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The influence of clustering on HR practices and intrapreneurial behavior

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Abstract

Purpose – This study aims to explore how the fact of belonging to clusters of dissimilar form or characteristics modify the application of human resource management (HRM) practices, as well as those knowledge-sharing processes that guide and encourage the intrapreneurial behavior of employees (IPB) in firms belonging to the cluster. The main thesis is that the application of HRM practices and some knowledge management processes are strongly conditioned by the form or characteristics of the cluster, all this in a knowledge-intensive context that requires a contingent application of such practices.

Design/methodology/approach – The research strategy chosen was a qualitative case study, given that the insight the authors were seeking could only be obtained through a fine-grained analysis inside the firm where it is very difficult to decouple the phenomenon to be observed from the context where it takes place. Two cases were selected to analyze the phenomenon in-depth and compare their results; they were big and technologically advanced firms but belonging to clusters of different forms and characteristics.

Findings – Results show that the influence of the cluster based on location is greater than the effects of the cluster formed by networks, where globalization and external ties play an important role. HRM practices and knowledge sharing processes that lead to intrapreneurial behavior are conditioned, only in part, by the characteristics of the cluster. Particularly, the geographical cluster encourages knowledge sharing with competitors and customers, mainly for technical training processes and because of belonging to a sectoral association. However, HRM practices, with the exception of training and compensation policies, are mainly conditioned by the company's culture and internal factors, rather than by belonging to a specific cluster.

Practical implications – Firms belonging to an organized cluster should encourage the development of practical training-oriented programs, not only on technical aspects but also on other skill and competence based areas. In addition, training based on strategic issues both for top and middle managers could be an interesting initiative. Additionally, clustered firms should develop more knowledge-retention policies to limit the degree of rivalry in the sector, as it is very common for a firm to search for new and specialized talent in the rest of competing firms in the cluster.

Social implications – Considering the economic impact of the geographical cluster, its effect on the employment and development of a region and taking into account the relevant and dynamic role of research institutions and associations, policymakers should support and facilitate the activity of those institutions, reinforcing the relevance of industrial districts or geographical clusters that are threatened by the pressures of globalization.

Originality/value – This study brings new insight into the effect of the form and characteristics of the cluster on HRM practices and knowledge sharing processes that lead to intrapreneurial behavior. The study may open the field for additional studies that, from a qualitative and quantitative perspective, analyze this topic in depth. The paper shows that IPB depends not only on the support of the institutions created in the cluster but also on the culture and competitive strategy of the company. Belonging to a geographical cluster can have an influence on firms' behavior and can, through the trust generated among its members, facilitate knowledge-sharing processes and intrapreneurial behavior.

Keywords HRM practices, Clustering, Knowledge sharing, Intrapreneurial behaviour

Paper type Research paper

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1. Introduction

Innovation has turned into a key factor for firms competing in knowledge-intensive contexts. Consequently, encouraging the intrapreneurial behavior of employees (IPB) is the basis for innovation. Recognizing the importance of this fact, there is recent literature studying how certain human resource management (HRM) practices applied in a firm can foster intrapreneurial behavior and innovation (Alpkan et al., 2010; Bamber et al., 2017). With the implementation of HRM practices, companies could activate the existing stock of knowledge to generate new products or implement new processes, through the exploitation of a greater number of entrepreneurial opportunities (Jahanshahi et al., 2018). So, employees should look for new internal or external opportunities that improve the results of the organization (Antoncic and Hisrich, 2001), to achieve a competitive advantage in their industry. Present work tries to consider this industry perspective, particularly the form and characteristics of the cluster and its effect on the application of HRM practices, knowledge management processes and, ultimately, intrapreneurial behavior.

As Porter (1990, 1998) popularized clustering as a determining factor for the competitiveness of a region, many works have focused on responding to questions related to the make-up, dynamics and benefits of clusters. In this regard, and in relation to the dynamics and benefits that can be obtained (externalities), there is recent consensus on the key role of the human element in them (Aranguren et al., 2014; Guilianni and Pietrobelli, 2014). In addition, and particularly in innovation-oriented environments, it is argued that regional clusters play a key role, not only in developing the geographical area in which they are located, but also as a driving force behind the competitiveness of their member companies, stimulating technological change, the creation and dissemination of new knowledge and orientation to innovation (Ferreira *et al.*, 2012). In the same vein, and inspired in the works of Marshall (1890, 1919), different authors (e.g. Maskell and Kebir, 2006) establish that location and clusters reduce the costs of coordination, facilitate the creation of a higher level of specialization in the labor force and encourage knowledge creation.

Turok (2003), taking the work of Gordon and McCann (2000) as a starting point, classifies clusters into three forms or types: agglomeration clusters, that favor knowledge-transfer as specialized workforce concentrates in them; clusters based on geographical proximity (where normally stable trading linkages among firms are established); and clusters understood as a network, where trust turns into a key variable. Additionally, other authors (Westlund and Bolton, 2003; Molina-Morales et al., 2012) argue the need to address the analysis of the effect of the cluster by adopting a mixed approach that includes social factors such as networks, and behavioral and institutional dimensions. Therefore, to better understand the dynamics of clusters and the performance of their member companies, one of the aspects that should be analyzed is the relationships established between cluster participants (Puig and Marques, 2010). These relationships are characterized by a combination of competition and cooperation (Becattini, 1990); and precisely, one of the explanations of the success or failure of clusters is found in the quality, development and frequency of these relationships (Saxenian, 1994; Schmitz, 2000; Puig and Marques, 2010; Staber, 2011). In fact, this double characterization (competition vs cooperation) of the relationships between the companies that belong to a cluster encourages the creation of a networking atmosphere that makes the cluster a platform for the exchange of both tacit and explicit information and knowledge (Han, 2009; Dias Leite, 2019) and thereby boosts the competitiveness of the participating companies.

Among the knowledge that can be exchanged by cluster members is the one related to HRM practices application, which has become an interesting and current topic in the academic debate. In this respect, there is recent literature that points out that the cluster may influence the application of the HRM practices by firms embedded in it (Martínez-del-Río et al., 2013; Dibben et al, 2020; Belso-Martínez et al., 2018). Also, literature has focused on the study of how clusters, through HRM and knowledge exchange practices, encourage innovation in member firms. Particularly, clusters attract and retain talent and specific knowledge (Weng, 2008; Hsu et al., 2014; Belso-Martínez et al., 2018) enhancing, as a result, organizational innovation. Companies belonging to a cluster take advantage of the knowledge shared that comes from the direct

contact with customers, suppliers, institutions and competitors. But, at the same time, these firms must also generate competitive advantages to survive in the cluster. Consequently, as a way of achieving this advantageous position firms will re-orient their HRM practices to incorporate and apply the acquired knowledge, being more creative and adopting intrapreneurial behaviors in-house.

Taking into account the foregoing, our work aims at examining how the fact of belonging to a particular form of cluster may have a key influence both on the HRM practices applied by member firms and those knowledge management processes that guide and encourage the intrapreneurial behavior of employees and, ultimately, firms' innovation. Thus, our work studies how membership to a cluster with particular characteristics and form may modify or have a key influence on how the company applies the HRM practices and the knowledge management processes that guide intrapreneurial behavior and innovation. In this way, we explore how the characteristics and form of the cluster affects the contingent implementation of HRM practices and knowledge management processes by member firms so that this application facilitates, ultimately, the innovative and intrapreneurial behavior of employees. To achieve this goal, a qualitative case study was carried out. We compare two cases of companies belonging to clusters with different characteristics and form: one of the companies belongs to the electronics industry and the other one to the tile manufacturing sector, in which there is a very important geographical cluster in the Valencian region.

2. Theoretical framework

2.1.- Human resource management practices application, knowledge management processes and intrapreneurial behavior

Park *et al.* (2014) suggest that an organization increases its levels of adaptation to the environmental changes and becomes more innovative when relationships with employees are built through empowerment and communication symmetry; this fact will motivate employees to involve in voluntary intrapreneurship, looking for new ideas and business opportunities. In turn, Moriano *et al.* (2009) recognize the relevance of developing intrapreneurial behaviors, oriented to the recognition

of new opportunities or to the implementation of innovative ideas. Generally, this interest in the development of intrapreneurial behaviors is part of a corporate or internal entrepreneurship strategy that tries to develop a set of new creative ideas and business opportunities within the businesses (Burgelman, 1983), having an influence on the innovation results of the firm.

To ensure the intrapreneurial behavior of employees, specific HRM practices need to be applied and certain levels of autonomy and support need to be granted so that employees can be creative and proactive without fear of failure. In this sense, Jahanshahi *et al.* (2018) stressed the role played by supervisor support and other internal conditions of the organization to encourage the intrapreneurial behavior of employees. In this vein, Lages *et al.* (2017), from the studies of Kuratko *et al.* (2001), Kuratko (2014) and Hornsby *et al.* (2009), consider that supervisor support facilitates and promotes intrapreneurial behavior, fostering the creation of new ideas and providing resources for their implementation. Additionally, autonomy, time availability, an adequate rewards system oriented to innovation and other internal procedures to evaluate innovation results are necessary to encourage intrapreneurial behavior.

Hayton (2005: 24), in turn, points out that, in intrapreneurial organizations, individuals face the need to quickly choose between multiple courses of action and do not always have enough information to decide based on rational criteria. Under these conditions, the HRM system and the set of associated practices must be designed to reinforce the desired intrapreneurial behavior, understanding that all practices must be aligned with the innovation strategy and should be coherent among them.

Also, the specialized literature establishes that knowledge management in the organization and, in particular, the exchange of knowledge inside and outside the company (inter-departmental and with customers, suppliers, competitors, sectoral associations, universities, etc.), becomes a key factor for employees, especially for qualified staff, when developing proactive, creative and risk-oriented behavior in the company. From the perspective of entrepreneurship, West and Noel (2009) suggested that knowledge improves the management capacity to develop a business. In turn, Castrogiovanni (1996) argued that good

knowledge management in the organization can help the entrepreneur to use resources more efficiently and to better evaluate new opportunities, based on the design of knowledge acquisition and transfer processes in the organization. And Neesen et al. (2019) established that some HRM practices at organizational level (e.g. reward systems and organizational design) and some employee attitudes and characteristics (e.g. level of motivation and acquired knowledge and skills) act as antecedents of intrapreneurial behavior.

Several previous works have discussed this theoretical approach that analyzes the mediating effect of variables such as exploratory learning and knowledge management to foster employees' innovative behavior. In particular, Escribá-Carda et al. (2017) stated that when employees have high levels of participation and autonomy in their daily work and are intrinsically motivated and perceive that rewards are properly established, they will feel more likely to learn and to seek new information and ideas from outside in order to generate new knowledge. As a result, this will generate greater levels of innovative behavior.

Regarding knowledge management processes, other works (e.g. Escribá-Carda et al., 2018; Canet et al., 2018) have focused on the mediating effect of knowledge acquisition and transfer in the relationship between high-performance work systems (HPWS) and intrapreneurial behavior [1] in the company. The results obtained in these works reveal the existence of a mediating effect of the process of knowledge acquisition and distribution in the relationship between HPWS and the intrapreneurial behavior of employees. Likewise, Del Giudice and Della Peruta (2016) established that knowledge management systems encourage individuals to act as "intrapreneurs" inside the firm. Consequently, it can be stated that HRM practices have a real influence on the IPB when they acquire, distribute and share knowledge in the organization. In this sense, HRM practices designed in the organization should formally reinforce existing processes of knowledge exchange and/or encourage the creation of different mechanisms for acquiring and transferring knowledge inside and outside the company, as it is through these processes that innovation and proactivity takes place.

In addition to the above mentioned and from a more external perspective, other variables more related to the characteristics and form of the cluster which the firm belongs to may affect the design and implementation of organizational HRM practices as well as the processes of knowledge generation and innovation orientation, as suggested by the specialized literature (e.g. see Martínez-del-Río et al., 2013). In this sense, the underlying forces that explain why the cluster has aroused (e.g. search for economies of scale, search for proximity in order to facilitate exchange of resources or decrease of communication costs, search for long-term cooperation based on trust), the culture and strategy of cluster members or the influence of competitors or other stakeholders (e.g. customers, suppliers) that form part of the value chain may also influence HRM practices implementation and knowledge management processes oriented to foster employees' intrapreneurial behavior. We address this issue in the next section.

2.2.- Influence of cluster characteristics and form on human resource management practices, knowledge management and intrapreneurial behavior

In the current knowledge-based economy, regional clusters play a crucial role in the competitiveness of a geographical area and of their member companies, since they stimulate innovative activities and promote technological change through their operational dynamics (Ferreira et al., 2012: 148). Research on this topic points out some other effects related to location. For example, Resbeut et al. (2019: 248) establish that “the agglomeration of similar industries” has a positive effect on the performance of firms belonging to the cluster and causes an increase in the earnings per employee. Similarly, Claver et al. (2019: 230) establish, through their literature review on empirical evidence, that the district effect can be understood as a “second-order construct formed in turn by three dimensions of first order (productivity/efficiency, international competitiveness and innovation)”. Thus, each of these three dimensions can be affected by the fact of belonging to a particular cluster.

Focusing on innovation and efficiency dimensions, the specialized literature (e.g. Jiménez and Sanz, 2011) recognizes that both dimensions are based on knowledge and learning processes. Particularly, the interaction with other companies that occurs within the cluster generates a learning process and a more

conscious view of the firm's technological needs, as well as creates more innovation in response to competitive pressure and to the continuous comparison with other companies (Porter, 1998; Jardón and Tañski, 2010: 29). The cluster facilitates the exchange of information between companies and, as a result, a core of knowledge is generated. In addition to this, the cluster constitutes a "powerful mechanism to transmit knowledge quickly, since relations between its companies promote cooperation while intensifying competition" (Jardón and Tañski, 2010: 32). Also, innovation is conceived as a complex and interactive learning process, based on cooperation and mutual trust and fostered by geographical proximity (Ferreira et al., 2012: 150).

In their research and based on the contributions of Rosenfield (1997), Giuliani (2005) and Tambunan (2005), Ferreira et al. (2012) synthesized the different types of clusters ranging from very basic to more dynamic and advanced conceptions. More recently, the cluster concept has been understood in the light of systemic and evolutionary approaches, in which customers, suppliers, and social and professional institutions participate. Precisely, Martínez-del-Río et al. (2013: 241) pointed out that "the origin of a shared knowledge in geographic clusters is the influence of social, economic and professional relations". And particularly, it is the set of relationships generated between the members of a cluster that transform the latter into a favorable environment for cooperation, reducing opportunism and encouraging better communication and knowledge-sharing among participants. In addition, we must not forget that the essence of clustering is that the companies that make it up voluntarily want to be part of the network and work with the rest of the member organizations. In this sense, trust must constitute the governing mechanism of the network, encouraging an atmosphere of cooperation based on reciprocity (Becattini, 1979; Benton, 1993).

It could be expected that belonging to a cluster will have an influence or will affect the adoption of more efficient HRM practices in the members. Ignjatovic and Svetlik. (2003: 26) studied how the contextual approach and the specific factors related to the country or territory influence individual and organizational behavior, generating differences in environments, strategies and the application of HRM practices. In their research, the authors identified four European country clusters in which organizations (medium-sized and large companies) applied specific

HRM strategies and practices coherent with the characteristics of their clusters and their locations. Similarly, the research carried out by Apospori et al. (2008) focused on differences in HRM practices in northern and southern European countries. And Vanhala and Stavrou (2013) analyzed how HRM practices varied between public and private sector organizations in three groups or clusters: the Anglo-Saxon cluster (characterized by individualism and managerial values), the German cluster (conservative and relatively focused on benefits) and the Nordic cluster (image of the welfare state with a large public sector financed by high taxes that offers generous services for all citizens).

Martínez-del-Río et al. (2013: 239), in turn, established that certain cluster characteristics (e.g., managerial networks and competitive local rivalry) influenced the development of some of the HRM practices applied by the members. The contacts network of a company, strengthened by geographical proximity, can be an important channel for learning good human resource and innovation practices and, above all, for obtaining advice on how to implement them effectively. Conversely, competitive rivalry can minimize the exchange of information about good and effective HRM practices, since firms will compete to hire the best employees in their geographical area. However, this rivalry may have the opposite effect of “exerting a strong and constant pressure to generate best practices that allow to overcome the competition” (ibid.: 241). Thus, local rivalry may produce a dragging (or pulling) effect.

If we apply this pulling effect to HRM practices, we find that close surveillance of these practices, as well as the advantages obtained through them, increases the pressure on the company to implement similar practices (Dibben et al., 2020). This process of homogenization of HRM practices (cooperation vs. imitation) will help companies belonging to a geographic cluster to gradually improve their HRM practices compared to those that do not belong to the cluster. In short, growing competitive rivalry can help companies in the cluster to improve, for example, their selection processes to attract the best candidates, their training processes to foster the best skills or their performance evaluation processes to maximize employees' potential (Martínez-del-Río et al., 2013: 242).

According to Nummela et al. (2006) and Fabi et al. (2009), companies that wish to operate as network organizations (as usually do firms belonging to a cluster) should encourage practices that support the development of skills, knowledge-sharing and employee participation in the decision-making process. Likewise, firms:

(...) “that do business with a limited number of customer or with large prime contractors can be forced by these business partners to adopt new ways, notably in matters of product quality and delivery; this in turn forces them to intensify employee training and revise their work design (Bacon and Hoque, 2005; Beaumont et al., 1996; Kinnie et al., 2005; Swart et al., 2004)” (Fabi et al., 2009: 11).

Some works establish a clear relationship between belonging to an industrial cluster and innovation. However, at the same time, they alert that the advantages of industrial districts are under threat (Dibben et al, 2020) due to globalization. In this sense, Pla and Puig (2009) argue that closer integration in the global economy has weakened the advantages of location and proximity. In turn, Dibben et al. (2020) or Molina-Morales and Martínez-Fernández (2006) establish that the greater the capacity for innovation and absorption of knowledge, the greater the capacity of firms belonging to the industrial cluster to face external threats. This also happens if there are barriers to mobility in the workforce and if knowledge is very specific (Dibben et al. 2020).

Turok (2003: 552) affirms that “business networks may be national or international, and firms may develop connections with customers, suppliers and collaborators beyond the cluster if they offer more advanced capabilities, lower prices or access to larger markets (Amin & Thrift, 2002; Scott, 2000)”. Nevertheless, Dibben et al. (2020) establish that the global economy and the relevance of external ties generate more difficulties in order to control and share specific knowledge that sometimes comes from external suppliers. In addition, HRM practices cannot be monitored and coordinated through the value chain as some key suppliers are in a remote location. Thus, these authors affirm that: (...)

“close spatial proximity in industrial districts facilitates not only the development and circulation of a pool of skilled labor, but also a greater

compatibility in HR policies (...); key firms are likely to be closely and intimately aware of how their spatially near partner firms manage their people” (Dibben et al., 2020,:257).

However, this is not possible in the case of offshoring.

Alternatively, Belso-Martínez et al. (2018) affirm that cluster characteristics and local networks have a positive effect on knowledge and HRM practices used by members of the cluster. In particular, these authors propose that the links with customers, suppliers, universities and cluster associations facilitate knowledge sharing processes. In turn, knowledge flows are not only related to technical capabilities but also contain information about HRM practices adopted and implemented by the firms in the cluster. Additionally, they state that the industrial cluster can generate an adequate human resource environment that will facilitate talent attraction and retention, and those skilled workers will improve ultimately their knowledge through the interaction with other highly skilled workers generating, as a result, better knowledge acquisition and sharing capabilities (Belso-Martinez et al., 2018, pp. 1401-1402)

Based on the previous arguments, we have developed a preliminary theoretical model that illustrates the main variables and relationships we want to explore (Figure 1) in our study. This model does not show relationships between variables to be statistically tested. On the contrary, the model tries to represent the main areas of study in order to guide the collection of primary information as well as its analysis. Also, we have followed the logic expressed in the model to write our findings (Section 4 above).

Figure 1 here

As seen in Figure 1, the model represents the basic ideas and relationships that we want to explore. In particular, the model illustrates that the particular characteristics and form of the cluster (i.e. geographical location; type of ties developed in the cluster; forces that explain how the cluster has been created – more based on value chain relationships, on the development of networks, on the achievement of some proximity-based advantage, etc.–; existence of powerful sectoral associations; etc.) may affect the application of HRM practices and

knowledge sharing by member firms, all of this from a macro-perspective. Also, our model shows the relationships that take place inside the firm; particularly, it represents that the application of HRM practices in the company may have an effect on internal knowledge sharing processes (the latter are influenced not only by those practices but also by the characteristics and form of the cluster), driving ultimately to encourage intrapreneurial behavior in employees. The study of how these relationships takes place in two contexts (i.e. clusters) with different characteristics and form becomes the focus of our research.

3. Methodology

3.1.- Background

This work has been carried out within the framework of a broader research project, with a first quantitative phase in which information was collected through different questionnaires administered to qualified company employees about HRM practices, intrapreneurial behavior, knowledge management processes and other aspects related to autonomy and perceived supervisor support. Each of the participating companies received an individualized report of the results obtained for it. The present study is part of a second phase of the project, which has a qualitative nature to deepen into the analysis of some of the results revealed in the previous quantitative stage.

3.2.- Research strategy and methods

As our research aims at exploring how the fact of belonging to clusters of different form or characteristics modify the application of HRM practices as well as those knowledge-sharing processes that guide and encourage the intrapreneurial behavior of employees in cluster members, the case study has been the research strategy chosen. According to Yin (1989), this strategy is ideal for investigating unusual, very complex and dynamic phenomena, as well as situations in which elements of an intangible or difficult-to-observe nature are involved. Similarly, Swanborn (2010) recommends this strategy when researchers need to analyze contextual conditions because they are relevant to the studied phenomenon, given that the interesting premise is to analyze the phenomenon in its real-life context (Yin, 1989; Robson, 2002). In this research, we developed an exploratory

case study since we intended to examine how the characteristics of the cluster may affect the application of HRM practices and the exchange of knowledge necessary for the development of intrapreneurial behavior in member organizations.

When considering a case study, the specialized literature establishes, in general, that there are three decisions to make when configuring the study sample (Pérez, 1999; Stake, 1995; Swanborn, 2010; Yin, 1989): the definition of the unit of analysis (i.e. what's the case in the research?), the number of cases to study (i.e. which is the sample size in the research?) and the selection criteria (i.e. how are we going to select the cases for the research?). Following Pérez (1999: 233), "the correct unit of analysis must be sensitive to the particularities of the objective of the investigation, take into consideration the theoretical framework and facilitate, as far as possible, comparisons with similar studies". Taking these considerations into account, the unit of analysis in our research is the organization as a whole, since the phenomenon we are studying is affected by organizational factors that go beyond a single department or area.

With respect to the number of cases to be analyzed, it is a decision that generates considerable controversy in the field of specialized literature and is a subject that has been widely debated by numerous authors (e.g., Eisenhardt, 1989; Dyer and Wilkins, 1991). Nevertheless, this decision is, in the end, a discretionary one made by the researcher (Bonache, 1999). As we intended to study the phenomenon in depth, we chose a small number of cases (i.e. two cases) for our investigation. To select them, we applied the following criteria:

- firms studied should follow a competitive strategy highly oriented to quality and innovation, so that intrapreneurial behavior has to be applied;
- cases had to compete in knowledge-intensive industries where knowledge is a strategic resource for the success of the organization, knowledge transfer processes are applied and highly-qualified employees who require a great level of autonomy to carry out their work are used;
- firms should be big-size companies, with explicit and formalized HRM practices and a consolidated HRM department or area;

- companies had to be located at the same geographical area, affected by the same national and regional regulations;
- firms should have a different degree of internationalization (e.g. local vs. global), which conditions the existence of different kinds of ties (i.e. internal vs. external);
- cases had to belong to clusters created by the action of different forces (e.g. pure agglomeration clusters with geographical proximity vs. network clusters with active cooperation between firms and other actors to promote trust and long-term decision-making);
- and, applying a convenience criterion, companies had to be close to the facilities of the research group, it should not be difficult for the research team to access the primary information and the firm had to offer the possibility of getting more information at a second moment of time if required.

As a result of the application of the above-mentioned criteria, Company AA and Company BB were selected. They are both located in the region of Valencia (Spain), a dynamic and competitive area, with a powerful institutional context and infrastructures. We have used fictitious names to preserve the anonymity of the firms studied.

We used two main methods to collect information: semi-structured interviews and documentation analysis, including corporate information as well as annotations that were made during the fieldwork. We also had aggregated quantitative information available to us from the previous phase of the research project in which this work is framed. This variety of sources of evidence enabled us to triangulate primary information (Kern, 2018), which constitutes one of the possible tactics that specialized literature (Cepeda, 2006; Flick, 2009; Yin, 1989) recommends to increase the quality of qualitative research.

The corporate documentation consulted included the organization's annual reports, sustainability reports, strategic lines, and work procedures related to HRM practices and knowledge transfer. With regard to the interviews, they took place between the beginning of 2018 and April 2019 and were conducted with the HRM managers of the organizations studied, since these were the people

who had the deepest knowledge of the phenomenon we were researching. Two interviews were conducted with each manager and a joint session was held to share the information and reports prepared about the company (in December 2018); this session was also employed to obtain additional information about the topics analyzed. The details of these interviews are shown in the following table.

Table 1 here

These interviews were recorded to facilitate their analysis. Two members of the research team were present during the interviews, and annotations were made in a field notebook that complemented the information recorded on digital media. To guide the interviews, an interview script that included the main topics to be discussed was designed. Likewise, on the day of the first interview a visit to the facilities of one of the organizations took place in order to obtain a better understanding of the context to be analyzed.

Finally, we applied a series of tactics to increase the quality of the research carried out (Flick, 2009; Gibbert and Ruigrok, 2010; Saunders et al., 2009; Yin, 1989). In this sense, we designed a protocol to facilitate the logic of replication in the case study. We used textual quotes from the interviewees to support our results. We defined a set of initial codes to facilitate the analysis that was enriched as far as the analysis went forward. The primary information was triangulated through different sources of evidence. And the results obtained were sent to the interviewees for their review.

4. Results

As mentioned in the methodology section, the analysis carried out takes into account the case studies of two large companies that work with knowledge and have advanced HRM practices: one belongs to the local computer and electronic product manufacturing sector (Company AA), although internationally it is highly diversified; and the other belongs to the tile sector (Company BB). In the first, the influence of the sector and location effect is much smaller than in the second case, where there is a strongly defined geographical cluster.

4.1. Context of the analyzed firms

The first company (AA) has a clear orientation towards innovation and a high average level of qualification in its workforce. It is a multinational and operates in a highly dynamic context, often marked by technological uncertainty, which forces it to orient its HRM practices towards innovation. As stated before, location influence is not very high in this industry. It also has well developed internal knowledge transfer mechanisms which are often intrinsically linked to the way of doing things and the processes planned and established to perform manufacturing tasks, often working on projects from a horizontal perspective that facilitates communication and teamwork. All these processes are based on the values of trust and cooperation.

The second organization analyzed (BB) is clearly oriented to differentiating its products by quality and design. It is a traditional company and is well established in its sector. It moves in a very dynamic context, marked by stiff competition and the geographical cluster to which it belongs (i.e. that of the ceramic and tile industry). This cluster of ceramic tile industry is located in the province of Castellón (Spain) and formed by really innovative firms (Molina-Morales et al., 2012), always supported by several institutions such as universities and sectoral associations as ASCER. Following recent data from ASCER (2019), this industry is leader in Spain with respect to technological development, design and service quality. 80% of the global turnover of this industry corresponds to exports, and it reached total sales of almost 3,600 million euros in 2018 directly employing about 15,400 workers.

With respect to the firm analyzed, it has carried out internal reorganization in the last ten years, modernizing its processes and its policies, applying more innovative HRM policies (that can be considered as pioneering in its sector), and looking to offer stable high-quality employment. Similarly, the firm has defined external (customers, sectoral associations) and internal (between different company departments, with the sales department being especially relevant, given its contact with customers) knowledge exchange processes. In terms of its organizational hierarchy, it is a traditional company, like many other companies in the sector. The firm is clearly investing in system and process innovation, and is striving to continuously increase product quality by being more creative in its design processes.

4.2.- Variables analyzed in each case study

4.2.1 Human resource practices, knowledge management and intrapreneurial behavior in Company AA. The first quantitative approach to Company AA, based on the questionnaires initially collected in the study (data from 45 qualified employees) shows that the staff surveyed have considerable professional experience in the sector (75%). Data shows that HRM policies are positively perceived by employees, highlighting the consolidated level of autonomy and the high perceived value of supervisor support. The high values shown by the “innovative behavior” variable, and the variables that measure intrapreneurship, including proactivity and risk-taking are especially salient. The analysis performed shows high correlation values between HR practices and innovative and intrapreneurial behavior (particularly, 0.648 for $p < 0.01$ between communication practices and innovative employee behavior; and 0.659 for $p < 0.01$ between training practices and innovative behavior, and 0.512 for $p < 0.01$ between training and proactive and risk-taking behavior, and 0.553 for $p < 0.01$ between performance appraisal practices and proactive and risk-taking behavior).

After examining the information obtained in the quantitative analysis, the additional information and based on the different interviews and contacts with the company, we can say that the organization’s HR policies are highly developed and formalized at local and corporate level (given that it is a multinational company), and are mainly oriented to encouraging teamwork, granting autonomy and reinforcing supervisor support, which is directly related to employees’ autonomy and risk-taking ability. HR practices are designed to support working by processes and the company has performance evaluation systems aimed at individual development and at promoting creativity. They mainly emphasize practices oriented to training and to forging a successful professional career. These are the practices that are best valued by the firm’s employees.

The processes of knowledge exchange and knowledge management in the company are constant. They occur, on the one hand, through the relationships

established with agents outside the company (mainly customers in this case). In the words of the HR Manager:

"In addition to the relationship with technology research centers at local level, we are part of the corporate responsibility code that applies to the electronics industry, (...) but we do not have regular meetings (...) we comply with the principles of ethics and professionalism at work, in the environment and in terms of safety and health, and we try to participate actively in conferences and workshops to stay in touch with the environment and with reality; and yes, we may have a stronger relationship with our customers in terms of knowledge-sharing, business practices, etc."

On the other hand, the exchange of knowledge within the company takes place through formal internal work processes, which intrinsically include the need for fluent communication and teamwork during the development of the process. In the words of the HR Manager:

"I believe that the transfer of internal knowledge (knowledge-sharing) is more directly related to teamwork, it is something that happens every day and it is embedded in our work processes, it is not explicitly stated (...). Above all, it takes place from engineering to operations, and often through training. For example, the Engineering Department develops a specific training course for the line when there is a process change. (...). In addition to all this, HR practices also are important in the company's culture".

Finally, with respect to the promotion of intrapreneurial behavior in the organization, the company starts from the premise of considering its workers as key stakeholders in its success, and affirms that it focuses its policies on creating an environment that will foster employees' innovation and creativity as the basis of their strategy. As it was said before, HRM practices put the emphasis on training, autonomy and teamwork. Through work-teams created for the different projects (normally formed with a multidisciplinary nature and taking into account customers' needs and suggestions), employees share specific knowledge and acquire abilities, take risks, propose new solutions and generate new ideas. That is, HRM practices and knowledge sharing processes seem to have an influence on intrapreneurial behavior and teamwork becomes a fundamental mechanism to facilitate it.

4.2.2 Human resource practices, knowledge management and intrapreneurial behavior in Company BB. The questionnaire, which was administered to different groups of qualified company staff (39 responses), showed the existence of a balanced group of employees agewise who are highly experienced in their sector (72.7% have over 11 years of experience). The firm's HR practices, mainly those related to communication and the perceived support of the supervisor, are highly valued by employees. The importance employees give to the "innovative behavior" variable, as occurs in Company AA, also must be highlighted.

Table 2 here

The correlation analysis performed shows a significant relationship between HR practices and innovative behavior, especially for practices such as training (0.484 for $p < 0.01$) and between various HR practices and proactive and risk-taking behavior (0.429 $p < 0.01$ between communication and proactive and risk-taking behavior and 0.610 $p < 0.01$ between training practices and proactive and risk-taking behavior).

From the information obtained in the different interviews and contacts held with Company BB, it should be stated that the organization's HR policies mainly have been developed and formalized over the last five years, although they have their fundamental basis in the company's values and culture, and that is why they are inspired by that culture, despite the fact they are "different" and "revolutionary" from the rest of the companies in the ceramic industry which is a highly traditional sector. Despite these differences, they are clearly oriented towards quality and innovation. The practices related to communication, extrinsic motivation (related to the remuneration system for both fixed and variable salaries) and the strong perceived support of the supervisor, along with job security, stand out. Currently, practices related to work-life balance are being developed. The company expects ethical behavior, a clear customer focus and an orientation to cooperation and teamwork from its employees, as well as efforts to promote the application of its HR practices.

The processes of knowledge exchange and management in the company are very frequent, both in terms of the acquisition of information and external

knowledge (through the company's value chain and through the recruitment of external talent) and to the internal transfer of information.

One of the outstanding sources of information exchange comes from the company's relationship with its customers (who are intermediaries or distributors), and with whom there is fluent communication about market trends, final customers, sales, etc. The company also provides specific product training to these distributors, giving them the chance to acquire new knowledge and at the same time establishing relationships of trust and fluent communication channels with them. In the words of the HR Manager:

“In addition to the usual customer-supplier process, where each sales agent is in close contact with the clients assigned to them, the process in our firm begins with a specific training process (...) in which the customer is taken to the company, given specific product training, shown videos of the company and is given more technical knowledge. On the second day, the company organizes a factory visit and the production process is explained (...)”.

Thus, the company tries to ensure that the customer is familiar with the product as well as with the values of the supplier company, so that their product distributors feel as though they are part of that company, in some way. In this case, the Ceramics Association (ASCER) also facilitates the exchange of knowledge, through meetings, internal working groups, and the publication of sectoral reports, etc. There is also knowledge exchange, especially at technical level, through the Ceramic Technology Research Center and the Jaume I University of Castellon; in this case, it is with suppliers and other companies that are part of the value chain.

However, the HR Manager points out that:

“It is a sector in which strategic information is not shared perhaps because all the companies are located so close together in the same area. Other data and information are shared, but basically because of concerns that some regulations or changes that may harm the sector may be introduced”.

Finally, in relation to intrapreneurial behavior in the organization, the company is clearly oriented towards innovation (it has its own R&D department), as well as towards the application of new technologies in its production plant. At the same

time, its quality strategy for its products is clearly a priority. It aims at fostering a creative and innovative spirit in all its departments, through the recruitment and selection processes, trying to accommodate new profiles in the organization that could bring new knowledge and ideas that, consequently, will encourage intrapreneurial behavior of employees. Practices as job security will reinforce the proactive behavior of employees, limiting their risk-aversion. Additionally, communication strategy, the use of teamwork and supervisor support, are key practices that promote knowledge exchange inside the firm. In addition, continuous training (contacts with universities and technology centers) together with the knowledge acquired from the relationships mainly with customers, will contribute to incorporate new ideas and new courses of action, promoting ultimately intrapreneurial behavior.

4.3.- Comparative analysis of both companies

With respect to HRM policies, both organizations have implemented a formal HR system aimed at strengthening the company's strategy, and both use innovation as a common line of action.

In the case of Company AA, the main HR practice is training and development that serves as a tool to promote internal and external knowledge transfer and intrapreneurial behavior. This HR practice includes training in skills and techniques, but also encompasses professional career development in the company, and this affects the intrinsic motivation of the employee.

In the case of Company BB, the training strategy is also relevant, but the HR Manager also highlights the company's communication policy, which has opened up new channels and information flows in what is, in theory, a more traditional company.

In Company AA, teamwork is more intensive, since it is used in more departments.

In both firms, the transfer and exchange of external knowledge occurs largely through customers; but in the case of Company BB, the fact of belonging to a

well-defined cluster is the main influence and also contributes to strengthening these processes.

4.4.- Cluster influence on human resource management practices and knowledge exchange processes in the analyzed companies

As commented throughout the work, the effect of the sector on the HR practices of Company AA is smaller than in Company BB, perhaps due to the importance of the geographic cluster in which this company is involved. Also, the effect of globalization is clearly greater in the cluster of company AA, where external ties can have more influence on internal policies of the firm than the industry in itself.

Specifically, the analysis of the primary information obtained from Company AA has revealed that the influence of the sector on some HR practices such as selection (through profiling) and remuneration is low or non-existent, beyond the sectorial collective bargaining agreement to which the firm adheres and also serves as a guideline for salaries, or at least as a reference for the firm to attract and retain talent.

Likewise, our analysis of the interviews conducted with the HR Manager in Company AA revealed that there is a generic influence created by the adherence of the firm to the corporate responsibility code that applies to the electronics industry, since this code affects the ethical behavior of managers and employees and can indirectly shift the orientation of some of the company's HR practices (e.g. salary, work conditions, etc.).

However, the analysis shows the relevance of other aspects that affect the HR practices that are implemented in the organization. Thus, the nature of work and the way of working (by processes and projects, which requires knowledge transfer, specific training and teamwork) is one of those factors. In the same way, the culture and values of the organization are also relevant, and they constitute the cornerstone of the policies applied. Finally, there is also another institutional factor that does come from the market sector of activity to some extent, and that is the fact that it is a highly regulated sector, and this sometimes changes or conditions the HR practices applied.

In terms of knowledge exchange, the sector does have a limited influence in external knowledge transfer, at least in relation to competitors. The influence is conducted mainly through technology research centers, or management associations, and it is focused on technical knowledge applied to production and services, not to management topics. Nevertheless, the exchange of knowledge with customers is extremely fruitful (knowledge, business practices, work processes).

When studying the influence of the sector we had to analyze certain key variables that have already appeared in the theoretical approach, such as rivalry and cultural variables. The issue of rivalry in this sector is not relevant as there are no real competitors at local level. Cultural variables are involved, not in relation to the country or geographical area of influence, but rather in terms of the culture and values of the organization (this is heightened by the fact that it is a multinational with a global orientation). Culture is a key variable that clearly modifies and reorients HR practices. In this regard, the HR Manager noted that:

"I believe that the industry does have a specific influence on behavior. We all have similar practices, but I think this is more due to the fact that we have this ethical code of corporate responsibility and to market regulation (...). HR practices are more closely linked to company culture at corporate level rather than at local level by imitation or competition with others (...). We are all (*firms belonging to this industry*) a reference for each other when the aim is to attract or incorporate the best profiles".

Industry regulation appears as another variable that influences the application of HR practices:

"We work in a highly regulated market segment and what we do need is obviously to meet all the certification and regulatory demands required by the sector".

However, no imitation practices are observed in the sector. Instead, it is the search for differentiation to attract talent and retain it that stands out.

On the other hand, the influence of the cluster in Company BB is much greater, although cooperation usually occurs through the main industry association (ASCER). When cooperation does take place it centers on the need

to join forces and work together to collect information to better deal with a future problem or threat that could substantially affect all the companies in the sector rather than having a proactive strategic nature.

Regarding whether HR practices are affected by the cluster, the analysis of primary information reveals that imitation does not occur, since there is enough secrecy, on one hand, and a search for differentiation on the other. There is greater homogeneity in all wage and labor relations issues that are affected by the cluster agreement. However, Company BB shows no need to seek how to homogenize practices with companies in the cluster as a way of competing. Instead, their HR practice philosophy is consistent with their strategic orientation to differentiation by design, quality and innovation, and by their desire to attract talent. Thus, the high degree of rivalry in the ceramic cluster, which is based on the geographical proximity of companies, leads, on the one hand, to the application of differentiated practices and, on the other, to protect their own initiatives in order to avoid being “copied” by rivals.

The other practice that seems to be coherently promoted and planned by the cluster and member organizations is training, mainly in technical areas, on new technologies, machinery, etc. However, training is not usually offered on issues related to organizational design skills, competence profiles and other general executive areas. There is no specific training either in management skills. However, the cluster organizes technical training to offer support when there are changes in legislation or regulations which might affect cluster member firms. In this sense, the HR Manager of Company BB states the following:

“Training is given in many cases by ASCER together with the Chamber of Commerce and/or the University, but it centers mainly on technical knowledge of machinery or of new tools, not at management level, or in terms of skills”.

In terms of selection processes, the search for new profiles, and knowledge transfer profiles, the analysis reveals that for product-related technical profiles they prefer employees who have experience in the cluster. Conversely, the firm prefers to recruit profiles from outside the cluster for more generic job positions and for managerial positions, as this brings new knowledge and ways of working

that can contribute to the innovation strategy of the organization, including the introduction of innovative ideas in the areas of management.

Likewise, in many ways, the cluster encourages the company's innovation orientation and the transfer of external knowledge. For example, belonging to the cluster does not only promote the exchange of knowledge, data or opinions on issues that may pose a threat to all companies in the sector. It also gives member firms access to innovation resources, enables companies to carry out innovative projects with the support of the cluster and provides training for employees in new technologies, thanks to collaboration with universities and technology research centers (as noted above). In any case, the technical and non-managerial nature of knowledge transfer always prevails.

On the other hand, the HR Manager in Company BB points out the importance of a particular variable (i.e. trust), obtained from repeated collaboration in different bodies within the association (standing committees for different technical areas). New technologies, with the exception of e-mail, such as videoconferencing, have not modified the dynamics of association meetings, perhaps due to the geographical proximity of the companies (the HR Manager suggests). Communications are continuous, and the email has speeded up the exchange of information; but the true relationship occurs in face-to-face meetings (which also underlines the informal aspects of the relationships) and generate more natural relationships based on trust that improve communication between companies in the sector, always respecting confidentiality (if information is shared, it is only done in an aggregate and anonymous way, in the shape of sector reports), and the need to protect each company's own strategy. Therefore, trust appears as a key variable in the relationship. As the company's HR Manager recognizes:

“In the end, I believe that trust is acquired through continuous interaction (...) and, for example, when a meeting is scheduled we see each other before for a coffee or after for lunch (...); sharing these moments with colleagues increases trust and this brings managers from different companies together and makes them closer”.

In this case, the regulation of the sector and the institutional aspects that surround it do not seem to have as much influence as in the previous case. For the HR

Department, the emphasis is placed on the company culture and strategy variables, together with the values of cooperation and teamwork as they are considered to be the cornerstone of the internal knowledge transfer processes in the organization, as well as the mainstay of the information transfer processes that have been established with customers (developed through specific training, as already mentioned, or their participation in the company, even if they are external to it).

Table 3 summarizes the main results of the comparison between the two cases.

Table 3 here

5. Conclusions

The work carried out wants to point out a relatively unexplored aspect in literature, namely, the effect of the form of clustering on the HRM practices and knowledge processes that guide and encourage the intrapreneurial behavior of employees in member firms and, consequently, firms' innovation. Particularly, the paper shows how the type of cluster can have an influence on company HR practices and the way in which knowledge management and intrapreneurship is developed. To do this, we analyzed the situation of two companies in advanced technological sectors: one of them belonging to a defined and very well-known geographical cluster and another one belonging to a cluster more based on global networks and external ties.

In both cases, we have observed that there is a fruitful exchange of knowledge with customers, reinforcing the new concept of cluster that includes other elements of the value chain such as customers and suppliers.

Also in both cases, it is not only the form and characteristics of the cluster what mainly drives and guides the company's HR practices. Other aspects as the company's culture and its strategic orientation towards innovation seem to have more impact. However, results show that the influence of the cluster based on location and geographical proximity is greater than the effect of the cluster formed by networks, where globalization and external ties play an important role. This result is consistent with the work of Dibben et al. (2020).

The analysis of Company AA revealed other relevant factors belonging to the industry such as industry regulation and membership of international associations that guide ethical and business management behaviors. In the case of Company BB, which belongs to a very defined geographical cluster, the importance of belonging to a sectoral association is apparent, mainly in terms of the exchange of knowledge between competitors in technical areas, since a large part of the training is given through the association itself.

Contrary to the findings of some authors (e.g. Martínez-del-Río et al., 2013), rivalry does not constitute the main stimulus to develop innovative practices in the cases studied. In the case of Company BB, rivalry is perceived as a major threat that inhibits the exchange of knowledge and promotes secrecy. The driving force behind change and innovation comes mainly from the company, its culture and its need to compete in international environments. However, technical institutions as universities or research centers, clearly linked to the cluster, are contributing to technical and product innovation, in part through the training programs organized by them. Additionally, it has been revealed that in the case of Company BB, membership to a powerful geographical cluster that groups most of the companies in the sector generates long-term relationships of trust that promote the exchange of knowledge, fundamentally to protect the sector from external threats (technological uncertainty, regulatory changes, etc.). In this respect, we think that cluster associations and institutions are a key factor to create coopetition relationships, that is, cooperate and compete at the same time inside the cluster (Bouncken and Kraus, 2013; Jankowska, 2013; Bouncken and Fredrich, 2016). This situation takes place in the geographical cluster where company BB is located at and can be at the origin of the innovativeness of the ceramic tile industry.

Also, our results have revealed that HRM practices and knowledge sharing processes that lead to an intrapreneurial behavior are, only in part, conditioned by the characteristics of the cluster. Mainly geographical clusters, as it is the case of company BB, are associated to the existence of institutions (e.g. research centers, associations) that, as previously said, foster intrapreneurial behavior through knowledge sharing and learning processes. In addition, they have an impact on HRM practices (training, motivation, communication) and these

practices are designed to facilitate internal knowledge exchange and intrapreneurial behaviors (new ideas, risk adoption, new initiatives and actions). Consequently, the institutional dimension of the cluster facilitates the processes that, subsequently, firms will adapt and implement, also influenced by strategy and organizational culture.

This work is an initial academic approach to analyzing how and why the type of cluster can influence HRM practices and knowledge sharing in organizations that encourage intrapreneurial behaviors in their employees. From this point of view, the work carried out constitutes a first step for those researchers interested in this area, as there is scarce research on the relationship between clusters and HRM practices.

From a practical point of view, firms belonging to an organized cluster should encourage practical training programs, not only about technical aspects but also about other areas that are more closely related to skills and competencies. Training based on strategic topics for top and middle managers could be an interesting initiative. Additionally, reinforcing trust among the members of the cluster increases the exchange of information and fosters the knowledge-sharing processes inside the cluster and can, as a result, increase learning and innovation in the cluster member firms. Institutions such as ASCER, universities and research centers, can facilitate the dissemination of knowledge and good practices, because these institutions can help the firms belonging to the cluster to acquire and also share knowledge, based on trust relationships. Derived from this, we can find some organizational implications. At an institutional level, organizations linked to research, innovation, training, etc. may play an active role in the development and promotion of learning processes, not only focused on technical aspects but also on managerial and organizational questions.

From the results of the cases analyzed, we have detected that innovation depends not only on the support of the institutions created in the cluster but also on the culture and competitive strategy of the company. As seen in Company BB, the strategy is deliberately designed to develop human capital in the organization to generate internal capabilities instead of acquiring them from competitors or other external sources. Building capabilities internally together with the support

of the institutions will contribute to generate trust and cooperation among the clustered companies which, ultimately, will be key for the development of innovation processes.

Considering the economic impact of the geographical cluster, its effect on the employment and development of a region, and taking into account the relevant and dynamic role of research institutions and associations, policy makers should support and facilitate the activity of those institutions, reinforcing the relevance of industrial districts or geographical clusters that are threatened by the pressures of globalization.

Our work shows several limitations that may offer opportunities for future research. In this sense, the methodology used, although it is an excellent way to obtain rich and detailed information about the phenomenon under study, does not enable us to generate results that can be applied as a general rule of thumb to other areas beyond the analyzed cases. Therefore, the sample should be extended to introduce more companies belonging to clusters with varying characteristics until it becomes statistically representative. Another limitation of the work centers on the collection of information, since only one person has been interviewed in each company and, therefore, the triangulation carried out is somewhat limited. Future qualitative works should obtain more information from other perspectives of the phenomenon by interviewing top managers, other middle managers different from the HRM manager, employees of lower hierarchical levels, representatives from cluster institutions and associations or other links in the value chain as customers or suppliers. Also, the sample could include selected companies belonging to clusters with characteristics dissimilar to the clusters of the firms that have been studied in this research. In so doing, more qualitative comparisons could be developed as the range of the phenomenon under study would be greater.

In addition, more research is required in order to analyze other effects of belonging to a cluster. For example, it would be interesting to study to which extent the fact of belonging to a cluster has an impact on wages; as suggested by Resbeut *et al.* (2019), salaries tend to be higher in clustered firms. Also, deepening into the analysis of the effect of clustering on effective retention

policies such as training would be intriguing, since the results of present research have revealed that it is one of the main HRM policies affected by the fact of belonging to a particular cluster.

Although our work puts the focus on the effect of the characteristics and form of the cluster on HRM practices, knowledge sharing and, indirectly, on intrapreneurial behavior, one of the interesting questions that emerge of the analysis has to do with the dark side of HRM practices fostering innovation and their possible negative effects on employee well-being. In this vein, Jensen et al. (2013: 1700) establish that there are two streams of literature when studying the effect of the high performance work systems (HPWS) on employees. Traditionally, there is a mainstream vision that considers such systems as positive for individual and organizational results. However, an alternative more-critical view highlights that these systems cannot always have this positive effect if we take into account the well-being of employees, as they generate work intensification, burnout and more stress (Beravesh *et al.*, 2019). In this sense, “many scholars have called for more investigation on not only the positive but also the possible negative effects of HPWS in organizations (Jiang, Lepak, Hu, & Baer, 2012)” (Beravesh *et al.*, 2019: 2). This question could be extended and analyzed in future works.

Note

1. According to De Jong et al. (2015), intrapreneurial behavior refers to three variables: proactivity, risk assumption and innovative behavior.

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Table 1.- Interviews conducted to collect primary information

	Contact person	Interview date	Interview duration
COMPANY AA	HR Manager	February 2018	1 hour, project presentation and collecting qualitative information on the main variables (HPWS, KM, IB)
		April 2019	½ hour, information about variables related to cluster influence
COMPANY BB	HR Manager	January 2018	45 minutes, project presentation for CEO and strategic committee and collecting qualitative information on the main variables (HPWS, KM, IB)
		April 2019	45 minutes, variables related to cluster influence

Table 2.- Descriptive and quantitative results

	Company AA N=45		Company BB N=39	
Employees' sector experience (more than 10 years)	75%		72,7%	
Dependent variables	Innovative behavior	Proactive and risk-taking behavior	Innovative behavior	Proactive and risk-taking behavior
Training	0.659**	0.512**	0.484**	0.610**
Communication	0.648**	0.395**	0.360*	0.429*
Motivation	0.641**	0.558**	0.268	0.367*

** . Correlation is significant at level 0.01 (2 tails).

* . Correlation is significant at level 0.05 (2 tails).

Table 3.- Summary of the comparison of results between companies studied

Common aspects	• Influence of internal culture • Influence of the strategic orientation of the firm (vertical congruence, between strategy and HRP) • Fluid knowledge sharing processes inside the firms	
Different aspects	AA firm • Characteristics of the industry ◦ Globalization and importance of external ties ◦ Very regulated market • HRM practices ◦ Not affected by the industry • Knowledge sharing: affecting general questions, internal or with customers	BB firm • Characteristics of the industry ◦ Geographical clusters, relevance of location ◦ Clusters including competitors and firms belonging to the value chain ◦ Relevance of institutional and technological context (associations, research institutes, universities) • HRM practices ◦ Recruiting, training and salaries (extrinsic motivation) affected by the industry • Knowledge sharing: exchange with customers. Firms share knowledge with competitors through the industry technical institutions (technical knowledge) or through industry associations (ASCER) about contextual factors that affect the overall industry
New relevant aspects	• Internal culture and values • Strategy of the firm • Industrial regulation (AA firm) • Trust (BB firm)	

Figure 1. Theoretical model

