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CAUSAL RELATIONSHIPS BETWEEN ORGANIZATIONAL LEARNING AND PERFORMANCE IN THE SPANISH HOTEL INDUSTRY: THE MANAGERS' PERCEPTION IN TIMES OF ECONOMIC CRISIS

Structured Abstract:

The present empirical study aimed to analyse the ways in which Spanish hotel establishments learn and whether their hotel managers could improve their organizational performance with the implementation of a suitable learning process in a situation of economic crisis. After reviewing the literature, a structural equation model was developed based on a survey of 147 hotel establishments in the region of Madrid in order to contrast the proposed hypothesis. The results revealed that hotel establishments' managers can improve their performance through organizational learning, drawing information from both external and internal drivers thanks to the existence of cultural and technological enablers. The conclusions of the study contribute to the scientific understanding of the subject researched and at the same time may encourage hotel managers to regard organizational learning processes as a key element for improving performance.

Keywords: Hotels, Hotel industry, Organizational performance, Organizational learning, Managers, Information Technology

1. Introduction

The ongoing change that characterizes the tourist industry has led the members of the socalled organizations to learn to acknowledge the need to acquire new skills or adopt new approaches to learning due to the relentless speed of that change in their environment (Xiao and Smith, 2007). Hotel industry managers and employees consequently regard all the elements of their business as vital issues that must be understood, and that involve analysing and compiling as much information on such elements as possible (Kraleva, 2011; Ruhanen and Cooper, 2004).

Organizational learning is the solution to survival, growth and success (Fiol and Lyles, 1985; Garvin, 1993; Tabassum, 2008), for learning is the result of understanding the change taking place in a company's surrounds (Yeo, 2002). That is, organizational learning establishes a rapport between the organization and the environment and encourages a more active behaviour towards this last one. Organizations that are focused on learning are faster and more efficient in terms of configuring their structure and relocating their resources in order to take advantage of opportunities as well as threats that may arise (Slater and Narver, 1995).

A crisis situation implies a change in the environment which companies must ensure to manage the best way possible. Uncertainty and risk are not foreign to the tourism industry (Melián-Alzola et al., 2015) and that has been palpable in the latest experienced economic crisis.

There is little research about solutions to managing the crisis in the tourism sector within the literature (Okumus et al., 2005) and there are even less studies analysing the impact and the behaviour which the organizations have had in the present economic crisis (Alonso-Almeida y Bremser, 2013; Bremser et al., 2014; Torres Bernier et al., 2014).

In this sense, this present study aims to analyse whether organizational learning can generate a special organizational performance thus serving as a possible solution to managing an economic crisis such as the one that has occurred in Spain since the second semester of 2008, and which has affected the tourism sector. In other words, this study aims to determine whether organizational learning truly serves to face changes-provoked by the economic crisis amongst other factors-that are experimented in the environment in which companies from the hotel sector perform. From this point of view, the hotel industry has not paid the necessary attention to the organizational learning processes. This is due to the positive results obtained traditionally using management procedures which did not take into account such learning. This is the result of a traditional heightened hotel demand that has led the hotel managers to avoid the need to use the organizational learning processes and include them into their management processes.

Although some earlier studies predicted that organizational learning may have affected tourist industry organizational effectiveness (Gupta and Govindarajan, 2000; Petrash, 1996), scant empirical evidence has been put forward on the effect of organizational learning on performance (Kayhan, 2011; Rebelo y Duarte, 2008; Yang 2007a; 2010). To date, empirical research has focused on organizational learning and its effect on service quality, customer satisfaction, employee satisfaction and yield management (Yang, 2008).

In a study on the hotel industry, Yang (2010) found that organizational learning affects organizational effectiveness. In a previous paper, that author [Yang, (2007a), p. 85] defined organizational effectiveness as "an outcome of managerial effectiveness and operational performance".

That notion is also explored here, considering that organizational learning is meant to be the way in which the employees of an organization share beliefs, thoughts, expertise and experience to establish common knowledge (Yang, 2010). Taking all into account, the present paper aims to reach three specific objectives: Firstly, it aims to identify the main knowledge acquisition drivers in the hotel industry. Secondly, it is designed to evaluate the impact of information and communication technologies (ICTs) and cultural factors on organizational learning. Finally, it purported to measure the effect of organizational learning on organizational performance.

This study enlarges on prior research in a number of ways. It expands the understanding of the organizational learning-organizational performance relationship in a particular moment of profound changes in the environment. It adds knowledge acquisition to the above list of considerations, addressing not only internal drivers such as in Yang's (2010) study, but external drivers as well. It sheds light on the impact of ICTs on organizational learning. Finally, it corroborates the relevant role of cultural factors in organizational learning. All the above provides useful practical knowledge for conducting business by hotel managers.

2. Review of the literature

2.1. Crisis management

Knowing how to manage the crisis is becoming of great importance for the touristic sector in general as well as for the hotel industry in particular after the unexpected recent events occurred-such as the Asian financial crisis, the terrorist attacks in USA in September 11th 2001, the Bali attack, the SARS outbreak and the war against Irak (Okumus et al., 2005), or the economic world crisis which started in 2008 in the United States, also named the Big Recession that still endures, though milder in Spain.

Many authors have defined the concept of "crisis". Kash and Darling (1998) identify it as a fact or an emerging unexpected situation which arises in the organization's internal or external environment which can harm the financial situation and its viability. Pauchant and Mitroff (1992, p.15) define this concept as "disruption that physically affects a system as a whole and threatens its basic assumptions, its subjective sense of self, its existential core." or Selbst (1978) in Faulkner (2001, p. 136) conceptualizes the crisis as "any action or failure to act that interferes with an organisation's ongoing functions, the acceptable attainment of its objectives, its viability or survival, or that has a detrimental personal effect as perceived by the majority of its employees, clients or constituents."

Given that crisis has been defined as the process identifying and planning what and how to respond to a crisis (Kash and Darling, 1988), this study aims to look at whether organizational learning could be a means to managing a crisis as, according to several authors (Svagzdiene et al., 2013), the success of companies which offer some kind of service -like the ones belonging to the domestic industry- depend on their adaptation and training capacity.

2.2. Evolution of the notion of organizational learning

A review of the literature on the theory of organizational learning revealed that the notion was not addressed by the scientific community until the mid-twentieth century. Cangelosi and Dill (1965) and Cyert and March (1963) were the first to use the term. Further contributions to the field arrived in the nineteen seventies, with studies by authors such as Argyris and Schön (1978) and March and Olsen (1976), whose research focused on learning as a process and on its results: errors and action taken. Despite such pioneering endeavours, research on learning was pursued practically unnoticed until the mid and late nineteen eighties, when papers were published by Fiol and Lyles (1985) and Levitt and March (1988). Interest in the subject began to rise especially after the publication in 1990 of a paper by Senge (1990), and was reinforced by Nonaka and Takeuchi's 1995 article. In fact, most studies focusing on organizational learning date from after 1990. Research began to branch out in that decade toward areas such as strategic management (Collis, 1994), resource and skills theory (Nonaka, 1991, 1994; Slater, 1996; among others), information theory (Huber, 1991; Walsh and Ungson, 1991; among others) and psychology (Bain, 1998; Dixon, 1994; among others). Today, learning is viewed as a crucial element for the development of competitive advantage and as a vehicle for adaptation to a changing environment (Jérez et al., 2005; Williams, 2001; among others). Rebelo and Duarte (2008) indicate that, even though the evolution of the organizational learning is not known, the tendency is for it to be an important and recognized concept for both the organizations themselves as for the academia.

2.3. Knowledge acquisition

Organizational learning can only take place if organizations are in touch with the surrounding environment (March, 1991) to acquire new knowledge beyond their own bounds (Garvin, 1993). Learning involves networking with suppliers, customers, other companies, industry networks, research institutes, government, universities, financial institutions and local and foreign consultants (Kumar et al., 2008). The importance of stakeholders as a strategic element for any type of business has been amply analysed in the literature (Kumar et al., 2008; Williams, 2001; Ordoñez de Pablo, 2002), as well as for the tourist industry in particular (Robson and Robson, 1996). Hence, Akin Aksu and Özdemir (2005), in a study on the hotel industry, pointed out that in genuine learning organizations, stakeholders such as suppliers, customers and even rivals are included in corporate strategy. In this regard, Ruhanen and Cooper (2004) report that the hotel industry needs to be aware of and understand all the elements of the business that may affect it, act in accordance with the changes taking place in society and analyse the assistance it can elicit from certain closely related stakeholders such as trade unions, shareholders and employers' organizations.

Ingram and Baum (1997a) proved that the hotel industry needs a more open and dynamic view of organizational learning that stresses the exploration of new routines and organizational arrangements. These authors suggest that hotels must acquire an understanding of markets to explore potential future investments and strive to obtain a competitive edge. Organizations can learn from external stakeholders by implementing information, sharing procedures with agents with whom they conduct business (Hernández et al. 2008). Some of the processes analysed in earlier studies include

personalized attention (Buhalis and Law, 2008) and joint activities, routines, methods and work (Caddy et al., 2001; Jamal and Getz, 1995). In this paper, external drivers are defined to main agents and procedures outside the organization from which information is gathered. The hypothesis proposed on the grounds of this prologue is set out below.

H1: the acquisition of knowledge from external drivers has a beneficial effect on organizational learning in hotel companies.

All companies depend not only on information from the outside environment (March, 1991), but also on the information that flows across the organization itself, among individuals, groups, departments and sections (Gamble et al., 2000). Yang (2004) noted that internal actors in the hotel industry acquire knowledge from outside that can be used in their organizations to learn, if the organizational environment allows. In particular, Yang and Wan (2004) and Yang (2007b; 2008) pointed out that managers should encourage employees to share knowledge with one another. Cooper (2006), in turn, reported that department managers are generally the ones who provide the organization's internal information. In this industry, front office employees have been characterized in the literature as a potential source of outside information (Yang and Wan, 2004).

Internal knowledge is attained in a number of ways, including learning from others, experience, or an understanding of the organization and organizational databases (Ordoñez de Pablo, 2002). Yang (2010) contends that hotel companies must be aware of the need to enhance the control and improve the use of their internal knowledge. In an earlier paper (2007a), the same author wrote that if organizations fail to implement mechanisms to warehouse what their employees collectively learn, the effects of that

learning will be short-lived and will contribute only sparingly to organizational learning. Such learning may materialize through organizational routine (Caddy et al., 2001; Yang, 2004), meetings (Pérez López et al., 2003) or workplace learning (Teare, 2011). Internal drivers are defined in this paper to main agents and procedures within the organization from which information is gathered.

The hypothesis deriving from the foregoing is set out below.

H2: the acquisition of knowledge from internal drivers has a beneficial effect on organizational learning in hotel companies.

2.4. Organizational learning enablers

Earlier papers have shown that some organizational elements drive learning within the organization itself (Rodríguez Antón and Trujillo, 2007). The two most highly valued are organizational structure (Rodríguez Antón and Trujillo, 2007) and culture (Williams, 2001). Both are closely related to the history of the organization, for past experience plays a determinant role in organizational decisions (Huber, 1991; Walsh, 1995).

Kraleva (2011) notes that for a tourist organization to learn, several conditions must be in place, one of the most prominent being the existence of an organizational culture that provides a suitable environment for sharing and disseminating information and knowledge. Values and attitudes have also been found to be organizational learning enablers in several studies (Yang, 2004; 2008). Another key factor for enabling organizational learning is teamwork (Rodríguez Antón and Trujillo, 2007). Bayraktaroglu and Kutanis (2003) suggested that working teams should be afforded the opportunity to contribute to hotel organizations' knowledge base. The hypothesis deriving from these considerations is as follows.

H3: in hotel companies, a series of cultural factors have a beneficial impact on organizational learning

2.5. ICTs

The hotel establishments have opted for ITCs as means to face the environment rapid changes (Sirirak et al., 2011). With the development of new information and communication technologies, organizations can share and apply the information conveyed. The technological improvements have been linked to the organizational learning (Martin et al., 2011; Robey et al., 2000), due to being used by companies in order to learn and absorb knowledge (Chio, 2012; Gilbert & Cordey-Hayes, 1996; Mihi-Ramírez et al., 2011).

ICTs support the acquisition (Xiao and Smith, 2010), generation, transfer, sharing and coding of and access to knowledge (Terrett, 1998) and information (Mazón and Pereira, 1999), all of which are related to learning, serve to improve communication and collaboration (McCampbell at al., 1999) and support the organization's memory (Croasdell, 2001).

One of the hotel companies' common characteristics is that in the wake of the enormous impact of the use of information and communication technologies, their service processes

are beginning to be primarily knowledge-based or knowledge-intensive (Kahle, 2002). Sheldon (2007) asserts that tourism is an information-intensive industry, while Figueroa (2009) contends that ICTs are a resource for improving information management and creating new tourist products and services. Other authors encourage companies to engage in the hotel industry to be more innovative and enhance their technological process to improve their organizational learning processes (Hjalager, 2002).

Prior research on organizational learning shows that the technologies most commonly used as learning tools are electronic mail (Gottschalk, 2000), Internet (Mazón and Pereira, 1999) and company websites (Buhalis and Main, 1998). In light of that, the following hypothesis proposes a positive relationship between organizational learning and information and communication technologies.

H4. ICTs have a positive effect on organizational learning in hotel companies.

2.6. Effect of organizational learning on organizational performance

Organizational learning is regarded as one of the main sources of improvement in any results concerning a business (López et al., 2005). It is being increasingly regarded as a crucial element for maintaining and creating a sustainable competitive advantage (Easterby-Smith, 1997; Sisaye and Birnberg, 2010; Pastuszak et al., 2011; Pastuszak et al., 2012). Companies that develop the ability to learn faster than their competitors may

become more efficient (Rodríguez Antón et al., 2010). From that perspective, creating a learning organization is imperative to favouring ongoing success (Tabassum, 2008).

Organizational learning yields a number of benefits. Several authors, Yang (2007a; 2010) among them, have reported a positive relationship between organizational learning and organizational effectiveness in the hotel industry. In this vein, the learning level in an organization may be associated with its ability to devise competitive and timely responses, thereby generating a greater and more sustainable edge over their rivals. In a global environment, when hotel companies learn and quickly share knowledge in-house, the decision-making process may be more effective and efficient than in companies that fail to adopt similar policies (Yang, 2008). Previous research on business performance in the hotel industry shows that when a hotel establishes organizational learning processes, customer satisfaction (Eggert and Ulaga, 2002) and perception of quality (Bontis et al., 2002), consequently the likelihood of returning to the same hotel (Bontis et al., 2002), is higher. Further to that research, in this paper organizational performance is regarded as a series of elements that enhance company effectiveness, such as higher organizational productivity (Jones, 2000), a successful new product, improved customer loyalty, a rise in perceived service quality, greater financial returns or faster company growth (Bontis et al., 2002).

Along the lines of the preceding discussion, the present study assumed a direct relationship between organizational learning and the generation of positive results, expressed in the following terms.

H5: organizational learning has a positive effect on organizational performance in hotel companies.

The hypotheses proposed are summarized in Figure 1.

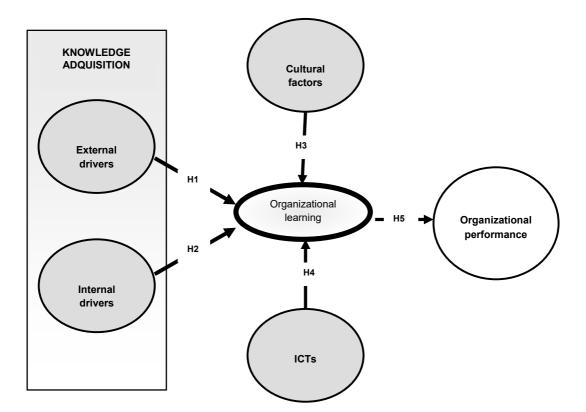


Figure 1. Initial working model proposed

3. Research design

3.1. Research framework

The study is conducted within the tourism sector framework as the crisis has had a strong impact on the consumers' confidence within the main tourism source markets. This sector could be one of the first affected faced by the arrival of a crisis (Hosteltur,

2012). Thereby, at worldwide level, in 2008, the growth went from 5 per cent for international tourism on the first semester to a decrease of 1 per cent in the second semester. In 2009, the arrival of international tourists fell to a 4.2 per cent up to 880 million, producing an income decrease of 5.7% for international tourism in real terms. In the last trimester of 2009, a recuperation tendency came about which continued in 2010, increasing the arrival of international tourists in 6.7 per cent compared to 2009 and being a positive increase within the world region (UNWTO, 2010).

The present study was conducted in the region of Madrid, Spain, where the hotel industry carries considerable weight. The region accounts for 17.65 % of the national GDP. In 2010, the hotel industry contributed 5.3 % to the regional economy and 9.7 % to the nationwide tourist industry GDP (IECM, 2012).

Moreover, there is an average of 1 113 hotels operating in the region, that together provide a mean of 105 750 hotel places (INE, 2015) and employ a total of 13 370 staff.

3.2. Sampling and data collection

The results showed that of the 147 hotels in the sample, most (75.5 %) belonged to chains, 45.6 % to Spanish chains. In all, 72.8 % were geared to business tourism. Similarly, 51.7 % were directly owner-run. Most guests (72.8 %) were business clients. Moreover, while the highest percentage of hotels (28.6 %) were from 20 to 50 years old, 24.5 % had been in business for less than 5 years. Thirty-four per cent of the hotels had from 100 to

199 rooms. Unsurprisingly in light of this latter figure, 64.6 % of the hotels surveyed had from 10 to 49 employees and consequently constituted small enterprises, as defined in the European Commission's classification (2003/361/CE).

The specifications sheet for the study is given in Table 1 below.

Population or universe	or universe 370 three, four- and five-star hotels in the region of Madrid	
Sample size	147 hotels	
Unit of analysis	Hotel	
Response rate	39 % (147 out of 370)	
Sampling error	6 %	
Confidence level	95 %	
Dates of field work	April-August 2010	
Follow-up	By telephone	
Questionnaire sent by	Personalized post	
Respondents	Senior management or heads of department	

Table 1. Specifications sheet for the study

3.3. Construct measurement

The hypotheses were tested by designing a structured questionnaire consisting of 96 fivepoint Likert-type closed questions with scaled answers. A panel of four academic experts in the area studied was created to determine the validity of the measuring tool used. The objective was for the panel to analyse and evaluate the full list of items compiled on the state of the art, based on its members' theoretical and empirical expertise in the area. The first draft of the questionnaire was adjusted on the grounds of these academic opinions and a pre-test was conducted and was further assessed by three senior managers: one in a three-, one in a four-, and one in a five-star hotel in the region of Madrid. The final questionnaire was drawn up based on their opinions. The variables addressed in the study and the references from which they were taken are listed in Table 2.

3.4. Data analysis

3.4.1. Prior assessment

Before defining a final model with the findings, sample representativeness was analysed. The cross validation conducted to this end showed that the sample was stable and not dependent upon its own characteristics. It was then analysed for internal consistency with Cronbach's alpha for each group of items. The results were as follows: information gathered from stakeholders, 0.882, and from internal agents, 0.865; factors enabling organizational learning, 0.956; technologies that support organizational learning, 0.849; organizational learning processes, 0.912; organizational performance, 0.869. Further to the analysis, all the scales were consistent, with Cronbach's alpha values of over 0.7, an indication that the construct was reliable (Cronbach, 1951; Thiétart, 2001). The values of over 0.7, obtained with a Spearman-Brown reliability analysis afforded proof that the scores for each scale were also highly accurate.

A Kaiser-normalized Varimax exploratory factor analysis was subsequently conducted, using the maximum likelihood method and orthogonal rotations to reduce the number of variables. The analysis yielded 26 variables and six factors that matched the elements of the hypotheses set out above: factor 1 -external drivers, 34.718 %; factor 2 -internal

drivers, 7.972 %; factor 3 -cultural factors, 7.371 %; factor 4 -ICTs, 6.058 %; factor 5 -creation of organizational knowledge, 5.526 %; and factor 6, organizational performance, 4.264 %. Of the total variance, 65.910 % was explained by the factors and the value of the KMO (Kaiser-Meyer-Olkin) test, 0.874.

Next, a confirmatory factor analysis was performed on the 26 variables on the previous analysis, which confirmed a 6-factor structure (see Table 2).

3.4.2. Model goodness of fit

The relationships proposed were analysed with a structural equation model (SEM, see Figure 1) using the variables and factors obtained with exploratory factor analysis. The SEM was run to find the values of the model parameters that best reproduce the variance and covariance matrix for the observable variables. EQS 6.1 software was used in this study and estimates were made with both the maximum likelihood (ML) and robust methods. The latter approach is more suitable when the multivariate normality assumption does not hold.

 Table 2. Variables and factors from exploratory and confirmatory factor analysis. Loadings, R2 and Composite Reliability from final structural equation model.

Factor	Construct	Loadings	R ²	Authors
	Shareholders ^{*)}			Williams (2001); Kumar et al. (2008)
Factor 1: External drivers CR= 0.766; AVE= 0.398	Trade unions	0.569	0.324	Williams (2001); Ordoñez de Pablo (2002)
	Employers' organizations	0.582	0.339	Ruhanen and Cooper (2004)
	Technologies	0.593	0.352	Kahle (2002)
	Joint work	0.666	0.443	Jamal and Getz (1995); Pérez López et al. (2003)
	Activities, routines and methods	0.730	0.533	Jamal and Getz (1995); Pérez López et al. (2003)
Factor 2: Internal driver CR= 0.763; AVE= 0.449	Front office employees	0.566	0.321	Yang and Wan (2004); Cooper (2006)
	Heads of departments	0.617	0.380	Yang and Wan (2004); Yang (2007b)
	Department meetings	0.779	0.607	Pérez López et al. (2003)
	Workplace learning	0.700	0.491	Pérez López et al. (2003); Yang (2004)
	Attitudes and values	0.764	0.584	Yang (2004, 2007a)
Factor 3: Cultural factors CR= 0.900; AVE=0.599	Organizational structure	0.751	0.564	Rodríguez Antón and Trujillo (2007); Kumar et al. (2008)
	Your hotel's culture is characterised by an open and trusting atmosphere in which staff share ideas -Culture-	0.780	0.609	Yang (2007a); Kumar et al. (2008)
	Your hotel's culture establishes a common language for exchanging knowledge -Culture-	0.812	0.660	Yang (2007a); Kumar et al. (2008)

	Organization's history	0.763	0.583	Garvin (1993); Schilling and Kluge (2008)
	Working teams	0.773	0.597	Rodríguez Antón and Trujillo (2007)
Factor 4: ICTs CR= 0.841; AVE=0.640	Internet	0.746	0.556	Croasdell (2001); Desouza et al. (2008)
	Electronic mail	0.908	0.825	Alavi and Tiwana (2003); Desouza et al. (2008)
	Website	0.734	0.539	Alavi and Tiwana (2003)
Factor 5: Organizational learning CR= 0.870; AVE=0.693	The hotel's corporate mission, vision and values are set out in formal and official documents -Externalization-	0.819	0.671	Namela and Talaanshi (1005), Dada'araa Aastin and Tariilla (2007)
	The hotel's organisational routines or methods are documented in procedures, flow charts and similar -Externalización-	0.916	0.840	-Nonaka and Takeuchi, (1995); Rodríguez Antón and Trujillo (2007)
	Combination	0.754	0.568	Nonaka and Takeuchi, (1995); Rodríguez Antón and Trujillo (2007)
	Operating results	0.662	0.439	Bontis et al. (2002); Yeung et al. (2007)
Factor 6: Organizational performance CR=0.824; AVE=0.542	Customer loyalty	0.804	0.646	Bontis et al. (2002); Yeung et al. (2007)
	Improvement in quality	0.783	0.614	Duphy et al. (1997); Bontis et al. (2002)
	Business competencies	0.685	0.469	Dunphy et al. (1997)

The first step was to establish the model specifications in keeping with the content of Figure 1. After obtaining non-optimal joint estimates for the initial structural equation model (see columns (1) in Table 3), a nested model sequence was computed to obtain a final model with optimal results (see columns (2) in that table).

	Initial structural ((1)	equation model	Final structu model (2)	Recommended	
Indicator	ML method value	Robust method value	ML method value	Robust method value	value
χ^2 for estimated model	629.780		387.290		
Degrees of freedom	295		266		
Critical value of χ^2 likelihood	0.00000		0.00000		x<0.05
Satorra-Bentler- scaled χ^2		567.4668		316.5251	
Degrees of freedom		295		266	
Critical value of χ2 likelihood		0.00000		0.01813	x<0.05
NFI	0.698	0.627	0.815	0.766	x>0.9 (Hair et al., 1999)
NNFI	0.790	0.749	0.923	0.945	x>0.9 (Hair et al., 1999)
CFI	0.810	0.772	0.932	0.952	x>0.9 (Hair et al., 1999)
IFI	0.813	0.778	0.934	0.954	x>0.9 (Hair et al., 1999)
MFI	0.320	0.396	0.662	0.842	x>0.9
GFI	0.757		0.829		Close to 0.9 (Jöreskog and Sörbom, 1993)
RMSEA	0.088	0.080	0.056	0.036	0.04 <x<0.08 (Bollen ,1989)</x<0.08
90 % RMSEA Confidence interval	0.078,0.097	0.060,0.089	0.043,0.067	0.016,0.050	
Normalized chi- square	2.13	1.92	1.45	1.18	1 <x <2<="" td=""></x>
Cronbach's alpha	0.917		0.918		>0.7

Table 3. Measures of model goodness of fit

Since the final structural equation model revealed that the multivariate normality assumption did not hold (the Mardia coefficient was 103.9835), the robust method was deployed. Optimization yielded no anomalous operations such as negative variances or correlations lying outside the statistical range.

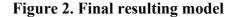
The generally accepted criteria on residuals for variables recommend coefficients lower than or around 0.05 (Levy, 2005), which are indicative of small measurement errors. The first coefficient, average absolute standardized residuals, was 0.0488, lower than 0.05, proof that the covariances were duly explained. The second, the average off-diagonal absolute standardized residuals may also suggest the introduction of additional parameters. Batista and Coender (2000) recommend a maximum value of around 0.15 for this second coefficient. The value found here was much lower: 0.0516.

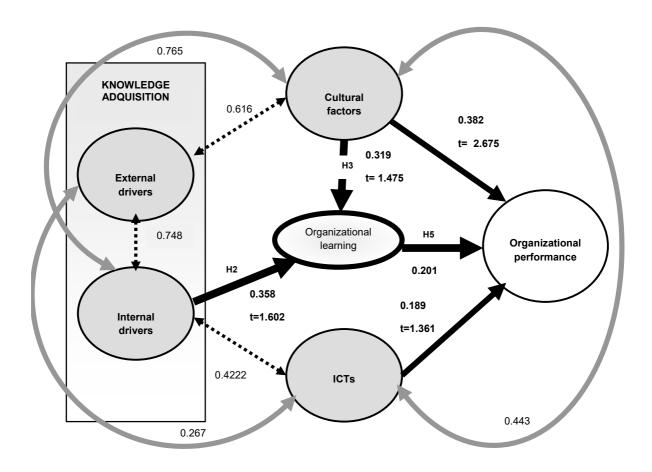
As far as joint significance tests are concerned, Table 3 also shows that the model complied with all the main usual and robust goodness of fit measures listed by Lévy (2005). Focusing on the most relevant measures for the final structural equation model only, the critical probability value in both the maximum likelihood and the robust method (respectively 0.00000 and 0.01813) was clearly under 0.05. The null hypothesis, H₀, which in this case was the null model (all coefficients equal zero), was therefore rejected. Lastly, since the values of the global fit indices (GFI and RMSEA), the incremental fit indices (NNFI, NFI and CFI) and the parsimony indices (normalized chi-square) were acceptable, the fit was likewise deemed to be acceptable.

4. Results

The final model fitting coefficients showed that with the exception of the "operating results" variable in the organizational performance factor (which was 0.389), all the loads had values of over 0.40 and in no instance did the t-statistic lie between -1.96 and 1.96. Consequently, all the factorial loads were statistically significant.

Figure 2 shows the standardized fitting coefficients for the structural part of the final model. Note that both the cultural factors and the internal drivers impacted organizational knowledge creation, with factorial loads of 0.319 and 0.358, respectively. In organizational learning, by contrast, both ICTs and external drivers, relationships postulated in the model proposed (Figure 1), were observed to lie outside the model. Organizational learning, in turn, was found to have an effect on the endogenous variable organizational performance (0.201). In addition to these expected relationships, other unpredicted associations also arose. Cultural factors affected organizational performance (0.382), as did ICTs (0.189). The independent variables internal drivers and cultural factors explained the variance in the dependent variable organizational performance was explained, with an R^2 of 0.405, while the variance for the dependent variables organizational performance was explained, with an R^2 of 0.4, by the independent variables organizational learning, cultural factors and ICTs. These last values (0.405 and 0.40) are equal or higher to the recommended -0.40- and a significance level of 5 %.





In addition to these results, which denote causal relationships among the model constructs, a series of correlations in the final structural equation model revealed new relationships. First, cultural factors were closely correlated to internal (0.765) and external (0.616) drivers, an indication that these factors are essential to furthering the acquisition of knowledge from both internal and external actors. Second, these factors were also closely related to ICTs (0.413), signifying that hotels' technological capacity depends on the prior existence of a series of factors or elements favouring the adoption and use of ICTs: cultural organization, organizational structure, attitudes and values, working teams and history of the organization. Third, external drivers are closely associated with internal drivers (0.748). The inference is that the knowledge acquired in

the organization through internal agents is related to the knowledge from external players. Finally, ICTs are correlated to both internal (0.4222) and external drivers (0.267), i.e., they can favour the acquisition of knowledge from both types of actors.

A discussion of the findings and their effect on the hypotheses formulated follows.

5. Discussion

5.1. Knowledge acquisition and organizational learning

Previous research shows that customers play a key role in organizational learning (Nasution and Mavondo, 2008; Yang, 2004). And indeed, hotel organizations must identify their guests' wants and needs to internalize and fully understand their special interests and thus reinforce their loyalty. In addition, the hotel industry can glean useful information (defining usefulness to be "the potential of a body of knowledge to produce an outcome that could be subsequently evaluated as effective or ineffective in terms of one's goals or expectations" [Xiao and Smith, (2007), pp.313] and learn from other external sources: shareholders, trade unions and employers' organizations. These hotel business stakeholders also need to be known and understood (Ruhanen and Cooper, 2004). ICTs are another necessity for tourist organizations, which must acquire pertinent information from external agents to respond swiftly to changes in demand (Coakes et al., 2002) by offering personalized attention services (Buhalis and Law, 2008). One recommendation is therefore to encourage certain activities, routines and methods that further information gathering from external agents via cooperation between the company and its stakeholders to reach common objectives (Jamal and Getz, 1995). This study,

however, unlike preceding research, found no empirical evidence that external drivers are critical to organizational learning. These findings could be due to the following reasons: the hotel products' design resort to external agents via cooperation or outsourcing, however, internal agents play a priority role through organizational learning in order to create new hotel services, as H2 has proven.

Consequently, H1 is rejected. Even though this construct is indirectly related to organizational learning through others, no direct relationship exists. This assertion should be interpreted cautiously, however, for it contradicts evidence from earlier research. Further study in this area is therefore deemed to be necessary.

The findings reveal that the acquisition of knowledge from internal agents has a positive and significant effect on organizational learning. H2 is consequently accepted. This study corroborates earlier findings (Yang, 2004; 2007a) to the effect that the acquisition of information from internal actors is essential to both individual and organizational learning.

In this research, the internal drivers comprise front office employees, heads of department, department meetings and collaboration. The findings show that the front office staff are well positioned to acquire external knowledge, in as much as they share customer- and product-related knowledge, solve problems and negotiate situations by word of mouth (Yang and Wan, 2004; Yang, 2007a). Information is also acquired from heads of departments, for they stand between employees, the source of customer information, and managers, who provide them with a constant flow of data on the market, with comparisons of the actual results to objectives. This argument follows along the lines

of Cooper's (2006) research. Meetings and collaboration are also identified as drivers. Meetings afford employees the opportunity for exchange with managers and both parties a chance to put forward information and proposals that can benefit the organization, whereas collaboration enables employees to pool information and ideas while conducting tasks jointly, generating new information for the organization.

5.2. Organizational learning enablers

The literature has proven the existence in organizations of some factors with an effect on organizational learning. In this regard, as cultural factors were found to enhance organizational learning, hypothesis H3 is accepted. As in other studies (Bayraktaroglu and Kutanis, 2003; Rodríguez Antón and Trujillo, 2007), here cultural factors are deemed to be learning enablers and as such must not be neglected in organizations. The model also shows that the factors that enhance or mostly favour learning are attitudes and values, organizational structure, culture, the history of the organization and working teams.

The present findings confirm part of the results reported earlier. Indeed, as in earlier research where the belief still prevails that structures and values that encourage organizational learning will lead to positive results for the organization (Berthoin-Antal et al., 2003), in the present survey organizational structure and values and attitudes are found to favour organizational learning. Here, culture also proves to be a positive element for generating organizational learning. Bayraktaroglu and Kutanis (2003) report that for a hotel company to become a learning organization it needs to foster a certain type of organizational culture. Similarly, Yang and Wang (2004) suggest that hotel establishments must take the necessary measures to further an organizational culture in

which knowledge acquisition and sharing are key elements to differentiation and survival. The history of the organization is also an element that appears on lists of activities for the development and integration of learning. Garvin (1993) and Cooper (2006), for instance, stress the role of past experience and the creation of a company memory based on that experience. Schilling and Kluge (2008) also contend that organizational learning is a collective, regulated process in which individual or group learning experiences are related to improved organizational operation. Lastly, working teams are also organizational learning learning enablers (Rodríguez Antón and Trujillo, 2007). Bayraktaroglu and Kutanis (2003) suggest that working teams should be given the opportunity to contribute to hotel establishments' knowledge base.

This survey does not corroborate earlier findings with respect to attitudes and values. In a study of the hotel industry, Yang (2010) reported that employees' attitudes toward sharing knowledge are unrelated to organizational learning, whereas the present results indicate the contrary. A possible explanation for this finding is that if the company strives to steer the individual's values and attitudes towards learning through enabling processes, the employee may cultivate positive values and attitudes towards organizational learning.

5.3. ICTs and organizational learning

Hypothesis H4 proposes that ICTs are essential learning tools, for today's interaction between technology and tourism has led to new levels of interactivity (Buhalis and Law, 2008) that may affect organizational learning. Since the present findings reveal that ICTs do not impact organizational learning, this hypothesis is rejected. Nonetheless, these technologies are found to have a direct effect on organizational performance, although that effect is significant only for certain specific ICTs, namely websites, Internet and electronic mail. This type of technological tools is geared to external actors, customers in particular (with the exception of electronic mail, which also involves internal agents), a commercial bias that would explain why ICTs have a greater impact on results than on learning. This is in accordance to what Law and Jogaratnam (2005) point out, that the investment made on ICTs in the hotel sector benefits their companies, providing customers with a better experience and helping the hotel staff to work more efficiently to better assist those customers.

5.4. Organizational learning and organizational performance

Finally, one of the key issues in the model proposed is to ascertain whether organizational learning can affect organizational performance, as proposed in H5. On the grounds of the findings, this hypothesis is accepted. The findings show that organizational learning improves operating results and a company's business competencies while delivering higher quality service and ultimately attaining the loyalty of a larger number of customers. Many prior studies suggest that organizational learning impacts organizational effectiveness (Petrash, 1996; Gupta and Govindarajan, 2000) or in the attainment of competitive advantages (Namya et al., 2011). To date in the tourist industry, however, scant empirical proof has been forthcoming on the effect of organizational learning on organizational performance. Yang's (2010) pioneering evidence to that effect for the hotel industry is supported by the present findings, which show that organizational learning impacts organizational performance. Specifically, not only are improvements observed in tangible (operating) results, but in intangible areas (quality and customer loyalty) as well, not to mention the acquisition of new business competencies.

Table 4 summarizes the results of the hypotheses tested with the structural equation model.

Hypothesis	Result
H1	Rejected
H2	Accepted
H3	Accepted
H4	Rejected
H5	Accepted

Table 4. Results of the hypotheses proposed

6. Conclusions

6.1. Conclusions, implications and recommendations for hotel managers

The empirical study conducted here aimed to verify whether organizational learning can improve hotel establishment performance in a time of crisis, with information obtained through both external and internal drivers thanks to the existence of cultural and technological enablers. A series of hypotheses formulated on the basis of a review of the literature were proposed and tested with a structural equation model to detect possible causal relationships among the latent constructs established.

From the academic standpoint, the findings establish new empirical evidence on organizational learning in the hotel industry and its effect on organizational performance and, therefore, this type of learning means an adequate solution in a moment of change as Fiol and Lyles (1985), Garvin (1993) and Tabassum (2008) indicate, due to the positive consequences of acquired organizational learning in crisis situations (Anderson, 2006; Faulker, 2001).

So, in this study it has been showed, as Yang (2004; 2007a) that the acquisition of knowledge from internal agents has a positive and significant effect on organizational learning. Likewise, as Bayraktaroglu and Kutanis (2003) and Rodríguez Antón and Trujillo (2007) founded, in hotel companies, a series of cultural factors have a beneficial impact on organizational learning. Finally, as advanced by Gupta and Govindarajan (2000) and Yang's (2010), organizational learning has a positive effect on organizational performance in hotel companies.

From the business perspective, they give rise to a number of recommendations about how to implement an effective organizational learning system which manages a complicated situation in the environment adequately, as summarized below.

1) Since hotel employees may have information liable to contributing to improvements in company operation, suitable methods should be set up to explicitly gather and learn from this information. Employees' tacit information cannot enhance organizational effectiveness unless it is given in explicit form and exploited to improve hotel service.

2) While the information acquired from external actors was found to have no direct effect on learning, it was observed to have an indirect effect through its impact on learning enablers and internal drivers. These findings reinforce the advisability of encouraging employees to acquire knowledge and reinforcing culture and teamwork to contribute to the flow of knowledge across hotel companies, which may in turn further the acquisition of relevant information from the environment.

3) While any number of studies address the effect of certain factors on organizational learning (Rodríguez Antón and Trujillo, 2007), many single out individual factors for analysis. The present article stresses that all these factors as a whole are vital to favouring learning in hotel establishments. Consequently, as mentioned earlier, such establishments must further the implementation or application of this type of factors to foster learning in their organizations. Moreover, a new relationship, not initially proposed, has been identified and proven to be more significant than the relationship between these factors and learning: namely, the relationship between cultural factors and organizational performance or effectiveness. This is an indication that factors not only enhance learning, but also underlie higher performance.

4) The article attempts to analyse the role of ICTs in the context of organizational learning, re-interpreting this notion in connection with the tourist industry, for the most influential studies on ICTs in the industry focus on demand and consumers, technological innovation and industry activities (Buhalis and Law, 2008). Although the proposed relationship between these tools and organizational learning was ruled out in the final model, that same model revealed an unexpected relationship between ICTs and organizational performance. This survey confirms, then, that ICTs are becoming an element vital to organizational effectiveness. The recommendation is that hotel establishments should invest in ICTs to improve their results. The present study identifies

ICTs, primarily Internet, electronic mail and websites, as tools that can enable hotels to achieve better results, albeit less through learning than through customer relations.

5) As a construct that generates better results, organizational learning should not be neglected by establishments, but rather regarded as a challenge to be confronted that may lead to beneficial change in the organization. Organizational learning is not alone in contributing to better results: learning enablers may also enhance organizational effectiveness and should be developed by hotel establishments.

The practical recommendation in this regard is for hotel establishments to empower and reinforce cultural factors, for culture and organizational structure are key factors in these organizations. In a changing environment, hotel establishments should further values that encourage knowledge sharing, the introduction and application of new knowledge, creativity and participation, and ensure permanent connectivity to their surroundings. Above all, they should set up flexible organizational structures able to capitalize on the organizational knowledge acquired from the environments in general and customers in particular. "Hyper clover" arrangements (Rodríguez Antón, 2001) are the organizational structures that best meet such requirements.

6.2. Limitations of the study and future research

This study was subject to a number of limitations. One is that firstly, the variables are measured on the grounds of respondents' subjective opinions. While this is a common approach in such surveys, the inclusion of more objective measurements might well have enhanced the validity of the findings. Nonetheless, the hotel industry's notorious reluctance to furnish this type of information constitutes an obstacle to obtaining more objective units of measure. Another, the information reflects the perceptions of only one respondent, a senior manager, per establishment. While executives are regarded as reliable sources of information in light of their experience and expertise, their opinions may contain some subjective bias. Last limitation is sample size. Although the response rate was acceptable [Levy, (2005), p. 805], a larger sample might have yielded more representative results.

These difficulties may be surmounted in future research. One promising approach would be to supplement the qualitative research methodology by introducing case studies. A comparison could thus be drawn between the proposals made here and actual business practice. Given the importance of the factors in the model proposed, focusing only on a few of them (the ones most extensively addressed in the literature such as organizational culture, structure and strategy) as enablers of organizational learning and analysing their effect on such learning in greater depth would be another fruitful area of study. Since three-, four- and five-star hotels were included in the sample, the data gathered could also be used to compare the level of learning attained category by category and ascertain whether that variable has any impact on organizational learning. The information collected could likewise be used to analyse the possible effect on learning depending on hotel size, age, number of employees and belonging or otherwise to a chain. Lastly, enlarging the sample size by expanding the sample universe to include all the hotels located in Spain would also be beneficial.

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