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# Are high-performance work systems (HPWS) appreciated by everyone? The role of management position and gender on the relationship between HPWS and affective commitment

## **Abstract**

**Purpose:** Although most studies on HPWS focus on various firm-level outcomes, there has been an increasing interest in how employees are affected by HPWS. However, most of these studies use social exchange theory and, based on an idea of reciprocal exchange, implicitly assume that all employees become more affectively committed to organizations using HPWS. Based on social identity theory, we argue that management position and gender likely influence how individuals respond to HPWS. Thus, the aim of this study is to examine how HPWS affects affective commitment among managers, subordinates, men, and women.

**Design/methodology/approach:** Hierarchical linear model analysis of 356 employees in 26 Swedish small and medium-sized manufacturing companies.

**Findings:** In the sample examined, managers and women show increased affective commitment in organizations using HPWS. For men with non-managerial positions, the results indicate a reversed relationship, i.e. HPWS could actually reduce affective commitment.

**Originality/value:** The findings indicate the need to consider individual differences when examining the effect of HPWS, and highlight the usefulness of relational-oriented theories when studying the employee outcomes of HRM systems.

## **Introduction**

Based on the notion that employees are the most important organizational resource (Andersén et al., 2016; Molloy and Barney, 2015; Wright et al., 1994), the concept of high performance work systems (HPWS) (Becker and Huselid, 1998; Huselid, 1995) has been examined, and advocated for, in both human resource management (HRM) (Paauwe, 2009; Subramony, 2009) and strategic management research (Chadwick et al., 2015; Colbert, 2004). The term HPWS refers to a group of interconnected HRM practices that focus on ‘flexible job assignments, rigorous and selective staffing, extensive training and development, developmental and merit-based performance appraisal, competitive compensation, and extensive benefits’ (Takeuchi et al., 2007, p. 1069). The overall purpose of implementing these practices is to contribute to achieving company objectives (Huselid et al., 1997) which ultimately generates competitive advantage (Boxall, 1996; 2003) and improved firm performance (Becker and Huselid, 1998; Tregaskis et al., 2013; Way, 2002; Wright et al., 2005). Such a firm-centric approach has, however, been criticized for neglecting that the employers and employees can have conflicting interests (Van De Voorde et al., 2012; Wood et al., 2012), and HPWS can result in negative outcomes for employees (Delaney and Godard, 2002; Godard, 2004; Harley, 2002; Ramsay et al., 2000). Moreover, how HPWS affect employees is likely to be a complex issue (Drummond and Stone, 2007) because different employees can react differently to HPWS (García-Chas et al., 2016; Heffernan and Dundon, 2016). Consequently, several publications have called for more research on how HPWS and HRM affect employees (Giauque et al., 2010; Grant et al., 2007; Grant and Shields, 2002; Heery, 2008; Kalleberg et al., 2006; Paauwe, 2009; Paauwe and Boselie, 2005; Van De Voorde et al., 2012), stressing the importance of restoring ‘employees’ experience of work to the heart of HRM research and practice’ (Boselie et al., 2005, p. 82).

Affective commitment (AC) has been identified as a key dimension of employee wellbeing (Horn et al., 2004; Iles et al., 1990; Rothmann, 2008) and a key objective of HPWS is to increase AC (Qiao et al., 2009; Takeuchi et al., 2009). AC is defined as ‘the degree to which an employee feels loyalty to a particular organization’ (Currivan, 1999, p. 497) and has been used in several studies on HPWS (Gong et al., 2010; Messersmith et al., 2011; Takeuchi et al., 2009). Thus, examining the relationship between HPWS and employees’ AC is an important area to explore.

Most studies use social exchange theory (Blau, 1964; Emerson, 1976) to hypothesize a positive relationship between HPWS and AC (Peccei and Van De Voorde, 2019). According to social exchange theory (Blau, 1964), the commitment for employees that is supposed to characterize HPWS-oriented organizations is expected to be reciprocated by employees in terms of increased AC (Chang and Chen, 2011). However, any assumption that all employees react in a similar manner to HPWS, as assumed in social exchange theory, may be an oversimplification of reality (Peccei and Van De Voorde, 2019). Instead, an individual’s social identification with an organization will determine how he or she responds to the exchange relationship (Hogg et al., 2005). Thus individuals will differ in what Tavares et al. (2016) refer to as their *currency of exchange*. For example, whereas most individuals are likely to be more committed to an organization that provides extensive training (a key dimension of HPWS), not all individuals are likely to appreciate training to the same extent. Thus, employees will vary in how much they value the training provided by the employer. In order to consider this, the present study will use social identification theory (SIT) (Tajfel, 1982; Tajfel and Turner, 1985) to examine the relationship between HPWS and AC. According to SIT, individuals seek to identify themselves with various social entities (Turner and Oakes, 1986) in order to reduce uncertainty or enhance their status (Goldberg et al., 2010). Because HPWS are influential to employees’ working conditions, being able to

socially identify with such policies and practices is likely to influence employees' AC. From an organizational approach on SIT, individuals' social identification with an organization leads to 'activities that are congruent with the identity' and 'support for institutions that embody the identity' (Ashforth and Mael, 1989, p. 20). Thus, if employees can socially identify with HPWS, their AC will likely be enhanced in terms of support for the HPWS-oriented organization.

Social identification with an organization is strongly influenced by other social identities (Amiot et al., 2007), making it relevant to examine how HPWS affect different social categories in various contexts. According to Sluss and Ashforth (2007), a social identity is determined by an interplay between the collective category and individual and interpersonal levels. Moreover, Sluss and Ashforth (2007) argue that in an organizational setting, interpersonal relationships mainly concern whether or not the individual has a managerial position; gender is a key social category at the level of the individual, and the organization constitute the collective category. Therefore, in the present study the relationship between management position, gender, and organizational characteristics in terms of HPWS will be examined. Previous studies have found that management position (Liao et al., 2009) and gender (Pichler et al., 2014; Qiao et al., 2009) influence attitudes towards to HPWS. The results of studies examining the relationship between HPWS and these factors have, however, been mixed. For example, Qiao et al. (2009) found that HPWS were less appreciated by women in Chinese organizations, whereas Pichler et al. (2014, p. 693) were able to conclude that 'HPWS are more strongly related to lower turnover among organizations that employ relatively more women' when examining American companies. This accentuates the importance of considering the empirical context. The influence of these social identities (i.e. gender and management position) on the relationship between HPWS and AC will be examined in the empirical setting of small and medium-sized enterprises (SMEs) in the

Swedish manufacturing industry. Previous studies on how the AC of different groups is affected by HPWS have mainly examined larger firms (Pichler et al., 2014; Qiao et al., 2009) and there is a general shortage of studies focusing on the relationship between HRM and commitment in SMEs (Giauque et al., 2010). The empirical setting is also relevant from a gender point of view. The Swedish manufacturing industry has higher levels of sick leave than other industries and women have higher sick leave than men in this industry (Ek et al., 2015). Organizational commitment is an important predictor of sick leave (Blau and Boal, 1987; Grunberg et al., 2000), making it highly relevant to examine how HPWS affects AC in an industry characterized by high levels of sick-leave. However, there is a considerable lack of studies examining HPWS among Swedish firms. Moreover, Sweden has one of the smallest gender gaps in the world (World Economic Forum, 2017). If there are significant differences between men and women in such a gender-equal country, this would accentuate the importance of considering gender when examining HPWS in less equal countries as well. Based on this discussion, the aim of this study is to examine how HPWS affects AC among managers, subordinates, men, and women in Swedish manufacturing SMEs. This purpose is fulfilled by a hierarchical linear analysis of a sample of 356 employees nested in 26 manufacturing SMEs located in Sweden. The study contributes to research on the relationship between HPWS and AC for different social categories, and could also have important managerial implications for Swedish manufacturing SMEs and other firms in a similar context.

## **Theory and hypotheses' development**

### *HPWS and AC*

HPWS concern several dimensions of HRM including employee empowerment, rigorous recruitment practices, extensive and continuous training, and compensation schemes based on performance (Lepak and Snell, 1999; Takeuchi et al., 2007). Thus, the term HPWS is a multifaceted construct, likely to greatly impact on occupational wellbeing. And, although most studies on HPWS have maintained a firm-centric approach, there has been increasing interest in employee outcomes in HPWS research (Chang and Chen, 2011; Heffernan and Dundon, 2016; Zhang et al., 2013). However, the results of these studies are mixed. Further, there is evidence to suggest that there are benefits as well as downsides for employees in organizations with HPWS. For example, some studies have found HPWS decreases employee turnover (Pichler et al., 2014; Way, 2002) as well as the likelihood of burnout (Bartram et al., 2012). Meanwhile, others have concluded that employees in HPWS-oriented organizations are more likely to experience burnout (Kroon et al., 2009), and have difficulties in achieving a work-life balance (White et al., 2003). Concerning how HPWS affect AC specifically, some studies have found that HPWS negatively affect AC (Heffernan and Dundon, 2016) and others have failed to identify a relationship between HPWS and AC (Harley, 2002; Takeuchi et al., 2009; Whitener, 2001). However, the majority of studies have found that HPWS is beneficial for employees' AC or related constructs (for example, Drummond and Stone, 2007; Gong et al., 2010; Messersmith et al., 2011; Wu and Chaturvedi, 2009).

The commitment shown for employees in organizations with HPWS, manifested in, for example, extensive training and rewards systems focusing on individual and team-based performance, produces a reciprocal response from the employees (Gong et al., 2010; Whitener, 2001). According to social exchange theory, if management activities are 'viewed beneficially by employees within an organization, they will be expected to reciprocate with

the attitudes and behaviors (e.g. commitment, satisfaction) valued by the organization' (Chang and Chen, 2011, p. 886). However, whether or not the management activities are viewed as beneficial is not only determined by the activities per se, but also by the individual who is the target for the activities. The notion that different individuals are likely to react differently to the exchange relationship has been somewhat neglected in the social exchange literature and accentuates the relevance of SIT (Tavares et al., 2016).

In contrast to the transactional approach characterizing social exchange theory, SIT (Tajfel, 1982; Tajfel and Turner, 1985) provides a relational approach to employee-management relationships. According to SIT, individuals identify themselves with various social categories, such as a religious affiliation or gender (Tajfel and Turner, 1985). Cognitively developing and relating oneself to various social categories helps the individual to order the social environment and to position himself or herself within this context (Tajfel, 1982). As argued by Ashforth and Mael (1989, p. 22), 'organizational identification is a specific form of social identification' and identifying with an organization can help the individual to socially define himself or herself. Identifying with an organization and its policies and activities is therefore an important predictor for AC (Van Knippenberg and Sleebos, 2006). Thus, if employees identify themselves with the key characteristics of HPWS, they are likely to be more committed to an organization with HPWS. Numerous studies (Takeuchi et al., 2007; Tregaskis et al., 2013; Way, 2002) have found HPWS to be strongly related to firm performance. At an aggregated level, it seems that individuals find it easier to socially identify with high-performing organizations than with inferior organizations (Van Knippenberg, 2000), indicating that employees in companies with HPWS will socially identify themselves with such organizations. In addition, several of the HR practices used in HPWS are also likely to increase employees' identification with the organization. For example, most employees are more likely to identify with HPWS practices such as

decentralization, open communication, and flexible job assignments (Jiang and Liu, 2015). Moreover, the competence development dimension and reward systems associated with HPWS (Becker and Huselid, 1998) are likely to generate positive feelings among many employees in terms of, for example, a sense of approval and appreciation. As stated by Ng and Sorensen (2008, p. 252), fulfillment of ‘needs of esteem, approval, and affiliation make employees more likely to embrace the organization as a part of their social identity’ and such a ‘positive feeling can increase affective commitment.’

To summarize, most previous empirical studies have that HPWS positively affect AC. Moreover, this notion is supported by SIT. Thus:

*Hypothesis 1:* The use of HPWS is positively related to employees’ AC.

Although there are some elements of HPWS that are likely to have a universal positive influence on the AC of employees, according to SIT, this does not necessarily imply that all employees will identify with HPWS to the same extent. On the contrary, a core idea of SIT is that individuals vary in their social identification, and consequently their commitment to an organization based on how they identify to other entities (Amiot et al., 2007; Ashforth and Mael, 1989).

#### *HPWS and AC among managers and subordinates*

There are several dimensions of HPWS that are likely to make managers more committed to organizations with HPWS than subordinates. An important characteristic of HPWS is to promote from within the organization in order to develop firm-specific knowledge (Takeuchi et al., 2007; Wright et al., 2001). Internally promoted managers are therefore more likely to act in accordance with HPWS policies by, for example, participating in training, performing well and being team-oriented (Huselid, 1995). According to SIT, individuals are expected to

congruently act toward systems they can identify with, and also be more supportive of such systems (Ashforth and Mael, 1989). Thus, the internal promotion of managers is one explanation for why managers in organizations with HPWS are likely to be more committed to the organization than subordinates.

Another reason is that managers are not only passive recipients of work systems. Because HPWS are initialized by managers, the managers initializing the implementation of HPWS are obviously likely to be highly supportive of them. For example, Messersmith et al. (2011) found that HR-managers are more committed to HPWS than other employees. For smaller SMEs with few hierarchical levels, the managers are usually the ones who are responsible for initializing HPWS. Nevertheless, for larger SMEs, middle managers can also play a crucial role in the initialization of strategies (Andersén and Andersén, 2014; Floyd and Wooldridge, 1994) such as HPWS. Working at the intersection between top management and the functional activities of the firm, middle managers ‘influence strategy in both the upwards and downwards directions’ (Gong et al., 2010, p. 122). As for HR-managers, those other managers responsible for HPWS at various levels are consequently likely to be more committed to the systems.

Those managers who are not directly involved in the original formulation or initialization of HPWS are also more likely to be more committed to HPWS. Middle-managers play a key role in the implementation of firm strategies (Floyd and Wooldridge, 1994; Wooldridge and Floyd, 1990) and have, compared to subordinates, more interactions with senior management or others responsible for HPWS. The likelihood of identifying to a specific entity is strongly influenced by the social interaction context (Stets and Burke, 2000). Therefore, interaction with proponents of HPWS is likely to make middle-managers identify with, and become more committed to, HPWS. Moreover, several studies (for example, Evans and Davis, 2005; Messersmith and Guthrie, 2010; Sun et al., 2007) have found HPWS to have

a positive effect on firm performance. Interactions between middle-managers and top management are likely to make middle-managers better informed (or persuaded) about the benefits of various strategies and their importance for firm performance (Mantere, 2008). Thus, middle-managers' AC in organizations with HPWS is most likely strengthened.

Essentially, because managers are involved in the formulation and implementation of HPWS and due to their social interaction context, managers are expected to identify more strongly with HPWS. Thus, the second hypothesis can be expressed as:

*Hypothesis 2: HPWS have a stronger positive effect on AC for managers than subordinates.*

#### *HPWS and AC among men and women*

Men and women often value HRM practices differently (Clark et al., 2017), and earlier research regarding whether men or women are more committed to HPWS-oriented organizations has produced mixed results. Whereas Qiao et al. (2009) found women to be less committed to HPWS than men, Pichler et al. (2014, p. 697) demonstrate that organizations with many females report 'less turnover when the use of HPWS is more extensive'. Pichler et al. (2014) argue that the differences in results can be explained by different cultural contexts (i.e., China and US), and that Western women value the flexibility of HPWS to a greater extent because it enables them to achieve a better work-life balance. However, White et al. (2003) found HPWS to affect work-life balance negatively. There are, nevertheless, other arguments to suggest why women are more committed to organizations with HPWS than men.

The industry examined in the present study, i.e. Swedish manufacturing companies, is dominated by men—and women constitute less than 25% of the employees (SCB, 2016).

Women in organizations dominated by men often experience less power which can have several implications for salaries and promotion possibilities (Kaiser and Spalding, 2015; Ragins and Sundstrom, 1989). Although the wage gap between men and women has decreased, different wages for men and women is a reality (Weichselbaumer and Winter-Ebmer, 2005). Moreover, women still experience the presence of a ‘glass ceiling’ (Ezzedein et al., 2015; Ng and Sears, 2017) or a ‘sticky floor’ (Filippin and Ichino, 2005), preventing them from reaching top positions or leaving subordinate positions. Although some studies (Powell and Butterfield, 1994) question the presence of a glass ceiling, the perception that men are favored remains strong, and many women in the workplace experience discrimination (Avery et al., 2008). According to Timberlake (2005), discrimination against women in the workplace can be partly explained by a lack of social capital, that is, access to social networks and relationships essential for career development. The accumulation of social capital is dependent on the social group an individual belongs to (Seibert et al., 2001). In male dominated organizations, individuals belonging to male social groups are more likely to possess greater social capital. Moreover, gender discrimination is often a problem in manufacturing-related industries, and Powell and Sang (2015, p. 919), for example, found that ‘women experience gendered treatment in everyday interactions with peers’ in the UK engineering and construction sectors. Although the gender gap is smaller in Sweden than in the UK (World Economic Forum, 2017), it is quite plausible that this finding also applies to the Swedish manufacturing industry.

Feeling unfairly treated is, as could be expected, strongly negatively related to AC (Simons and Roberson, 2003) as individuals are understandably not likely to identify with the entities discriminating against them. A key characteristic of HPWS, however, is the use of objective and quantifiable data for key HRM practices such as reward systems, wages, and promotions (Becker and Huselid, 1998). Moreover, these policies should be communicated

clearly and frequently to employees, making HPWS highly transparent within the organization (Way, 2002; Wu and Chaturvedi, 2009). HPWS practices such as open communication with management (Macky and Boxall, 2007), well-defined expectations, and criteria for salaries, rewards, and promotions (Way, 2002) make social capital and ‘untold benefits and rewards’ (Timberlake, 2005, p. 43) less important. Therefore, companies with HPWS are expected to be less discriminative against women. When wage differences do exist, or when men are promoted more often, the decisions in organizations with HPWS are, compared to organizations without HPWS, based more on objective facts and less influenced by gender bias. Therefore, women are expected to identify more to organizations with HPWS. The HPWS-oriented organization is, therefore, expected to be more objective and less discriminatory against women, making women in such organization more committed. Hence, the third hypothesis can be expressed as:

*Hypothesis 3:* HPWS have a stronger positive effect on AC for women than men.

## **Method**

### *Sample*

The sample is from a larger study on HRM practices in Swedish SMEs in the manufacturing industry. The dependent variable (AC) and the key independent variable (HPWS) have not been used in any previous publications based on this data-set. The data were collected by a consultancy company and a total of 150 companies located in western Sweden were contacted. The information was collected from a database which includes all Swedish companies (i.e., Infotorg Företag), as well as from three online surveys directed to various individuals in each company. The three surveys measured different variables (described in the

following section) and were answered by the CEO (Chief Executive Officer), the HR-manager, and 8-15 employees from each firm.

The final sample used in the present study includes 26 companies and information from 408 respondents (26 replies from CEOs, 26 replies from HR-managers, and 356 replies from employees). The number of employees in the companies ranged from 30 to 224 and the age of the companies varied from 8 to 85 years. 250 of the 356 employees were men and 105 had a management position. The distribution between men and women corresponds to the proportion of women in the manufacturing industry in Sweden. Most (156) of the employees worked with production-related tasks, 44 with research and development, 60 with sales and marketing, 54 with support and administration, and 42 had other tasks.

### *Measures*

The study involves data from two different levels: Firm-level data and employee-level data. Firm-level data were collected from the database Infotorg Företag, as well as and one survey answered by the CEO and one survey answered the HR-manager of each firm. Individual-level data were collected by employee surveys. Subjective variables (i.e., AC, HPWS, and firm performance) were measured using seven-point Likert scales. It is worth noting that the three subjective variables were collected from different respondents in each firm.

*Dependent variable.* The dependent variable is employee-level AC and was measured in the employee survey. The four item scale developed by Currivan (1999) for measuring organizational commitment was used to measure AC. The Cronbach's alpha for this measure was 0.75.

*Independent variables.* HPWS was measured at the firm-level and reported by the HR-manager of each firm. The 21 item scale used by Takeuchi et al. (2007), originally developed

by Lepak and Snell (2002), for measuring HPWS was used. Because this study uses hierarchical linear model analysis, the number of firm-level observations is limited to 26. This rules out any traditional reliability and validity analysis, making it important to ensure that the variable used is established and corresponds to the values with studies using larger sample sizes (Andersén, 2017; Kauppila, 2014). Cronbach's alpha for HPWS was 0.84 and the mean score was 4.51. These values correspond well with the work of Takeuchi et al. (2007) (Cronbach's alpha = 0.89, mean = 4.15). As illustrated by the Takeuchi et al. scale used in this study, HPWS is not regarded as a binary variable. Instead, all firms can be placed on a HPWS continuum on a seven-point Likert scale based on the extent to which they adopt HPWS. The employee-level independent dummy variables *gender* and *management position* were collected in the employee survey by asking the respondents their gender and whether or not they held a management position. The data was coded as 1 = man, 0 = woman; and, 1 = manager, 0 = subordinate.

*Control variables.* The employee-level control variables used were *level of education* and *job type*. The employees were asked to state their highest level of education and main job type in the employee survey. Dummy variables (specified in Table 1) were used for each factor. Firm-level control variables *firm age* and *firm size* were measured using archival data. Moreover, whether a firm is performing well or not is likely to influence AC. Therefore, *firm performance* was measured by asking the CEO to rate the profitability and the growth of the firm for the last three years in comparison to competitors on a seven-point Likert scale. The average of these values was used to measure firm performance.

### *Hierarchical linear model analysis*

Because the data were from two different levels, in which 356 employees are nested in 26 firms, the analysis requires the use of hierarchical linear model (HLM) analysis (Woltman et al., 2012). The software HLM7 was used to conduct two-level hierarchical linear model analysis. Firstly, an analysis if HLM is justified was conducted by determining whether belonging to a specific company affected the dependent variable. An intercept-only null model regression was conducted and the result of this analysis ( $\chi^2 = 66.63$ ,  $P < 0.00$ ) supports the use of HLM; hence, there are some firm-level factors influencing AC. Further analyses revealed that 11.02 percent of the variance in AC can be explained by firm-level factors and 88.98 percent by factors related to the individual.

HLM does not produce any traditional  $R^2$ -values, and pseudo  $R^2$ -values for within-firm and between-firm variance were calculated according the formula suggested by Raudenbush and Bryk (2002). The cross-level interaction effects postulated in Hypotheses 2 and 3 were estimated by examining the significance levels, and also the nature of the interactions by visual examination of the slopes in the slopes-as-outcome model. As suggested by Garson (2013), firm-level variables (HPWS, size, age, performance) were centered around the grand-mean.

### **Results**

The descriptive statistics and bivariate correlations are presented in Table 1 and the regression model is presented in Table 2. Because each subjective variable (i.e., AC, HPWS, and firm performance) was collected from different respondents, concerns for common-method bias can be alleviated. Seven percent of the variance in AC can be explained by the employee-level factors included in the regression, whereas 27 percent can be explained by the firm-level

factors examined. Of the firm-level factors, being an employee of a high performing company has a strong ( $P < 0.001$ ) influence on AC. Because HPWS have been found to affect firm performance (Evans and Davis, 2005; Messersmith et al., 2011; Sun et al., 2007), additional regressions were conducted in which performance was excluded. This did, of course, decrease the explained variance in the models, but the results corresponded to the results when firm performance was included (i.e., confirmation of Hypotheses 2 and 3 described below).

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INSERT TABLE 1 ABOUT HERE  
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INSERT TABLE 2 ABOUT HERE  
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Hypothesis 1 stipulates that HPWS have a universally positive influence on AC. As shown in Table 2, this hypothesis could not be confirmed and HPWS is not significantly ( $\beta = 0.07, P > 0.50$ ) related to AC.

Hypothesis 2 postulates that HPWS have a stronger effect on managers' AC than on subordinates' AC. The cross-level interaction of management position and HPWS on AC is significant ( $\beta = 0.47, P < 0.05$ ). Following the recommendation by Dawson (2014) and Dawson and Richter (2006), the nature of this interaction effect is illustrated in Figure 1. Moreover, cross-level studies examining two-way interaction generally illustrate the relationship graphically in order to show the nature of the interaction effects (see, for example, Andersén, 2017; García-Chas et al., 2016; Kauppila, 2014). The figure shows the separate regression lines for managers and for subordinates. As previously described, HPWS

is not a binary variable and the regression line for managers illustrates that the higher the HPWS, the higher the AC for managers. As illustrated, being in a HPWS-oriented organization is highly beneficial for managers' AC, but HPWS have no effect, or even a slightly negative effect, on the AC of subordinates. Thus, as illustrated in Figure 1, and as confirmed by the level of significance presented in Table 1, managers' AC benefits more from HPWS and Hypothesis 2 is confirmed.

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INSERT FIGURE 1 ABOUT HERE  
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According to Hypothesis 3, HPWS have a stronger effect on AC among women. The cross-level interaction of HPWS and gender is significant ( $\beta = -0.27, P < 0.05$ ) and Figure 2 demonstrates the nature of the interaction between HPWS and gender. As evidenced by the regression coefficient in Table 2, and as illustrated by Figure 2, HPWS is apparently more appreciated in terms of increased AC by women than men. Thus, Hypothesis 3 is confirmed.

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INSERT FIGURE 2 ABOUT HERE  
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**Discussion**

This study has several important implications. As argued for in the development of Hypotheses 2 and 3, the results concerning managers' higher commitment towards organizations with HPWS can most likely be explained by their role in strategy formulation

and implementation of HPWS. Women's increased AC in organizations with HPWS could possibly be the result of objective and well-defined criteria for compensation, rewards, and promotion which assume less discrimination. Whereas previous studies have found HR-managers (Messersmith et al., 2011) and women in top management positions (Pichler et al., 2014) to be positive towards HPWS, the results of this study indicate that this notion also holds true for employees in middle-management positions and women in general. Although as few studies have examined these issues, this study contributes to the accumulation of evidence suggesting that HPWS might have a general positive effect on women and managers' AC.

Although HPWS have a positive effect on the AC of some individuals, the Swedish manufacturing industry is generally dominated by men and individuals without managerial responsibilities (SCB, 2016). For example, in the sample examined in the present study, out of the 356 respondents, 250 are men, 251 do not hold a management position, and 152 are men without a management position. AC is an important predictor of occupational wellbeing and several studies (Clark, 1996; 1997; Gazioglu and Tansel, 2006) have shown women to experience higher levels of occupational wellbeing than men. The results of the present study clearly demonstrate that some categories are not affected by HPWS, and non-managers are likely to become less committed to organizations with HPWS. Thus, HPWS in manufacturing SMEs seem to miss a key target (i.e., men without management positions) and this group generally experience less occupational wellbeing. This result should worry those arguing for the universal benefits of HPWS because companies with HPWS could risk having employees with diverse levels of AC.

The finding that different groups respond differently to HPWS accentuates a wider theoretical implication which can help explain the mixed results of previous studies. That is, some studies have found HPWS to be beneficial for employees (e.g., Wu and Chaturvedi,

2009; Zatzick and Iverson, 2011) whereas others have concluded the opposite (Heffernan and Dundon, 2016; Kroon et al., 2009). Most previous research (for example, Garcia-Chas et al., 2014; Whitener, 2001; Zhang et al., 2013) on how HPWS affect employees has used social exchange theory, arguing that employee training and development, among others, are assumed beneficial practices associated with HPWS that yield reciprocal responses from employees in terms of, for example, increased AC (Chang and Chen, 2011; Gong et al., 2010). By showing that employees react differently to HPWS, the results of the present study provide support for the critique put forward by Peccei and Van De Voorde (2019) on relying solely on social exchange theory to examine the employee effects of HRM. Moreover, the present study provides additional empirical support for those arguing for the complexity of the relationship between HRM-systems and employee wellbeing (Liao et al., 2009; Takeuchi et al., 2009; Whitener, 2001; Wood et al., 2012). Whereas, for example, Datta et al. (2005) argue for the importance of considering industry differences when examining HPWS, the present study accentuates the need to also examine individual factors such as gender and management position. As evidenced in this study, relational-oriented theories such as SIT can be used as alternatives or complements to the more transactional-oriented social exchange theory.

In addition to providing support for the use of SIT when studying HPWS, the present study also contributes to SIT *per se*. The conceptualization of social groups has been a debated area in SIT research (Gillespie et al., 2012), and as expressed by Brown (2000, p. 751): ‘SIT does not differentiate between different kinds of groups’. Much organizational research using SIT has used the ‘overall’ organization as a social group without defining any specific characteristics of the organization (Van Knippenberg and Sleebos, 2006)—for example, by examining how the level of social identification with an organization influences employees’ relationships with external stakeholders (Korschun, 2015). In the present study, the relationship between two (mostly) binary social groups in terms of gender and

management position and an organizational characteristic in terms of HPWS has been examined. By not only examining whether or not an individual identifies with the organization, the present study shows the importance of considering organizational characteristics when studying a collective category in terms of an organization. Moreover, the findings of the study illustrate the usefulness of adopting cross-level research designs when using SIT.

This article also illustrates the usefulness of cross-level research designs when examining employee-level outcomes of HRM-systems as suggested by Boselie et al. (2005). An important objective of HPWS is to increase employee commitment (Qiao et al., 2009; Takeuchi et al., 2009) and some literature uses HPWS and commitment-based HRM as synonymous concepts (Wood et al., 2003). Using same source-data, for example, from HR-managers concerning employees' AC and the use of a commitment-oriented HRM-system such as HPWS, can be criticized as tautological. Thus, it is highly plausible that respondents giving high scores to the use of HPWS will overrate the effect of these practices on actual AC. Several studies using cross-level analysis (Chang and Chen, 2011; Heffernan and Dundon, 2016; Liao et al., 2009; Wood et al., 2003) show the relationship between HPWS and AC to be complex, and as such the present study provides more evidence for those findings.

### *Practical implications*

The importance of gender for HPWS have produced mixed results in previous studies (Pichler et al., 2014; Qiao et al., 2009). Thus, the specific results of the present study are mainly generalizable to similar contexts, i.e. Swedish (and most likely also Scandinavian) manufacturing SMEs. If the objective is to increase the AC of specific groups such as women

or managers in Scandinavian manufacturing SMEs, the present study provides some straightforward evidence that the use of HPWS could be one method of achieving such outcomes. Although this could be expected to hold true for manufacturing SMEs in a western context—or at least a Scandinavian context—there is also some evidence to suggest that this implication may also be valid in other contexts. For example, Messersmith et al. (2011) also found that managers were more positive to HPWS, whereas Pichler et al. (2014) were able to show positive effects of HPWS on women. Importantly, HPWS also run the risk reducing the AC of men in subordinate positions in these firms, which accentuates that the study has a more generic managerial implication.

The most important generic managerial implication of the present study is that it highlights the importance of considering that different groups of employees are likely to react differently to HPWS. Previous studies have shown the relationship between HPWS and employees' AC to be mediated by various internal (Evans and Davis, 2005; Heffernan and Dundon, 2016) and external factors (Datta et al., 2005). The present study provides more evidence suggesting that the relationship between HPWS and AC is highly complex. Thus, managers should be aware that implementing HPWS is not an easy quick fix for fostering more committed employees, and the relationship between HPWS and increased commitment is not always straightforward.

#### *Limitations and future research opportunities*

A few study limitations should be noted which also provide some new research opportunities. Firstly, the sample is limited to 356 employees in 26 manufacturing SMEs located in a specific region. Although examining similar organizations in a specific context alleviates concerns for potential confounding factors, it limits the generalizability of the findings. The

most important contribution – that different employees are likely to react differently towards HPWS – is likely of importance to other contexts as well. However, the specific relationships identified are most relevant for other manufacturing SMEs in western, or at least Scandinavian, countries and more studies examining the effects of HPWS on employees' AC would increase the generalizability of the present study. More specifically, it would be interesting to examine whether or not HPWS are more favorable for minority groups within organizations. This could be organizations with more women than men (in contrast to the sample examined in this study) or organizations with ethnic or other minorities.

Secondly, this study has only examined a specific employee-level outcome of HPWS. Because of the specific nature of HPWS, that is, its focus on raising employee commitment, this is probably the most important employee factor to examine. Nevertheless, other studies on HPWS have examined other outcomes at the employee-level, for example, job satisfaction (Macky and Boxall, 2007), burnout (Kroon et al., 2009), and work-life balance (White et al., 2003). This study has identified that managers, subordinates, men, and women vary in their commitment towards HPWS and future studies are encouraged to examine how HPWS affects other wellbeing-related factors of these groups. In addition, future studies could also examine the relationship between AC and various dimensions of HPWS. The present study has an aggregated approach to HPWS in order to examine the overall attitudes towards HPWS. Examining the relationship between gender and/or management position and specific dimensions of HPWS (e.g. extensive training, flexible job assignments etc.) could provide a more detailed picture of the relationship between social categories and HPWS.

## *Conclusion*

This study has shown the importance of not considering employees as a homogenous entity that responds to HPWS in a similar manner based on the idea of reciprocal exchange. Thus, when examining consequences for employees of HPWS, it is important to consider that individuals belong to different social groups and this affects their identification with, and response to, HPWS. Using SIT is one way to consider such differences, and future research is encouraged to apply the theory, or other more relational-oriented explanations, when analyzing how different HRM-systems affect employees.

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**Table 1. Descriptive statistics and correlations**

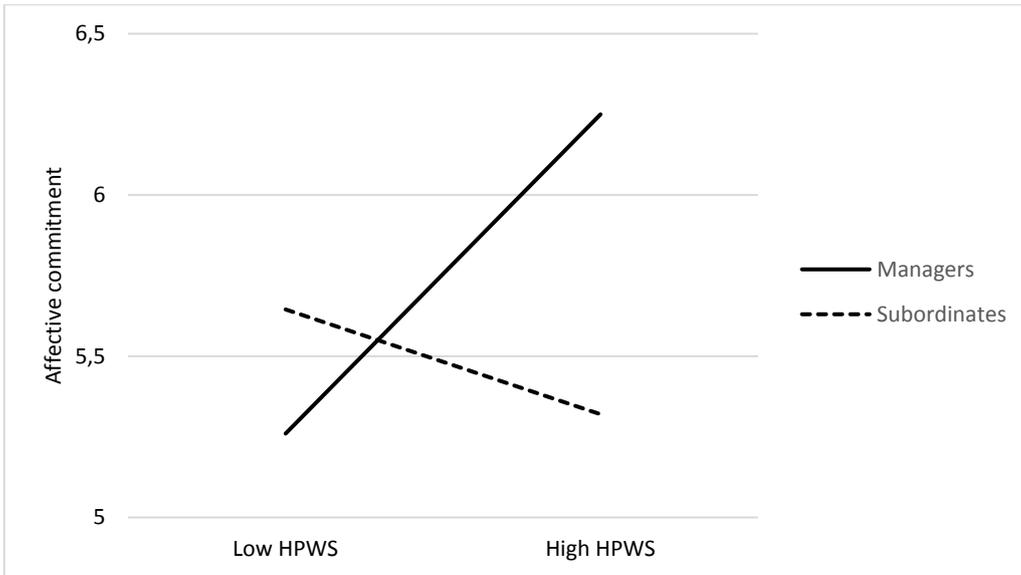
<b>Level 1, n = 356</b>	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12
1. Edu. (elementary)	0.09	0.29												
2. Edu. (vocational)	0.22	0.41	-0.17**											
3. Edu. (high school)	0.44	0.50	-0.28**	-0.47**										
4. Edu. (university ≤ 3 yrs.)	0.15	0.36	-0.13*	-0.22**	-0.36**									
5. Edu. (university > 3 yrs.)	0.11	0.31	-0.11*	-0.18**	-0.30**	-0.15**								
6. Task (production)	0.44	0.50	0.16**	0.18**	0.06	-0.18**	-0.27**							
7. Task (RnD)	0.12	0.33	-0.06	-0.12*	-0.09	0.17**	0.15**	-0.33**						
8. Task (sales)	0.17	0.37	-0.06	-0.08	0.06	-0.04	0.11*	-0.40**	-0.17**					
9. Task (support)	0.15	0.36	-0.05	-0.07	-0.04	0.08	0.11*	-0.37**	-0.16**	-0.19**				
10. Task (other)	0.12	0.32	-0.05	0.02	-0.02	0.06	0.02	-0.32**	-0.14**	-0.17**	-0.16**			
11. Gender (1 = male)	0.70	0.46	0.05	0.09	-0.06	-0.02	-0.05	0.17**	0.08	-0.08	-0.20**	-0.01		
12. Manager (1 = yes)	0.29	0.46	0.01	0.06	-0.10	-0.02	0.08	0.24**	-0.07	-0.14**	0.02	-0.14**	0.21**	
13. Affective commitment	5.57	1.04	0.03	0.00	-0.01	-0.09	0.09	-0.09	-0.01	0.01	0.08	0.05	-0.01	0.08

<b>Level 2, n = 26</b>			1	2	3
1. Firm age	38.31	18.29			
2. Firm size (log10)	1.83	0.28	-0.09		
3. Firm performance	4.12	1.13	-0.12	0.04	
4. HPWS	4.51	0.71	-0.10	-0.04	-0.12

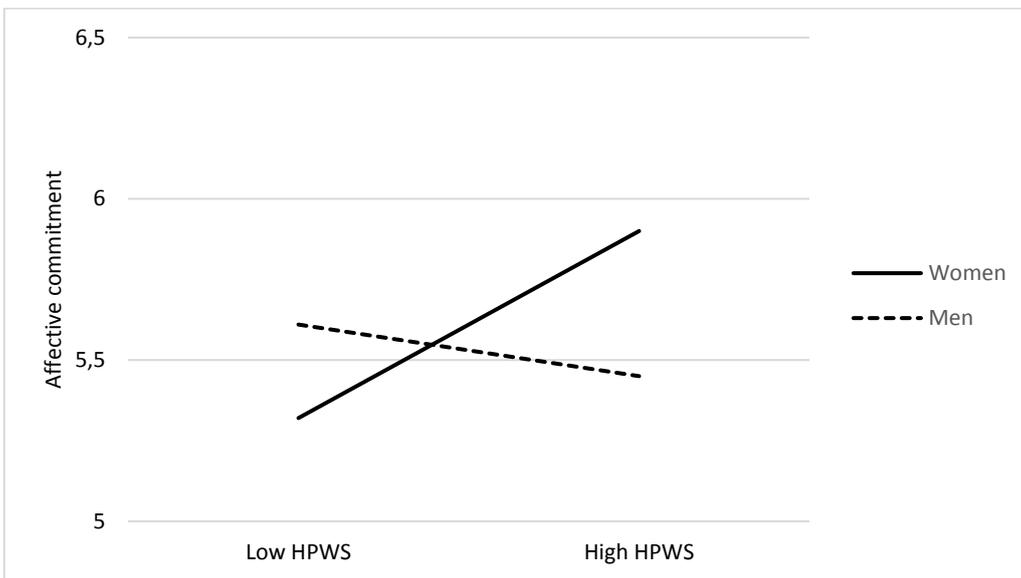
\*P<0.05; \*\*P<0.01

**Table 2. Results of hierarchical linear modelling analyses of affective commitment**

	<b>Affective commitment</b>	
	Coefficients	S.E.
Intercept	5.80***	0.16
<i>Level 1 control variables</i>		
Education (elementary school)	0.11	0.14
Education (high school/vocational)	0.02	0.13
Education (university ≤ 3 yrs)	-0.27*	0.12
Education (university > 3 yrs)	0.09	0.19
Task (production)	-0.40*	0.18
Task (RnD)	-0.23	0.20
Task (sales)	-0.23	0.17
Task (support)	-0.04	0.14
<i>Level 1 independent variables</i>		
Management position (1 = Manager)	0.29†	0.15
Gender (1 = Man)	-0.08	0.08
<i>Level 2 control variables</i>		
Firm size	-0.17	0.22
Firm age	0.00	0.00
Firm performance	0.27***	0.06
<i>Level 2 independent variables</i>		
HPWS	0.07	0.10
<i>Cross-level interactions</i>		
HPWS x Manager	0.47*	0.21
HPWS x Man	-0.27*	0.11
Pseudo R <sup>2</sup> within-firms	0.07	
Pseudo R <sup>2</sup> between-firms	0.28	
*P<0.05; **P<0.01;***P<0.001		



**Figure 1. HPWS and affective commitment among managers and subordinates**



**Figure 2. HPWS and affective commitment among men and women**