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Human resources retention and knowledge transfer in mergers and acquisitions

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Abstract

Mergers and acquisitions can be a mechanism used by firms to access innovative knowledge, including intellectual property, and to strengthen and expand their core capabilities. In the mergers and acquisition context, the creation of value depends on the transfer of capabilities and knowledge being carried out successfully during the post-acquisition integration process. The paper adopts this view. It examines the role of the top management and personnel who hold knowledge and skills linked to the capability of the acquired firm considered most valuable by the acquiring firm in the transfer of knowledge from the acquired firm to the acquiring firm. The paper also examines whether the impact of the retention of the acquired firm's high-value human resources (HVHR) on knowledge transfer is moderated by the degree of embeddedness of the knowledge to be transferred. Furthermore, the study identifies the factors that influence the retention of the acquired firm's HVHR. We tested the model using data from a sample of 57 domestic, related, friendly Spanish mergers and acquisitions belonging to a wide variety of industries. The results support the notion that the more embedded the knowledge, the greater the impact of the acquired firm's HVHR retention on the knowledge transfer. They also show that the autonomy granted to the acquired firm, the frequency of use of rich media among the personnel of both firms, and the acquired firm's pre-acquisition profitability are factors encouraging the acquired firm's HVHR to remain. The study contributes to the literature on knowledge transfer in mergers and acquisitions by highlighting the relevance of retention of the acquired firm's HVHR for knowledge transfer, as well as demonstrating the importance of taking into consideration the nature of the knowledge to be transferred. It also contributes to the literature on the implementation process in mergers and acquisitions by identifying factors available to managers to favor HVHR continuity in the acquiring firm or the one resulting from the merger.

Keywords: Mergers and acquisitions, Knowledge transfer, Human resources, Retention, Post-acquisition implementation

Mergers and acquisitions (M&As) have become a common phenomenon in the world of business. The high overall investment that M&As represent (Barkema & Schijven, 2008), as well as their strategic importance, have contributed to them becoming an important focus of study in finance and strategic management literatures (Haleblian, Devers, McNamara, Carpenter, & Davison, 2009). To date, a large part of work about M&As has focused on the motives leading firms to undertake M&As (e.g., Seth, 1990; Trautwein, 1990; Walter & Barney, 1990; Rhodes-Kropf & Robinson, 2008;

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King, Slotegraaf, & Kesner, 2008), and on the performance of these processes (e.g., King, Dalton, Daily, & Covin, 2004; Moeller, Schlingemann & Stulz, 2005; Schoenberg, 2006). In particular, the potential of M&As as means of reinforcing the core competencies of the new firm (or the acquiring firm) and/or to access a new set of valuable capabilities has been highlighted (e.g., Capron, 1999; Capron & Pistre, 2002; Uhlenbruck, Hitt, & Semadeni, 2006; King, Slotegraaf, & Kesner, 2008). However, the process by which firms integrate, transfer, and manage resources in the post-acquisition phase remains relatively unexplored. Consequently, there have been calls for further research in this area (Haleblian et al., 2009).

The pressure of competition, the speed of technological change, and the reduction of product life cycles make it difficult for firms, even those of large size, to quickly develop by themselves all the necessary knowledge and capabilities. In this context, organizations may resort to external sources (Zhao, 2009), such as alliances and M&As, to complement their internal efforts. M&As may allow the incorporation of new capabilities at a speed unattainable through internal development and to obtain new knowledge and specific capabilities subject to market failure (Uhlenbruck, Hitt, & Semadeni, 2006).

While M&As have potential for expanding firms' knowledge and capabilities, the literature indicates that the acquisition of a firm possessing valuable knowledge and capabilities does not guarantee that they will be transferred to or exploited by the new organization (Ranft & Lord, 2002; Reus & Lamont, 2009; Al-Laham, Schweiger, & Amburguey, 2010). For transfer to occur the post-acquisition process of integration of the acquiring and acquired firms must be carried out successfully (Bresman, Birkinshaw, & Nobel, 1999; Haspeslagh & Jemison, 1991; Ranft & Lord, 2002; Junni, 2011).

The transfer of knowledge and capabilities in the process of integration of organizations is complex and challenging (Capron, 1999; Ranft & Lord, 2002; Al-Laham, Schweiger, & Amburguey, 2010). Several problems may make it difficult (Haspeslagh & Jemison, 1991; Al-Laham, Schweiger, & Amburguey, 2010; Junni, 2011), particularly cultural conflicts (Buono & Bowditch, 1989; Teerikangas & Very, 2006; Björkman, Stahl, & Vaara, 2007; Stahl & Voigt, 2008; Sarala & Vaara, 2010; Junni & Sarala, 2011) and human resources problems (Ranft & Lord, 2000, 2002; Graebner, 2004; Castro & Neira, 2005; Junni, 2011).

Several studies have found that after a merger or acquisition the acquired firm experiences a higher than normal turnover of top managers (Walsh & Ellwood, 1991; Cannella & Hambrick, 1993; Krug & Hegarty, 1997) and the loss of other key human capital (Roberts & Mizouchi, 1989; Ernst & Vitt, 2000; Ranft & Lord, 2000, 2002; Reus & Lamont, 2009). The top management and personnel who hold knowledge and skills linked to the development, advancement, and functioning of the capability considered most valuable by the acquiring firm (or dominant partner) are described as the acquired firm's high value human resources (HVHR) (Ranft & Lord, 2000; Reus & Lamont, 2009). If they leave after an M&A and before they can be effectively utilized to improve competencies, the knowledge possessed by those personnel may not be transferred.

The loss of high value human capital, as well as damaging the firm's key capabilities (Coff, 2002), provides industry rivals with opportunities to acquire experienced resources and, perhaps more important, tacit knowledge that holds the potential to enhance a firm's capabilities and competitive positions (Cannella & Hambrick, 1993; Haleblian et al., 2009). Therefore, 'identifying and keeping key employees (…) is almost always important for extracting value from an acquisition' (Zander & Zander, 2010: 32).

Despite recognition of the importance of retention of the acquired firm's human resources in the outcomes of M&As (Cannella & Hambrick, 1993; Reus & Lamont, 2009; Al-Laham, Schweiger, & Amburguey, 2010; Butler, Perryman, & Ranft, 2012), the empirical evidence regarding its effect on the transfer of knowledge and capabilities is limited and, in general, has focused on case studies of acquisitions in high technology industries (Ranft & Lord, 2002; Graebner, 2004; Castro & Neira, 2005). Consequently, further research is needed using methodologies that will permit more generalizable results.

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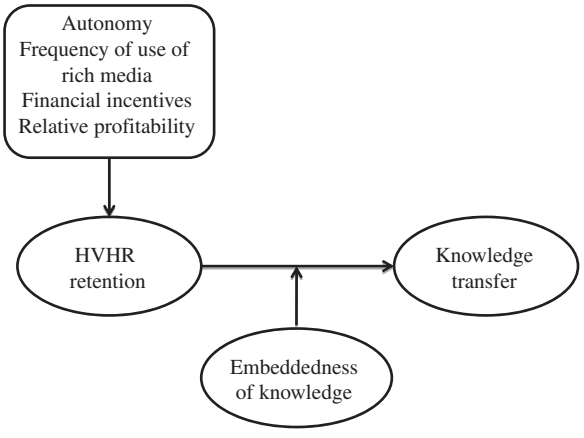

FIGURE 1. HYPOTHESIZED MODEL

This paper focuses on retention of the acquired firm's HVHR. Specifically, it aims to respond to the following research issues: (1) Does the retention of the acquired firm's HVHR contribute to the transfer of knowledge from the acquired firm to the acquiring firm?; (2) Is the impact of the retention of the acquired firm's HVHR on knowledge transfer moderated by the degree of embeddedness of the knowledge to be transferred?; (3) What factors influence the level of retention of the acquired firm's HVHR?

On the basis of earlier research (Zollo & Singh, 2004; Reus & Lamont, 2009), we argue that the retention of acquired HVHR by the acquiring firm is an effective managerial mechanism for favoring transfer of knowledge from the acquired firm to the acquirer. In addition, we posit that the importance of the retention of the acquired firm's HVHR for the transfer of knowledge in M&As may be moderated by the degree of embeddedness of the knowledge to be transferred. Research has established that a firm's capabilities involve both individual and collective knowledge (Spender, 1996; Argote, 1999). Embedded knowledge is the collective form of tacit knowledge residing in the complex pattern of relationships within the group or the firm. Embedded knowledge is linked to the context in which it is developed and used, and depends to a large extent on the relative stability of the set of individuals who make up the group (Berman, Down, & Hill, 2002). Statistically, testing the moderating effect of embeddedness of knowledge on the association between retention of HVRH and knowledge transfer is an important contribution of this study because to date, as far as we know, that effect has not been considered.

In addition, drawing on literature about important dimensions of the post-acquisition process (Haspeslagh & Jemison, 1991; Hambrick & Cannella, 1993; Marks, 2007), we examine factors that influence the level of retention of the acquired firm's HVHR. Specifically, we analyze how the autonomy granted to the acquired firm, the frequency of use of rich media among the personnel of both firms in the post-acquisition phase, and the financial incentives influence the retention of the acquired firm's HVHR. We also examine the effect of the pre-acquisition profitability of the acquired firm on the retention of its HVHR.

To sum up, this paper contributes to the growing, yet sparse, literature that analyzes the implementation process and knowledge transfer in M&As. At the same time it addresses recent calls for research on how firms integrate, transfer, and manage the human resources of the combined firms using an alternative methodology to that based on archive data (such as surveys) to analyze the process of integration (Haleblian et al., 2009).

The conceptual model tested in this research is summarized in Figure 1.

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This paper is organized as follows. First, the conceptual framework guiding the study is established and a set of hypotheses proposed. Then they are tested empirically on a sample of 57 domestic, related, friendly Spanish M&As, belonging to a wide variety of industries. In the final section the results are discussed, pointing out the main limitations of the study.

CONCEPTUAL FRAMEWORK

People are the principal agents of knowledge creation. A firm's stock of knowledge and its capabilities are formed from the experiences of its members over the course of time (Nelson & Winter, 1982).

The creation of value following the acquisition depends largely on the retention and integration of critical talent, that is, top management and other key personnel. Nevertheless, one of the consequences of M&As is the post-acquisition departure of acquired personnel (Cannella & Hambrick, 1993; Krishnan, Miller, & Judge, 1997; Ranft & Lord, 2000; Bergh, 2001; Paruchuri, Nerkar, & Hambrick, 2006).

Most of the empirical studies show that top management turnover has a negative effect on outcomes and on acquisition success (Cannella & Hambrick, 1993; Krishnan, Miller, & Judge, 1997; Saxton & Dollinger, 2004; Zollo & Singh, 2004; Cording, Christmann, & King, 2008; Butler, Perryman, & Ranft, 2012), due to the disruptions created by increasing levels of uncertainty and by organizational conflict, as well as the loss of human and social capital.

According to the resource-based view (Barney, 1991), firm-level value creation and competitive advantage are based on possession and development of valuable, firm-specific, and costly-to-imitate resources, and the management's skill in combining them (Barney, 1991; Mahoney & Pandian, 1992). Intangible and knowledge-based resources are considered the fundamental base of value creation.

In line with the resource-based view several authors (Cannella & Hambrick, 1993; Bergh, 2001; Zollo & Singh, 2004) have pointed out that when the managers of acquired firms possess knowledge and skills that are valuable, unique, and specific to the firm, those managers cannot be easily replaced. Supporting this vision, the recent meta-analysis by Butler, Perryman, and Ranft (2012) shows that the turnover of the acquired firm's top management team has a negative effect on firm performance.

Management continuity may affect the acquiring firm's intangible resources, namely its reputation (Hall, 1992). By ensuring management retention, the acquiring firm is sending a signal that it values the acquired firm's leadership and previous strategies, as well as its interest in ensuring a smooth transition (Cannella & Hambrick, 1993). Moreover, management retention favors coordination between the acquired and acquiring firms and reassures the rest of the employees, to some extent, that their interests will be taken into account (Krishnan, Miller, & Judge, 1997), minimizing overall resistance to change (Ellis, Reus, & Lamont, 2009).

The turnover of the acquired firm's managers not only implies the loss of knowledge and valuable role models, but also has a negative effect on the morale of those that remain (Buono & Bowditch, 1989). Acquiring a firm, or assuming the role of lead party in a merger, may generate a 'superior–inferior' or 'winner–loser' attitude (Marks & Mirvis, 2001). The departure of key managers of the acquired firm can have a great symbolic impact on the rest of the employees, as it sends a signal that the personnel of the acquired firm is of little value for the acquirer, favoring the perception that the employees of the acquired firm are the losers of the process.

The study by Graebner (2004) shows that the acquired managers play a key role in value creation through actions that keep employees focused, maintaining organizational momentum during the acquisition implementation process. The results of her study suggest that the acquired managers can help to reduce employee turnover by undertaking actions to deal with their problems and concerns. Likewise, Saxton and Dollinger (2004: 141) concluded that 'the successful appropriation of

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knowledge implied by a good acquisition may require maintaining those that know the target's operations best – its managers.'

From the organizational learning perspective, the managers of the acquired firm may possess expertise and functional backgrounds that are complemented by those of the acquiring firm, which improves organizational learning and has a positive impact on value creation (Krishnan, Miller, & Judge, 1997). Furthermore, their knowledge of the organization's underlying political structure will be essential for the successful implementation of the acquisition (Bergh, 2001).

Therefore, when the objective of the acquisition is the transfer of knowledge and capabilities to the acquiring firm, the retention of management, in particular that of the acquired firm's top management, can be critical for the transfer, since these managers play a substantial role in the development of conditions that feed the creation of knowledge, support the retention of other groups of employees linked with the core competencies (Ranft & Lord, 2000, 2002), and favor the necessary interaction between the two firms (Graebner, 2004) for the transfer to occur. Although, from a learning perspective, retention of management by the acquiring firm is considered important for the successful transfer of the acquired firm's capabilities to the acquirer (Ranft & Lord, 2000, 2002; Graebner, 2004), M&As cause duplication of people in many posts in the new firm, so it may be necessary to reach a compromise between managerial stability and the organization's cost efficiency.

Several authors (Ranft & Lord, 2000; Kapoor & Lim, 2007) point out that the people who possess the knowledge generating the core competencies are not necessarily the senior managers. Although the latter are fundamental in establishing the agenda for core competency building, in general it is the employees at lower levels who develop and maintain the competency.

Empirical research supports the positive effect of retention of other groups of employees, as well as the top management, on acquisition outcomes. Ranft and Lord (2000) showed that retaining engineering and sales personnel was as important for the transfer of critical knowledge-based resources as retaining the top management. Reus and Lamont (2009) confirmed that key employee retention had a strong positive effect on acquisition performance. More recently, Ahammad and Glaister (2011) found that retention of the key employees of the acquired firm during the first year after the acquisition contributed significantly to market share and sales growth.

Some researchers (Buono & Bowditch, 1989; Kumer, 2008), who have studied post-acquisition integration, have reported that the best-performing employees or those holding valuable intellectual property, and whose skills and expertise are therefore most valuable for the firm, may be the first to leave, since they have more opportunities to find alternative jobs. Buono and Bowditch (1989: 226) reported on an acquisition motivated by accessing the expertise of the acquired firm's technical, engineering, and scientific experts. During the post-acquisition period, the operational consolidation in other areas was interpreted by these experts as a 'sign of things to come.' Although their expectations were groundless, the result was a high level of voluntary turnover among the very people that influenced the acquirer's decision to buy the company in the first place. Roberts and Mizouchi (1989) concluded that an acquisition generally originates the departure of key scientists. Ernst and Vitt (2000) observed that $\sim$23% of the key inventors in the acquisitions analyzed occupied new positions in other firms following the combination and that those who remained, in general, reduced their contribution after the acquisition. Some go voluntarily to avoid the stress and anxiety associated with the acquisition. Their departure, as well as compromising the success of the M&A, may strengthen rivals, providing them with the opportunity to acquire tacit knowledge that may improve their capabilities and competitive positions (Haleblian et al., 2009). As pointed out by Meyer (2008: 209): 'The irony is that it may have been just these employees that were crucial for making the acquisition worthwhile, and that by undertaking integration, the acquirer disproportionately disrupts these important resources.'

Given the value, rareness, inimitability, and non-substitutability of firm-specific knowledge associated both with key top management and with other groups of employees linked to the most

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valuable capability to be transferred, their retention is essential for the transfer and the success of the acquisition. The permanence of the top management helps to safeguard the capabilities; their replacement may disturb the processes through which the acquired firm encourages learning and the accumulation of knowledge. Likewise, the retention of other employees in whom the knowledge resides favors the transfer, since it is they who must participate in the process of interaction required for the transfer. On the basis of these arguments, we propose:

Hypothesis 1: The higher the level of retention of the acquired firm's HVHR, the greater will be the transfer of knowledge from the acquired firm to the acquirer.

Frequently, the most valuable resources to be transferred and/or combined during the implementation of an M&A are those based on tacit knowledge and rooted in individuals' relationships with the social system of the organization (Haspeslagh & Jemison, 1991). Badaracco (1991: 79) uses the term 'embedded knowledge' to refer to that which 'resides primarily in specialized relationships among individuals and groups and in the particular norms, attitudes, information flows, and ways of making decisions that shape their dealings with each other.' Embedded knowledge is the collective form of tacit knowledge residing in organizational routines, practices, and shared norms. Embedded knowledge does not reside in a single individual but in the way in which the various members of the group interact. This knowledge exists between rather than within individuals. Although the members can articulate their individual knowledge, the group also relies on the tacit understanding of how to work together; that is, only the team possesses the total knowledge.

To transfer embedded knowledge from the acquired firm to the acquirer, it is necessary to prevent turnover of acquired employees after the deal is closed (Ranft & Lord, 2000, 2002; Puranam, Singh, & Zollo, 2006). If any member of the team abandons the firm, the organizational routines and the social structure of the group may change (Nelson & Winter, 1982), damaging the capability of the group (Ranft & Lord, 2002). Moreover, it may be difficult to replace them due to the links established with other members or groups. Given the importance of these relationships, their departure could even increase the risk of losing other employees.

In this paper we posit that the importance of the retention of the acquired firm's HVHR for the transfer of knowledge in M&As may be influenced by the type of knowledge to be transferred. Retention is of greater importance when the objective of the M&A is to transfer a capability that is based on the relationship of cooperation between different people, as opposed to individual skills. For this reason we hypothesize that:

Hypothesis 2: The effect of the level of retention of the acquired firm's HVHR on transfer of knowledge from the acquired firm to the acquirer is moderated by the degree of embeddedness of the knowledge to be transferred.

If retention of the acquired firm's HVHR is fundamental for the transfer of knowledge, it is necessary to implement measures to prevent their departure. Among the mechanisms for favoring retention of the personnel are: granting autonomy to the acquired firm, using rich media, and offering financial incentives.

The level of autonomy granted to the acquired firm is one of the main strategic decisions affecting the creation of value in M&As. In some M&As, the acquiring firm allows the acquired firm to enjoy a high level of autonomy after closure of the agreement, while in others it is totally integrated.

Evidence exists that acquired firms experience a greater sense of disruption and loss when they are integrated with their acquirers than when they are not (Puranam, Singh, & Zollo, 2006). The reduction of autonomy in strategic and operational decision making generates a sense of failure,

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and therefore constitutes one of the principal determinants of the turnover of top managers. Hambrick and Cannella (1993) discovered that executives who enjoyed a high level of autonomy in decisions regarding strategy, systems, and procedures showed a lower level of turnover, during the first year after the operation, than those firms that were rapidly integrated. Also, Lubatkin, Schweiger, and Weber (1999) concluded that the greater the perception of loss of autonomy on the part of the acquired managers, the higher the rate of turnover, particularly during the first and fourth years after the operation.

A low degree of autonomy implies that the managers of the acquiring firm take a very active role in the operations of the acquired firm, which may produce greater changes and adjustments in the months following the M&A. In this situation, the perceived value of the acquired managers' skills and knowledge is reduced, and consequently their relative standing (Hambrick & Cannella, 1993). The greater the scope of the change, the greater the risk of undesired departures (Appelbaum, Lefrancois, Tonna, & Shapir, 2007). The granting of autonomy, on the other hand, is an indicator that the managers of the acquired firm can exercise some control over the actions undertaken during the post-acquisition integration process (Ellis, Reus, & Lamont, 2009).

Ranft and Lord (2000) concluded that the autonomy granted to the acquired firm was the main predictor of retention of key personnel in high technology acquisitions. Other studies (Paruchuri, Nerkar, & Hambrick, 2006; Kapoor & Lim, 2007) found that acquisition integration negatively affected the productivity of the knowledge workers of the acquired firms. So:

Hypothesis 3: The greater the autonomy granted to the acquired firm, the higher will be the level of retention of the acquired firm's HVHR.

Several authors (Graebner, 2004; Appelbaum et al., 2007; Marks, 2007; Kumer, 2008) have pointed out that communication is an effective strategy for favoring retention of human resources in M&As.

If the goal is to conserve the acquired firm's top management, or any other group, this objective must be transmitted clearly. The acquiring firm must communicate its needs, intentions, and integration plans; otherwise, uncertainty and insecurity will increase, and with them, the probability of undesired departures. To show that the M&A will create new opportunities, without generating false expectations, may also stimulate the continuity of personnel in the firm (Buono & Bowditch, 1989).

Communication in the first stages is crucial in reducing the uncertainty faced by the personnel, stabilizing the situation and restoring the employees' commitment to the new organization (Graebner, 2004; Marks, 2007; Meyer, 2008; Klendauer & Deller, 2009). Rafferty and Restubog (2010), in their longitudinal analysis of a merger, found that the perceived quality of information about the change was negatively associated with anxiety and positively related to affective commitment to change, while Kiefer (2005), in another longitudinal study of a merger, found that anxiety, anger, and frustration were positively related to employee withdrawal.

Although it is recommendable to use a broad set of communication channels, perhaps no medium can substitute for interpersonal communication, particularly when the objective is to deal with the human side of the M&A, as it helps to reduce the tension and the anxiety characteristic of these processes (Colombo, Conca, Buongiorno, & Gnan, 2007).

According to Daft, Lengel and Trevino (1987: 358), media richness refers to capacity of a communication medium to facilitate insight and understanding. 'A rich medium facilitates insight and rapid understanding.' Media richness theory (Daft & Lengel, 1986), also known as information richness theory, posits that media can be ordered on a continuum from leanest to richest, based on four factors: (a) language variety – the ability to convey natural language rather than just numeric information; (b) multiplicity of cues – the number of ways in which the information could be communicated, such as vocal inflection and body gestures; (c) speed of feedback – the speed both of

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answers and of the questions to be asked; and (d) personalization – the use of personal feelings and emotions. Rich media, such as face-to-face communication, are capable of transmitting non-verbal cues or of providing immediate feedback, while lean media, such as written memos or reports, lack the personal approach and are unable to achieve it.

While some researchers have pointed out that communication performance is positively related to the information richness utilized (Purdy & Nye, 2000), others have posited that there is a positive relationship between communication performance and the information richness of the chosen communication medium fitting the requirements of the situation (Rice, 1992).

The organizational context of an M&A is characterized by uncertainty and equivocality. In this situation, rich media, involving face-to-face contact between transmitter and receiver, facilitate the reduction of equivocality by enabling people to overcome differences between frames of reference and by providing the capacity to process subjective messages (Daft & Lengel, 1986). The studies by Grunig, Grunig, and Dozier (2002) determined that face-to-face communication is the most productive way to build strong relationships based on mutual respect. As employees develop strong relationships within the firm, they are less likely to leave (Shaw, Duffy, Johnson, & Lockhart, 2005).

In addition, interpersonal media permit employees to clarify doubtful or confusing aspects, ensuring the transfer of information to the message receiver in a way that reduces potential conflicting interpretations or misunderstandings (Daft & Lengel, 1986; Kupritz & Cowell, 2011). Hence, we posit:

Hypothesis 4: The greater the frequency of use of rich media between the personnel of the acquired firm and the acquiring firm, the higher will be the level of retention of the acquired firm's HVHR.

High pay levels permit the firm to attract, motivate, and retain highly qualified employees (Werner & Ward, 2004). An increase in the pay level and in financial incentives generates higher performance and satisfaction, and reduces the turnover of high performers and the intention to leave an organization (Werner & Ward, 2004; Ou & Wang, 2007). If the pay level is seen to be higher in the current job than in other jobs available in the labor market, voluntary turnover is reduced. However, it has to be pointed out that an increase in remuneration increases the costs associated with the M&A, which could disincentivize its use as a mechanism for retention of HVHR.

We assume that a higher salary level should decrease turnover through diminished desirability of movement. Chaudhuri (2005), in a case study of acquisitions, discovered that strong financial incentives encouraged acquired employees to stay. Stahl, Larsson, Kremershof, and Sitkin (2011) have suggested that providing financial incentives to the employees it has desired to retain helps to build trust and ensures commitment from acquired employees.

Therefore, if the acquiring firm is interested in retaining the top management or the key employees of the acquired firm, it can offer additional compensation to encourage them to stay. These incentives have to be available relatively quickly for them to have an immediate effect (Kumer, 2008). We therefore posit:

Hypothesis 5: The greater the financial incentives established, the higher will be the level of retention of the acquired firm's HVHR.

As well as managerial mechanisms for incentivizing HVHR retention, the acquired firm's pre-acquisition profitability could influence retention. In general it is presumed that firms that obtain high stable performance are managed by a competent team, while firms characterized by poor performance are managed by incompetent teams. On this basis it is argued that management turnover depends on the results obtained by the acquired firm before the M&A, such that the better they are, the lower will be the rate of departure. However, Walsh and Ellwood (1991) did not succeed in

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demonstrating that the acquired firm's pre-acquisition performance influenced executive turnover, but did find significant effects with respect to the pre-acquisition performance of the acquiring firm. According to Hambrick and Cannella (1993: 739) 'the performance of an acquired firm may not be nearly as predictive of executive departure as its performance relative to that of the acquiring firm.' They discovered that executive departure depends more on an acquired firm's performance relative to the acquiring firm's than on the acquired firm's performance alone. The greater the acquired firm's pre-acquisition performance relative to that of the acquiring firm, the lower was the departure rate of managers in the first year after the acquisition. In this situation, the acquired managers had a favorable relative standing, generating greater self-esteem and management discretionality, as well as better future prospects. On the other hand, when the performance of the acquiring firm exceeded that of the acquired firm, the managers of the acquiring firm thought that they could manage the acquired firm, or at least, impose their decisions. We therefore propose:

Hypothesis 6: The better the pre-acquisition profitability of the acquired firm relative to that of the acquirer, the higher will be the level of retention of the acquired firm's HVHR.

METHOD

Sample

The model is tested using empirical data obtained from a sample of 57 domestic, related, friendly M&As in Spain. We selected M&As that occurred between January 1995 and March 2000. While retrospective bias can influence survey data, the M&A event involves a major change, from both the organizational and personal viewpoints, which favors recall and would probably reduce the possibility of retrospective bias (Reus & Lamont, 2009).

The information was obtained from two sources: The firm *Infotel*, on the basis of the records of the *Boletín Oficial del Registro Mercantil*, lists the merger operations occurring during this period. Since the above information was not complete, an alternative source for the same period, *Thomson Financial Securities Data*, was consulted. The only condition established was that the size of the acquiring firm should exceed 50 employees. The information required for the sending of questionnaires was gathered from Dun & Bradstreet.

Three characteristics of M&As considered are relevant. First, by focusing on the transfer of knowledge, M&As of a purely financial character are excluded. Second, only friendly M&As were included. Third, only Spanish M&As were considered. These characteristics, in particular, the cultural environment, may influence the results obtained, so that the results cannot be extrapolated to other situations.

To date, the vast majority of M&A research has utilized quantitative archival data. Haleblian et al. (2009) suggest that where appropriate (i.e., integration and process related), researchers should consider these and other alternative approaches, such as surveys. For this study we developed a questionnaire, which was sent to top managers of the acquiring firms or those resulting from merger for two reasons: (a) the strategic nature of its content requires an overall knowledge of the firms involved in the M&A and of the post-acquisition process (Cannella & Hambrick, 1993; Capron, 1999; Ellis, Reus, & Lamont, 2009; Reus & Lamont, 2009), and (b) they are the best able to forward the questionnaire to other persons who have more specialized knowledge of the subject. Although it would be interesting to have information on the top managers of the acquired firms, this information is very difficult to obtain because in many cases such firms do not remain as a separate entity (Capron, 1999) or because due to the departure of the acquired managers it is often impossible to identify former executives from the target (Homburg & Bucerius, 2005).

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Altogether 435 questionnaires were sent to top managers of the acquiring firms or those resulting from the merger, together with a cover letter explaining the purpose of the research and the type of operation on which the study was focused (M&As in which the acquirer had attempted to transfer some capability of the acquired firm). Despite the efforts made to refine the information, the bases contained some errors. Thus, five firms informed that they had no experience of merger or acquisition or that the operation had consisted of a collaboration agreement. On the other hand, 25 responses were received explaining the M&As in question did not fit the objective of the study.

The questionnaire included an item to verify whether the acquiring firm pursued the transfer of knowledge from the acquired firm to the acquirer. When a firm made various M&As in the interval of the study, the manager (key informant) was asked to choose one in which it had been attempted to transfer skills and capabilities of the acquired firm.

The cover letter contained the telephone and e-mail of the principal researcher so that the managers could clarify any doubt. In an attempt to minimize the social desirability bias, and to motivate more accurate responses, respondents were guaranteed confidentiality, were promised a summary report of the research findings, and were assured that the data would be processed in the aggregate. Also, a return envelope was attached for the questionnaire to be sent directly to the researcher and thus reduce the pressure to provide politically correct responses.

A week after posting, one of the researchers telephoned the top managers of the acquiring firms to explain to them, in greater detail, the purpose of the study and to encourage them to participate. After two attempts, she was able to speak directly with only 29% of them. Four weeks later, a second round of questionnaires was sent. Around 33 firms replied by telephone or by e-mail that the information requested was highly sensitive, that they had a policy of not taking part in surveys, or that they did not have time due to the large number of questionnaires they received, and refusing to participate in the study.

Of the 62 questionnaires received, five were eliminated: one because it corresponded to a hostile takeover; two because their aim was not to transfer the capability of the acquired firm to the acquirer; one because it was incomplete; and another because the operation had not been carried out within the period of analysis. In total, 57 usable surveys were received, representing a 14% response rate. This percentage, though modest, is satisfactory for three reasons. First, the majority of the indices documented in the studies of M&As (Lubatkin, Schweiger, & Weber, 1999; Colombo et al., 2007; Zaheer, Castañer, & Souder, 2013) and knowledge transfer (Bresman, Birkinshaw, & Nobel, 1999) are very low. Second, the response rate is above the 10–12% rate often experienced when surveying top management (Geletkanycz, 1997). Third, M&A operations are usually characterized by a highly restrictive information policy, making it difficult for the researchers to gather data. Therefore, although the sample is small, it is consistent with the sample sizes used in this area of research.

The final data set covered M&As in a wide range of industries. Among the acquiring firms, or dominant partners, the industries that stand out are construction (8.8%), telecommunications (8.8%), distribution (8.8%), chemicals (7%), food (5.3%), automobile (5.3%), and pharmaceutical (3.5%). The rest are distributed among a variety of industries (law, audit, mining, finance and insurance, etc.). For the acquired firms, the distribution follows practically the same pattern, except for the presence of internet firms (7%), which were the target, in general, of telecommunications firms. A total of 40.4% of the firms, both acquirers and targets, belonged to the service industry, and 59.6% to the manufacturing industry. The number of employees in the acquiring firms ranged from 150 to 11,000. The size of the acquired firms varied from 60 employees to 2,000. Therefore, the sample is formed by domestic, related, friendly M&As belonging to a wide variety of industries.

The sample includes both mergers (42.1% of the operations) and acquisitions (57.9%). To verify whether differences exist between the two types, a *t*-test was performed for each construct of the study. The results show that the means of the two groups (M&As) were not significantly different in any of the constructs analyzed.

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Most of the managers who replied to the questionnaire belonged, before the operation, to the acquiring firm or the dominant partner (80.7%). To determine whether there was any bias in the responses depending on the previous affiliation of the respondent, a *t*-test was carried out for each of the study constructs. The results indicate that the means of two groups (acquiring firm/dominant partner managers vs. acquired firm managers) were not significantly different in any of the constructs analyzed. The informants held positions of president, CEO, CFO, or senior vice-president for acquisitions.

Furthermore, since it can be assumed that the last respondents are similar to the non-respondents (Schwab, 1999), we examined the non-response bias by comparing the mean responses between the first and the last respondents. The *t*-test for differences of means was not significant, indicating that the non-response bias did not endanger the validity of the findings.

Measurement of variables

Most of the data required to measure the constructs in this study is not available from archival sources. Therefore, data were gathered through a survey of key informants. Before sending the questionnaire, all scale items were pre-tested with a panel of top managers involved in five M&As to increase clarity and parsimony (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). These interviews permitted us to explore the degree of understanding of the various questions posed in the research, and to refine the measures used.

The first part of the definitive questionnaire captures data on: (a) the capability of the acquired firm that was considered most valuable by the acquiring firm, (b) the level of retention of top management and personnel of the acquired firm who possess knowledge and skills linked to the capability considered most valuable by the acquiring firm or dominant partner (HVHR), at the end of the first year from the signing of the M&A agreement, (c) the degree of embeddedness of the knowledge underlying the capability of the acquired firm considered most valuable by the acquiring firm or dominant partner, and (d) the knowledge transferred.

Different acquirers may try to acquire and transfer different capabilities, depending on the industry in which they operate, the characteristics of the firm, or the specific objectives of the operation. For this reason, managers were asked to select, from a list developed by Ranft (1997), the capability of the acquired firm that was considered most valuable by the acquiring firm and that the latter therefore sought to transfer to itself. The capabilities considered were managerial capability, engineering capability, product innovation capability, process or production technology, relationships and customer knowledge, supplier relationships and knowledge research capability, product technology, marketing expertise, and low-cost manufacturing capability. Other studies of transference in acquisitions (e.g., Capron, 1999; Junni, 2011) have used similar lists of capabilities.

The data obtained showed that the capability of the acquired firm considered most valuable by the majority of the acquiring firms was sales relationships and customer knowledge (49%), followed by research capability (14%), product technology (12%), and process or production technology (10%). Other capabilities (engineering capability, managerial capability, product innovation capability, marketing expertise, and supplier relationships and knowledge) obtained small percentages. None of the firms in the sample attempted to transfer low-cost manufacturing capability.

HVHR retention

Following Ranft and Lord (2000), HVHR retention was measured as the mean of the retention of top management and that of other key personnel weighted by their importance. First, we asked the respondents about the importance of retaining both the acquired firm's top management and employees of the areas linked to the capability previously indicated as most valuable (1 = 'no importance,'

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7 = 'extremely important'). Second, we asked the respondents the percentage effectively retained in these categories at the end of the first year after the deal was closed.

Embeddedness of knowledge

The degree of embeddedness of the knowledge underlying the capability of the acquired firm considered most valuable by the acquiring firm or dominant partner was valued by an item. This reflected the degree to which the fundamental capability of the acquired firm is the result of the interaction and collaboration of many people (Badaracco, 1991; Brown & Duguid, 1991). The scale was a 7-point Likert-type scale (1 = 'strongly disagree,' 7 = 'strongly agree').

Knowledge transfer

To measure the transfer of knowledge, the managers were asked to indicate, with reference to the capability considered most valuable, what had been the level of transfer of knowledge from the acquired firm to the acquirer. The scale used was of the 7-point Likert type (1 = 'nothing at all transferred,' 7 = 'totally transferred').

Control variables

In addition, we included two control variables: the relative size of the merging firms and the industry. As in Kapoor and Lim (2007), the relative size was measured by dividing the number of employees in the acquired firm the year the M&A took place by the number of employees in the acquiring firm that year. The industry was measured by a dummy variable: a value 1 for service industry and 0 for manufacturing industry.

The second part of the questionnaire captured data about different antecedents of the retention. The variables autonomy, frequency of use of rich media, and financial incentives focus on the first year after the M&A. The first year after the acquisition is critical for the evolution of the relationship between the firms, and the transfer, for several reasons: (a) it is during this first stage when there is greatest danger of undesired resignations; (b) decisions on the level of autonomy granted to the acquired firm and on the mechanisms for retaining critical talent must be taken immediately after the transaction has been completed.

Autonomy

Following Datta and Grant (1990: 35), the managers were asked to indicate the 'overall level of autonomy provided to the acquired firm' during the first year following the M&A agreement (1 = 'low autonomy,' 5 = 'high autonomy'). This measure is comparable to that used by Hambrick and Cannella (1993).

Frequency of use of rich media

The frequency of use of rich media between the personnel of the acquired firm and the acquiring firm, during the first year after the M&A, was measured as follows. First, media were grouped into two types – written and personal (Daft & Lengel, 1986) and they were weighted according to their capability to facilitate insight and rapid understanding in interactions among the personnel of both firms for the managers interviewed (0.3 written; 0.7 personal). Second, we asked about the frequency of their use on a 7-point Likert scale (1 = 'never,' 7 = 'very frequently'). Third, the weighted sum of the use of both types of media was calculated.

Financial incentives

The managers were asked to indicate to what extent the personnel of the acquired firm had been offered an increase in fixed remuneration and an increase in variable remuneration to encourage them

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to stay during the first year following the M&A agreement (1 = 'never,' 7 = 'always') differentiating between top management and other personnel linked to the most valuable capability. Next, the mean of the incentives provided to both groups was calculated.

Relative profitability

The acquired firm's profitability relative to that of the acquirer before the acquisition was measured on a 5-point Likert scale (1 = 'much less profitable than the acquirer,' 5 = 'much more profitable than the acquirer'). This measure is comparable to that used by Ahammad and Glaister (2011).

Statistical techniques

All the constructs were measured using Likert-type scales or composite measures with Likert-type scales, except relative size (ratio) and industry (dummy variable). Similarly, organizational studies of M&As (e.g., Ranft & Lord, 2000; Ellis, Reus, & Lamont, 2009; Reus & Lamont, 2009; Ahammad & Glaister, 2011), we consider Likert-type scales as interval scales. As they meet the conditions of order and distance, they are appropriate for analysis by linear correlation and regression.

Hypotheses 1 and 2 were tested using a multiple linear regression with 'transfer of knowledge from the acquired firm to the acquirer' as dependent variable. This type of regression is suitable given the continuous nature of the variables, except industry, and the multivariate nature, with moderation, of the model posited (Aguinis & Gottfredson, 2010).

Multiple linear regression analysis was used to test Hypotheses 3–6 with 'HVHR retention' as the dependent variable. All analyses were done using SPSS 19.

Before the analysis, the variables were centered to reduce the problem of multicollinearity (Aiken & West, 1991) and to interpret the interactions between predictors. To examine the presence of multicollinearity, the variance inflation factor, which evaluates the extent to which the relationships among the independent variables inflate the standard error, was calculated. In the present study, the variance inflation factor values were below 2, far from the recommended threshold of 10 (Neter, Kutner, Nachtsheim, & Wasserman, 1996), suggesting that multicollinearity is unlikely to affect the estimated parameters.

RESULTS

Table 1 shows the means, standard deviations, and correlation matrix of the variables studied. The level of knowledge transfer is high (5.86), but this construct is not correlated with HVHR retention. The retention of acquired HVHR at the end of the first year of the M&A agreement is significantly positively correlated with the autonomy granted to the acquired firm (0.47, $p < .001$), with the relative profitability (0.34, $p < .01$) and with the frequency of use of rich media (0.30, $p < .05$).

Table 2 reports the results of the hierarchical regression models that were used to test Hypotheses 1 and 2. Hierarchical regression adds controls, explanatory variables, and joint effect terms incrementally to gauge their relative contributions. In Model 1 the control variables were introduced. The model is not significant, indicating that the industry and the relative size do not influence knowledge transfer. Model 2 incorporates the two explanatory variables (HVHR retention and embeddedness of knowledge), and Model 3 includes the interaction variable 'embeddedness of knowledge X HVHR retention.' For it to be considered that the inclusion of the interaction variable increases the explanatory power of the model, it is necessary that the result of the model is significant, the interaction variable is significant and the change in F is significant.

The results show that Model 3 fulfills the above conditions. Adjusted R^2 is 0.14 ($p < .05$). In Model 3, retention of the acquired firm's HVHR does not significantly influence knowledge

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Table 1. Means, standard deviations, and correlations

Variables	*Mean*	*SD*	*1*	*2*	*3*	*4*	*5*	*6*	*7*
1. Relative size	0.38	0.23							
2. Autonomy	2.89	1.53	−0.13						
3. Frequency of use of rich media	5.24	1.36	0.10	−0.09					
4. Financial incentives	2.64	1.32	−0.06	−0.06	0.05				
5. Relative profitability	2.32	1.12	−0.02	0.08	0.09	0.16			
6. HVHR retention	459.83	181.97	−0.08	0.47***	0.30*	0.12	0.34**		
7. Embeddedness of knowledge	3.86	1.73	−0.15	−0.06	0.11	−0.13	0.21	0.20	
8. Knowledge transfer	5.86	1.33	−0.07	−0.38**	0.42***	0.02	0.16	−0.12	0.34**

Note. HVHR = high-value human resources.
*$p < .05$; **$p < .01$; ***$p < .001$.

Table 2. Results of regression analysis (dependent variable: knowledge transfer)

	Model 1		*Model 2*		*Model 3*	
	β	*Student t-test*	β	*Student t-test*	β	*Student t-test*
Industry	0.14	1.01	0.12	0.91	0.07	0.59
Relative size	−0.06	−0.43	−0.02	−0.15	−0.08	−0.62
HVHR retention			−0.19	−1.47	−0.11	−0.86
Embeddedness of knowledge			0.37**	2.81	0.34**	2.61
Embeddedness of knowledge × HVHR retention					0.25†	1.83
R^2	0.024		0.16		0.22	
Adjusted R^2	−0.013		0.10		0.14	
F	0.652		2.58*		2.82*	
ΔR^2			0.14		0.05	
ΔF			4.42*		3.33†	

Note. Standardized regression coefficients (β coefficients) are shown.
HVHR = high-value human resources.
†$p < .10$; *$p < .05$; **$p < .01$; ***$p < .001$.

transfer from the acquired firm to the acquirer. Thus, the results do not support Hypothesis 1. However, the interaction 'embeddedness of knowledge × HVHR retention' ($\beta = 0.25$; $p < .10$) is significant. Hypothesis 2 is therefore confirmed. Furthermore, though not put forward as a hypothesis, the results indicate that the degree of embeddedness of the knowledge positively and significantly ($\beta = 0.34$; $p < .01$) influences knowledge transfer.

To test Hypotheses 3–6 a two-step regression was carried out with 'HVHR retention' as the dependent variable (Table 3). In the first step (Model 1) the control variables were introduced. The model is not significant. In the second step (Model 2) the explanatory variables (autonomy, frequency of use of rich media, financial incentives, and relative profitability) were introduced. Model 2 is significant (adjusted $R^2 = 0.35$, $p < .001$) and has a notable explanatory capacity in view of its coefficient of determination. All the variables, except 'financial incentives,' are significantly related to retention of the acquired firm's HVHR and in the direction hypothesized. Hypotheses 3, 4, and 6 are therefore supported.

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TABLE 3. RESULTS OF REGRESSION ANALYSIS (DEPENDENT VARIABLE: HVHR RETENTION)

	Model 1		*Model 2*	
	β	*Student t-test*	β	*Student t-test*
Industry	−0.00	−0.01	−0.10	−0.88
Relative size	−0.08	−0.59	−0.05	−0.48
Autonomy			0.47***	4.29
Frequency of use of rich media			0.31**	2.82
Financial incentives			0.11	0.99
Relative profitability			0.26*	2.37
R^2	0.007		0.42	
Adjusted R^2	−0.03		0.35	
F	0.174		6.03***	
ΔR^2			0.42	
ΔF			8.90***	

Note. Standardized regression coefficients (β coefficients) are shown.
HVHR = high-value human resources.
*$p < .05$; **$p < .01$; ***$p < .001$.

DISCUSSION AND CONCLUSIONS

We have explored the role of retention of the acquired firm's HVHR in the transfer of knowledge from the acquired firm to the acquiring firm. We hypothesized a model in which the retention of the acquired firm's HVHR improved knowledge transfer, this relationship being moderated by the degree of embeddedness of the knowledge to be transferred. Furthermore, we predicted that granting greater autonomy, using rich media, and offering financial incentives would improve the retention of the HVHR. We also hypothesized that better profitability of the acquired firm compared to the acquiring firm would contribute to greater retention of the acquired firm's HVHR.

Although it is generally affirmed that retention of the acquired firm's key personnel is a factor for the success of M&As, our study, focused on HVHR, has not been able to demonstrate that it independently influences knowledge transfer from the acquired firm to the acquiring firm. Several reasons may explain this result. First, the level of retention of top management and of other valuable personnel in our sample was fairly high during the year following the M&A, with only small variations. The high level of retention of the acquired firm's HVHR may be because, as indicated by Coff and Kryscynski (2011: 1433): 'individuals' idiosyncratic contributions may be unobservable, making it unclear who should be retained.' Thus, the acquiring firm may have retained the largest possible number of employees during this initial period, until it is able to evaluate more precisely which individuals hold the valuable knowledge of the acquired firm (Graebner, 2004).

The high level of HVRH retention may also be associated with the objective of the M&As. The retention of the acquired human resources may be more important or critical in M&As, whose objective is the transfer of knowledge and the accumulation of capabilities than in M&As motivated by the desire to reduce costs by means of economies of scale and rationalization. To achieve efficiency gains, the acquiring firm, or the new firm resulting from the combination, may consolidate activities, close production installations, rationalize product lines, and eliminate redundancies in the workforce. In these M&As the importance of retaining human resources diminishes.

Second, even though the employees have been retained, the challenge is to keep them motivated and affectively committed to the transfer of knowledge. Husted and Michailova (2002) argue that the

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personnel may have a deeply rooted resistance to sharing the knowledge they possess and reusing knowledge from others. Paruchuri, Nerkar, and Hambrick (2006) posit that the process of integration de-motivates the acquired personnel, disrupts their routines, and may negatively affect the transfer of capabilities. Kapoor and Lim (2007) show the negative impact of integration on the productivity of the acquired firm's inventors. Recently, Junni (2011) has underlined the importance of motivation of individuals in the firms for the transfer of knowledge from the target to the acquirer. According to the author, the transfer of knowledge and capabilities from one firm to another depends largely on the willingness of individuals to share their knowledge. If the employees of the acquired firm fear being exploited by the receiving unit without getting anything in exchange, they may be reluctant to share their knowledge.

Third, given that the study is about Spanish M&As, the results could be due to their specific cultural context. Spanish culture is characterized by a higher degree of power distance and uncertainty avoidance than US culture (Hofstede, 2001), the framework in which most earlier studies of knowledge transfer in M&As have been carried out. Spanish culture is also characterized by a lower degree of masculinity and individualism (Hofstede, 2001), which could favor the collaboration and sharing of knowledge necessary to achieve a high level of knowledge transfer even if HVRH retention is lower. However, given that the level of HVRH retention is quite high, it cannot be argued that the specific cultural context of this study influences the results.

The reasons given to explain the lack of a significant effect on knowledge transfer of the retention of the high value personnel indicate that the influence of retention on transfer must not, however, be ruled out. Consequently, more studies are needed in order to test this hypothesis in broader samples and in different contexts.

Our study confirms that HVHR retention contributes to the transfer when it interacts with the degree of embeddedness of the knowledge to be transferred. The more embedded the knowledge, the more continuity of the acquired firm's HVHR favors knowledge transfer from the acquired firm to the acquirer. Highly embedded knowledge can only be transferred through the contribution of the people in whom it is rooted, requiring close personal contact between possessor and receiver. The results of the study also show that the embeddedness of the knowledge positively and directly affects the transfer. From the strategic point of view, the knowledge residing in socially complex interactions between individuals and groups is more valuable (Brown & Duguid, 1991), as it is more difficult for competitors to imitate. Being more valuable, firms will be motivated to make a greater effort to encourage its transfer.

Since the model only explains 14% of the variance in knowledge transfer, we must acknowledge that other potential antecedents influence knowledge transfer in M&As. The difference between the organizational cultures of the participating firms, and prior experience of acquisition, among others, are factors that can significantly affect knowledge transfer.

The difference between the organizational cultures may hinder transfer insofar as they may negatively affect the employees' attitudes and behaviors, reducing trust between the parties during the post-acquisition process (Stahl & Voigt, 2008; Sarala, 2010; Stahl et al., 2011) and making difficult the cooperation and interaction necessary for transfer (Junni, 2011; Stahl et al., 2011). However, different but complementary organizational cultures can provide potential for learning (Sarala & Vaara, 2010) and value creation (Teerikangas & Very, 2006). According to Sarala and Vaara (2010), the effect of organizational cultural differences on knowledge transfer depend more on how organizational relationships develop over time and on how the cultural integration process is managed. Future research should analyze how the management of cultural differences affects transfer.

In relation to the acquiring firm's prior experience in M&As, firms with significant acquisition experience may be able to discriminate adequately the particular requirements of each acquisition, while the less-experienced ones may apply inappropriately the lessons derived from past experiences in

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different contexts (Haleblian & Finkelstein, 1999). According to Al-Laham, Schweiger, and Amburguey (2010), acquisition experience permits one to gain insights into the most suitable way of managing the integration process, and improves the capability of transferring and integrating knowledge. Also, experience of a pre-acquisition alliance between the firms implicated favors learning and improves the absorption capacity of the receiver of the knowledge (Al-Laham, Schweiger, & Amburguey, 2010), facilitating the transfer of tacit knowledge.

With respect to the antecedents of retention, the results of our study show that autonomy, the frequency of the use of rich media and relative profitability are the principal factors encouraging the personnel of the acquired firm to stay on during the year following the signing of the M&A agreement.

The influence of autonomy on retention is especially important, supporting the arguments set out in previous studies (Hambrick & Cannella, 1993; Lubatkin, Schweiger, & Weber, 1999; Ranft & Lord, 2000). Autonomy contributes to greater motivation, morale, and initiative, as well as a lower level of anxiety among the personnel (Datta & Grant, 1990). Although, in the sample, the acquired firms enjoyed on average a moderate degree of autonomy, as this increases so does retention. The reduction of autonomy, implying greater changes in the acquired firm, accentuates the perception of domination exercised by the acquiring firm, creates a sense of loss and failure, diminishing the relative standing of the personnel of the acquired firm (Hambrick & Cannella, 1993; Lubatkin, Schweiger, & Weber, 1999; Paruchuri, Nerkar, & Hambrick, 2006), and generates lower commitment in the acquired personnel. All this precipitates a higher turnover.

Autonomy is related with the depth and speed of integration, which in turn have been linked with the realization of potential value of the M&As (Homburg & Bucerius, 2005; Cording, Christmann, & King, 2008). Integrating too much, too fast, may lead to the destruction of resources based on tacit and embedded knowledge (Graebner, 2004; Puranam, Singh, & Zollo, 2006). In a case study of technology acquisitions, Ranft and Lord (2002) showed the importance of slow gradual integration so as not to damage the technological capabilities of the acquired firm; Paruchuri, Nerkar, and Hambrick (2006) confirmed that integration was very harmful for the inventors who were most socially embedded in collaborative relationships with their pre-acquisition colleagues; and Puranam and Srikanth (2007) discovered that structural integration was negatively associated with the acquirer's success at leveraging the innovative capabilities of acquired firms in technology acquisitions, due to the disruptive effects of reducing the autonomy of the acquired firm. The change implied by integration disrupts established routines and alters the identity of the acquired firm, increasing the likelihood of employee attrition (Björkman, Stahl, & Vaara, 2007), which negatively influences their willingness to participate in the teaching–learning process required for the transfer of tacit knowledge (Paruchuri, Nerkar, & Hambrick, 2006).

Although the autonomy granted to the acquired firm facilitates the preservation of capabilities and tacit and embedded knowledge through the retention of the HVHR, it may also be an obstacle for the transfer as it hinders access to the knowledge possessed by the acquired firm (Ranft & Lord, 2002; Castro & Neira, 2005). Nevertheless, if the acquiring firm wishes to retain the high value personnel of the acquired firm, the results suggest that it must take a preservation approach to begin with even if the longer-term objective is to fully integrate the firms (Haspeslagh & Jemison, 1991). New studies are needed to analyze how firms balance the need for integration to transfer the capabilities with the need to preserve them, especially when they are based on embedded or socially complex knowledge.

Our study also supports the importance of using rich media during the first year after the M&A as an antecedent of retention. The existing literature indicates that communication is one of the factors most influencing the successful implementation of an M&A (Marks, 2007; Meyer, 2008). As well as helping to reduce uncertainty and ambiguity, communication can help to prevent or to lessen cultural conflicts, to mitigate the stress experienced by the employees and to maintain the commitment of the HVHR to the change and to the new entity after the acquisition. Ellis, Reus, and Lamont (2009)

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confirm that informational justice affects the creation of value during integration efforts in related acquisitions. Dedicating time to communication, fundamentally to that of an interpersonal nature, encourages the acquired firm's personnel to stay on.

As relative profitability increases, the acquiring organization strives to retain more people, supporting the results of previous studies (e.g., Hambrick & Cannella, 1993).

Finally, this study, like that of Ranft and Lord (2000), has found no relationship between financial incentives and retention of the acquired firm's HVHR. This result may be due to various reasons. First, the data show that almost no firms in the sample offer financial incentives to encourage the HVHR to remain. Considerations of an economic character may have limited their application, as the costs associated with the deal have increased and negatively influenced the profitability of the operation. Second, the motivation for staying in the new organization is not so much economic, especially when the employees are highly qualified, so that even if the firms have established attractive financial incentives, these may not be enough to retain the HVHR (Wickramasinghe & Karunaratne, 2009). The opportunities for promotion in the firm, for training and development or participation in new projects, may be stronger incentives to stay than monetary ones. The intrinsic motivation and the ambitiousness of a new project may stimulate retention in the context of acquisitions. In a recent survey by McKinsey of 1,049 executives, managers and employees around the world (Dewhurst, Guthridge, & Mohr, 2010), the respondents considered three non-cash motivators – praise from immediate managers, leadership attention (e.g., one-on-one conversations), and a chance to lead projects or task forces – to be motivators as effective as, or more effective than, financial incentives: cash bonuses, increased base pay, and stock or stock options.

Third, the scale used, though similar to that used in other studies (e.g., Ranft & Lord, 2000), may be unable to capture adequately the financial incentives provided.

The results should be interpreted with caution due to the size of the sample, the measurement of the constructs, and the use of a single informant. In particular, a larger sample size could have increased the power to find a significant relationship between retention of the acquired firm's HVHR and knowledge transfer.

Given that the constructs cannot be measured directly using archival data, similar to other acquisition studies (e.g., Capron, 1999; Ellis, Reus, & Lamont, 2009) we used data from a single respondent. Although the respondents had detailed knowledge of the process of integration and transfer, the use of multiple informants would improve the validity of the findings and reduce the potential response bias. Further studies, with multiple informants from the acquired firm and from the acquirer, are required in order to corroborate the results and to explore these relationships.

Despite the limitations, we believe that the study helps to understand better the role of the acquired firm's HVHR in knowledge transfer in M&As, demonstrating that the importance of retention must take into consideration the nature of the knowledge to be transferred. Also, if the aim is to retain the acquired firm's HVHR, management must pay careful attention to the level of autonomy provided, and dedicate time to communication, especially that of an interpersonal nature.

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