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## Antecedents of high performance work practices in SMEs: an attention-based view

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# **Antecedents of High Performance Work Practices in SMEs:**

## **An Attention-Based View**

### **Abstract**

Relative to the large body of work in the broader strategic HRM (SHRM) literature, knowledge about determinants of SMEs' approaches to HRM remains limited. We argue that heterogeneity in the use of high performance work practices (HPWPs) is influenced by top managers' exposure and attention to information obtained via environmental scanning. Invoking an attention-based view (ABV), we develop hypotheses suggesting that competition tracking, participation in trade associations, and social network embeddedness will be associated with greater use of HPWPs. We also propose direct and moderating roles for top managers' perceptions of competitive intensity. We test our hypotheses using a database comprised of a combination of archival data and mail survey responses from 260 agricultural SMEs located in geographical clusters. Our results broadly support study hypotheses and contribute to a better understanding of the role of top managers' environmental scanning in shaping of HR systems in SMEs.

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## **Introduction**

Multiple reviews within the strategic human resource management (SHRM) literature suggest that this literature lacks a body of research facilitating an understanding of the determinants of HRM systems (Jackson, Schuler & Jiang, 2014; Jiang & Messersmith, 2018). Many of these same authors note that such research is particularly warranted given observations and data indicating both a low baseline and heterogeneity in firms' utilization of a systematic set of HR policies and practices (e.g., Harney & Dundon, 2006; Jackson et al., 2014). This is particularly true in SMEs (e. g. Dundon & Wilkinson, 2003; Way, 2002) as we do not fully understand the processes shaping the use high performance work practices (HPWPs) in this important sector (Harney & Dundon, 2006; Harney & Alkhalaf, 2021).

Previous research addressing this issue emphasizes the influence of the owner/top manager in SMEs' approach to HRM (e.g., Chadwick, Super & Kwon, 2015; Harney & Alkhalaf, 2021; Mayson & Barrett, 2017). Although the role of top management is certainly relevant in large firms, SME CEOs are often one of the few – and sometimes the only – core decision-maker in the business. As such, CEO exposure to environmental information and the manner in which the CEO perceives and makes sense of the external forces affecting their companies play an outsized role in affecting SMEs' HRM strategies (Kroon, Van de Voorde & Timmers, 2013).

The adoption of HPWPs in SMEs is also associated with market-related factors, such as competitive intensity, the power of customers (e.g., Wu, Bacon & Hoque, 2014), and CEOs' access to HR expertise through advisory networks (e.g., Hoque & Bacon, 2006; Wu, et al., 2014), such as employers' associations (Bacon & Hoque, 2005). Kroon

et al. (2013) found that the mere awareness of HPWPs by the SME CEOs implied greater adoption. However, the sources of information and expertise that lead to CEOs deploying HPWPs remain poorly understood. As a consequence, we know little about the role of SME CEOs exposure to information in their external environment and role this plays in HPWP adoption.

As a general theoretical framework, we draw upon the attention-based view (ABV, Ocasio, 1997; Lee, 2021) to help understand how CEOs' information exposure may affect HR strategy. As we further develop below, this framework is particularly germane to studying HRM in the SME context, given the important role CEOs have as influencers of employment systems (Harney & Alkhalaf, 2021). Harney and Alkhalaf (2021) and Bacon and Hoque (2005) group determinants (or antecedents) of HRM within SMEs into two broad categories, internal and external. The CEO/owner in SMEs sits at the nexus of these two sets of determinants and plays a principal role in both interpreting the external environment and assessing and configuring internal resources in response to their perceptions.

Consistent with this perspective, the ABV emphasizes the role of CEOs and top managers as agents of organizational adaptation, who (1) scan the external environment and notice, acquire and interpret information regarding trends, opportunities and threats in the external market, and (2) make strategic decisions about how to reconfigure internal resources in response to the information they have acquired (Ocasio, 1997; Ocasio & Joseph, 2005; Lee, 2021). In concordance with Harney and Alkhalaf's (2021) encapsulation of extant research as augmented by the ABV, we suggest that SME CEOs' environmental scanning via scanning capabilities, trade association involvement, and

social network embeddedness will increase their exposure to HPWPs and, in turn, the probability of HPWP adoption.

Advancing knowledge on the determinants of HPWPs systems in SMEs is important because SMEs represent a majority of the economic activity and jobs in developed economies; yet we lack theory-driven insight into the logic and impetus behind the adoption of HPWPs by SMEs. Our study makes two important contributions in this realm. First, we provide theoretical development and additional research on antecedents of HRM adoption in SMEs, where research on HRM generally, and antecedents of HRM systems, specifically, is deficient (Harney & Alkhalaf, 2021). Drawing upon and extending prior work (cf. Wu et al. 2014), our study demonstrates the relevance and influence of information obtained through top managers' competition tracking, membership in trade associations and informal networks. In doing so, we provide insight about how SME CEOs perceive the external environment and make decisions to use HPWPs to "fit" their HR to the challenges and demands of that environment. Second, our use of the ABV perspective to frame our exploration of linkages between environmental scanning and HRM adoption incorporates a theoretical framework largely absent from the HRM literature. Although the ABV has rarely been applied to issues surrounding HRM (see Lee, 2021 for a notable exception), we believe it is particularly relevant in explaining the use of HPWPs in the context of SMEs. Our study thus contributes to the further development of the SME, HRM and ABV literatures.

## **THEORY AND HYPOTHESES**

### **ABV, Environmental Scanning and SHRM**

A critical role of top managers is to monitor opportunities and threats presented by the external environment and make decisions on organizational strategy, structure and resource deployments to best match (i.e., “fit”) their organizational context (Chakravarthy, 1982). As the firm’s environment and associated opportunities and threats shift and change, managers must amend their strategic choices and deployments. Scholars have noted, however, that the SHRM literature has paid scant attention to the role of a firm’s external environment as either an antecedent of HR configurations or as a factor conditioning the effectiveness of these configurations (Jackson, et al., 2014; Lee, 2021). Instead, the SHRM literature has generally focused on internal fit, with much less attention to “vertical” fit with a firm’s external environment. As described by Lee, empirical SHRM research evolved into two broad streams. The first stream focused on the notion of “strategic fit” between HRM systems and organizational strategy whereas the second focused on “best practice” in terms of a set of horizontally consistent and complementary HR practices that would maximize firm performance. According to Lee (2021), however, a lack of consideration of a firm’s external context in both research streams is inconsistent with the basic tenets of strategic management, rendering SHRM research less strategic and more tactical in nature.

As a step in this direction, and consistent with the ABV perspective, our study focuses explicitly on the richness of information sources that SME CEOs are exposed to and the association of this exposure with the relative use of HPWS. Our focus on CEOs is consistent with the view that a limited presence of formal HR departments and staff in SMEs accentuates top managers’ role in orchestrating the general approach and orientation of HR systems (Harney & Alkhalaf, 2021). “Top management, especially the CEO, can have a weighty impact on all levels of the firm. It is the CEO’s decisions that

can most profoundly influence the firm's structure, determine how the firm's employees will be managed and treated, and so forth" (Chadwick et al. 2015: 362). Very few studies, however, have examined how leaders shape HR systems (Jackson, et al., 2014).

At its core, the ABV perspective suggests that managerial exposure to external information affects organizational strategy and structure in the following manner: (1) Managers are exposed to and attend to a limited set of environmental information salient to their firm's particular situation, and (2) act upon and adapt their organizations based on what they have learned. We focus on CEOs' information exposure because "for an organization to embark on adaptation, it must first be aware of potential environmental stimuli impinging on its business (focus of attention)" (Lee, 2021, p. 12).

Prior studies have identified a general relationship between dynamic and complex market conditions and the adoption of HPWS (e.g., Patel & Cardon, 2010; Rodwell & Teo, 2008). This relationship is thought to be due to managers' continual need to deploy organizational resources in ways that will improve productivity (Jackson et al., 2014). Although more true in some contexts relative to others (i.e., in highly competitive market), most managers will attend to and adapt productivity-enhancing practices to which they are exposed. Our general proposition is that managers who have more environmental scanning capability will be more likely to learn about and attend to elements of HPWPs and dedicate organizational resources in developing these systems. The absence of multiple layers of management in SMEs elevates the central role of the CEOs information gathering capabilities and perceptions of the relevance of this information for his or her firm.

## **Hypotheses**

### *Competition Scanning and HPWPs*

A primary way in which CEOs may obtain and interpret information about the environment is by tracking their competitors. Competition scanning capabilities focus on monitoring competitors' strategies and the degree to which these strategies succeed or fail (McEvily & Zaheer, 1999; Miller, 1987). These practices, for example, may include systematic search and gathering of information about competitors' activities, strategies, and tactics, searching for information about competitors' customers and suppliers, or collecting information about competitors', market share and performance (McEvily & Zaheer, 1999). In aggregate, these capabilities result from the resources and success of companies in systematically monitoring their competitive rivals.

According to the ABV, CEO's decisions are influenced by "industry benchmarks" and the "available repertoires of issues and answers" that are relevant in a given economic sector or organizational field (Ocasio 1997:193). When top managers are exposed to more information from comprehensive competition scanning capabilities, they are more aware of competitors' strategic decisions and the path-dependency processes driving these decisions (McEvily & Zaheer, 1999). The repertoire of answers considered to organizational (i.e. HRM) issues typically include "the answers developed by competing firms" (Ocasio 1997:198). When competitors are proximate, the information about competitors is more salient and will attract CEOs' focus and attention (Pouder and St. John, 1996).

We contend that CEO decisions about HPWPs will be affected by the information gathered through competition scanning. There is evidence that the competitive environment affects HR policies and practices (Barney & Wright, 1998), particularly in



SMEs (e.g., Wu et al., 2014). For example, an SME implementing intensive performance management practices may achieve greater levels of service quality. In turn, competitors with more comprehensive scanning capabilities will become aware of this improvement sooner than other firms. They may also infer that this service quality improvement may have stemmed, at least in part, from its rival's approach to performance management. Firms and CEOs lacking these scanning capabilities would have gathered less intelligence on these factors and, in turn, are less likely to adopt similar performance management practices.

The information obtained through competition scanning information is particularly relevant for SMEs because HPWP implementation is more dependent on CEOs' awareness of HPWPs (Kroon et al., 2013) and expertise (Wu et al., 2014). As such, we hypothesize:

*H1: The utilization of competition scanning by SME CEOs will be positively associated with higher levels of HPWP system adoption.*

#### *Trade Associations and HPWPs*

Consistent with the ABV and Wu et al., (2014), involvement in trade associations can be characterized as an environmental scanning mechanism and bring relevant information to the attention of SME CEOs. Literature on geographical clusters has studied trade associations as “repositories for knowledge and opportunities about competitive capabilities” (McEvily & Zaheer, 1999: 1139). In trade associations, the flow of industry-related best practices and expertise is abundant, generating “knowledge spillovers” among companies (e.g. Malmberg & Maskell, 2002; Torre, 2008).

SME CEOs may not have a strong personal HRM background and experience (Colbert, Rynes & Brown, 2005), but interactions with trade associations may expose the CEOs of SMEs to new ideas about HR policies and practices, and disabuse previously held notions about the importance of HRM. Associations may organize HRM-related courses in areas such as employee performance management, sales personnel management or team management (Erickson & Jacoby, 2003; Marsden & Belfield, 2010). Consequently, CEOs with more extensive and intensive interactions with these associations may become aware of what constitutes current “best practices” in HRM (Erickson & Jacoby, 2003; Marsden & Belfield, 2010; Wu et al., 2014). These associations not only create awareness about HPWPs, they also legitimize and help CEOs make sense of the use of HPWPs. Through training courses, ready-to-use reports regarding HRM best practices and routines, trade associations “model the way” (Farndale and Brewster, 2005) for deploying internal resources and capabilities necessary for altering approaches to HRM.

*H2: Interactions with industry trade associations by SME CEOs will be positively associated with higher levels of HPWP system adoption.*

#### *CEOs' Social Embeddedness and HPWPs*

The extensiveness and density of CEOs' social networks may also provide managerial capabilities for environmental scanning. According to the ABV, CEO's *structural position*, or personal relationships “provide them with the interests, values and identities that regulate how they act in organizations” (Ocasio, 1997: 197). CEOs vary in their social embeddedness which can be a source of variation in the priorities of decision makers

Social networks are enhanced by both social and geographical proximity and facilitate the diffusion of information among network constituents, playing an important role in the evolution of competitive capabilities (McEvily and Zaheer, 1999). We argue that CEOs differ in their capacity to access useful information through their networks (e.g., Heavey, Simsek & Fox, 2015), and that these differences will be reflected in variations in firms' propensities to utilize HPWPs. CEO's rich social network may expose them to valuable pieces of information about HR practices and knowledge about how to implement these practices (Marsden & Belfield 2010; Mayson & Barrett, 2017). For example, a manager who is experiencing low levels of workforce motivation might experience improvements after adopting a new approach to performance management. This manager might share the results with fellow contacts in the network. A CEO within the network who faces a similar situation may come to believe that this particular approach to performance management might be helpful for their firm.

Although there is debate about the specific features of valuable social networks (e.g., Granovetter, 1973; Burt, 1997), Collins and Clark (2003) suggest that social networks that are larger, pertain to different social groups, and are characterized by strong ties (i.e., frequent interactions) allow access to richer sources of information (Heavey et al., 2015). We agree with this perspective; CEOs discussing, refining and evaluating ideas with an extensive range of close contacts may have better access to industry knowledge, professional norms and available repertoire of issues and answers related to HRM and HPWPs.

*H3: SME CEOs' social network embeddedness will be positively associated with higher levels of HPWP system adoption.*

### *Perceived Competitive Intensity and HPWPs*

CEOs' perceptions of competitive intensity may also influence decisions about HR systems (Wu et al., 2014). According to the ABV, the particular situational context of a CEO shapes the saliency of certain issues and the enactment of organizational answers to these issues (Ocasio, 1997). We contend that CEO's perceptions of intense and threatening competition focus the attention on organizational performance (i.e., issue), and increase interest in the use of high performance work practices. Our view is consistent with prior studies show that perceptions regarding competitive pressures may increase the motivation to use HPWPs as a means to overcome rivals (Som, 2008; Sun & Pan, 2011) and increase organizational performance (Paauwe and Boselie, 2005; Huselid, 1995). For example, CEOs may increase the use of performance management practices (e.g., performance appraisals, compensation tied to goal achievement) to increase employee motivation or adopt extensive training and careful employee selection practices to maximize employee productivity.

For example, Barney and Wright (1997) describe how Continental Airlines was ailing because of strong competition during mid to late 90s. The company introduced several HRM practices, including enhanced training, pay linked to performance and attitude surveys. One of the practices responsible for this turnaround was an "on-time" bonus – \$65 for every month the company was ahead of the competition in on-time performance. In 1996 the company moved from last to first in the industry in on-time performance and gained significant market share.

Although competitive intensity is partly an industry-wide phenomenon, perceptions of the levels of perceived competition are typically firm and CEO-specific

(e.g., Kilduff, Elfenbein & Staw, 2010). Specific to our context, SME CEOs may have perceptions differing from the industry average. Competition levels might seem more of a threat to SMEs if they are smaller and have limited resources. SME CEOs perceiving lower levels of competition will be less motivated to adopt or increase their use of HPWPs. Lacking heightened competitive concerns, CEOs of SMEs may be less interested in investing in relatively costly and complex HRM innovations and instead more likely to maintain the “HR *status quo*”. Thus,

*H4: Higher levels of perceived competitive intensity by SME CEOs will be positively associated with higher levels of HPWP systems adoptions.*

From an ABV lens, competitive pressures suggest the need for CEOs to maintain an acute awareness of (i.e., pay more attention to) and heighten their search for everything that helps create firm value, including the consideration of HRM innovations (e.g., HPWPs). The opportunity cost of maintaining the status quo under conditions of competitive pressure is higher because there is a bigger risk of being out-performed by competitors who have taken a different HR path (Pil & MacDuffie, 1996). This sensitivity to foregone opportunity costs may (at least partially) offset concerns about costs of investing in HPWPs.

We believe these perceptions will magnify the effects of environmental scanning information gleaned from competition scanning, trade associations and social networks. More specifically, if a CEO learns about potential value-adding HR practices, she will be more likely to act upon this new knowledge in the context of higher competitive pressures. This suggests that the relationships depicted in Hypotheses 1, 2 and 3 are modified by CEOs’ perceptions of competitive intensity.

*H5: SME CEOs' perceptions of competitive intensity will moderate the strength of the relationship between competitive scanning capabilities, trade associations, network embeddedness and HPWP system adoption. Perceptions of higher (lower) levels of competition will strengthen (weaken) the relationship between these sources of information and HPWP system adoption.*

## **METHODS**

### **Empirical setting**

We developed a database composed of a combination of archival data and mail survey responses of 260 SMEs. Survey responses were from the target firm's CEO. We obtained archival data from the Sistemas de Analisis de Balances Ibericos (SABI) database. Spanish regulations requested companies located in Spain to disclose their yearly accounts in an official and public register overseen by Spanish economic authorities. The SABI database compiles this data, including financial information, industrial sector, number of employees and other miscellaneous information.

We applied the SME official definition of the European Commission (EC, 2003). The category of SMEs is made up of companies employing fewer than 250 employees and have an annual turnover not exceeding EUR 50 Million and balance sheet below EUR 43 Million. We excluded micro-enterprises from our study (fewer than 10 employees; EU, 2003). A total of 895 companies received a paper questionnaire, including a pre-paid envelope and a letter describing the importance of the study. After 6 weeks, we sent it again as a reminder to all the companies that did not respond previously. Finally, after another 6 weeks, we repeated the procedure again. In total, 12 weeks went by between

the first and last mailing wave. 264 (29.5%) managers' responses were obtained. We were unable to find secondary data for 4 companies, leaving 260 companies for our analyses.

We obtained data from companies operating in three Spanish geographical clusters related to food production in which regional producers are well-organized. In this context, the effect of trade associations and social networks can be stronger than in other studies. In addition, competition can be perceived as more threatening and evident, and competition scanning can be more effective, given the physical closeness.

The first geographical agglomeration is located in the *Catalonia* area, in the North-East of the country and is responsible for the production of *cava*, a sparkling white wine similar to champagne. The other two clusters produce fresh fruit and vegetables and are located in the South of the country (Almeria and Huelva). The three clusters have several similarities: they are predominantly composed by highly competitive and small and medium exporting companies; they have common comparable subsectors around food production (food producers, seeds, agricultural machinery, pesticides, packaging, fertilizers, irrigation systems, etc.), and share similar culture and values.

In the fruits and vegetables clusters, there were two strong associations. Each one holds more than 150 companies formally associated. In the wine industry, there were three smaller associations representing different subsectors. The associations in these sectors organize training courses and seminars and elaborate ready-to-use reports about best practices and routines. These associations frequently assess HRM management and regulations. For instance, they provide training for managers about topics such as labor regulations, empowerment, and performance appraisals. Associations also promulgate reports about trends in salaries and labor productivity in the corresponding region.

Of all respondents, 59.9% were located in fruit and vegetable regions, and the remaining 42.1% were located in a wine region. Our sample was comprised of relatively small firms with all having less than 250 employees. The average size was 43 employees with 75% percent of the firms having 61 or fewer employees. The firms in our sample had average sales of \$2.7 million. Within our sample, 33.8% ranked the competition intensity from “neutral” to “very strong” and 52.5% formally belonged to an industry association. 32.6% of the firms produced fruits or vegetables, 27% produced grapes or wine, 9.4% were agricultural machinery manufacturers, 7.3% were seed producers, 6.9% were pesticide producers, and the remaining 13.7% belonged to other sectors, such as the irrigation systems and fertilizer production sectors. Our data also revealed variability in competition scanning capabilities (see Table 1).

Our sample is appropriate for the purposes of this study because: (1) the companies in the sample belong to different industries, displaying a wide variety of business models that suggests generalizability to other settings; (2) at the same time, the study of firms located in common geographical clusters suggests some commonalities in institutional environments (e.g. regulations, cultural values, social norms); (3) the clusters studied have strong industry associations and variability in how firms interact with them; (4) labor regulations in Spain are homogeneous across regions. Finally, (5) the concentration of an industry in a geographical area favors the circulation of valuable information through social networks.

We addressed potential nonresponse bias issues by comparing certain key attributes of the respondents (number of employees, annual sales and return on assets (ROA)) with those of the full sampling frame. We obtained size, sales and ROA data from



the SABI database. *t*-tests revealed no significant differences between the mean size ( $t = 0.87$ ), mean sales ( $t = 1.36$ ), and mean ROA ( $t = 1.06$ ) of the respondents and the full sample. To further confirm the representativeness of our sample, we conducted Kolmogorov-Smirnov two-sample tests. For size, sales and ROA, we found no significant differences between the respondents and the full sampling frame; the *p*-values were, respectively, .201, .256 and .221, suggesting that the two samples were drawn from the same population.

## Measures

**High Performance Work Practices.** We used the 13-item scale based on Huselid (1995). One of the items used by Huselid (1995) did not load to any of the factors based on EFA or on CFA and was substituted by the item “How many levels exist between the lowest and the highest position of the organization (including both)?”. 10 items were measured in a percentage numerical scale (e.g., “What % of the employees receive regular formal performance appraisals?”), while 3 used a numerical count (e.g., “Nr. of hours of training that an average employee received last year”). A detailed description of the items used and its wording can be found in Table 1. Cronbach’s alpha of the construct was .81, which is consistent with previous estimates in studies using this scale (e.g., Huselid, 1995) and indicative of good internal reliability. A confirmatory factor analysis suggests a good fit to the data (CFI = .91; TLI = .89; RMSEA = .07) and all variables loaded significantly on the latent factor ( $p < .01$ ).

The multi-industry, multi-cluster sample used in this study presented problems in terms of interpreting similar scores in different sectors (Dess, Newport and Rasheed, 1993). As such, we standardized the HPWPs scale using the average and the standard deviation of

the sector of activity in the cluster to overcome these difficulties and avoid bias resulting from a different average in each sector. In this manner, the standardized scores were more comparable between sectors, as they provided an indicator relative to competitors' scores.

**Competition Scanning Capabilities.** To operationalize companies' attempts to track competitors' strategies and initiatives, we used three items in asking CEOs to identify practices used by their firm to gather information on rivals, including information on their customers, market share, strategies and tactics (e.g., "your company monitors your competitors' strategies and tactics"). These items are based on a measurement instrument created and validated by Miller (1987) and later used by McEvily and Zaheer (1999). The scale ranges from 1 to 7 representing "very little" to "very intensively". The Cronbach's alpha for this measure is 0.83.

(Insert Table 1 about here)

**Intensity of Interaction with Associations.** To operationalize the relationship with regional industry associations, we asked CEOs to rate the "frequency of contacts with trade association staff" on a 7-point Likert scale, with 1 representing least frequently and 7 representing most frequently.

**CEO Network Embeddedness.** To operationalize this concept, respondents were asked to identify (i.e., with the initials) their most important contacts (McEvily & Zaheer, 1999). Contacts were persons (i.e., industry experts, former university colleagues, consultants, and so on) with whom managers discussed relevant questions about their firm but who were not affiliated with the company. The respondents were also asked to specify the average number of monthly conversations that they held with any of their contacts and whether these sources knew one another.

Relying on previous research (i.e., Collins & Clark, 2003), we considered network embeddedness to be a multifaceted construct measured as the linear combination of the standardized scores of: a) the number of contacts identified, b) the interaction frequency measured as the square root of the average number of monthly conversations with the identified contacts (McEvily & Zaheer, 1999), and c) the extent to which the contacts identified knew each other (i.e., structural holes; Burt, 1997). To determine the extent to which the contacts knew each other we developed a matrix with the initials of the contacts provided. Then, we asked the respondents to mark links between people who knew each other. Applying this matrix, the non-redundancy index obtained was as follows (McEvily & Zaheer, 1999):

Non-redundancy = (potential relationships – existing relationships) / number of advisers,

where potential relationships are the maximum number of relationships that can exist among the identified advisers  $n(n-1)/2$ , where  $n$  is the total number of identified advisers. Existing relationships are the number of relationships that exist among the identified advisers. The number of advisers is equal to the total number of identified advisers.

**Perceived Competitive Intensity.** To operationalize this concept, CEOs were asked to “please indicate how your company will be affected by the intensity of competition in your industry”. The potential values range from “very negatively” to “very positively” on a seven-point Likert scale. We used a perceptual measure of competition because organizational actions and decisions will likely be affected by perceived events (Miles, Snow & Pfeffer, 1974).

**Control variables.** To account for possible alternative explanations, we controlled for industry cluster type and firm size. Depending on the *cluster* in which they were located, companies were classified as being (1) located within a wine cluster or (0) located within a fresh fruit and vegetable cluster. *Size* was measured as the log number of employees, as reported in the SABI database. Based on prior similar research (e.g., Liu, et al., 2009), we also controlled for firm **strategic orientation**, firm **prior performance** and **capital intensity**. Strategic orientation was measured by a 3-items scale including “rate your firms’ product or service quality”, “rate your firm’s new product/service development” and “rate your firms’ customer service”, which were reported from CEO on a 7-point Likert scale (Cronbach’s alpha is 0.74). Prior performance was measured by each firm’s two-year average return to asset (ROA) before the year when the survey was conducted. Firm capital intensity was measured by the firm two-year lagged average asset rotation.

**Industry differences for main variables.** Before we analyzed the data, we compared the mean differences for the dependent variable and independent variables from two industries. We did not find significant mean differences in HPWP usage between industries (mean difference=0.05, n.s.). However, we found that competition intensity and competition scanning capabilities were higher in the wine cluster, while intensity of interaction with associations and CEO network embeddedness were higher in the fresh fruit and vegetable cluster.

## **RESULTS**

*Analysis Procedure.* We conducted simultaneous path analyses using MPLUS 8.0 to test our research hypotheses. We reported standardized coefficients which allow us to

compare the strength of relationships in a single model. We also conducted confirmatory factor analysis to ensure the main variables (perceived competition intensity, competition scanning capabilities, intensity of interaction with associations and CEO network embeddedness) are unique constructs.

*The measurement model.* Since our independent variables were all collected from a single informant (the CEO), we compared different models to reduce common method bias concerns (Podsakoff, et al., 2003). First, we constrained the correlation between the pair of perceived competitive intensity and competition scanning capabilities to be 1. The chi-squared difference test suggests that this model was worse than our measurement model without any constraints ( $\Delta\chi^2(1) = 17.74, p < 0.001$ ). Then we constrained the correlation between trade association relationships and embeddedness to be 1. Again, the chi-squared difference test suggests that this model was worse than our model ( $\Delta\chi^2(1) = 36.52, p < 0.001$ ). Overall, our proposed measurement model including five factors (HPWPs, competition scanning capabilities, interactions intensity with associations, network embeddedness and perceived competition intensity) fits the data well ( $\chi^2(20) = 22.69, RMSEA = 0.02, CFI = 1.00, TLI = 0.99$ ).

*Descriptive statistics.* Table 2 shows the variable means, standard deviations and correlations. It indicates that HPWPs were significantly associated with perceived competitive intensity ( $r=0.25, p<0.01$ ), competition scanning capabilities ( $r=0.22, p<0.01$ ), and were marginally associated with intensity of interaction with associations ( $r=0.12, p=0.06$ ). But HPWPs were not significantly related to CEO network embeddedness ( $r=-0.04, n.s.$ ). Moreover, perceived competitive intensity and competition scanning capabilities were

positively related ( $r=0.27$ ,  $p<0.01$ ). Firm interaction intensity with associations and CEO network embeddedness were not significantly correlated ( $r=0.01$ , n.s.).

(Insert Table 2 about here)

*Regression results.* Figure 1 displays the path analysis results from all estimated effects. HPWPs were positively related to competition scanning capabilities ( $b=0.19$ ,  $p<0.05$ ), intensity of interactions with trade associations ( $b=0.14$ ,  $p=0.02$ ) and perceived competitive intensity ( $b=0.17$ ,  $p<0.01$ ), but were not significantly related to top management network embeddedness ( $b=-0.03$ , n.s.). In sum, H1, H2, H4 were supported and H3 was not supported. For the moderating effects, we found that the interaction between perceived competitive intensity and interaction intensity with trade associations to be marginally significant ( $b=0.10$ ,  $p=0.07$ ) with no other moderating effects. Therefore, H5 is only marginally supported.

To rule out the possibility that our results are attributed to the way we measured network embeddedness, we also tested the isolated effect of CEO's number of contacts, interaction frequency, and structural holes on HPWPs (H3). None of these effects were significant.

(Insert Figure 1 about here)

## **DISCUSSION**

Our study focuses on the external facilitators of HPWP adoption in SMEs. We were motivated by Lee's (2021) suggestion of an ABV approach to better understand

HRM adoption and by the evidence suggesting the efficacy, yet low uptake, of HPWPs in SMEs (Harney & Alkhalaf, 2021). The application of the ABV perspective seems particularly appropriate given the important role played by top managers/CEOs in shaping HR systems (Arthur, Herdman & Yang, 2016; Chadwick et al. 2015), especially in SMEs (Harney & Alkhalaf, 2020). Our study extends prior work emphasizing external, market factors, information sources and relationships (e.g., Wu et al., 2014) as determinants of HRM adoption.

Using a sample of Spanish SMEs, we explored the relationship between CEOs' potential exposure to competitor and market information and the propensity to utilize HPWPs. As environmental scanning information sources, we examined the influence of SME CEOs' competition tracking capabilities, trade association participation and social network embeddedness. Our results indicate that both competition tracking capabilities and trade association participation intensity are associated with greater relative use of HPWPs. In addition, CEOs' perceptions of competitive intensity positively influenced HPWP adoption and (moderately) magnified the association between trade association participation and HPWP use.

Our study makes a number of contributions to the literature. Our first empirical contribution directly responds to calls for additional research on antecedents of HR system development and adoption (Harney & Alkhalaf, 2021; Jackson et al., 2014). Our study provides insight about how SME CEOs' competition tracking capabilities, interaction with trade associations and perceived competition intensity move them to use HPWPs to "fit" their HR to external challenges and demands. Market related factors affect managerial focus and attention (Ocasio, 1997). CEOs obtain and interpret

information about the environment by tracking their competitors. When confronted with intense competition, CEOs may use HPWPs to help meet perceived challenges.

Our application of the ABV perspective towards understanding determinants or antecedents of HPWPs adoption represents a second contribution of this study. This theoretical perspective offers potential for HRM research in SMEs for two primary reasons. First, the ABV perspective emphasizes the important role played by top management, particularly the CEO, in environmental scanning and strategic decision-making. This emphasis parallels cumulating research evidence in SMEs documenting the important role played by the CEO as influencers on their firm's approach to HRM (Harney & Alkhalaf, 2021). Second, the ABV perspective views top managers as important agents of dynamic adaptation, responsible for understanding important trends in their competitive environment and deciding how to use this information to configure organizational resources (Ocasio, 1997; Lee, 2021). If CEOs have enhanced capabilities for obtaining information on management best practices and innovations, this should, *ceteris paribus*, be reflected in organizational resources being deployed in the adoption of these innovations. As noted by Lee (2021), managerial attention to environmental stimuli is the starting point for noticing, encoding, and embracing best practices and opportunities for their firms. The evidence from our study, along with prior work (e.g., Wu et al., 2014), comports well with this perspective: When SME CEOs have capabilities (e.g., competition tracking; trade association memberships) to better perceive best practices in their environment, they are more likely to notice and adopt HPWPs.

Our study provides insight on how the ABV can be applied to the SME context to explain HPWPs adoption. Our results suggest that adopting HPWPs is a decision that is



affected by the particular context directing managerial attention. SME CEOs interaction with trade association provides access to a cultural repertoire of possible schemas for HR problems and answers to these problems. Similarly, CEO's competition tracking capabilities and perception of fierce competition may focus their attentional capacity in the HR problems and opportunities to cope with the challenging context.

Finally, the empirical setting may provide insight to our results. Our sample comprises 260 SMEs pertaining to a wide variety of sectors within 3 wine and fruit and vegetables geographical clusters. Previous literature on geographical clusters (e.g., Malmberg & Maskell, 2002) emphasize that these agglomerations favour both enhanced cooperation and competition among firms and the creation of knowledge spillovers running through rich formal and informal networks. The SMEs in our sample might face a dynamic and competitive environment, particularly favourable for environmental scanning due to the actions of the competitors being more evident. Social embeddedness was not related to HPWP adoption in our sample. Although we can only speculate, one possible explanation is that, unlike other information sources, social contacts may affect HR decision-making in a more erratic and less structured, or strategic way rendering a limited association with the adoption of a system of aligned HR practices (i.e., HPWPs).

Some practical implications can also be inferred from our study. We show that within SMEs, CEO/owners' attention to HR issues can be influenced by information acquired from interactions with trade associations and also by competition tracking and sector competitive intensity. Public decision makers interested in increasing SME or agricultural sector productivity may find these mechanisms useful in fostering the use of HRM best practices. SME CEOs interested in making sense of the opportunities and

complexities of implementing HPWP systems in their companies may find our paper useful too. Interacting with trade associations and tracking competitor's actions may direct the manager's attention to the importance of using HPWPs and, in addition, provide information about how to do it effectively.

### **Limitations and further research**

Although our study provides interesting insights into factors driving adoption of HPWPs in SMEs, our findings should be interpreted with study limitations in mind. First, while we focus on environmental scanning as an important component of the ABV perspective, our study does not investigate the details of this process. For example, we do not have data on existing HR (or other) organizational resources and how new knowledge on HR obtained during environmental scanning is combined with existing resources, policies and practices. We also lack data on other potentially important antecedents in HPWS adoption. Although we use several controls in our study, future research can also improve upon our analyses by controlling for factors such as unionization and other structural variables such as employee skillsets (e.g., Wu et al., 2014). Further, we assess the relative use of HPWPs at a single point in time and do not know when a firm's particular approach to HRM originated. Moreover, our main variables were reported from a single source, firms' CEOs. Although our measurement model did not indicate a problem with common method bias, future research should attempt to add additional respondents (e.g., those with direct responsibility for HR activities). Despite these limitations, we hope that our study inspires future research incorporating the ABV perspective to study HR phenomena in SMEs.

### **Data Availability Statement**

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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**Table 1. Measurement instruments**

Construct	No. of Items	Cronbach's alpha	t-value	Std Estimate		Description
Competitive intensity	1	n.a	n.d.		Competition int.	Please indicate how will affect to your company the intensity of competition in your industry (7-point scale - 1=very positively; 7= very negatively)
Relationships with regional associations	1	n.a	n.d.		Associations	Please indicate the level of agreement with the following sentences (7-point scale - 1= I do not agree at all; 7= I completely agree) Our personnel meets very frequently (many times per month) with the personnel of this associations
Competition tracking capabilities	3		n.d.	.66	TrCap1	Please rate your firm from 1 to 7 (1= we know little about this practice; 7 = We do this all the time): Source: Miller (1987); McEvily and Zaheer (1999) Search for information about which customers your competitors supply
			9.58	.97	TrCap2	Collect information about your competitors' market share
			10.26	.75	TrCap3	Monitor your competitors' strategies and tactics
High-involvement work practices	13					Source: Adapted from Huselid (1995) <b>Ability-enhancing practices</b>
			2.66	0.76	HIWPJOBA	% of positions subjected to a formal job analysis
			n.d.	0.48	HIWPTRAIN	Nr. of hours of training that an average employee received last year.
			2.14	0.51	HIWPSEL	For the 5 positions in which your company hires new employees more frequently, how many qualified applicants are considered in the selection process on average?
			2.36	0.51	HIWPTTEST	What % of the workforce goes through an employment test prior to hiring?
						<b>Motivation-enhancing practices</b>
			18.94	0.84	HIWPINC	% of employees receiving incentives depending on performance appraisals
			n.d.	0.87	HIWPPERF	% of employees receiving regular formal performance appraisals
			3.44	0.47	HIWPBEN	% of the workforce who have access to company incentive plans, profit-sharing plans, and/or gain-sharing plans
			3.13	0.41	HIWPPROM	% of the medium-top level jobs that have been filled from within in the recent years
						<b>Opportunity-enhancing practices</b>
			12.23	0.74	HIWPINF	% of employees included in a formal information sharing program (emails, newsletters, etc.)
			13.16	0.79	HIWPTTEAM	% of employees taking part in teams combining managers and employees or in quality circles
14.10	0.76	HIWPCSYS	% of employees with access to a formal grievance procedure and/or complaints system			
2.92	0.50	HIWPLEVL	How many levels exist between the lowest and the highest position of the organization (including both)?			
n.d.	0.81	HIWPATT	% of the workforce who are administered attitude surveys on a regular basis			

**Table 2. Means, Standard Deviations and Correlations**

<b>Variables</b>	<b>M</b>	<b>SD</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>
1. HPWPs	-0.04	0.55										
2. Perceived competitive intensity	4.99	1.77	0.25**									
3. Competition scanning capabilities	4.28	1.76	0.22**	0.27**								
4. Intensity of Interactions with associations	2.78	2.10	0.12	0.00	-0.07							
5. CEO network embeddedness	0.91	1.05	-0.04	-0.01	0.01	0.01						
6. Industry	0.39	0.49	0.04	0.26**	0.13*	-0.24**	-0.34**					
7. Firm size <sup>a</sup>	3.17	1.33	0.11	0.06	-0.07	0.16**	0.12	-0.25**				
8. Firm strategy orientation	5.59	0.87	0.07	0.12*	0.01	-0.15*	-0.21**	0.39**	-0.15*			
9. Firm prior performance	0.01	0.85	-0.02	-0.05	0.07	0.00	0.04	0.04	0.03	0.10		
10. Firm capital intensity	-0.03	0.85	0.05	0.07	-0.05	-0.10	-0.11	0.02	-0.08	0.04	0.28**	
11. Firm financial slack	0.32	0.77	-0.10	-0.02	0.02	-0.05	0.05	0.02	-0.24**	0.05	0.07	-0.15*

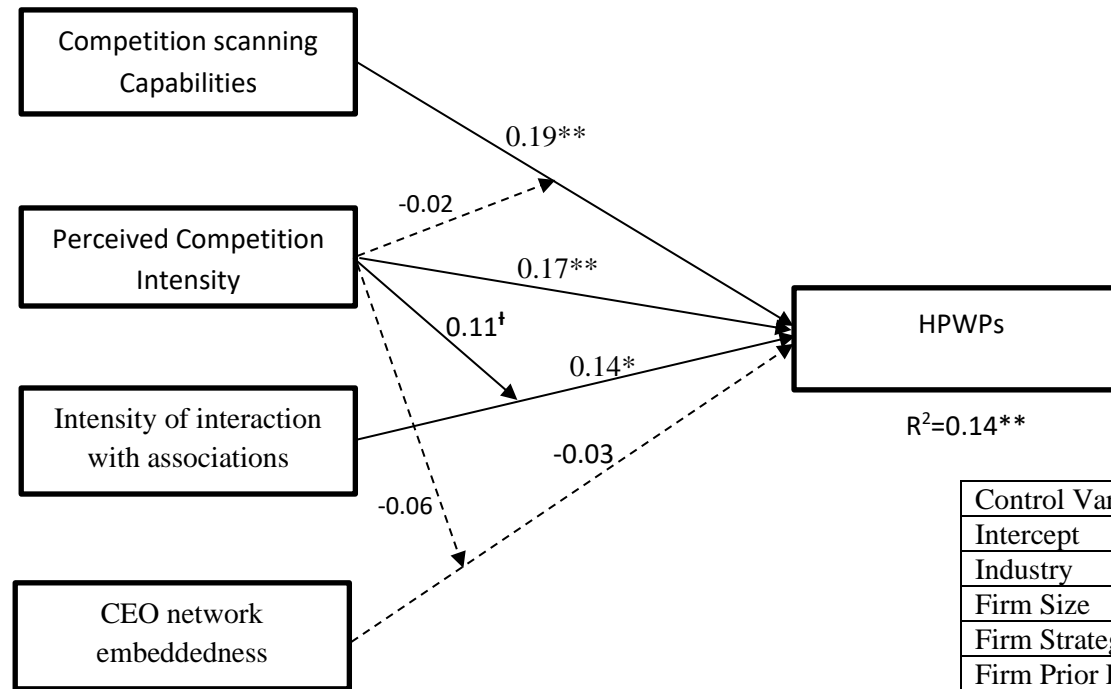
Note. N=260. HPWPs=High Performance Work Practices. For Industry, Wine=1 and fresh fruit and vegetable=0

\*p < 0.05, \*\*p < 0.01 (two-tailed).

<sup>a</sup>Natural log transformed



**Figure 1: Regression Results**



Control Variables	Coefficients
Intercept	-1.89**
Industry	-0.02
Firm Size	0.09
Firm Strategy Orientation	0.08
Firm Prior Performance	-0.04
Firm Capital Intensity	0.08
Firm Financial Slack	-0.05

Note. N=260. Standardized coefficients are reported. HPWPs=High Performance Work Practices. For Industry, Wine=1 and fresh fruit and vegetable=0.

† p<0.01, \*p < 0.05, \*\*p < 0.01 (two-tailed)