## RESEARCH

# Where there is light, there is dark: a dual process model of high-performance work systems in the eyes of employees

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## Abstract

High-performance work systems have been widely adopted in the workplace. Previous research on high-performance work systems debated whether the generated effects are mutual gains or conflicting outcomes for employers and employees. Drawing on the job demands and resources model, this conceptual study proposes that high-performance work systems can be both beneficial and harmful by eliciting distinct perceptions in employees. Specifically, perceptions of job resources are the positive and perceptions of job demands are the negative mechanism whereby high-performance work systems affect employee job performance. This research further proposes that servant leadership strengthens the positive impact of high-performance work systems, whereas directive leadership strengthens the negative impact. Overall, this conceptual research provides new insights into the research on high-performance work systems.

**Keywords:** High-performance work systems (HPWS), Job demands, Job resources, Leadership, Job performance

## Introduction

High-performance work systems (HPWS) have garnered much research attention over the past three decades and such attention seems to be increasing (Jackson, Schuler and Jiang 2014). It is argued that HPWS is commitment-oriented and can enhance employees' competencies, motivation, and discretion at work when employees are treated as a source of sustainable competitive advantage (Sun, Aryee, and Law 2007). Extant literature suggests that organizations adopting HPWS tend to achieve better operational and financial performance (e.g., Combs et al. 2006; Saridakis, Lai, and Cooper 2017; Sun et al. 2007; Wu et al. 2015). It is also documented that employees exposed to HPWS tend to be proactive (Beltrán-Martín et al. 2017) and creative (Chang et al. 2014) and have high job performance (Aryee et al. 2012, 2016; Liao et al. 2009). This line of research suggests that HPWS offers mutual gains for both employees and their organizations (van de Voorde, Paauwe, and Van Veldhoven 2012).

However, another line of research indicates that HPWS raises conflicting outcomes for employees and their employers (e.g., Ehrnrooth and Björkman 2012; Jensen, Patel and Messersmith, 2013; Wood et al., 2012). According to Ostroff and Bowen (2016), human resource practices serve as a signaling system that sends messages to employees about

what is valued and what are appropriate behaviors. By investing in employees and offering autonomy and flexibility at work, HPWS communicates an organization's expectations for extra effort from its employees (Shaw et al. 2009). Thus, under the practice of HPWS, employees may be faced with work overload, high working speeds, and tight deadlines and feel that they are forced to intensify their work in order to comply with the organization's interest (Balducci, Schaufeli, and Fraccaroli 2011; Boxall and Macky 2016; Macky and Boxall 2008). For example, certain HPWS practices such as performance appraisal and performance-contingent pay reflect employers' expectations for higher levels of performance and productivity (Pohler and Schmidt 2015). Through these practices, employers place greater demands and responsibility on employees (Shaw et al., 2009). Employees thus experience increased stress and decreased control over the pace and amount of work (Anthony et al. 2013). In this light, HPWS contributes to organizational competitive advantages at the cost of employees' well-being in the way of increased emotional exhaustion and enhanced job anxiety (e.g., Jensen et al. 2013; Kroon, van de Voorde, and van Veldhoven 2009; Macky and Boxall 2008; van de Voorde and Beijer 2015). Indeed, Godard (2004) criticizes studies stressing the contribution of HPWS as not only overestimating HPWS' positive effects but also underestimating potential costs.

Based on these competing perspectives, we expect that when HPWS is adopted in an organization, it has both bright and dark sides. Therefore, our understanding of HPWS would be incomplete if we take only one side into consideration. Indeed, Bamberger and Meshoulam (2000) suggest viewing the two competing aspects together to capture a complete picture of HPWS. Hence, our purpose is to conceptualize two opposite mechanisms through which HPWS promotes or prohibits three aspects of job performance and find out when such effects become more or less pronounced. We focus on job performance (represented by task performance, organizational citizenship behavior, and counterproductive work behavior) (Colquitt, Lepine, and Wesson 2011) for two reasons. First, it is crucial to firm success (Huselid 1995). Second, as one of the major concerns of human resource management research (Alfes et al. 2013), employees' individual performance has been given limited attention in studies on HPWS (Aryee et al. 2012).

Drawing on the job demands and resources (JD-R) model (Demerouti et al. 2001), we identify perceived job demands and perceived job resources as contrasting perceptions employees hold toward HPWS, which leads to different performance outcomes. HPWS manages the work domain and shapes working conditions (Boxall and Macky 2009). According to the JD-R model, working conditions encompass both job demands and job resources, the perceptions of which activate an energy-depletion effect and a motivational effect respectively. Consequently, perceptions of job demands and job resources may be linked to job performance in opposite directions (Bakker and Demerouti 2017). In other words, while job resource perception benefits job performance, job demand perception deteriorates job performance. Building on the JD-R model and related research, we speculate that HPWS may be favorable or detrimental to job performance, depending on whether employees perceive it as resources or demands. Indeed, Schaufeli and Taris (2014) note that the conceptual difference between job demands and job resources is not clear-cut: Certain working conditions perceived as resources by some employees might be experienced as demands by others. Following this logic, it is very likely that the two contrasting perceptions toward HPWS coexist among employees, which generate mixed effects on job performance.

We further extend our theorizing by identifying two leadership styles (servant leadership and directive leadership) that strengthen the positive or negative effect of HPWS. The role of managers in the functioning of HPWS has been increasingly recognized (Pak and Kim 2016). Although they are not the sole deliverers of human resource practices, line managers serve as important agents in their work groups by enforcing human resource policies, such as setting objectives, appraising performance, giving feedback, and providing mentoring (Den Hartog, Boselie, and Paauwe 2004). The way in which line managers implement human resource practices greatly influences employees' perceptions of their working conditions (van de Voorde, Veld, and Van Veldhoven 2016). Therefore, line managers' skills and characteristics in performing these tasks play a crucial role in acting on HPWS. Whether the intended effects of HPWS can be generated is determined by line managers to a great extent. In this case, how employees perceive HPWS may be influenced by managers' leadership behaviors (Purcell and Hutchinson 2007). As Bowen and Ostroff (2004) suggest, managers who implement human resource policies in a manner that elicits favorable attitudes in employees can contribute to the desired performance. We expect that HPWS evokes different perceptions of job demands and resources and then leads to discrepant performances depending on the leadership styles of line managers.
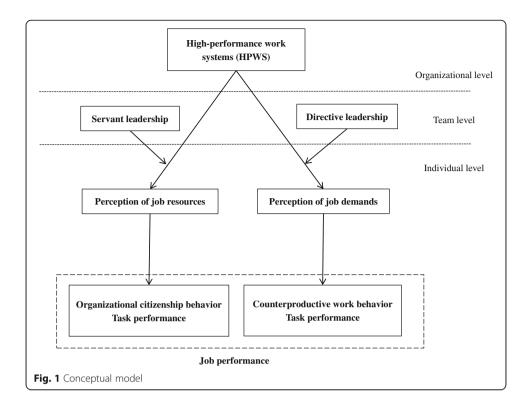
Overall, this paper makes three theoretical contributions. First, it advances our understanding of HPWS's effects on individual performance by considering both the bright and dark sides of HPWS. Second, this study extends the contingency view of strategic human resource management and enriches leadership research by exploring the interaction of HPWS with servant and directive leadership styles. Doing so responds to the call for attention to managers' role in the human resource management research (Huselid 2011). Third, our research enriches the literature of the JD-R model by suggesting that whether employees interpret the company-level practice as job demands or job resources depends on managers' leadership styles. Figure 1 illustrates our conceptual model.

## Theory and propositions

### Job demands-resources (JD-R) model

The JD-R model posits that job demands and job resources are two sets of working conditions that can be distinguished in each organizational context (Schaufeli, Bakker, and Van Rhenen 2009). Job demands refer to those physical, psychological, social, or organizational aspects of a job that require physical or mental efforts and are therefore associated with certain physiological and psychological costs (Demerouti et al. 2001). Workload, time urgency, job responsibility, and emotional conflict are specific forms of physiological and psychological costs (Crawford, LePine, and Rich 2010). Job resources refer to those physical, psychological, social, or organizational aspects of a job that may (1) be functional in achieving work goals, (2) reduce the physiological and psychological costs of job demands, and, (3) stimulate personal growth and development (Demerouti et al. 2001). Job autonomy, participation in decision-making, job security, performance feedback, job control, and superior support are all common forms of job resources (Crawford et al. 2010; Demerouti et al. 2001).

According to the JD-R model, job demands and job resources can activate an energy depletion process or a motivational process respectively. Regarding the energy depletion

**Fig. 1** Conceptual model

process, employees have to put sustained effort into coping with job demands (Bakker and Demerouti 2007). The increase in employees' efforts is accompanied by feelings of strain (Bakker and Demerouti 2007), exhaustion (Bakker, Demerouti, and Verbeke 2004), and burnout (Crawford et al., 2010). As a result, there is an increase in compensatory psychological and physiological costs that drain employees' energy and impair their health (Bakker and Demerouti 2017). Regarding the motivational process, perceived job resources motivate employees to engage in work goal achievement (Bakker and Demerouti 2007). Job resources induce employees to dedicate their efforts and abilities to the job. Meanwhile, job resources also satisfy employees' needs for autonomy and competence. According to the literature, job resources are positively associated with job engagement (Nahrgang, Morgeson, and Hofmann 2011; Schaufeli and Bakker 2004).

### High-performance work systems (HPWS)

HPWS generally refers to a bundle of separate but interconnected human resource management practices designed to enhance employees' skills, trigger discretionary effort, and provide opportunities for decision-making participation and ultimately contribute to superior firm performance and sustainable competitive advantage (Sun et al. 2007). Specific practices of HPWS include selective staffing, extensive training, internal promotion, flexible working time, enriched job design, information-sharing, participation in decision-making, job security, developmental performance appraisal, performance-contingent rewards, and self-management teams (Datta, Guthrie, and Wright 2005; Huselid 1995; Lepak et al. 2006; Liao et al. 2009; Sun et al. 2007). Because all open systems include maintenance and production subsystems (Katz and Kahn 1978), Gong et al. (2009) classify HPWS practices into two subsystems: a performance-oriented subsystem and a maintenance-oriented

subsystem. While the former primarily develops human resources and provides motivation and opportunities for productivity, the latter ensures employees' well-being and equality.

Investigating the impact of HPWS on performance outcomes has long been the focus of strategic human resource management. More recently, researchers have shifted their attention to the more proximal employee outcomes and pointed out the importance of employees' perceptions in determining behavioral outcomes (e.g., Kehoe and Wright 2013; Liao et al. 2009; Nishii, Lepak, and Schneider 2008; Sanders, Shipton and Gomes 2014). The performance effects of HPWS occur via individuals' perceptions (Den Hartog et al. 2013). As indicated by Bowen and Ostroff (2004), human resource practices contribute to desired consequences only to the extent that they are consistently perceived by employees in an intended manner. However, employees' perceptions of HPWS may be divergent (Den Hartog et al. 2013). On this basis, this paper aims to explore how employees' perceptions of job resources and job demands arising from HPWS affect individual job performance. Although it is suggested that the practices included in HPWS are resources that organizations invest in employees (e.g., Bartram et al. 2012; Cooke et al. 2016), we posit that HPWS may not be perceived by employees only as resources. Employees exposed to HPWS also experience job demands. Divergent perceptions of job resources and job demands further lead to different job performance.

### HPWS, job resources, and job demands

According to the JD-R model, autonomy, feedback, opportunities for development, rewards and recognition, and job variety are all job resources that help to solve job-related problems, attain task goals, and achieve personal growth (Crawford et al. 2010; Demerouti et al. 2001). From this standpoint, HPWS can be perceived as job resources. The provision of maintenance-oriented practices allows employees to gain job security (Gong et al. 2009). Moreover, the performance-oriented practices enable employees to obtain prestige, skill development, career advancement, and recognition (Gong et al. 2009).

Specifically, with the practice of job security, employees can concentrate on how to further improve performance rather than worry about losing jobs, and thus they are able to strive for performance goals. Extensive training and job enrichment encourage employees to take on different tasks and help them develop skills favorable to career development (Lado and Wilson 1994). Developmental performance appraisal makes employees understand their past performance and identify what to improve in the future, which is especially beneficial to personal growth. Combined with performance appraisal, performance-contingent pay enables high achievers to obtain financial rewards and recognition (Nyberg, Pieper, and Trevor 2016). Additionally, employees acquire discretion and control through self-management teams, freely deciding how to fulfill job responsibilities and handle work exceptions (Morgeson 2005). Such discretion and control resources may buffer the cost of job demands (Jensen et al. 2013). Flexible working time protects employees from deep energy depletion because they can manage time to meet their own needs (Topcic, Baum, and Kabst 2016). Furthermore, HPWS also delegates individuals to make job-related decisions by encouraging decision-making participation (Benson, Young, and Lawler III 2006). With these decision-making opportunities, employees can develop professional and managerial skills conductive to personal development. In short, HPWS

involves practices that enhance employees' skills and competence, reduce psychological and physical costs, and are functional to the achievement of work goals. Therefore, we expect that:

*Proposition 1a: HPWS increases employees' perceptions of job resources.*

Although HPWS is a potential source of job resources, it can also raise perceived job demands. Based on Ostroff and Bowen's (2016) study, HPWS conveys a message of expectation for increased productivity. By investing in employees and offering autonomy and flexibility at work, HPWS communicates an organization's expectations of extra effort from its employees (Shaw et al. 2009). Thus, the application of HPWS leads to longer working hours, stress, and role overload (Jensen et al. 2013; Heffernan and Dundon 2016). Although the commitment-based view suggests that HPWS is aimed at enhancing positive employee experiences and commitment, the real situation is that it increases control over employees via stricter rules, higher requirements, and rewards and punishment based on the organization's interest (van de Voorde and Jensen 2016). As Danford et al. (2008) assert, HPWS tightens the iron cage through a combination of compulsory and discretionary means. The performance-oriented practices function through work intensification and employees' satisfying the increased expectation of their organization.

For example, although self-management teams offer employees discretion to make decisions, the teams elicit more investment in organizations and increased responsibility for the decisions, which are associated with greater levels of work intensity (Gallie, White, and Cheng 1998). Self-management teams make team members develop values and principles themselves and thus place greater constraints on team members (Barker, 1993). With respect to performance-contingent pay, it is a double-edged sword. Despite the rewards for high performers, it sets performance objectives for employees and monitors their output (Pohler and Schmidt 2015). The pay-performance link impels employees to be more engaged in their work and boosts perceived pressure (Brief and Atieh 1987). Moreover, extensive training may lead to individual stress through enhancing task complexity, workload, and supervisor expectations (Topcic et al. 2016). Briefly, the practices embedded in HPWS are not perceived by employees as resources all the time. Operating through intensifying work, in reality, HPWS seems to place greater demands and pressure on employees. Indeed, Jensen et al. (2013) find that HPWS is associated with enhanced job demands. For these reasons, we expect that:

*Proposition 1b: HPWS increases employees' perceptions of job demands.*

### HPWS, job resources, job demands, and job performance

Job performance is defined as "the set of employee behaviors that contribute, either positively or negatively, to organizational goal accomplishment" (Colquitt et al. 2011, p. 35). There are three broad categories of job performance: task performance, citizenship behavior, and counterproductive behavior (Colquitt et al. 2011). Task performance and citizenship behavior contribute positively to the organization, whereas counterproductive behavior contributes negatively to the organization. In the following sections, we explain how HPWS relates to the three categories of job performance.

Research has found positive relationships between HPWS and task performance and citizenship behavior through different intervening mechanisms. For example, HPWS is positively associated with individual service performance through psychological empowerment (Aryee et al. 2012). HPWS leads to high task performance via organizational support (Liao et al. 2009) and elicits citizenship behavior through employees' HPWS satisfaction (Zhang, Di Fan, and Zhu 2014). Moreover, when perceiving a favorable social exchange in HPWS, employees tend to reciprocate with more citizenship behaviors and better task performance (Snape and Redman 2010).

Different from the above perspectives, we posit that employees' perceptions of job resources link HPWS to task performance and citizenship behavior. As mentioned earlier, HPWS leads to employees' experiences of job resources because it is functional to employees' achievement of work goals and personal growth. According to the JD-R model, job resources instill motivation in employees. Perceived resources, such as job control and skill development opportunities, can satisfy the needs for autonomy and competence and thus increase employees' willingness to devote to work (Crawford et al. 2010). When such intrinsic motivation is fueled, employees enjoy the process of performing tasks and keep working effectively and productively (Grant 2008). Furthermore, job resources can increase employees' job engagement (Nahrgang et al. 2011; Schaufeli and Bakker 2004). Because engaged employees tend to concentrate on their work with physical, cognitive, and emotional energy, they are able to exhibit high-quality task performance (Rich, Lepine, and Crawford 2010). The positive association between job resources and job performance has been substantiated by several studies (for review, see Bakker and Demerouti 2017).

Moreover, intrinsically motivated individuals have been found to perform more organizational citizenship behaviors (Piccolo and Colquitt 2006). Individuals with greater autonomy and skills are in a better position to mobilize their knowledge, ability, time, and effort to display voluntary behaviors that are not directly or explicitly recognized by the formal reward system. When employees do possess resources, they are inclined to go beyond actual goal accomplishment and perform extra-role behaviors voluntarily (Wrzesniewski and Dutton 2001). Indeed, Bakker et al. (2004) demonstrate the positive relationship between job resources and individual extra-role behaviors. Additionally, job resources improve work engagement. Research on work engagement also suggests that job resources boost citizenship behavior because actively engaged employees are more likely to invest themselves and are more willing to step outside the bounds of their formally defined jobs (Rich et al. 2010). Consistent with the above arguments, we develop the following propositions:

> Proposition 2a: Employees' perceptions of job resources are the internal mechanism whereby HPWS increases task performance.

> Proposition 2b: Employees' perceptions of job resources are the internal mechanism whereby HPWS increases citizenship behavior.

High job demands derived from HPWS may put employees in a stressful situation. It has been well-documented that job demands have attendant negative implications for employees' psychological and physical well-being (Bakker and Demerouti 2007).

Demanding aspects of work that consume one's time and energy can lead to constant overtaxing and exhaustion (Bakker et al. 2004). Empirical studies suggest that exhausted employees under the influence of job demands have problems in investing sufficient effort into their tasks because of diminished energy (Cropanzano, Rupp, and Byrne 2003). Moreover, a high level of stressors is an important predictor of sleeping problems (Litwiller et al. 2017), cardiovascular diseases (Karasek et al. 1981), and psychiatric disorders (Stansfeld et al. 1999). These physiological responses may reduce employees' task performance and even seriously interfere with work capacity in the long run (Lazarus 2006). Consistent with our view, Bakker and colleagues' research (2004) shows that job demands are associated with low in-role performance. Admittedly, there is research indicating that whether job demands have negative or positive effects may depend on one's overall perception, i.e., hindrances or challenges (Crawford et al. 2010). However, according to two meta-analytic studies (Jamal 1984; Gilboa et al. 2008), research on job demand stressors is more supportive of the negative relationship between job demands and performance. Employees experiencing stress and feeling threatened are likely to reduce work effort and decrease work quality or quantity (Penney and Spector 2005). Even though job demands may contribute to job performance over a short time, these marginal benefits will eventually disappear because of sustained decline in employees' physical and psychological well-being.

According to the JD-R model, employees who experience energy consumption due to job demands may distance themselves from further energy loss by withdrawing from work (Bakker et al. 2004) or even engaging in behaviors such as being late, leaving early, taking longer breaks, and committing theft to conserve their resources (Krischer, Penney, and Hunter 2010). Previous studies have demonstrated a high frequency of deviant behavior resulting from job demands. For example, heavy workload is found to be related to absenteeism (Bakker et al. 2003) and a general index of counterproductive behavior (Balducci et al. 2011). Moreover, job demands give rise to emotional exhaustion, which is suggested to result in production deviance and withdrawal behaviors (Krischer et al. 2010). Burnout and strain derived from job demands can also increase counterproductive behavior (Luksyte, Spitzmueller, and Maynard 2011).

In summary, when employees experience job demands derived from HPWS, they are more likely to perform their tasks badly and engage in counterproductive behavior:

> Proposition 3a: Employees' perceptions of job demands are the internal mechanism whereby HPWS decreases task performance.

> Proposition 3b: Employees' perceptions of job demands are the internal mechanism whereby HPWS increases counterproductive behavior.

### Servant leadership and direct leadership as boundary conditions

Employees' perceptions of HPWS do not depend exclusively on objective characteristics of the human resource system but also on social constructions of the information available to them at the time they make judgments (Griffin et al. 1987). Because managers serve as key human resource agents in organizations (Pak and Kim 2016), employees' interpretations of the HPWS are largely affected by their

managers (Den Hartog et al. 2013; Shin and Konrad 2017). When delivering duties such as selecting, appraising, developing, communicating, and involving, managers provide information about what is expected and what is appropriate behavior (Huo, Boxall and Cheung 2018). To attain the desired effects of HPWS, managers as practice deliverers must communicate adequate and unambiguous information to create a perception of the human resource system as high in distinctiveness, consistency, and consensus (Bowen and Ostroff 2004). However, different perceptions of HPWS may emerge among employees because line managers differ in how they implement human resources practices (Den Hartog et al. 2013). Managers may not be able to or be willing to send consistent messages because of their differentiated abilities, skills, and leadership styles (Khilji and Wang 2006; Wright and Nishii 2013; Zbaracki 1998). As a result, HPWS perceived or experienced may vary significantly with the information employees extract from managers' behaviors. As Bowen and Ostroff (2004, p. 206) assert: "all human resource practices communicate messages constantly and in unintended ways, and messages can be understood idiosyncratically, whereby two employees interpret the same practices differently."

In accordance with the maintenance-performance subsystem of HPWS (Gong et al. 2009), there are two primary types of leader behaviors: consideration and initiating structures (Stodgill and Coons 1951). By focusing their behavior on consideration, leaders show concern about followers, care about their welfare, and provide support for their growth. By initiating structure, leaders prescribe the roles of followers, set standards, and evaluate performance. From the perspective of consideration-initiating structure, we choose two relevant leadership styles, i.e., servant leadership and directive leadership, and explore their roles in shaping employees' perceptions of HPWS.

Servant leadership refers to a leadership style that goes beyond one's self-interest and is genuinely concerned with serving others (Greenleaf 1977). Paying more attention to followers' needs and interests than their own, servant leaders show considerable concern about followers' career development and personal growth, encourage followers to identify and solve problems, and possess knowledge so as to be in a position to effectively support followers even through self-sacrifice (Liden et al. 2008). When performing human resource duties, servant leaders center their efforts in assisting subordinates in reaching their full potential and achieving optimal career success. Therefore, practices such as extensive training, performance-contingent rewards, decision-making participation, and within firm promotion will all be viewed as practices designed for the benefit of individual well-being and personal development. Servant leadership is likely to enhance employees' consideration of HPWS utilization as job resources that help to achieve work goals and attain ideals. Although the moderation effect of servant leadership has not yet been explicitly tested, related studies provide some support for our arguments. Based on the work of Nishii et al. (2008) as well as that of Shipton et al. (2013), line managers performing in a way that signals concern for employees' well-being can raise positive attitudinal and behavioral outcomes. Employees are especially concerned with line-managers' support (Teo and Rodwell 2007). Thus, servant leaders who facilitate the growth, development, and well-being of employees (Van Dierendonck 2011) are likely to direct employees'

attention to the bright side and accordingly generate a positive perception of HPWS. Thus we propose that:

 Proposition 4: Servant leadership strengthens the positive association between
 HPWS and employees' perceptions of job resources.

Directive leadership is associated with a leader's positional power and aims to actively structure subordinates' work through clear directions and expectations regarding compliance with instructions (House 1971; Pearce et al. 2003; Somech 2006; Yukl and Falbe 1991). Directive leaders make virtually all decisions themselves, give detailed directions, establish clear rules for behavior, and help followers be better aware of their own roles (Kahai, Sosik, and Avolio 2004; Pearce et al. 2003). In the process of delivering or performing human resource duties, directive leaders expect followers to carry out their commands with little freedom to express opinions, and to take actions in alignment with the leaders' visions without deviation. To ensure followers' performance on track, directive leaders constantly monitor and offer direction to poorly performing followers (Martin, Liao, and Campbell 2013). Consequently, we expect that this task-orientated leadership will increase employees' perceived stress and make them experience more pronounced job demands when they are exposed to HPWS.

Specifically, employees under directive leadership may experience a discordance between messages from the human resource policies and those from the line managers. For example, autonomy and decision-making participation are espoused by HPWS but prohibited under directive leaders' close supervision and control. Such inconsistent and conflicting signals about what is expected and supported would generate a high degree of uncertainty and role conflict (Black and Gregersen 1991), a form of job demands. Moreover, directive leaders tend to give instructions such as "work quickly" "work accurately" and "work more," emphasizing what employees need to do and monitoring behaviors in case of deviation. Thus, directive leaders place employees under pressure from target realization and rule compliance (Euwema, Wendt, and Van Emmerik 2007), which further strengthens the signal from HPWS that hard work and extra efforts are expected. While employees are required to make hard effort and enhance performance, they have no control over tasks that enable them to cope with stressful situations (Baumgartel 1957). As a result, employees are more likely to perceive stressful job demands (Jensen et al. 2013). In this light, directive leadership intensifies employees' interpretations of HPWS as a source of job demands.

 Proposition 5: Directive leadership strengthens the positive association between
 HPWS and employees' perceptions of job demands.

Based on the aforementioned reasoning, we further posit that leadership styles moderate the indirect relationship between HPWS and task performance, citizenship behavior, and counterproductive behavior, thereby demonstrating a pattern of moderated mediation. Specifically, a servant leader is more concerned about followers' needs and

interests than their own and strives to promote followers' growth. Servant leadership makes it more likely for individuals to view HPWS as job resources that help to achieve success and pursue personal development. With perceived job resources, employees are more motivated to engage in their jobs and to take advantage of resources such as job control, participation opportunities, and expertise gained from training to fulfill work requirements. Furthermore, perceived job resources also enable employees to exert discretionary efforts to promote the welfare of others and the overall organization. Therefore, servant leadership strengthens the association between HPWS and task performance as well as citizenship behavior by increasing employees' perceptions of job resources.

In contrast, directive leadership provides clear instructions, requirements for performance goal achievement, and expectations regarding compliance with orders. However, employees have no opportunities to display discretion. What they experience is demands, obligation, and duty fulfillment. Thus, HPWS is more likely to be perceived as stressful demands by employees. For example, performance-contingent pay included in HPWS can be regarded as higher performance requirements and heavier workload. Increased job demands consume so much time and energy that they lead to decreased physical and psychological well-being, which disable individuals from fulfilling tasks efficiently and persistently. Moreover, diminished energy also causes employees to display deviance for the purpose of resource conservation. Consequently, directive leadership strengthens employees' perceptions of job demands arising from HPWS, which, in turn, elicits lower task performance and deviant behavior.

On the basis of the above reasoning, we expect that:

*Proposition 6a: Servant leadership strengthens the indirect relationship between HPWS and task performance via employees' perceptions of job resources.*

*Proposition 6b: Servant leadership strengthens the indirect relationship between HPWS and citizenship behavior via employees' perceptions of job resources.*

*Proposition 7a: Directive leadership strengthens the indirect relationship between HPWS and task performance via employees' perceptions of job demands.*

*Proposition 7b: Directive leadership strengthens the indirect relationship between HPWS and counterproductive behavior via employees' perceptions of job demands.*

## Discussion

In the existing literature, HPWS is widely considered to be conducive to both organizational and individual performance. However, there are studies indicating conflicting outcomes for employees and their employers. This paper extends the extant literature by considering both the bright and dark sides of HPWS. Drawing on the JD-R model, our theoretical framework proposes a dual mechanism (employees' perception of job demands and job resources) to explain the impact of HPWS on task performance, citizenship behavior, and counterproductive behavior. We further propose that the extent to which employees perceive HPWS to be job

resources or demands is contingent on two leadership styles (directive leadership and servant leadership), providing new insights into the research on HPWS.

### Theoretical contributions

This conceptual work contributes to the literature in the following ways. First, it enriches the understanding about HPWS's impact on job performance. As a performance-oriented human resource system, HPWS has been widely claimed to contribute to both individual and firm performance through investment in employees (e.g., Aryee et al. 2012, 2016). In contrast, our theoretical framework adds to the literature by exploring the potential negative influence of HPWS on job performance. Adopting the JD-R model, we theorize that employees may not perceive HPWS consistently. The job demand perception of HPWS burdens employees with intensified work and depletes their energy, reducing task performance and incurring counterproductive behaviors. Indeed, several studies have pointed out that HPWS may lead to emotional exhaustion, job strain, and anxiety (e.g., Jensen et al. 2013; van de Voorde and Beijer 2015; Boxall and Macky 2016), which are potential detriments to individual performance (Baer et al. 2015; Bakker and Demerouti 2017). Thus it is surprising that the possible damage of HPWS on job performance has long been overlooked. In line with our research, Wright and Boswell (2002, p. 269) note in their study that "(We) often hear of organizations that attempted to copy an HR practice or set of practices from a successful organization, only to find that the copied practices did not result in the same beneficial outcomes." Also, the empirical study on HPWS-productivity conducted by Zatzick and Iverson (2006) does not support the "best practice" assertion. Furthermore, despite the suggested dark side of HPWS, only a few studies (e.g., Nishii et al. 2008; van de Voorde and Beijer 2015) consider the bright and dark sides simultaneously. As a result, current understandings about HPWS are limited and incomplete. Consequently, we integrate the existing, separate research streams by incorporating both positive and negative aspects and explore how the interpretation of HPWS as job demands or job resources affects employees' subsequent performance at work.

Second, this paper highlights the importance of managers' leadership behaviors in shaping employees' perceptions of and reactions to human resource systems and enriches our understanding of line managers' role in the HPWS-performance linkage. Current studies on strategic human resource management have mostly explained the mediation processes through which human resource management practices influence various outcomes (Jackson et al. 2014), but have neglected the role of leadership in the practices' transformation process. The role of leadership in human resource management has long been acknowledged by researchers. For example, Bowen and Ostroff (2004 p. 215) state that "supervisors can serve as interpretive filters of human resource management practices." Pak and Kim (2016) argue that "team managers... have responsibility to manage their members' efforts and administer human resource policies." However, insufficient effort has been put into this research direction. Our theoretical study is an attempt to explore how leadership behavior influences the functioning of HPWS. By identifying that servant leadership and directive leadership can elicit different interpretations by employees of HPWS, our research enriches the understanding of

how leaders' implementation of human resource practices influences employees' perceptual and behavioral reactions.

Third, investigating the moderating roles of servant leadership and directive leadership extends the JD-R model. Most of the extant studies primarily employ the JD-R model as a frame to explain the consequences of job demands and resources, such as burnout and job engagement, but pay little attention to what accounts for the perception of job demands and resources. According to the JD-R model, all job characteristics can be classified into two categories (Demerouti et al. 2001), indicating that job demands and resources only derive from and are affected by certain job characteristics. This paper enriches the literature on the JD-R model by specifying the contribution of managers to employees' interpretation of job demands and resources. In accordance with Schaufeli and Taris (2014), we assert that there is no clear boundary between job demand and resource perceptions. Concerning the same working condition, some employees' perceptions may be completely distinct from that of their coworkers. Given the role of managers in delivering human resource practices, we introduce servant leadership and directive leadership as moderators to explain why the same work environment does not necessarily lead to the same perceptions of job demands or job resources. Because of their proximity and relatively frequent interactions with employees, line managers can make a difference to individual experiences of job demands and resources under the same working conditions by displaying different leadership behaviors.

### Practical implications

Our conceptual model raises practical implications for managers to consider as well. As we point out, HPWS can raise perceptions of both job demands and job resources. Despite the benefits from perceived job resources, managers need to be aware that the potential cost resulting from job demands may undermine the overall contribution of HPWS to performance. Considering the increasing coverage of HPWS in organizations, it is especially important for managers to keep the potentially dark side of HPWS in mind and take actions to reduce it. Organizations can mitigate potential negative effects by implementing stress management programs to develop the ability of employees in dealing with job stressors (Richardson and Rothstein 2008). Line managers also play a vital role in the implementation of HPWS by serving as human resource agents, whose behaviors determine the effects of HPWS to a great extent. Therefore, it is suggested that line managers provide more support to employees and show concern for employees' well-being.

Furthermore, when companies want to apply HPWS to boost performance, they should pay particular attention to how managers deliver human resource policies. Differences in implementation and communication may lead to variation in employees' interpretation of HPWS. Organizations can invest in line managers to improve their abilities in performing human resource management tasks in a way that the intended information is conveyed to employees. Based on propositions in this paper, line managers' leadership style can shape employees' perception of their working conditions. By performing servant leadership behaviors, managers can strengthen the positive effects of HPWS through increasing the experience of job resources. In contrast, direct leadership can aggravate the job demand perception that may harm employees' performance.

Therefore, one way to minimize the negative side of directive leadership is for companies to train their managers how to display more servant leadership behaviors and fewer directive behaviors so that employees could experience less job demand from HPWS.

### Directions for future research

First, our research is a theoretical piece and we encourage scholars to test our propositions. Second, since scholars have not reached an agreement on the causal mechanisms linking HPWS and performance outcomes (Gittell, Seidner, and Wimbush 2010), apart from the job demands/resources approach, we note that there may be other intervening mechanisms to explore both the bright and dark sides of HPWS. For example, Nishii and her coauthors (2008) draw on human resource attributions and propose a typology of five human resource attribution dimensions. They contend that the varying attributions employees make for the same human resource practices are differentially associated with employees' attitudes and behaviors. Hence, we suggest researchers further integrate other potential theories into our model to advance knowledge concerning the mechanisms through which HPWS leads to divergent attitudinal and behavioral outcomes.

Another fruitful avenue for future research would be to continue investigating the contingency view of strategic human resource management. In this paper, we incorporate servant leadership and directive leadership into our model to investigate the moderating factors that affect the interpretation of HPWS. There might be other leadership styles that interplay with human resource practices in different ways and even play different roles because of the outcomes of interest. For example, Han et al. (2015) theorize that team managers' contingent reward leadership positively moderates the relationship of pay-for-performance practice and employees' performance-reward expectancy, which then contributes to job performance. Hence, future studies are recommended to extend our research via examining how other leadership styles shape the effects of HPWS.

Furthermore, although not incorporated in our model, individual characteristics also play an important role in the functioning of human resource management. There may be several personal factors that influence whether employees perceive HPWS as job demands or job resources. For example, challenge appraisal might lead employees to view HPWS as job resources that help to achieve goals rather than as exploitation that demands extra effort, because appraising, as potentially promoting personal growth, can trigger positive emotions and reactions. As well, negative affectivity might affect individual experiences when employees are faced with job demands from HPWS, as people with high negative affectivity tend to be more sensitive to the stress caused by job demands and thus experience negative emotions, compared to those with low negative affectivity (Penney and Spector 2005). Thus, we advise future research to examine different kinds of individual factors as moderators for the effects of HPWS so as to advance our understanding about how individual differences impact the process and outcomes of human resource management.

### Conclusion

This research draws on the JD-R model to develop a dual process model of HPWS. While HPWS may promote job performance through employees' perceptions of job

resources, it can also impair job performance by inducing employees' perceptions of job demands. Servant leadership strengthens the positive influence of HPWS, and directive leadership strengthens the negative influence of HPWS. In view of the prevalence of HPWS initiatives and the worldwide pursuit of improved performance, we hope this research will prompt some interesting work that provides more insights into HPWS.

**Abbreviations**
HPWS: High-performance work systems; JD-R model: Job demands and resources model

**Availability of data and materials**
Data sharing not applicable to this article as no datasets were generated or analysed during the current study.

**Authors' contributions**
In preparing for this manuscript, XF generated research ideas, did literature review, and drafted the manuscript. YL participated in the discussions on the research model and helped to draft the manuscript. XZ helped to update the literature and actively involved in the revising process of the manuscript. All authors read and approved the final manuscript.

**Competing interests**
The authors declare that they have no competing interests.

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