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Human Resource flexibility and performance in the hotel industry: the role of organizational ambidexterity

Purpose –The purpose of this paper is to explore if human resource flexibility (HR flexibility) facilitates the development of organizational ambidexterity, which in turn has positive effects on firm performance.

Design/methodology/approach – The research hypotheses are tested by partial least squares (PLS) with data from a sample of 100 Spanish hotels.

Findings - The results confirm a total mediator effect of organizational ambidexterity on the relationship between HR flexibility and performance. However, it was not possible for us to check that such flexibility directly influences performance. This may be due to the fact that human resource flexibility has a gradual effect on the development of organizational ambidexterity.

Research limitations/implications - The results of this study contribute to the knowledge on the impact of human resource flexibility on performance. This paper thus stresses the strategic role that human resources play within organizations, insofar as their flexibility makes it possible to develop a highly relevant organizational capability such as ambidexterity. The study's limitations are the analysis technique utilized (it assumes linearity between latent variables) and that the research only explores the hotel industry.

Practical implications – Human resource managers need to consider that HR flexibility contributes to developing organizational ambidexterity and the ability to combine the learning of exploration and exploitation affects the firm's performance and, therefore its competitiveness.

Originality/value – The results of this study can contribute to broaden the knowledge about the impact of human resource flexibility on performance. In fact, the studies on HR flexibility performed so far have focused on analyzing the role played by that flexibility as a mediator variable between high performance work system (HPWS) and performance. This work goes one step further, trying to examine the extent to which human resource flexibility influences the ability to undertake exploitation and exploration processes at the same time. This paper thus stresses the strategic role that human resources play within organizations, insofar as their flexibility makes it possible to develop a highly relevant organizational capability as is ambidexterity.

Keywords Organizational Ambidexterity; Human Resource Flexibility; Firm Performance

Paper type Research paper

Introduction

Two topics have been at the foreground of human resource management studies in recent years. The first is the utilization of high commitment and/or high performance work systems —HPWS— (Arthur, 1994; Pfeffer, 1994; Sanders, Shipton, and Gomes, 2014) by organizations, whereas the second focuses on the forms of organization that can provide firms with workforce flexibility (Kalleberg, 2001, 2003; Vela-Jimenez et al., 2014; De Lastra et al., 2014; Natasaputra and Kusumastuti, 2016). Labour flexibility is a very important topic in every organization, but even more so within highly labour-intensive sectors strongly affected by seasonality, as is the case of the hotel industry (Knox and Walsh 2005; Hoque, 2013; Duncan, Scott and Baum 2013; Yaduma et al., 2015).

The combination of these two characteristics makes the hotel industry of special interest when it comes to studying human resource flexibility. This has been of great concern within

the Spanish tourism sector lately. Labour flexibility is often understood in an incorrect and incomplete way, since it exclusively refers to the use of work contracts with a fixed duration or focuses on the reduction of redundancy costs. In fact, one of the main problems faced by the hotel industry is the high staff turnover derived from its partially understood labour flexibility.

Furthermore, the development recently experienced by the notion of organizational ambidexterity offers a new perspective from which different organizational aspects –amongst them, human resource management– can be analysed (Glaister, Ahammad and Junni, 2015; Patel *et al.*, 2013; Prieto and Santana, 2012; Kang and Snell, 2009)

Even though progress has been made in research on human resource flexibility and organizational ambidexterity, no works relating both concepts have been written so far. Nevertheless, these topics raise a number of questions such as: Does human resource flexibility influence the development of the ambidextrous learning capacity? Does human resource flexibility have an impact on organizational performance? Is organizational ambidexterity positively related to business results? Does organizational ambidexterity mediate between human resource flexibility and performance? The search for answers to these questions is what led us to write the present paper and a sample of Spanish hotels is utilized to this end. Our choice of this industry is due to its great interest in the issue of human resource flexibility and the fact that the ability to exploit knowledge (in order to be efficient and competitive via prices) no longer suffices; the need arises for hotels to simultaneously develop the capacity to explore new knowledge (seeking to innovate and offer differential services with respect to competitors).

Organizational ambidexterity

The bibliography dedicated to organizational ambidexterity has tended to revolve around how to achieve balance and simultaneity between exploration-based and exploitation-based learning. Several options have been suggested in the bibliography. The first is known as *structural, partitional or reciprocal ambidexterity* (Gibson and Birkinshaw, 2004; Simsek *et al.*, 2009; Raish and Birkinshaw, 2008; Chebbi *et al.*, 2015). This sort of ambidexterity achieves a combination between both types of learning through the creation of structural mechanisms that make possible either the alternation between exploitation and exploration periods or the coincidence in time between both types of learning, though in various organizational units with different structural configurations.

Another alternative regards organizational ambidexterity as *a capacity of leaders* (Gibson and Birkinshaw, 2004; Mom *et al.*, 2009; Zimmermann, Raisch and Birkinshaw, 2015). From this perspective, ambidexterity would be achieved if executives' behaviour is oriented towards the combination of exploratory and exploitative activities.

Finally, there is *contextual or harmonic contextual ambidexterity* (Simsek *et al.*, 2009; Hahn *et al.*, 2016), which arises when the organization designs social and behavioural mechanisms which allow employees to follow both types of learning (Prieto and Santana, 2012). This perspective establishes the importance of building a specific organizational context which allows and encourages individuals to think for themselves about how to better divide their time between the conflicting demands for exploitation and exploration. As stressed by Kang and Snell (2004) and Ahammad *et al.* (2015), contextual ambidexterity assumes that the ambidexterity of an organization as a whole derives from specific actions carried out by individuals; in other words, it is indissolubly linked to the firm's efforts to manage its human resources.

Therefore, organizations which pursue ambidextrous behaviour should develop the functional aspect of their human resources so that they can devote their efforts to activities associated with both exploitation and with exploration (Cordery et al., 1993; Lepak *et al.*, 2003). The expression ‘human resource flexibility’ consequently appears as an antecedent variable of organizational ambidexterity.

Human resource flexibility

Within the strategic approach to human resource management, researchers have advocated flexibility in human resource systems and processes to help the organization adapt to a complex and dynamic environment (Lengnick-Hall and Lengnick–Hall, 1988; Snow and Snell, 1993; Ketkar and Sett, 2009; Way et al., 2012; Camps et al., 2015). From this point of view, human resource flexibility is conceived as a capability through which the organization can more easily adapt to environmental contingency changes (Snell, Youndt, and Wright, 1996; Tracey, 2012; Camps et al., 2015; Sekhar, Patwardhan and Vyas, 2016), where both intangible assets, such as knowledge and other tangible ones, play a role in the determination of competitive advantage (Hitt et al. 2001; Miller and Lee, 2001; Sirmon, Hitt and Ireland, 2007; Aryee et al., 2016). In the words of Wright and Snell (1998), employees’ flexibility can be defined as the extent to which the firm’s human resources possess skills and behaviour repertoires which offer the organization a chance to develop strategic alternatives within its competitive environment.

Focusing on the concept of human resource flexibility, the literature draws a distinction between external or numerical flexibility and internal or functional flexibility (Atkinson, 1984; Michie and Sheehan, 2005; Kumari and Pradhan, 2014). Numerical flexibility refers to a firm’s ability to vary the amount of labour employed, while functional flexibility is associated with the ability to perform a variety of heterogeneous tasks.

This research sees organizational ambidexterity as the final variable promoted by internal flexibility; in other words, internal flexibility does not constitute an end in itself but a means to develop organizational capabilities (Lado and Wilson, 1994; Shafer *et al.*, 2001; Aagaard and Andersen 2014), among which would stand out ambidexterity or the ability to undertake exploratory and exploitative learning at the same time (Jerez-Gomez *et al.*, 2005; Camps *et al.*, 2015). Exploratory learning presupposes the search for new knowledge to create new customer value or to replace a firm's present knowledge with the aim of improving current customer value. Exploitative learning seeks to refine existing knowledge so that current customer value can be expanded or improved (March, 1991; Gupta *et al.*, 2006; Turner, Swart and Maylor 2013). Organizational ambidexterity suggests that a firm needs both types of learning and also that they can be promoted through the adoption of various flexibility forms (López-Cabrales *et al.*, 2011).

Even though human resource flexibility has been traditionally presented as a desirable capability in the aforesaid works, its dimensions as well as the process through which it develops were not adequately studied until Wright and Snell (1998) described these conceptualization deficiencies around the following three dimensions: skill flexibility; behavioural flexibility; and HR practice flexibility.

The definition of *behavioural flexibility* by Wright and Snell (1998) gives the consideration of 'behaviour' at work to those routine scripts or sequences that employees follow when performing their tasks. For these authors, behaviours become rigid or inflexible when the employees who have applied a sequence of actions to handle repetitive situations select the same sequence to deal with new situations. By contrast, if employees are capable of using different routines when faced with new circumstances, their behaviours are flexible. Expressed differently, employees with flexible behaviours adapt their responses to previously unknown circumstances on the basis of improvisation rather than following predefined action

patterns (Wright and Snell, 1998; Bhattacharya *et al.*, 2005; Dyer and Ericksen, 2005; Kumari and Pradhan, 2014;). There is a variety of reasons why flexible behaviours amongst employees constitute a valuable resource for the organization. Firstly, employees who can successfully cope with different contingencies at their workplace allow the firm to achieve savings in the costs derived from the lack of adaptation to change (Lepine *et al.*, 2000). And secondly, behavioural flexibility makes it easier to implement change processes in the firm, insofar as it gives the organization real chances to adequately respond to a wide range of situations (Bhattacharya *et al.*, 2005; Beltrán-Martín and Roca-Puig, 2013).

Skill flexibility arguably differs from behavioural flexibility in the fact that employees may have a motivation to act flexibly but lack the knowledge or skills required to do so. Flexibility in skills is one of the most relevant antecedents of flexibility in behaviours (Sujan *et al.*, 1994). Following the suggestion of Wright and Snell (1998), Beltrán-Martín (2008) and Kumari and Pradhan (2014), skill flexibility refers on the one hand to the number of potential alternative uses where the knowledge and skills owned by an employee can be applied. Those who have acquired a large number of skills which allow them to perform a wide range of tasks are flexible employees. A flexible employee is thus one who shows the ability to work on different tasks and under various circumstances, a low cost and a short period of time being required to mobilize this employee to new functions or jobs (Riley and Lockwood, 1997; Van den Berg and Van der Velde, 2005; De Lastra *et al.*, 2014; Camps *et al.*, 2015). And on the other hand, skill flexibility is also related to the ability of employees to develop a broad variety of skills in the future (Wright and Snell, 1998; Maurer *et al.*, 2003; Martin *et al.*, 2013). Flexible employees are trained and recycled according to necessity; they anticipate the needs for future skills, show enthusiasm about learning new approaches to tasks, and perceive each event occurring inside the organization as a way to learn something

important for the future (Arulampalam and Booth, 1998; Kohli *et al.*, 1998; Pulakos *et al.*, 2000; Dyer and Ericksen, 2005; Chang *et al.*, 2013; Stokes *et al.*, 2015).

Human resource management *practice flexibility* is the degree to which such practices can be adapted and applied to a variety of situations or in diverse units or sections of the organization, as well as the speed at which these adaptations and applications take place (Bhattacharya *et al.*, 2005; Beltrán-Matín *et al.*, 2008; Kumari and Pradhan, 2014). It could be said that it is the firm's ability to implement/apply alternative human resource practices easily and effectively. Flexibility in practices may create value inside the organization in several ways. Firstly, when the firm's situation undergoes changes, the organization can change its practices quickly. For instance, a remuneration system based on the description of jobs is bound to create resistance to change; however, a flexible pay policy linked to profit measures adapts faster to changes in terms of profit increase or decrease (Milkovich and Newman, 1999; Ismail *et al.*, 2015). Secondly, flexibility in human resource practices will most probably result in flexible behaviours amongst employees. In the previous example about variable compensation plans, it becomes easier for employees to adapt to the change required by the business because their remuneration is determined by the firm's success. And thirdly, human resource practice flexibility enables the firm to offer similar practices in different units and to achieve coherence throughout the organization.

In our opinion, the flexibility of human resources (understood as the conjunction of flexibility in behaviours, skills, and human resource practices) will have a positive effect on organizational ambidexterity, insofar as it facilitates the possession of skills and behaviour repertoires on the part of employees, thanks to which they can exploit and explore new strategic alternatives; hence our proposal of the following hypothesis.

Hypothesis 1. HR flexibility is positively related to organizational ambidexterity

As for the connection between human resource flexibility and performance, several studies have shown that employees' flexibility affects business results (Way et al., 2013; Arabi and Daneshparvar, 2008; Chang et al., 2013; Way et al., 2013; Preenen et al., 2015). By way of example, works placed within the framework of the human capital theory argue that the set of capabilities and skills underlying flexibility in human resources determines their capacity to be responsible for several activities inside the organization (Rönnmar, 2004; Camps et al., 2015). Employees with a broad knowledge base contribute to the organization's competitive advantage because this base generates higher capabilities to develop more efficient means to fulfil the different task requirements (Wright *et al.*, 1994; Boxall, 1999; Boxall, 2013). A number of studies assume that greater flexibility increases employees' level of satisfaction and motivation and, accordingly, their productivity (Cordery et al., 1993 Camps et al., 2015). Moreover, flexible employees maintain profitable relationships with customers that contribute to meeting those customers' needs, as well as to improving their satisfaction levels (Youndt and Snell, 2004; Fu et al., 2015).

Human resource flexibility may become relevant in the adoption of innovative solutions inside the firm because such flexibility implies that employees can better respond to stimuli which have previously appeared. To this must be added that, when employees improve their knowledge base on a regular basis, their performance variability at work decreases and, consequently, their productivity increases (Lado and Wilson, 1994; Nieves and Quintana, 2016). Similarly, flexibility encourages the members of an organization to improvise and come up with new ideas, to question themselves and reflect on their actions, to give sense and generate new knowledge from these actions. For instance, it allows organization members to think about ways to reduce costs and develop new innovations in service delivery (Youndt and Snell, 2004; Nieves and Quintana, 2016). Some empirical studies have provided evidence of the impact that such a flexible employee has on working performance (Crant, 1995;

Glaser, Stam and Takeuchi, 2015), on job satisfaction (Seibert, Crant, and Kraimer, 1999; Glaser, Stam and Takeuchi, 2015), on productivity, on customer service, and on the degree of commitment to the organization (Kirkman and Rosen, 1999; Beltrán-Martín *et al.*, 2008, 2013; Camps *et al.*, 2015), as well as on objective financial performance measures (Bhattacharya *et al.*, 2005; Ngo and Loi, 2008) and on subjective financial performance measures (Ketkar and Sett, 2009, 2010). This leads us to propose the following hypothesis:

Hypothesis 2. Human resource flexibility is positively related to performance

Focusing on the relationship between organizational ambidexterity and performance; although some researchers have shown that organizational ambidexterity directly affects performance (for example, Gibson and Birkinshaw, 2004; Lubatkin *et al.*, 2006), others have identified this relationship as being contingent (Lin *et al.*, 2007; Cao, Gedajlovic and Zhang, 2009; Mom, Fourné and Jansen, 2015), and there are even studies which have found negative effects (He and Wong, 2004; Atuahene-Gima, 2005; Lavie, Kang and Rosenkopf, 2011), and there are even studies that show an inverted U shaped relationship between ambidexterity and performance (Caspin-Wagner, Ellis and Tishler, 2012; Wei, Zhao and Zhang, 2014). Thus, the question as to whether or not –and in which conditions– ambidexterity leads to improved performance is still scarcely developed and even contradictory results exist. For this reason, our paper attempts to confirm that ambidexterity positively influences the organization's results through the formulation of the hypothesis offered below.

Hypothesis 3. Organizational ambidexterity is positively related to performance

Finally, as explained earlier, the present work seeks to verify if organizational ambidexterity acts as a mediator variable between human resource flexibility and performance. The following hypothesis is proposed to that end:

Hypothesis 4. The effect of HR flexibility on firm performance is mediated by organizational ambidexterity

Research Methods

Data collection and processing

Both the theoretical model and the hypotheses proposed were tested using a sample of Spanish hotels. Our analysis focused on hotels with three or more stars located in the Valencian Autonomous Region (Spain). More precisely, the population under study comprised a total of 415 establishments included in various databases (amongst others, the municipal tourism supply, Turespaña, or the Iberian Balance Sheet Analysis System –SABI for its initials in Spanish).

A questionnaire addressed to HR managers was designed for the purpose of obtaining all the necessary information. Two reasons led us to choose these addressees; firstly because they had enough knowledge about the items covered in the research; and secondly, because they were committed to our study object. A consensus was previously reached on the questionnaire with experts in human resource management, as well as with tourism sector professionals. A pre-test carried out with 15 hotels allowed us to define the questions that were ultimately included in the questionnaire. The validated questionnaire was sent online. The assurance of information confidentiality and interviewee anonymity served to increase the response rate. A total of 100 questionnaires considered valid were collected (after sending three reminders to non-responders), which covered 24.1% of the population under study, with a sampling error of 8.5% at 95.5%. The sampling error turned out to be relatively high, but this often happens in research works carried out in Spain, where collaboration between firms and universities is not easily established (Camelo *et al.*, 2004). To test for non-responses bias, we examined differences between respondents and non-respondents. T-test showed no significant differences based on control variables (size and category).

Measurement

All the items used to measure the variables shown below are listed in Appendix 1.

Ambidexterity. Even though there is no widely accepted measurement of organizational ambidexterity, it is possible to find solid research works in the literature which allow us to establish a measurement for this variable. For instance, the studies of Chang, Hughes, and Hotho (2011), Gibson and Birkinshaw (2004), Gupta *et al.*, (2006), and Jansen *et al.* (2005, 2006, 2009), use scales to measure organizational ambidexterity in service companies. In the present study we use the exploitation and exploration scales developed by Jansen *et al.* (2006 and 2009) and Stettner and Lavie (2014) adapting them to our study population, and treating the two scales as orthogonal variables (Gibson and Birkinshaw, 2004, Jansen *et al.*, 2009). Ambidexterity thus appears in our work as a latent construct which captures the co-variance of both innovation types. A factor analysis with varimax rotation reveals the two-factor structure, which accounts for 71.95% of variance –these two factors adequately represent the exploration and exploitation elements. Reliability can be considered suitable for both exploration ($\alpha=0.768$) and exploitation ($\alpha=0.892$). According to the postulates of Floyd and Lane (2000), these two orientations are ‘inseparable’ and researchers have combined both measures for the purpose of creating a measurement for organizational ambidexterity.

HR Flexibility. Employees’ flexibility is assessed through the measurement scales proposed by Volverda (1998), Verdú (2002), Bhattacharya *et al.* (2005), Beltrán-Martín *et al.* (2008) and Beltran-Martin and Roca-Puig (2013). As with the previous variable, a factor analysis provides us with 3 factors that explain 84.89% of variance. These three factors suitably represent the elements of behavioural flexibility (BF), skill flexibility (SF), and (human resource) practice flexibility (PF). Reliability can be regarded as adequate for both BF ($\alpha =0.972$) and for SF ($\alpha =0.938$), as well as for PF ($\alpha =0.976$). The combination of these three

orientations –considered inseparable here– creates the measurement for human resource flexibility.

Performance. Numerous studies have confirmed that perception measurements constitute quite a valid representation of organizational performance (Ngo *et al.*, 1998; Khatri 2000; Hartog and Verburg, 2004). Our study utilizes perception measurements to capture organizational performance on the basis of works such as those written by Gibson and Birkinshaw (2004), Chang and Hughes (2012) or Wang and Rafiq (2014). More specifically, eight items were used to capture general performance criteria (market share growth, brand recognition, market image of the firm, and sales growth) on the one hand; and performance variables better suited to hotel sector firms (revenues per room, average occupancy, customers' satisfaction level, and employees' satisfaction) on the other. Interviewees were asked to specify the average perceived performance for each variable –with respect to their competitors– corresponding to the last three years. It was deemed appropriate for us to establish a minimum period of three years since the results of certain organizational capabilities –such as ambidexterity and human resource flexibility in our study– which are generated with time periods exceeding a financial year (Wright, Dunford and Snell, 2001). As with the preceding scales, a factor analysis serves to check scale unidimensionality. Indeed, a single factor appeared which explains 77.642% of variance. Cronbach's α is 0.959.

Our study also monitors possible alternative explanations for the relationships set forth in the theoretical model through the inclusion of two relevant control variables, namely: hotel size and hotel category. Firstly, because large organizations are likely to own more resources but they may also lack the flexibility required to be ambidextrous, it was decided to include the number of full-time employees as an indicator of firm size. After all, greater size has traditionally been associated with inertia and difficulty in processing information –both aspects being related to change of resources and the failure to adapt to ever-changing

conditions (Hannan and Freeman, 1989). Secondly, different studies have shown that the higher the category, the higher the hotel performance levels (Pine and Phillips, 2005; Chand and Katou, 2007); hence our decision to use hotel category as a control variable.

Statistical Procedure

As a previous step to estimating measurement or structural models, an analysis was carried out for the purpose of examining common method variance, since all the variables included in our research were appraised by a single person within each organization. According to Harman's single factor test (Podsakoff *et al.*, 2003), if common method variance existed, a single factor would emerge from a factor analysis with all research indicators. This test must be preceded by the estimation of a confirmatory factor analysis (CFA) that includes all the indicators from every scale, with a view to determining whether most of the variance in this model is explained by a general factor (Podsakoff *et al.*, 2012). Five factors are identified which explain the 81.36 % of variance. None of the factors explains more than 50% of variance, which suggests that no common method variance exists in our study, because these indices do not reach the values considered acceptable.

The data analysis method used in this paper –known as *Partial Least Squares* (PLS)– turned out to be the most appropriate when technical knowledge is limited and the model to be estimated has a more complex nature (Chin *et al.*, 2003). This happens in our case, since only few research works relate HR flexibility and ambidexterity; furthermore, this technique is less demanding with regard to the minimum sample size, the nature of measure scales, and the distribution of observable variables –in comparison with the tools of co-variance-based structural equation models such as LISREL or EQS (Chin *et al.*, 2003).

To make the HR flexibility variable operational in the PLS model, we consider a second-order construct made up of three first-order reflective constructs, namely: behavioural flexibility, skill flexibility and human resource practice flexibility.

The ambidexterity variable is also regarded here as a second-order construct formed by two first-order reflective constructs known as exploitative innovation and exploratory innovation.

Analyses and results

Since PLS does not permit direct representation of second-order factors, the first step to create them is to calculate the factor scores of first-order constructs (latent variable scores), which are subsequently considered the indicators of second-order factors (Chin *et al.*, 2003; Bock *et al.*, 2005). Thus, in a first stage, the first-order factors that HR flexibility and organizational ambidexterity represent are separately included in the model with their respective indicators.

Insert Table 1. Measurement model evaluation

In the second step, a model is estimated which uses the latent variable factor scores calculated in the first step for each of the first-order components. After building the second-order variables, the measurement model is assessed on the basis of the stages proposed by Hair *et al.* (2011).

Stage 1. Measurement model evaluation

The individual reliability of indicators is evaluated through their loadings (λ). In this respect, all loadings exceed the value of 0.7 –as recommended in the bibliography (Carmines and Zeller, 1979). This first stage must also include the evaluation of scales through the Cronbach's α and composite reliability (CR) indices –and the existence of convergent validity through the average variance extracted (AVE). As can be observed in Table 1, both the alpha/ α and the CR values exceed the critical 0.7 in all variables, and the AVE value is above 0.5. Finally, measurement model analysis requires verification of the existence of discriminant validity. In this regard, the method most widely accepted in PLS consists in comparing the AVE value of each construct with the squared correlation of the same construct with each of the variables. Therefore, if AVE exceeds the squared correlation, it can

be accepted that each construct is more closely related to its own measures than to those of other variables (Barclay *et al.*, 1995). Table 2 shows the AVE square root on the diagonal and the correlations estimated for each pair of constructs in the elements outside the diagonal. This information confirms the existence of discriminant validity in such constructs.

Insert Table 2. Measuring instrument: discriminant validity

Stage 2. Structural model analysis

The second stage consists in evaluating structural model results (see Figure 1). In order to analyse the result of a structural model, it is first necessary to assess the predictive value of endogenous constructs through R^2 values. This index varies between the values 0 and 1, and the closer they are to 1 the greater the explained variance of the variable under analysis. Although no consensus has been reached so far on the minimum level that this index should reach, Falk and Miller (1992) recommend a minimum value of 0.1. In the present research work, the R^2 values of endogenous constructs (see Table 4) are significantly higher than the minimum value (the R^2 for performance being 0.667 and that of ambidexterity, 0.683). Therefore, it can be stated that our model has an adequate predictive power.

Insert Figure 1. Structural model results

Secondly, it is necessary to analyse the strength of relationships between constructs (*path* coefficients, β) and their significance, which will jointly allow us to test the hypotheses. The level of significance corresponding to path coefficients (β) is obtained by means of a bootstrap procedure with 5,000 sub-samples (Chin, 1998). As can be seen in Table 3, the direct link between HR flexibility and ambidexterity is significant ($\beta=0.827$, $t=30.061$, $p<0.001$) –the same as the one between ambidexterity and performance ($\beta=0.626$, $t=6.035$, $p<0.001$). However, the relationship between HR flexibility and performance is not significant ($\beta=0.165$, $t=1.398$). As for the specific control variables introduced in the model, neither hotel category nor size show significant coefficient values.

β coefficients prove the relative intensity of statistical relationships. The variance of an endogenous construct explained by another latent variable is determined by the absolute value, which results from multiplying the coefficient (β) by the correlation coefficient between both variables. It is suggested that this coefficient has to reach a value of at least 0.2 (see Table 3). Finally, model quality assessment also takes place through the Geisser test (Q^2), which must be above zero ($Q^2 > 0$, see Table 4).

Insert Table 3. Hypothesis confirmation

Insert Table 4. Effects on endogenous variables

The R^2 corresponding to organizational ambidexterity is 0.683 (Table 4) and would be explained by human resource flexibility; Hypothesis 1 –i.e. HR flexibility is positively related to organizational ambidexterity– would thus be confirmed.

The other endogenous variable corresponds to hotel performance. The model proposed accounts for 66.70% of this variable. More precisely, ambidexterity is the variable that explains performance with the greatest intensity (49.9%, see Table 4). This result also allows us to confirm Hypothesis 3; in other words, ambidextrous learning in hotels positively impacts on their performance. However, despite accounting for 11.91% of performance variance, the HR flexibility variable is not statistically significant (see Table 3), which prevents us from accepting Hypothesis 2. As a result, HR flexibility does not have a positive influence on the organization's performance within our research work.

Two causal models are estimated in our study to test the mediator effect of ambidexterity on human resource flexibility and organizational performance (Hypothesis 4). Following Baron and Kenny (1986), one variable acts as a mediator when it fulfils the following three conditions: 1) variations in the independent variable levels significantly affect the variations of the alleged mediator variable; 2) variations in the mediator significantly affect dependent variable variations; and 3) a previously significant relationship between the independent and

the dependent variable stops being significant, the strongest demonstration of mediation occurring when the direct relationship equals zero. Therefore, our attention focuses on one model where only the direct impact caused by the independent variable (human resource flexibility) on the dependent variable (performance) is considered —Model 1— and on another model derived from the theoretical development carried out in the preceding section —Model 2.

Insert Figure 2. Mediator effect of organizational ambidexterity

The increase in R^2 from Model 1 to Model is 0.12. Effect importance (f^2)ⁱ was calculated so that f^2 levels of 0.02, 0.15 and 0.35 could be observed as proof or indication of a small, medium or large effect caused by the mediator variable, respectively. Our conclusion was that the increase in R^2 is significant, value $f^2=0.35$ which means that the model's explanatory increase is strong. Thus, the observation of Model 2 shows us that: a) variations in HR flexibility significantly affect mediator variable ambidexterity; b) variations in mediator variable ambidexterity significantly impact on dependent variable performance; and c) the previously significant relationship between HR flexibility and performance (that of Model 1) stops being significant when the mediator variable is introduced (Model 2).

Since the procedure devised by Baron and Kenny (1986) provides no information whatsoever about the significance of indirect effects, a bootstrapping method is applied to find it (Preacher and Hayes, 2004). More precisely, a decision was made to apply the percentile method based on the works of authors such as Chin (2001) or Williams and MacKinnon (2008), which uses a bootstrapping method with 5,000 subsamples to calculate a confidence interval for the mediator effect with a 5% confidence margin. Figure 2 shows that the value zero is not contained in the HR Flexibility> Ambidexterity>Performance path, which allows us to state that the previously calculated indirect effect is significant. This would in turn lead us to confirm Hypothesis 4. Organizational ambidexterity consequently

behaves as a mediator variable between human resource flexibility and organizational performance. It is also a total mediation, insofar as the initially significant direct relationship (Model 1 Figure 2) loses its significance with the introduction of the mediator variable.

Discussion

This study examines the proposition that HR flexibility facilitates the development of organizational ambidexterity, which in turn has positive effects on firm performance. The findings provide partial support for this proposition. A full mediator effect of organizational ambidexterity on the relationship between HR flexibility and performance is found. However, it is not possible for us to show that such flexibility directly influences performance. This may be due to the fact that human resource flexibility has a gradual effect on the development of the organizational ambidexterity capability.

The results of this study contribute to the knowledge on the impact of human resource flexibility on performance. In fact, the studies on HR flexibility performed so far have focused on analysing the role played by this flexibility as a mediator variable between HPWS and performance –a total mediation effect being verified in most cases (Beltrán-Martín et al., 2008; Sawhney, 2013; Hui *et al.*, 2010). This work goes one step further, examining the extent to which human resource flexibility (which will obviously depend on people management practices) influences the ability to undertake exploitation and exploration processes at the same time. Our paper thus stresses the strategic role that human resources play within organizations, insofar as their flexibility makes it possible to develop a highly relevant organizational capability such as ambidexterity.

The contribution made with this work in theoretical terms lies in the fact that it represents a step forward in the study field shaped by organizational ambidexterity and HR flexibility.

The verification that flexibility in human resources is an antecedent factor of organizational

ambidexterity provides a better understanding of which elements act as facilitators of this capability. From a 'micro' point of view, our work provides another factor to be taken into account within studies into organizational ambidexterity, thus complementing the extant bibliography, as suggested by Antonacopoulou, Guttel and Pesqueux (2010). Our results also support a key idea in research on contextual ambidexterity: that ambidexterity has a close link with the efforts made by the organization to develop human resource flexibility (Cordey *et al.*, 1993; Lepak *et al.*, 2003). A further contribution is made to the new streams of research on human resource management which analyse the influence exerted by human resources on organizational capabilities (Collins and Smith, 2006; Wei and Lau, 2010; Chang *et al.*, 2013; Patel *et al.*, 2013; Prieto-Pastor and Martin-Perez, 2014).

The following practical implications stem from the present research work. Organizational ambidexterity arises as a key element in the generation of competitive advantages and, consequently, of competitiveness. The results obtained in this paper show that the capacity to simultaneously undertake exploitative and exploratory learning exerts a positive influence on performance. In the tourism industry as a whole –and more specifically in the hotel industry– ambidexterity is an essential capability for exploitation-based type learning which facilitates efficiency and competition via prices. Nevertheless, organizations must also cultivate innovation to cope with the changes that constantly occur in such a dynamic sector. This is why human resource managers must bear in mind the important role that HR flexibility development plays in this process.

These managers must, therefore, start employing functional flexibility formulas that contribute to business success more rigorously, not confining themselves to numerical flexibility (part-time jobs, subcontracting, etc.). This is a conception of HR flexibility that would be placed within the paradigm of organizational dynamic capabilities, which would facilitate the development of ambidextrous learning and, consequently, the organization's

ability to be efficient, exploiting the knowledge that it owns together with the capacity to learn to adapt to the new demands imposed by the market. More precisely, a need would exist to encourage behavioural flexibility; that is, to develop employees' ability to adapt their responses and actions to any new circumstances which might arise in the workplace. This aim can only be fulfilled if the human resource management achieves an alignment of individual interests with strategic goals. This behavioural flexibility will be viable as long as skill flexibility is previously developed; in other words, employees need to be versatile in order to perform different tasks and/or functions, and they must also be given the opportunity to develop new skills in the future. Finally, the human resource management has to implement people management practices which can easily adapt to any potential organizational contingencies. In short, it would be necessary to adopt a strategic approach to human resource management based on the use of high performance work systems, the positive effect of which on functional flexibility has already been demonstrated in previous works (Beltrán-Martín et al., 2008).

The hotel industry has always shown a special concern for labour flexibility and its repercussions on productivity; although most studies have focused on numerical flexibility and its benefits (Lucas, 1995; Hoque, 2013; Yaduma et al., 2015). Adding the fact that a labour surplus exists in this industry, it comes as no surprise to find that numerical flexibility –along with the people management approach (Marco and Ubeda, 2013)– have traditionally been the formulas preferred by human resource management in this sector.

Nevertheless, the present paper highlights the fact that the development of functional flexibility in the terms described above will also cause an indirect impact on organizational performance through the development of organizational ambidexterity. Thus we confirm the results of previous papers that find a positive relationship between functional flexibility and performance (Ngo and Loi, 2008; Ketkar and Sett, 2009; Ngo, Loi and Foley, 2011; Tracey,

2012; Chang et al., 2013; Way, Wright and Tracey, 2013; Preenen et al., 2015), with the qualification that this relationship is produced through the development of ambidextrous learning.

In addition to influencing performance, this approach to flexibility might prove more advantageous for firms, as shown by the outcomes of the study carried out by Kelliher and Riley (2010): greater job satisfaction amongst employees, better customer service, reduction of staff turnover, and improved firm reputation.

Limitations and future research

This research faced a number of limitations. The first is related to the analysis technique utilized –Partial Least Squares (PLS)– where linearity between latent variables is assumed. Moreover, the study deals with a single Spanish region and focuses on the hotel industry; to this can be added the small sample size, which must be considered for the interpretation of the results obtained. Also, the study does not consider any possible moderator variables in the relationships between HR flexibility-performance and ambidexterity-performance. In the first case, the bibliography on functional flexibility introduces the moderating effect of some variables such as: the dynamism of the environment (Tracey, 2012; Ketkar and Sett, 2012; Natasaputra and Kusumastuti, 2016) or inter-organizational cooperation (Vela-Jimenez, 2014). In the second case, apart from the dynamism of the environment (Jansen et al., 2006) a moderating effect has also been found in the ambidexterity-performance relationship of variables such as competitive intensity (Schulze et al., 2008), structural differentiation (Jansen et al., 2012), resource endowment (Venkatraman et al., 2007) or leadership type (Jansen et al., 2008).

These limitations represent new paths for the future development of work in this area. By way of example, the study could be geographically extended to cover the whole Spanish

territory –even obtaining empirical evidence in other countries. It would equally be very interesting to have the chance of testing the same hypotheses in other activity sectors so that a comparison could be drawn between the respective results obtained. Future works might focus on analysing which HR flexibility component (skill flexibility; behavioural flexibility; or HR practice flexibility) has the strongest influence on the development of organizational ambidexterity, and even the indirect (mediation) effects which could exist between these three types of flexibility. Attention might also be paid in future studies to the impact of flexibility on results affecting other stakeholders (not focusing merely on economic results), including improved firm reputation, increased job satisfaction or higher degree of customer loyalty, amongst others. Finally, future studies could include the moderator variables (internal and external) referred to earlier to identify the extent to which these factors can influence the relationships analysed in this paper.

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Appendix 1

Human Resource Flexibility	References
<p>Behavioral Flexibility (1=I totally disagree; 4=I neither agree nor disagree; 7=I totally agree)</p> <p>BF1 The flexibility of our employees' work habits helps us change according to market demands.</p> <p>BF2 People in our firm change their work habits in response to changes within the competitive environment.</p> <p>BF3 Our employees respond to changing situations within a short period.</p> <p>BF4 People in our firm readily change their work habits as demanded by changes within the working environment.</p> <p>BF5 Most of our employees are flexible enough to adapt to dynamic work requirements.</p> <p>BF6 Our employees adapt to changing work requirements within a short period.</p> <p>BF7 Our employees' response to the changing nature of their jobs helps us remain competitive in the market.</p> <p>BF8 People in our firm change their behavior in response to customers' requirements.</p>	<p>Verdú (1992) Volverda (1998) Bhattacharya et al. (2005) Beltran-Martin et al. (2008) Ketkar and Sett (2009) Beltran-Martin and Roca-Puig (2013).</p>
<p>Skill Flexibility (1=I totally disagree; 4=I neither agree nor disagree; 7=I totally agree)</p> <p>SF1 Our firm can shift employees to different jobs when necessary.</p> <p>SF2 Our employees can switch to new jobs in our company within a short period.</p> <p>SF3 Our employees are capable of putting new skills to use within a short period.</p> <p>SF4 Our firm is capable of meeting the demand(s) for new skills by retraining or shifting its existing employees.</p> <p>SF5 We employ people who own a broad variety of skills.</p> <p>SF6 Many employees in our firm have multiple skills that are used in various jobs.</p> <p>SF7 People in our firm can learn new skills within a short period.</p>	<p>Verdú (1992) Volverda (1998) Bhattacharya et al. (2005) Beltran-Martin et al. (2008) Ketkar and Sett (2009) Beltran-Martin and Roca-Puig (2013).</p>
<p>Human Resource Practices Flexibility (1=I totally disagree; 4=I neither agree nor disagree; 7=I totally agree)</p> <p>PF1 The flexibility of our HR practices helps us adapt to the changing demands of the business environment.</p> <p>PF2 Our firm modifies its HR system to keep pace with the changing competitive environment.</p> <p>PF3 Our HR practice parameters have been designed in such a way that they can quickly adapt to changes in business conditions.</p> <p>PF4 We introduce frequent changes in our HR practices in order to align the HR system with the changing work requirements.</p> <p>PF5 Changes in our HR practices enable us to remain competitive in the market.</p> <p>PF6 Our HR practices meaningfully adapt to changed business scenarios.</p> <p>PF7 As a whole, our HR practices are flexible.</p>	<p>Verdú (1992) Volverda (1998) Bhattacharya et al. (2005) Beltran-Martin et al. (2008) Ketkar and Sett (2009) Beltran-Martin and Roca-Puig (2013).</p>
<p>Organizational Ambidexterity</p> <p>Exploitative Innovation (1=I totally disagree; 4=I neither agree nor disagree; 7=I totally agree)</p> <p>Exploitative1 We frequently carry out small adjustments in our existing products and services</p> <p>Exploitative2 We improve efficiency in our product and service provision</p> <p>Exploitative3 We increase economies of scales in existing markets</p> <p>Exploitative4 Our organization expands services for existing clients</p>	<p>Jansen et al. (2006) Jansen et al. (2009) Stettner and Lavie (2014)</p>

<p>Exploratory Innovation (1=I totally disagree; 4=I neither agree nor disagree; 7=I totally agree)</p> <p>Exploratory1 Our organization accepts demands that go beyond the existing products and services</p> <p>Exploratory2 We commercialize products and services that are completely new to our organization</p> <p>Exploratory3 We frequently take advantage of new opportunities in new markets</p> <p>Exploratory4 Our organization regularly uses new distribution channels</p>	
<p>Performance (1 = <i>much worse</i>; 4 = <i>the same</i>; 7 = <i>much better</i>)</p> <p>P1 The growth in my firm's market share relative to competitors during the last three years has been...</p> <p>P2 My firm's brand recognition relative to competitors during the last three years has been...</p> <p>P3 My firm's image relative to competitors during the last three years has been...</p> <p>P4 The average growth in my firm's sales relative to competitors during the last three years has been...</p> <p>P5 My hotel's average occupancy relative to competitors during the last three years has been...</p> <p>P6 Customers' satisfaction level relative to competitors during the last three years has been...</p> <p>P7 Employees' satisfaction level relative to competitors during the last three years has been...</p> <p>P8 Revenues per room in my hotel relative to competitors during the last three years has been...</p>	<p>Gibson and Birkinshaw (2004) Chang and Hughees (2012) Wang and Rafiq (2014).</p>

$$f^2 = \frac{R_{included}^2 - R_{excluded}^2}{1 - R_{included}^2}$$

Figure 1. Structural model results

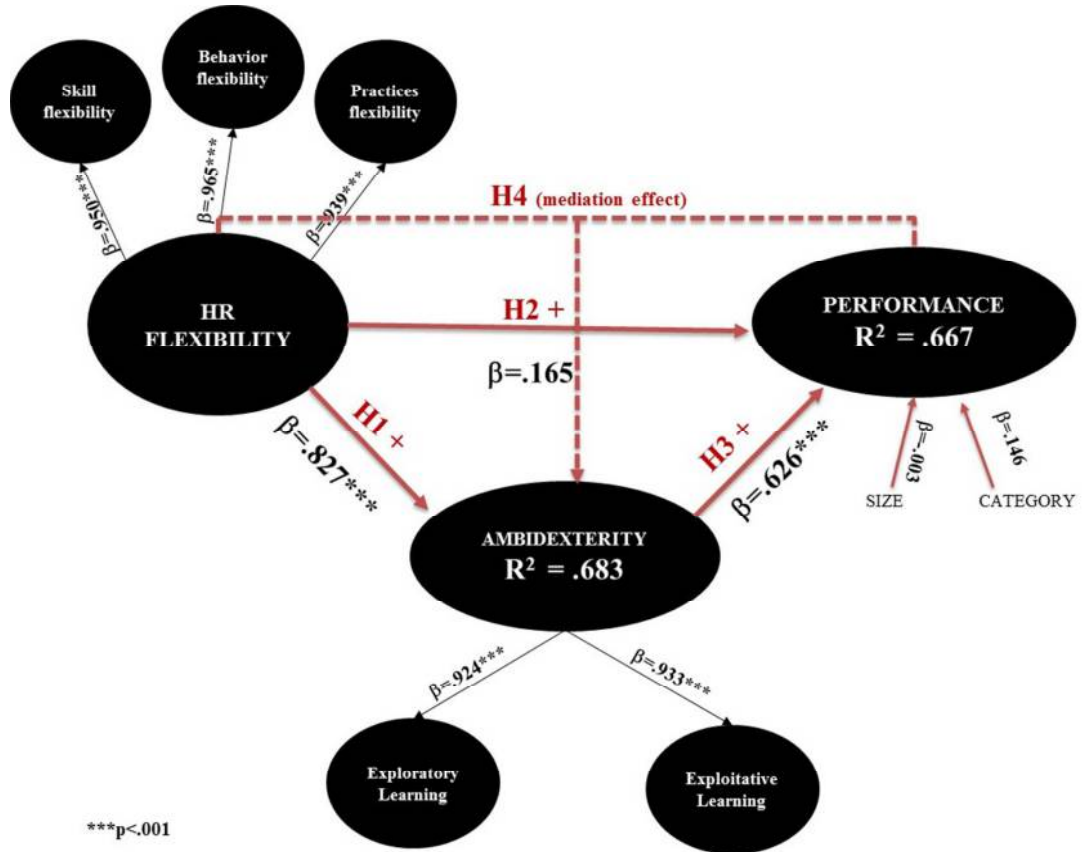
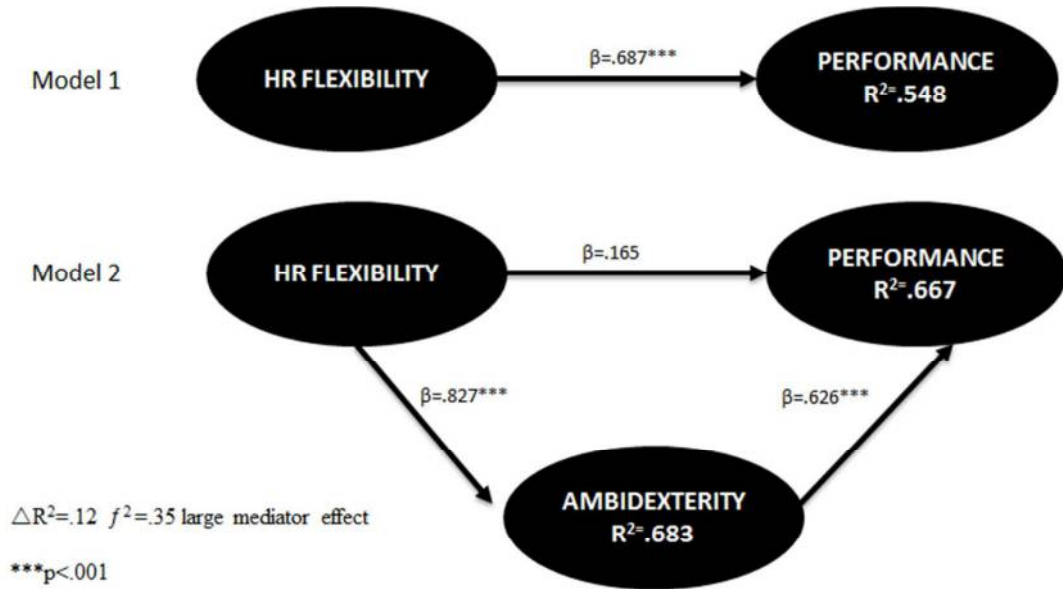


Figure 2. Mediator effect of organizational ambidexterity



Indirect effect	Estimation	Confidence interval (5%)
HRFlexibility>Ambidexterity>Performance	(0.827*0.626)	(0.3433; 0.7036)
	0.517	

Table 1. Measurement model evaluation

Constructs	α Cronbach	Loading (λ)	T value	Composite Reliability	(AVE)
HR FLEXIBILITY	0.948			0.966	0.906
Skill flexibility	0.938	0.950	71.766	0.950	0.732
Behavioral flexibility	0.972	0.965	136.413	0.976	0.838
Practices flexibility	0.976	0.939	69.880	0.980	0.875
AMBIDEXTERITY	0.862			0.926	0.862
Exploratory Innovation	0.768	0.924	47.482	0.852	0.594
Exploitative Innovation	0.892	0.933	69.609	0.926	0.759
PERFORMANCE	0.959			0.965	0.776

Table 2. Measuring instrument: discriminant validity

	AMBIDEXTERITY	HR FLEXIBILITY	PERFORMANCE
AMBIDEXTERITY	0.928		
HR FLEXIBILITY	0.826	0.951	
PERFORMANCE	0.796	0.722	0.882

Table 3. Hypothesis confirmation

Hypothesis	Suggested effect	Path coefficients	t-value (bootstrap)	Support
H1: HR FLEXIBILITY> AMBIDEXTERITY	+	0.827	30.061***	Yes
H2: HR FLEXIBILITY> PERFORMANCE	+	0.165	1.398	No
H3: AMBIDEXTERITY> PERFORMANCE	+	0.626	6.035***	Yes
CATEGORY> PERFORMANCE		0.146	1.951	No
SIZE> PERFORMANCE		-0.003	0.049	No

Table 4. Effects on endogenous variables

	R²	Q²	Direct effect	Correlation	Variance explained
AMBIDEXTERITY	0.683	0.582			
FLEXIBILITY			0.827	0.826	68.30%
PERFORMANCE	0.667	0.493			
AMBIDEXTERITY			0.626	0.797	49.90%
HR FLEXIBILITY			0.165	0.722	11.91%
SIZE			-0.003	0.125	-0.037%
CATEGORY			0.146	0.341	4.97%