

# High involvement work systems, happiness at work (HAW) and absorptive capacity: a bathtub study

HIWS, HAW  
and absorptive  
capacity

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## Abstract

**Purpose** – The purpose of this research is to examine the impact of high-involvement work systems (HIWS) on absorptive capacity. In addition, the mediating effect of happiness at work in the relationship between high-involvement work practices and absorptive capacity is analyzed.

**Design/methodology/approach** – A 2-1-2 bathtub multilevel mediation model was used to analyze a sample of 783 employees from 111 bank branches, gathering data at three different times.

**Findings** – The results reveal that HIWS positively affect absorptive capacity. In addition, they show that happiness at work partially mediates the relationship between HIWS and absorptive capacity.

**Originality/value** – Happiness at work is a fundamental element for knowledge absorption. The findings support the basic assumptions of the job demands-resources model, and demonstrate how HIWS, acting as a job resource, lead to positive attitudes (happiness at work) and, in turn, to positive outcomes (absorptive capacity). The proposed HIWS, based on the assumptions of the mutual gains model, reveal a positive employment relationship with effects on both HAW and organizational outcomes. If organizations expose their employees to management practices that have specific benefits for their HAW, employees are more likely to perform their jobs in ways that will promote their absorptive capacity.

**Keywords** High-involvement work practices, Happiness at work, Absorptive capacity

**Paper type** Research paper

## 1. Introduction

In our current highly turbulent business environment, knowledge has become a predominant source of competitive advantage. To ensure survival, firms need to “recognize the value of new, external information, assimilate it, and apply it to commercial ends” (Cohen and Levinthal, 1990, p. 128), namely, absorptive capacity. Absorptive capacity depends on organizational context and practices and not only on the organization’s direct interaction with the external environment (Cohen and Levintahal, 1990).

Accordingly, human resource management (HRM) may play a fundamental role in explaining a firm’s absorptive capacity. However, it is difficult to draw conclusions about the effects of HR practices on organizational outcomes for several reasons. First, the nature of HR practices is unclear. Second, the HIWS-performance relationship shows contradictory results (Camps and Luna-Arocas, 2009). And third, HRM practices differ significantly from one study to another (Boselie *et al.*, 2005). A review of literature shows that intra-organizational factors, such as positive attitudes, have not been considered as an explanation mechanism

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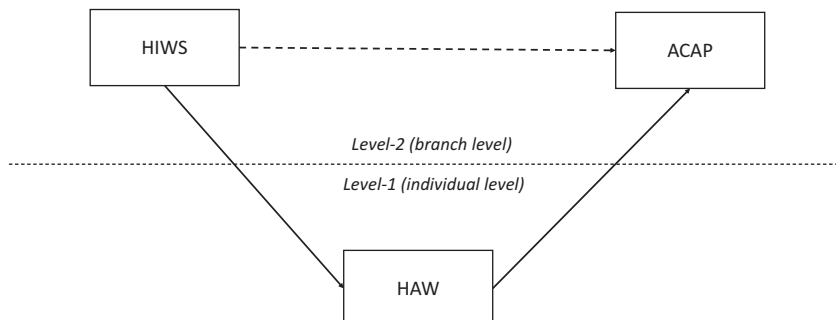
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through which HRM increases its impact on absorptive capacity (Distel, 2019). In addition, little research has examined the intra-organizational antecedents of absorptive capacity in non-R&D service firms (Moilanen *et al.*, 2014), and from an internal viewpoint (Flatten *et al.*, 2015). Large and non-R&D-intensive firms are not well positioned to take advantage of external knowledge compared to R&D firms. This is because large firms use more bureaucratic and highly rigid management practices (Ortega-Argilés *et al.*, 2009), which hinders knowledge absorption. In addition, non-R&D firms are not properly policy-supported, and collaboration with national R&D institutions increases absorptive capacity. However, service companies, particularly banking services, might improve their absorptive capacity by other means than R&D, such as by further focusing on their human resources. To shed light on these questions, the objectives of this research are: (1) to confirm whether high-involvement work systems (HIWS) have a positive impact on non-R&D-intensive service firms' absorptive capacity and (2) to check whether intra-organizational factors, namely happiness at work (HAW), mediate the relationship between HIWS and absorptive capacity. Figure 1 shows the proposed mediation model.

Previous studies have shown that the combined use of HRM practices produces a mutual and supportive influence on employees (Kloutsiniotis and Mihail, 2018). McDuffie (1995) proposed the notion of "HRM bundles" as being more effective in improving performance than isolated HRM practices. HR practices that focus on employees, such as participation in decision-making and job rotation (Van Den Bosch *et al.*, 1999) can facilitate knowledge exchange (Matusik, 2002). HIWS can be defined as the HR practices that provide employees with information, knowledge, power and rewards that enable them to work autonomously (Lawler, 1992). HIWS, as bundles of HR practices, have proved to have an impact on a firm's absorptive capacity (Smith, 2018). Distel (2019) argued that it is necessary to advance research on the informal mechanisms that exert an influence on a firm's absorptive capacity (Distel, 2019), and Volberda *et al.* (2010), underlined the key role of attitudes in managing absorptive capacity. We specifically aim to examine absorptive capacity from the "ground up" by analyzing how HAW, as an intra-organizational mechanism at individual level, might mediate the relationship between HIWS at branch level, and absorptive capacity at branch level.

Although a very great deal of studies has addressed the HRM-positive attitudes relationship, the vast majority of existing research has focused on the effect of HRM on specific and narrow positive attitudes (job satisfaction, commitment, engagement, motivation or trust). The use of narrow attitudes might involve a loss of sensitive information, as attitudes are complex and involve a wide range of states of mind (Fisher, 2010). In the words of Fisher (2010), "what seems more intriguing and useful is further research on a higher-order construct, [...] containing a number of positive attitudes and feelings" (Fisher, 2010). Fisher argued that further research is needed on the mediating role of HAW in the HRM-outcomes relationship.



**Figure 1.**  
2-1-2 Mediation model  
involving HIWS (high  
involvement work  
systems), HAW  
(happiness at work)  
and ACAP (absorptive  
capacity)

HAW is defined as a work state involving engagement, job satisfaction and affective organizational commitment (Fisher, 2010). HAW is different from other positive attitudes, thanks to its capacity to overcome the “compatibility principle” (Salas-Vallina and Fernandez, 2017), which argues that wide attitudes are better at predicting job behaviors (Harrison *et al.*, 2006). Salas-Vallina *et al.* (2017b) and Salas-Vallina *et al.* (2019), empirically confirmed that HAW can predict job behaviors better in the public service sector under this “compatibility principle.” Also, HAW clarifies the vague and nebulous range of positive attitudes in the management field of research, some of which overlap each other (Warr and Inceoglu, 2012). HAW involves different attitudes involving hedonic (pleasure) and eudaimonic (fulfillment) feelings, as well as active and passive attitudes. HAW’s first dimension, job satisfaction, is related to adequacy, sufficiency and satisfaction, and assesses employees’ feelings about working conditions, such as salaries and career opportunities. It is a passive and reactive concept that shows whether employees are achieving what they want, and therefore opens up an interesting research field to examine its interaction with complementary positive attitudes such as engagement and affective organizational commitment, in explaining absorptive capacity. Engagement refers to employees giving themselves to their work, and can be understood as a special feeling of energy and motivation related to thrill and passion at work. Affective organizational commitment is related to emotional links, and identification and involvement in the organization (Meyer *et al.*, 2002). Thus, HAW comprises three necessary dimensions that together explain happiness in the work context (Fisher, 2010): the work itself (engagement), the job characteristics (job satisfaction) and the organization as a whole (affective organizational commitment). These three dimensions reinforce each other and could shed light on the relationship between HRM-positive attitudes-performance.

We consider HAW as an informal integration mechanism, as it is a positive attitude which improves the individual perceptions of the work climate (Verhezen, 2010). Integration mechanisms make a firm more receptive to new external knowledge and foster knowledge exchange within its boundaries (Matusik, 2002). Firms rely on informal integration mechanisms to encourage trust and cooperation, thus reducing conflicts and increasing efficient knowledge exchange and implementation (Jansen *et al.*, 2005). Previous research evidences the possible effect of positive attitudes on absorptive capacity (Song, 2014), yet has ignored an encompassing approach such as HAW. As an illustration, Zatzick and Iverson (2011) related HIWS to job satisfaction. However, they measured job satisfaction through two items related to general satisfaction with the job, and satisfaction with pay. Yet, job satisfaction can be measured through 29 different instruments (Van Saane *et al.*, 2003). Other research found a negative relationship between high-involvement management and job satisfaction, using an eight-item scale (Wood *et al.*, 2012). This is an example of the diverse interpretations and measurements concerning positive attitudes, and justifies the emergence and development of HAW in order to shed light on the existing confusion of meanings and measurements of positive attitudes. Meanwhile, little research has addressed the HIWS-engagement relationship (Rana, 2015), with a few exceptions. In fact, the Web of Science shows only three results when searching for the words “high involvement” and “engagement” in the titles of articles submitted between 1900 and 2019. This is also apparent in the high-involvement-commitment research area, with Yang’s (2012) remarkable research framed in the hospitality sector being the only salient example.

Thus, HAW not only advances on prior attempts to reveal the effect of HIWS on positive attitudes but also suggests a potential mediating role between HIWS and absorptive capacity. This is because HAW places emphasis on employee involvement, motivation and skills, thus meeting employees’ needs. This could reinforce HIWS and improve employees’ positive attitudes and yield superior performance (Karadas and Karatepe, 2019).

If HR practices focus not only on organizational objectives but also on employees’ well-being, this could cause a snowball effect, which is known as the mutual gains model (Guest,

2017). This model implies that employees who perceive that their organization is concerned with their needs, improve their performance, when compared to HRM practices that only focus on organizational objectives. For this reason, we follow Zatzick and Iverson's (2006) HIWS proposal, as their six HRM practices reflect commonly used HIWS focused on employees' needs, and therefore they can be considered as a job resource. According to Guest (2017), investing in employees, an engaging job, a positive social and physical climate, voice, and organizational support could be key antecedents of employee well-being, and the proposed HIWS are expected to meet these requirements based on a positive employment relationship. The job demands-resources model posits that job resources (physical, psychological, social or organizational aspects) lead to positive attitudes, such as HAW (Salas-Vallina *et al.*, 2017a), while job demands result in negative outcomes, such as burn-out. However, job resources can also reduce job demands, and lead to improved organizational behaviors. A scenario of positivity, well-being and quality of life at work, where HAW and positive behaviors exist (such as dialogue, communication, cooperation), is likely to promote learning (Bakker *et al.*, 2012), knowledge activities (Hislop, 2003) and knowledge processing (Storey and Quintas, 2001). Therefore, if there is a solid HIWS model, some kind of relationship between HIWS and positive employee attitudes should appear, resulting in enhanced absorptive capacity.

According to Cohen and Levinthal (1989, 1990), a large number of highly qualified R&D staff improves an organization's absorptive capacity. Hence, non-R&D-intensive firms would show a significantly lower absorptive capacity, and would therefore suffer from competitive disadvantages compared to R&D-intensive firms. However, we question this hypothesis, suggesting that relevant external knowledge may not be primarily rooted in R&D, given that innovation in service firms may be better fostered by practical or customer-based knowledge. Non-R&D firms may be able to grow their absorptive capacity through other non-R&D channels, such as improving human resource development. A non-R&D-intensive service industry such as banking enables us to better explore the role that human resources plays in fostering absorptive capacity, given that absorptive capacity is dependent on how human resources are managed and especially on gatekeepers that possess customer knowledge (Cohen and Levinthal, 1990).

The aim of this paper is to contribute to the literature in three specific ways. First, our approach incorporates the mutual gains model into the analysis of absorptive capacity, which is an issue that has not received the required attention in the literature. Second, this study provides new empirical evidence of the effect of HIWS, based on a positive employment relationship, on absorptive capacity, in a non-R&D context. Third, this research highlights the fundamental role of intra-organizational mechanisms (HAW), by which HIWS contribute to absorptive capacity.

This paper is organized as follows. First, a literature review and hypotheses proposal is provided on the relationships between HIWS, HAW and absorptive capacity. Then, the methodology of the empirical study is described. Next, the obtained results are presented. Finally, conclusions and implications are discussed.

## 2. HIWS and absorptive capacity

Absorptive capacity involves the incorporation, retention and distribution of knowledge (Cohen and Levinthal, 1990). The acquisition of external knowledge requires internal structures and network communication (Cohen and Levinthal, 1990), such as those provided by HIWS. HIWS are a source of competitive advantage, and include a specific HRM design that promotes opportunities for collective interactions (Batt and Colvin, 2011). This means that HIWS can play a central role in improving employees' capabilities, such as absorptive capacity, as a result of these interactions and knowledge sharing. Paré and Tremblay (2007)

argued that HIWS improve the communication of organizational knowledge through information-sharing practices. As these practices provide more information for employees to participate, they will be willing to share their knowledge. HIWS also increase the level of trust, encouraging employees to seek and offer help, thus enhancing knowledge-exchange opportunities (Jones and George, 1998). Moreover, enriched job design, derived from HIWS, can increase employees' willingness to develop unique skills (MacDuffie, 1995), which will improve knowledge absorption. However, the issue is whether HIWS are equally effective in non-R&D companies (Moilanen *et al.*, 2014). Highly qualified R&D staff generate improved absorptive capacity (Cohen and Levintal, 1989; 1990), which could lead us to believe that non-R&D-intensive firms show less absorptive capacity. However, service firms such as those in the banking industry can foster absorptive capacity from a customer-based knowledge viewpoint. In addition, banking companies may be able to grow their absorptive capacity by developing existing technological solutions (Bender, 2008). Given that HIWS has contradictory effects on performance (Camps and Luna-Arocas, 2009), and that little research has been done into absorptive capacity antecedents in non-R&D intensive firms, we aim to examine the HIWS-absorptive capacity concept in the banking industry.

This research follows Zatzick and Iverson's (2006) proposal of six high-involvement practices, namely job design, information-sharing, problem-solving teams, self-directed teams, gain-sharing and training. According to these practices, HIWS can be defined as HRM practices that focus on employee involvement, motivation and skill development through job design, information-sharing, problem-solving teams, self-directed teams, gain-sharing and training. Typical high-involvement work practices include team-based design (i.e. problem-solving teams and self-directed teams), information-sharing, aggregate compensation strategy (i.e. gain-sharing) and employee training (von Bonsdorff *et al.*, 2018; Zatzick and Iverson, 2006). According to Zatzick and Iverson (2006), their six HRM practices reflect a commonly used HIWS approach to work design and have been used in subsequent research (Li *et al.*, 2018).

Job design is a central HRM activity. It is related to decisions on current job structure, that is, choosing job activities and allocating them, in order to generate synergies and benefits for the organization. Job design activates three psychological states that affect employees' motivation and performance: meaningfulness at work, responsibility for work outcomes and knowledge of one's own results at work (Foss *et al.*, 2008). These three psychological states affect variables such as autonomy, task identity and feedback, thus impacting on employee motivation and knowledge-sharing behavior (Foss *et al.*, 2008). In addition, job design can also foster social integration, thus leading to improved absorptive capacity (Zahra and George, 2002).

Information-sharing involves mutual exchanges between individuals, which promotes absorptive capacity (Malhotra *et al.*, 2005). Information can be understood as a flow of signals, while knowledge can be seen as the interpretation of those signals (Bhatt, 2000). Information increases the efficiency of assimilation capabilities (Boer *et al.*, 1999), and is the substance to create knowledge (Nonaka and Takeuchi, 1995). Problem-solving skills are necessary for knowledge creation (Kim, 1998), enabling employees to filter information, and thus absorb valuable knowledge that can be applied (Reiter-Palmon and Illies, 2004). Problem-solving groups are fundamental to create a shared view and internalize acquired knowledge (Hult *et al.*, 2004).

Self-directed teams are trained to solve problems, and hold positions in the company that enable them to encourage interaction and a collaborative culture of participation, gathering a great quantity of knowledge (Nonaka and Takeuchi, 1995).

Gain-sharing helps to maintain a healthy collaborative relationship. According to the equity theory and organizational justice approach, employees need to perceive that their rewards and promotion are based on their efforts, and this will improve employees'

motivation and use of knowledge (Minbaeva *et al.*, 2014). Compensation policies have an impact on absorptive capacity (Lane and Lubatkin, 1998). When performance is fairly compensated, knowledge is promoted (Minbaeva *et al.*, 2003), and gain-sharing can create those positive working conditions which are fundamental in motivating employees to perform (Huselid, 1995). Employees that feel fairly treated in the workplace may exhibit positive attitudes (Moorman, 1991), such as absorptive capacity.

Lane *et al.* (2001) and Minbaeva *et al.* (2003) demonstrated that training programs are a fundamental knowledge acquisition instrument. We argue that employee training increases individual performance (Delaney and Huselid, 1996), by making employees more capable of and skilled in selecting and acquiring the knowledge required to improve their task performance.

In short, HIWS can help employees accumulate a sufficient level of knowledge, removing traditional boundaries and supporting knowledge acquisition and distribution.

Recent studies, such as the one by Yao and Chang (2017), analyzed absorptive capacity antecedents by considering how individual characteristics affect absorptive capacity, yet little research has considered whether HIWS influence absorptive capacity in non-R&D-intensive firms (Moilanen *et al.*, 2014). In addition, there is certainly a lack of investigation into the intra-organizational antecedents of absorptive capacity (Flatten *et al.*, 2015). For all of the aforementioned, our first hypothesis is:

*H1.* HIWS is positively related to absorptive capacity at branch level

### **3. The mediating role of happiness at work (HAW) in the relationship between HIWS and absorptive capacity**

#### *3.1 HIWS and HAW*

For employees to feel happy at work they need to work with enough resources and low job demands, and we argue that HIWS might act as a job resource fostering HAW. The job demands-resources model posits that job demands are physical, psychological, social and organizational aspects of a job that require a special effort with physiological and/or psychological costs (such as an unfavorable physical or psychological environment). In contrast, job resources refer to those physical, psychological, social and organizational factors that achieve work objectives, reduce job demands, and stimulate personal growth, learning and development (Demerouti *et al.*, 2001; Demerouti and Bakker, 2011). Therefore, resources are not only important in reducing job demands, but are also essential in their own right. This is in line with Hackman and Oldham's (1980) job characteristics model that highlights the motivational aspect of job resources. Accordingly, we propose HIWS as a job resource. However, employees need to have suitable job resources to feel a balanced employee-employer relationship, and when companies demand greater efforts from their employees, they assume increased job resources in order to maintain this equilibrium. By combining the social exchange theory and the JD-R model, we can better explain the social exchange process underlying the HIWS-absorptive capacity relationship. The social exchange theory (Blau, 1964) has been recognized as a prominent theory to examine social exchanges in the workplace. This theory argues that employees who perceive they are being positively and fairly treated in the organization reciprocate through improved behaviors in the workplace. Employees only respond positively when they perceive that job resources fulfill their needs.

When adequately applied, HIWS may not only lead to positive attitudes, but also reduce job demands (such as work intensification), thus lending more clarity to the diverse findings in the HIWS-performance relationship. While previous works found a positive connection between HIWS and positive attitudes (Wood *et al.*, 2012; Paré and Tremblay, 2007), other

research found that work intensification had a negative influence on employees. [Boxall and Macky \(2014\)](#) reported interesting results in relation to HIWS and job satisfaction. In particular, they found that greater autonomy, fairer rewards and better development opportunities are factors that improve job satisfaction. However, they recommended avoiding practices leading to work intensification, thus highlighting the importance of focusing on processes releasing human potential rather than on the intensity of work. In this sense, [Zatzick and Iverson's \(2006\)](#) HIWS focus more on providing support rather than on intensifying work, as they provide autonomy, fair wages, development of capacities, information sharing and flexibility.

HRM can contribute to creating happy employees ([Cropanzano and Wright, 2001](#)), and we expect HIWS to improve HAW. HIWS promote employee empowerment, relational collaboration and coordination ([Lawler, 1992](#)). HRM practices such as training, rewards, job design and participation enhance positive attitudes, resulting in higher performance ([Den Hartog et al., 2013](#)). [Boselie et al. \(2005\)](#), in a review of 104 articles, revealed the direct effect of different HRM activities on employees' satisfaction and commitment. For example, the practices related to participation, rewards, autonomy, training and fair employment treatment led to employee satisfaction, commitment, retention, trust and loyalty. [Chamberlin et al. \(2018\)](#) revealed that empowerment and voice led to improved performance. The social cognitive theory frames this relationship by arguing that employees enact behaviors in order to reach future outcomes as a result of prompted situational cues ([Bandura, 1989](#)).

Valuable working conditions, such as a good pay system, enhance job satisfaction ([Brown et al., 2008](#)) and fairness at work promotes positive attitudes ([Moorman, 1991](#)). On the basis of the resource-based approach, [Den Hartog et al. \(2013\)](#) revealed that HR training practices that result in highly skilled employees foster positive attitudes in employees.

HAW is different from narrow positive attitudes, such as job involvement, job satisfaction and commitment. This is because it is a three-dimension second order construct overcoming the "compatibility principle," which is not the case for job satisfaction or commitment ([Harrison et al., 2006](#)). HAW includes both hedonic and eudaimonic components as well as passive and active ones that make this construct especially representative of positive attitudes ([Fisher, 2010](#)). HAW has been checked in different samples and countries, revealing a strong explanatory ability to measure and conceptualize positive attitudes at work, being a broad enough concept to predict positive behaviors (see [Salas-Vallina et al., 2017a](#)). For these reasons, we argue that HAW opens up a new approach to explore the role of HRM on positive attitudes. On this basis, we predict a direct and positive relationship between HIWS and employees' HAW:

*H2. HIWS are directly and positively related to employees' HAW*

### *3.2 HAW and absorptive capacity*

Knowledge processes are complex and dependent on employees. The absorptive capacity of an organization depends on the attitudes of its members to proactively manage knowledge ([Rafique et al., 2018](#)). Prior studies, however, have ignored the role of individuals in promoting absorptive capacity ([Volberda et al., 2010](#); [Foss et al., 2011](#)), and we lack knowledge about how individuals effectively enhance this capacity.

We argue that HAW could facilitate an indirect relationship between HIWS and absorptive capacity. This indirect connection depicts what is known as the mutual gains perspective ([Guest, 2017](#)). Under this approach, both employees and the organization are beneficiaries.

Informal relationships, represented by HAW, are fundamental for the identification and assimilation of new knowledge. HAW might facilitate social embeddedness, which has been identified as crucial in transferring tacit and explicit knowledge ([Dhanaraj et al., 2004a](#),

2004b). In addition, informal intra-organizational relationships are a source of heterogeneity, in turn fostering absorptive capacity (Volberda *et al.*, 2010).

The social exchange theory (Cropanzano *et al.*, 2017) also enables us to explain how HIWS enhance absorptive capacity through HAW. This theory focuses on the positive reaction of humans when they feel well treated by others. According to this theory, HIWS can “jump start” the beneficial spiral in which HRM that supports employees can promote HAW, in turn fostering absorptive capacity. In addition, the JD-R reinforces this argument as job resources (HIWS) lead to positive attitudes (HAW), resulting in positive behaviors (absorptive capacity).

Individuals might possess the prerequisite to learn, but knowledge absorption is likely to be poor if motivation is low (Baldwin *et al.*, 1991), and HAW might be the motivational component needed to absorb knowledge. Motivation is a fundamental requirement for employees to be effective (Huselid, 1995). The employee needs not only to be able to receive knowledge but also be willing to absorb it. Absorptive capacity has been conceptualized as including both an employee’s ability and their motivation, as these two factors are fundamental to facilitate the absorption of knowledge (Minbaeva *et al.*, 2003). Nonaka (1994) also stated that positive attitudes are basic for knowledge creation. Employees with high levels of positivity, who perceive a climate of pleasure and comfort, are willing to provide extra discretionary effort and, in turn, will perform better to absorb knowledge. Positive attitudes are fundamental aspects for knowledge creation (Thompson and Heron, 2005).

As knowledge absorption is enhanced through positive attitudes, we expect HAW to directly and positively affect absorptive capacity. HAW is an informal integration mechanism which improves positive perceptions of work circumstances (Verhezen, 2010), and is capable of predicting improved organizational behaviors (Salas Vallina *et al.*, 2017a; Harrison *et al.*, 2006). Integration mechanisms boost knowledge exchange (Matusik, 2002) and make firms more receptive to new external knowledge. However, informal integration mechanisms also encourage trust and cooperation, resulting in increased knowledge exchange (Jansen *et al.*, 2005). In addition, HAW responds to the call of Volberda *et al.* (2010) to explore the individual antecedents of absorptive capacity.

HAW involves engagement, job satisfaction and affective organizational commitment, which could show a direct connection with absorptive capacity.

Engaged employees experience a special feeling of energy and motivation, which makes them more pro-active in searching for knowledge. Engagement generates an alertness in seeking external knowledge which is a critical element to generate new business concepts and products (Ardichvili *et al.*, 2003). Engagement enables individuals to seek new and novel knowledge from outside that is useful for their current job (Tho and Trang, 2015). We argue that in the context of banking services, employees who devote more time and effort to actively searching for new ideas are better positioned to find valuable opportunities. Employees who make less effort to search externally use more proximal sources of knowledge. In contrast, engaged employees make considerable individual efforts to actively find useful external knowledge, which can be combined with internal knowledge in a novel manner (Fleming and Sorenson, 2001).

Job satisfaction refers to employees’ satisfaction with their working conditions and opportunities for development. This concept derives from the appraisal of one’s job or job experiences (Locke, 1976). Employee behaviors are the result of an exchange in the employment contract (Deluga and Perry, 1994), where employees who perceive satisfactory work circumstances, through job satisfaction, reciprocate with proactive behaviors (Moorman, 1991). Al-Abdullat and Dababneh (2018) found, in the banking sector, that job satisfaction creates a bond between the organization and employees, and enables employees to improve their experience, skills and knowledge. Higher levels of job satisfaction involve a



motivational process which can increase the effort employees make for the organization, thus improving absorptive capacity.

Affective organizational commitment refers to employees' interest and connection with an organization (Meyer and Allen, 1997). It includes emotional links, perceived costs to the employee if she or he leaves the organization, and the obligation the person feels to stay in the organization. This concept represents heavy involvement with the organization. For employees, affective organizational commitment includes continuous interest in searching for new ideas to improve existing products, services or processes. Highly committed employees are willing to provide extra discretionary effort, thus leading to better performance to absorb knowledge (Rafique *et al.*, 2018). Thompson and Heron (2005) stated that the transformation of external knowledge depends on active employee participation, and that organizational commitment is crucial to knowledge creation, and to the implementation of knowledge processes. Therefore, HAW is expected to foster absorptive capacity.

Under the AMO framework, we can strengthen the explanation of how HRM practices elicit desired performance outcomes. By developing abilities (A), enhancing motivation (M) and promoting opportunity to participate (O), employees are expected to improve their performance (Appelbaum *et al.*, 2000). In an examination of the systems perspective, Delery and Gupta (2016) found that ability, motivation and opportunity enhancing HRM practices interact to influence organizational effectiveness. HIWS provide ability, motivation and opportunity, and HAW is expected to reinvigorate HIWS. In short, we suggest that more extensive use of HIWS will enhance absorptive capacity by means of happiness at work (HAW). Accordingly, we hypothesize:

*H3.* HAW mediates a positive relationship between HIWS and absorptive capacity.

## 4. Method

### 4.1 Procedure for data collection and sample characteristics

Our research was carried out in the Spanish and Italian banking sectors. The European banking industry is made up of large companies, as a result of a massive merger process in recent years. Spain and Italy have a similar banking structure compared to the European banking industry. Data were gathered in two phases through self-completion questionnaires. Surveys are one of the most widely used methods in research examining the connection between HRM practices and employee work attitudes (Guest, 1999). This is the method followed in our study, in which we checked our proposed model at the individual level of analysis. The questionnaire was accompanied by a letter, in which the importance of completing the survey was highlighted. As banking products and services do not significantly differ between firms, there is room for differentiation through employee knowledge management.

Questionnaires were distributed among banking employees by external survey contractors, who were responsible for collecting the completed surveys.

In Time 1, employees were asked about their HIWS perceptions, collecting data from January to March 2017. A total of 1,856 questionnaires from employees working in 177 branch offices specializing in SMEs were completed and returned in this phase. This represented 29.7% of total employees working in these specialized branch offices (6,246) in major banks in Spain and Italy. Next, employees were asked about their perceived HAW and absorptive capacity, collecting data from January to March 2018. Out of a total of 1,243 employees, 783 employees from 111 branches answered the questionnaire, yielding a 63% response rate (82.8% of branches).

The median number of employees in the sampled banking branches was 11 (branch size ranged from 8 to 17). Men predominated in the 45–55 (16.70% men vs. 14.30% women), and 55

and over age groups (5.10% men vs 3.67% women), while women predominated in the 25–45 age group (32.00% women vs. 27.00% men). Most employees belonged to the 25–45 age group (59%). Fixed-term contracts represented 92.28%. Average tenure was 9.45 years. The target population belonged to the largest Spanish and Italian banks who possess 90% of Spanish and Italian banking assets. [Table 1](#) shows sample details by bank and country.

#### 4.2 Measures

HIWS were measured at branch level using [Zatzick and Iverson's \(2006\)](#) scale. This is a Likert-scale set of six practices and 12 items implemented by organizations to involve employees, ranging from 1 (totally disagree) to 7 (totally agree). These practices were: flexible job design, information-sharing, problem-solving teams, self-directed teams, gain-sharing, and training. We gathered data from employees' direct experiences, given that responses from HR managers may be unreliable ([Takeuchi et al., 2009](#)). Branch-level HIWS were derived indirectly by data aggregation ([Shen, 2015](#)). This is a commonly performed procedure in management research ([Sun et al., 2007](#)). Through Intraclass Correlation Coefficient 1 and 2 (ICC1 and ICC2), the degree of inter-rater reliability was examined ([LeBreton and Senter, 2008](#)). In addition, the inter-rater agreement index (rWG(J)) was obtained to ensure consensus between ratings. The results showed sufficient justification for data aggregation, with ICC1 standing at 0.55, and ICC2 at 0.92. The rWG(J) for each of the six HIWS ranged from 0.81 to 0.98, and the median rWG(J) was 0.89. Additionally, a paired *t*-test was performed to compare the means of HIWS at aggregate level and non-aggregate level, to ensure they did not differ significantly. No significant differences were found in means across the HIWS levels. Principal component analysis showed that the 12 items loaded satisfactorily onto a single latent factor (BBNFI = 0.968, CFI = 0.991, RMSEA = 0.056). The scale's  $\alpha$  reliability was 0.892.

HAW was measured at individual level using [Salas-Vallina et al.'s \(2017b\)](#) seven-item Likert scale, which comprises nine items (i.e. "At my work I feel plenty of energy"), ranging from 1 (totally disagree) to 7 (totally agree). Whether employees experienced HAW at the individual level was calculated by aggregating employees' individual HAW evaluations in the workplace. Principal component analysis showed that the nine items loaded satisfactorily onto a single latent factor. The scale's  $\alpha$  reliability was 0.886.

Perceived absorptive capacity was measured at branch level adapting the scale developed by [Flatten et al. \(2015\)](#) ranging from 1 (totally disagree) to 7 (totally agree). For example, we adapted items such as "Our management supports the development of prototypes" to "Our management supports the testing of new services." Fourteen items regarding knowledge acquisition, knowledge assimilation, knowledge transformation, and knowledge exploitation were assessed. Flatten *et al.*'s recent scale was applied revealing good psychometric properties ([Ferrerás-Méndez et al., 2018](#)). In terms of aggregation, ICC1 was 0.35 and ICC2 was 0.87, and the median level of rWG(J) was 0.92, ranging from 0.89 (*strong*) to 0.98 (*very high*), thus providing support for the aggregation of this construct at branch level. Principal

**Table 1.**  
Sample details by bank  
and country

Bank	Country	Branches
1	Spain	21
2	Spain	18
3	Spain	20
4	Italy	17
5	Italy	19
6	Italy	16

component analysis showed that the 14 items loaded satisfactorily onto a single latent factor (BBNFI = 0.968, CFI = 0.991, RMSEA = 0.056). The scale's  $\alpha$  reliability was 0.892.

Gender, contractual status and tenure were examined as control variables. Originally, they were measured at employee level, but considering the multilevel nature of the research, aggregate scores were developed to proxy branch-level characteristics. Previous research has examined these variables affecting both performance and well-being (Wood and De Menezes, 2011). Age was coded using five age bands. Gender was coded through a binary variable (1 if the individual was male and 0 if they were female). Two binary variables represented temporary (0) or fixed-term contracts (1). Tenure was categorized through six bands (0 = 1–2 years, 1 = 2–5 years, 2 = 5–10 years, and 3 = 10 + years). Table 2 shows the fit values for the measurement scales, which are under the recommended values.

#### 4.3 Analysis

The proposed model involved a type of hierarchical mediation process whereby both HIWS and absorptive capacity were analyzed at branch level, whilst employee HAW was studied at individual level. Up until now, researchers have tended to follow single-level mediation methods that do not examine differences across levels, leading to biased standard error estimates (Preacher *et al.*, 2010). Multilevel mediation analysis can be used to examine Level-2 and Level-1 mechanisms impacting on mediated effects.

This study adopted a 2-1-2 mediation model, based on Multilevel Structural Equation Modeling (MSEM). It involved two types of cross-level effects: the effect of a Level-2 predictor on a Level-1 mediator, and the effect of a Level-1 mediator on a Level-2 outcome. Both effects were examined at the same time following a one-stage procedure that evaluated the direct and indirect multivariate pathways. The present study followed Preacher *et al.*'s (2010) multilevel mediation procedure because it considers the fact that the indirect link between the Level-2 predictor (HIWS) and the Level-2 outcome (absorptive capacity) via the Level-1 mediator (HAW) varies across Level-2 units. Accordingly, this mediation model allows the intercepts and slopes to vary randomly across Level-2 units.

#### 4.4 Hypotheses testing

Two separate 2-1-2 mediation models were implemented to check the hypothesized relationships, using the robust maximum likelihood (MLR) estimator in each one. The direct effect of HIWS on absorptive capacity and the indirect effect of HIWS on absorptive capacity via HAW were estimated simultaneously in a single-stage process. MLR is particularly useful in multilevel analysis (Preacher *et al.*, 2010), providing robust standard errors.

The mediated effects were obtained by the product-of-coefficients method ( $\alpha\beta$ ), where  $\alpha$  was the regression path between the independent and the mediator variables, and  $\beta$  was the regression path between the mediator and the dependent variable. Confidence intervals from the distribution-of-the-product method were used to evaluate the statistical significance for the  $\alpha\beta$  coefficient, by comparing the product of standardized values for  $\alpha$  and  $\beta$  parameters to a table of critical values (MacKinnon *et al.*, 2007). In addition, the Monte Carlo method was

**Table 2.**  
Fit values for the measurement scales of HIWS (high involvement work systems), HAW (happiness at work) and ACAP (absorptive capacity)

Mod	S-B $\chi^2$	D. f	<i>p</i> -value	BBNFI	CFI	RMSEA	NC ( $=\chi^2/df$ )
HIWS	16.212	11	0.023	0.968	0.991	0.056	1.473
HAW	38.804	22	0.042	0.989	0.975	0.039	1.764
ACAP	17.368	11	0.038	0.929	0.976	0.029	1.579

**Note(s):** N.B.: All the loadings were significant at  $p < 0.01$

used for assessing mediation, by simulating a sampling distribution of the  $\alpha\beta$  coefficient (Preacher *et al.*, 2010).

**5. Results**

Descriptive statistics of means, standard deviations, factor correlations and Cronbach's alpha are shown in Table 3. Table 4 shows the multivariate results: standardized regression coefficients, residuals and statistical significance for the direct effects, as well as confidence intervals for indirect effects. The results reveal a direct and positive effect of HIWS on absorptive capacity ( $\beta = 0.278, p < 0.001$ ), thus supporting Hypothesis 1. HIWS were positively related to HAW ( $\beta = 0.202, p < 0.001$ ), and HAW was positively related to absorptive capacity ( $\beta = 0.149, p < 0.001$ ), thus supporting hypothesis 2 and 3. The 95% confidence intervals reported in Table 4 reveal that the mediated path from HAW to absorptive capacity was significant and positive. Thus, HAW mediated a positive relationship between HIWS and absorptive capacity. Therefore, hypothesis 3 is supported.

Variable	M	SD	Composite reliability	Average variance extracted	1	2	3
1. HIWS	4.237	1.724	0.923	0.508	0.901		
2. HAW	3.212	1.202	0.891	0.479	0.336***	0.887	
3. ACAP	3.417	1.891	0.965	0.698	0.301***	0.446**	0.891

**Table 3.** Descriptive statistics, correlations and reliabilities

**Note(s):** HIWS = High involvement work systems; HAW = Happiness at work; ACAP = Absorptive capacity. Cronbach's alphas appear on the diagonal. \*\*\*Significant correlation  $p < 0.001$ ; \*\*Significant correlation  $p < 0.01$

Variables	HAW		ACAP	
	Coefficient	Errors	Coefficient	Errors
HAW	–	–	0.149	0.003
HIWS	0.202	0.003	0.278	0.004
Male	0.011	0.006	0.015	0.005
Age (18–20 years)	0.025**	0.008	0.012**	0.003
Age (21–30 years)	0.023**	0.007	0.070**	0.010
Age (31–40 years)	0.005	0.017	0.021**	0.012
Age (41–50 years)	0.001	0.006	0.005	0.003
Age (51–65 years)	0.006	0.004	0.008	0.005
Temporary contract	0.009*	0.005	0.011*	0.006
Fixed contract	0.015*	0.004	0.070**	0.005
Tenure (less than 1 year)	0.024**	0.014	0.076***	0.010
Tenure (1–2 years)	0.009*	0.006	0.058***	0.007
Tenure (3–5 years)	0.005	0.007	0.039**	0.015
Tenure (6–10 years)	–0.007	0.005	0.012**	0.004
Tenure (11–15 years)	–0.057**	0.008	0.048**	0.005

*Confidence intervals for indirect effects of HIWS on ACAP via HAW*

	Lower limit	Upper limit
95% confidence intervals from Monte Carlo method	0.011	0.019
95% confidence intervals from distribution of the product method	0.014	0.016

**Table 4.** Results of proposed model. All regression coefficients and errors are standardized scores

**Note(s):** Statistical significance: \*\*\* $p < 0.001$ ; \*\* $p < 0.01$ ; \* $p < 0.05$

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## Discussion

The complex and challenging environment in which the banking sector operates requires banks to increase their competitive advantage by adding extra value, which can be achieved through absorptive capacity (Cepeda-Carrion *et al.*, 2016). Absorptive capacity improves existing firm procedures and practices by providing innovation and support to transform knowledge paradigms within firms (Haro-Dominguez *et al.*, 2007). However, this study identifies and addresses three essential gaps related to the antecedents of absorptive capacity.

First, although non-R&D-intensive firms can have a significantly lower absorptive capacity, and in consequence will suffer from competitive disadvantages compared to R&D-intensive firms (Cohen and Levintal, 1989, 1990), the results show that HIWS positively affect absorptive capacity in a non-R&D context. Service companies in general, and banking firms in particular, do not necessarily experience competitive disadvantages compared to R&D-intensive firms. Banks can grow their absorptive capacity by other means, namely, further developing their human resources. When HIWS turn the spotlight on employees, organizational capabilities are improved.

Second, while some prior research found a positive connection between HIWS and positive attitudes (Wood *et al.*, 2012; Paré and Tremblay, 2007), other studies showed a negative link. This may be due to the fact that some research has included appraisal as a high-involvement work practice (Wood *et al.*, 2012), and this could be the reason for the negative effect of HIWS on job satisfaction. This is because appraisal can considerably harm employees' well-being, depending on how it is applied. Our findings show that HIWS were directly and positively related to employees' positive attitudes. However, the novelty in this research lies in the introduction of HAW as an attitudinal variable. HAW is a wide positive attitude, with a solid theoretical foundation in literature (Fisher, 2010). HAW is a construct that overcomes the compatibility principle, under which wide positive attitudes can predict better positive behaviors (Fisher, 2010; Harrison *et al.*, 2006). We found that the combined use of HIWS produced a mutually and supportive influence on employees (Kloutsiniotis and Mihail, 2018), thus resulting in increased HAW. This is in line with studies showing that coherent bundles of HRM practices enhance positive attitudes (Khoreva and Wechtler, 2018). A possible explanation is that the varying positive and/or negative effects of individual components of HIWS may neutralize negative effects through an overall positive combined effect (Macky and Boxall, 2007), thus tying in with the particular focus of Zatzick and Iverson (2006) HIWS practices focusing on employees' needs. The present study combines flexible job design, information-sharing, problem-solving teams, self-directed teams, gain-sharing, and training as HIWS practices, all of which strengthen employees' capabilities, job enrichment and information transparency, thus being employee-centered HRM practices. These HIWS encompass a set of job characteristics, which according to the AMO framework (Appelbaum *et al.*, 2000), foster employees' abilities, motivation and opportunities to implement them (Zhang and Morris, 2014). In fact, Huselid (1995) labeled HIWS as a set of HR practices based on the AMO framework. These characteristics transmit the key role that employees play for organizations. In turn, employees understand HIWS as being positively treated by the organization, and return it through a positive attitude towards the organization (Wood, 2018). The social exchange theory together with the JD-R model support the HIWS-HAW connection. Therefore, the positive effect of HIWS on HAW adds value to the assumption that HIWS, when focused on employees, have positive consequences on employees' attitudes.

A third contribution that emerges from our analysis concerns the mediating role of informal processes, represented by HAW, in fostering absorptive capacity (Distel, 2019). The results confirm that employees' attitudes play a fundamental role in the generation of organizational capabilities (Gavetti, 2005). In particular, we found that differences at individual HAW levels explain differences in branch capabilities (absorptive capacity).

Thanks to HAW's depth and breadth, it is easier to explain how absorptive capacity is better achieved through a multilevel analysis. To date, the mediating role of employees' positive attitudes in the relationship between HRM and its outcomes has not been well examined by multilevel mediation techniques (Shen, 2015). Instead, single-level mediation methods have been applied, though these fail to account for interdependences between employees embedded in the same organization. Furthermore, additional research is necessary to make progress in the antecedents of absorptive capacity research at individual level (Volberda *et al.*, 2010), outside high-tech firms (Moilanen *et al.*, 2014; Mathews *et al.*, 2014), and considering the internal factors of organizations (Flatten *et al.*, 2015), particularly in the banking industry (Mathews *et al.*, 2014). Accordingly, the present study addresses this gap by adopting a 2-1-2 mediation model, to simultaneously examine the direct effect of HIWS on HAW, and the role of HAW in explaining the link between HIWS and absorptive capacity. Therefore, this study confirms the theoretical approach of influential microfoundation research, proposing that individuals cannot be assumed to be homogeneous across work units (Felin and Hesterly, 2007), and their HAW differences directly affect branches' absorptive capacity. This paper is also original in that it suggests a connection between the relationship between HIWS, HAW and absorptive capacity, in a non-R&D context, where competitive advantage is fundamental to achieve short-term objectives. HIWS alone do not sufficiently explain absorptive capacity, as Nonaka (1994) underlined, because knowledge is 'deeply rooted' in positive attitudes, such as involvement and commitment: commitment is one of the most important components for promoting the formation of new knowledge within an organization' (Nonaka, 1994, p. 17).

Fourth, we respond to the call by Van De Voorde *et al.* (2012), Peccei *et al.* (2013) and Guest (2017) to clarify the HR practices that positively affect both employee well-being and organizational benefits. HAW plays a critical role in explaining how HIWS create a "win-win" context of mutual gains for both employees and companies. In terms of theory, HIWS elicit collective interactions for knowledge exchange and absorption, resulting in higher levels of absorptive capacity, through the mediating effect of HAW. Minbaeva *et al.* (2014) argued that absorptive capacity is promoted by HRM practices, but we have enriched this by an integrative perspective that incorporates the theory of HRM, positive psychology and knowledge management. We follow HRM research logic which suggests that HR systems improve employee performance via employee motivation (Liao *et al.*, 2009). This study improves our understanding by identifying HIWS as the key practices to enhance both HAW and absorptive capacity. We interpret this to suggest that if organizations expose their employees to management practices that have specific benefits for employees' experience of HAW, employees are more likely to perform their jobs in ways that promote their absorptive capacity.

Our findings also convey a practical message to managers in non-R&D organizations. HIWS act on organizational capabilities, such as absorptive capacity, through indirect paths (Foss *et al.*, 2009). Capabilities are indirectly formed by establishing specific conditions for employees that are proven to enhance positive attitudes. For building and maintaining absorptive capacity, organizations need workers to show wide positive attitudes. Therefore, HAW plays a fundamental role in developing absorptive capacity, hence creating competitive advantages. HAW can be promoted by applying challenging HR practices, for example, by establishing coherent, achievable and stimulating objectives (which is not frequent in banking). Coherence means that objectives follow a logic and are not contradictory. More frequently than desired, employees are asked to sell banking products with negative margins following a sales campaign. After some time, they are asked to remedy this by aggressively selling highly profitable products. In addition, information transparency could be improved by clarifying the financial configuration of banking products, as well as by improving partnerships. In addition, banking employees are increasingly more dependent not only on software (which makes decisions for them), but also on superiors who leave little room for

employees to make decisions. Giving more autonomy to branch teams is highly recommended, as autonomy increases both well-being and performance. Moreover, as financial markets are becoming more complex, with lower financial margins, banking employees need improved training programs to sell more products as a whole (known as cross-selling). In addition, employees need more training to focus on higher margin products. Finally, by designing a fair gain-sharing program, banking firms can foster teamwork, resulting in higher HAW and subsequently increasing branch capabilities.

In the digital era, where machines can substitute tasks traditionally carried out by humans, HAW is still a characteristic that differentiates human beings from machines and computers. It means that humans are (still) essential in generating differentiation and competitive advantage. Therefore, human-centered HRM, such as HIWS, should be employed by firms and branch managers to nurture absorptive capacity. As Nonaka (1994) and Vallina (2005) argued, the theory of organizational knowledge creation calls for building a “humanistic” knowledge society, beyond “economic rationality”. Individuals are “essential actors in creating new knowledge” (Nonaka, 1994, p. 34).

#### *Limitations and future research directions*

Certain limitations and directions for future research should be noted. First, the sample came from Spain and Italy, which share certain cultural and labor market characteristics. Future research could implement this investigation in other European countries with different cultures, such as Scandinavia. Second, causal feedback through which HIWS positively affects HAW and absorptive capacity, in turn enhancing HIWS and HAW, might be explored in a longer study. Third, though all hypotheses were supported, this research may have neglected other important outcome variables or key moderators. Happier employees are expected to have a positive influence on their colleagues and their organization (Meyer and Maltin, 2010). Future studies could consider the 2-1-2 mediation approach in investigating other well-being variables, such as trust and exhaustion (Guest, 2017), thus leading to different outcomes (self-efficacy). Fourth, the study could be an opportunity to look at the impact of specific HIWS on absorptive capacity, given that some HIWS can lead to work intensification and negative outcomes (such as training). Therefore, we advocate future studies which can address the individual effect of HIWS on both HAW and absorptive capacity.

#### **Conclusions**

The present study has revealed how HIWS, a consistent bundle of HRM practices, can influence HAW, in turn fostering absorptive capacity. Higher HAW resulting from HIWS can increase levels of absorptive capacity, a result which is consistent with the mutual gains approach of HRM. This research followed a 2-1-2 mediation model, which could be used in future research on improving firms’ competitive advantage, and could illustrate the role of HIWS in improving quality of life at work in a highly competitive context.

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