than that of key competitors
5. Productivity of our company is better than that of key competitors.

### **Financial Performance**

1. Return on investment of our company is better than that of key competitors
2. Return on assets of our company is better than that of key competitors
3. Return on sales of our company is better than that of key competitors
4. Average profitability of our company is better than that of key competitors
5. Profit growth of our company is better than that of key competitors
6. Sales growth of our company is better than that of key competitors.