

Contents lists available at [ScienceDirect](https://www.sciencedirect.com)

Tourism Management

journal homepage: www.elsevier.com/locate/tourman

Pushing forward high-performance work systems in the hotel industry: A procedural-justice climate to promote higher unit-level outcomes

Jaewan Yang^a, Youngsang Kim^b, Peter B. Kim^{c,*}^a College of Business, Hankuk University of Foreign Studies, 107 Imun-ro, Dongdaemun-gu, Seoul, 02450, South Korea^b SKK Business School, Sungkyunkwan University, 25-2 Seonggyungwan-ro, Jongno-gu, Seoul, 03063, South Korea^c School of Hospitality and Tourism, Auckland University of Technology, 423 WH Building, 49 Wellesley St East, Auckland, 1010, New Zealand

ARTICLE INFO

Keywords:

High-performance work system (HPWS)
Collective organizational citizenship behavior (OCB)
Organizational service performance
Procedural-justice climate
Hotels

ABSTRACT

In this study, we examine how the high-performance work system (HPWS) can be used to promote positive employee behavior leading to higher organizational service performance in the hotel industry. Specifically, we suggest that the collective organizational citizenship behavior (OCB) of employees links the HPWS to organizational service performance, and a stronger procedural-justice climate of a hotel strengthens the relationship between the HPWS and the collective OCB. Using multi-source data drawn from 5290 employees across 180 independent franchise hotels in North America and customer feedback on each surveyed hotel, we found that the collective OCB mediates the relationship between the HPWS and organizational service performance, and when hotels have a stronger procedural-justice climate, the mediating effect is more salient. The implications of these findings for tourism researchers and practitioners are discussed.

1. Introduction

The literature of strategic human-resource management (SHRM) indicates that the organizational use of progressive human-resource management practices is linked to various unit-level performance outcomes, such as manufacturing performance, customer-service satisfaction, and profits (Subramony, 2009). Within these findings, high-performance work systems (HPWS) and bundles of interconnected human-resource (HR) practices are theorized to provide evidence of the strategic value of employees and to communicate enhanced expectations for employee performance and contribution (Liao & Chung, 2004).

However, research on the performance implications of HPWS is still unclear, and the research findings are limited in generalizability, because most studies examining the HPWS–firm performance relationship have been conducted in the manufacturing sector (e.g., Arthur, 1994). The service industry differs from other industries because products (intangibles) are developed and consumed simultaneously, and customers are part of the service production in the industry (Kandampully, Keating, Kim, Mattila, & Solnet, 2014; Liao, Toya, Lepak, & Hong, 2009). Moreover, HR practices are mainly institutionalized to differentiate one hotel from others within the tourism and hospitality sectors

(Ivanova & Ivanov, 2015). Hence, in the tourism and hospitality context where employees play a critical role in satisfying customers for organizational success and sustainability (Kim, Gazzoli, Qu, & Kim, 2016), the HPWS–organizational performance relationship is particularly relevant.

Extant research suggests that human-capital resources, social exchange, HR climate, or collective attitudes and behavior (e.g., Jiang, Lepak, Hu, & Baer, 2012; Messersmith, Patel, Lepak, & Gould-Williams, 2011; Takeuchi, Lepak, Wang, & Takeuchi, 2007) may function as a mediating process in the HPWS–performance relationship; nevertheless, we are unsure how these factors work and what other processes should be studied in the service context. Furthermore, extant research in the tourism and hospitality literature has mainly focused on how HR practices affect individual employee outcomes, such as emotional exhaustion and intention to quit (Wong, Xu, Chan, & He, 2019), individual organizational citizenship behavior (OCB; Pham, Tučková, & Jabbour, 2019), service-oriented OCB (Kloutsiniotis & Mihail, 2020b), and work engagement and individual performance (e.g., Karatepe & Olugbade, 2016), relying on the data collected from employees and managers using surveys, rather than organizational outcomes measured by customers. Thus, studies that examine the relationship between the HPWS and organizational service performance are rare.

* Corresponding author.

E-mail addresses: jwyang@hufs.ac.kr (J. Yang), ykim03@skku.edu (Y. Kim), pkim@aut.ac.nz (P.B. Kim).

<https://doi.org/10.1016/j.tourman.2021.104385>

Received 31 March 2020; Received in revised form 16 June 2021; Accepted 17 June 2021

Available online 23 June 2021

0261-5177/© 2021 Elsevier Ltd. All rights reserved.

Given the importance of maintaining good service performance in the tourism and hospitality industry, more studies that examine how the HPWS influences service performance are imperative. In a similar vein, Kloutsiniotis and Mihail (2020a), in their recent review of the HPWS research in the tourism and hospitality context, called for empirical research that scrutinizes the mechanism of the HPWS-organizational performance link. However, the majority of HPWS empirical studies in the tourism and hospitality context utilized a cross-sectional research design that is exposed to the issues of common-method variance (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003) and reverse causality (Guest, 2011), making it difficult to develop better understandings of the HPWS-organizational service performance linkage.

In developing better knowledge of the effect induced by using HPWS in organizations, it is critical to identify the role and function of employees' judgment for the exchange relationships between employees and the organization they work for, namely, justice perception (Wu & Chaturvedi, 2009). In fact, previous studies showed that the procedural-justice climate, shared perceptions of the procedural justice in decision-making experienced by employees, substantially influences employee behaviors (e.g., Colquitt, NOE, & Jackson, 2002; Naumann & Bennett, 2000). Bowen and Ostroff (2004) suggested that organizational climate plays a critical role in how HR practices are implemented, and the procedural-justice climate can constitute a critical organizational context in the HPWS-performance relationship. However, to the best of our knowledge, no empirical attempts have been made to examine the moderating role of the procedural-justice climate to investigate the effect of HPWS in any organizational context.

In this study, we address the aforementioned gaps in the literature. In doing so, first, using social-exchange theory (Blau, 1964; Cropanzano, Rupp, Mohler, & Schminke, 2001), we contend that organizations with more investment in HPWS improve the collective organizational citizenship behavior (OCB), because employees are expected to reciprocate by collectively increasing their helping behavior, which in turn leads to organizational service performance. In a service context, service performance can be categorized into (1) employee service-related behavior of serving and helping their customers or (2) service effectiveness, such as the consequences of employee service behavior (Liao & Chung, 2004). Following this categorization, we define organizational service performance as organizational consequences (e.g., customer satisfaction, intention to return) from employees' service performance behavior, which is frequently used in SHRM research that integrates a service context (e.g., Chen, Zhu, & Zhu, 2015). This study differs from previous studies of the HPWS in the tourism and hospitality industry that focus on individual employees OCB (e.g., Kloutsiniotis & Mihail, 2020b; Safavi & Karatepe, 2018) given that we examine collective OCB and its mediating role between the HPWS and organizational service performance in the hotel industry.

Second, using theory on the strength of the HR system (Bowen & Ostroff, 2004), we also argue that the positive effect of HPWS on OCB largely depends on how strong the organization's procedural-justice climate is, which helps shape a situation in which behavior is accepted and rewarded by developing the consensus of the HPWS perceptions among employees (Bowen & Ostroff, 2004). We believe that it is of particular importance to identify how the procedural-justice climate affects the HPWS-organizational performance linkage, because it could provide important insights into the mixed findings on the effect of HPWS (e.g., Liao et al., 2009), the inter-organizational differences of HR systems (Nishii & Wright, 2008) and the quality of practice implementation (Khilji & Wang, 2006).

Last, we endeavor to provide additional theoretical and methodological clarity about the HPWS-service performance linkage by using multi-sourced unit-level data, drawn from hotel employees and their customers, to test a research model with a lagged study design to address the issues of common-method variance (Podsakoff et al., 2003) and reverse causality (Guest, 2011).

2. Theory and hypotheses

Fig. 1 presents our conceptual model for testing the moderating effect of the procedural-justice climate on the linkages among HPWS, collective OCB, and organizational service performance. Given that the mechanism of how the HPWS affects organizational performance in the service context is not well known, we aim to provide new insights into the linkage from the HPWS to the organizational service performance, along with the organizational context that would make this linkage stronger.

2.1. HPWS and collective OCB

SHRM research suggests that the HPWS plays an important role in influencing organizational resources, employees' performance, and competitive advantage (Jackson, Schuler, & Jiang, 2014). According to ability-motivation-opportunity (AMO) theory and SHRM-related perspectives, the effect of the HPWS on organizational outcomes is generally believed to operate through the improved ability (human-capital resources), motivation, and opportunity for employees to engage in behavior that is important to the organization (e.g., Arthur, Herdman, & Yang, 2021; Jiang et al., 2012; Li, Wang, van Jaarsveld, Lee, & Ma, 2018). Other scholars also suggest that the HPWS improves the development of the organizational climate (Bowen & Ostroff, 2004), internal social structure (Evans & Davis, 2005), or social exchange (Takeuchi et al., 2007). We focus here on the role of the HPWS, which includes selective staffing, extensive training and development, promotional opportunities, contingent compensation, information sharing, rigorous performance appraisal, employee participation and autonomy, and employment security, in shaping employee motivation and behavior in the form of collective OCB that is important for improved customer satisfaction.

In particular, the HPWS is an important organizational driver to facilitate social exchange between the organization and its employees (Takeuchi et al., 2007). The use of the HPWS is theorized to provide evidence of the organization's expanded investment in, and valuing of, employees (Collins & Kehoe, 2017). To the degree that employees experiencing the practices perceive that the value received within the exchange relationship is increased, they are expected to reciprocate by collectively improving their own contribution to the exchange via behavior that helps the organization's functioning and performance (Cropanzano & Mitchell, 2005; Walton, 1985). In doing so, patterns of mutual reciprocal obligation activated between the organization and employees give rise to a deeper and more protracted relationship between the organization and its employees over time (Mossholder, Richardson, & Settoon, 2011; Sun, Aryee, & Law, 2007).

OCB represents discretionary behavior that operates outside task performance but is important to organizational functioning and performance (Organ, 1988; Podsakoff, Ahearne, & MacKenzie, 1997). Whereas the study of OCB has largely focused on antecedents to individual acts of OCB, the study of collective levels is critical, because the effect on organizational performance depends not on single instances of the behavior, but on the collective effects of many behavioral instances among groups of employees (Ehrhart, 2004; Organ, 1988). The

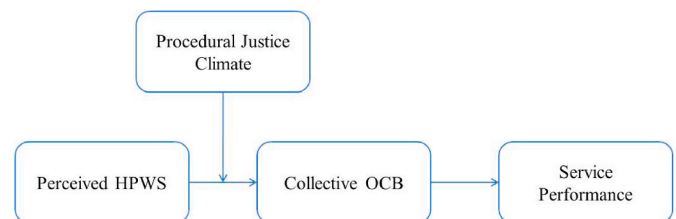


Fig. 1. Theoretical model (HPWS = high-performance work system; OCB = organizational citizenship behavior).

organization's ability to tap and leverage discretionary behavior across populations of employees has long been argued to be an important consequence of the HPWS (Walton, 1985), as demonstrated in past research (Messersmith et al., 2011; Sun et al., 2007). Thus, we expect that levels of the HPWS will be positively associated with levels of OCB.

Hypothesis 1. Unit-level HPWS perceptions will be positively associated with collective OCB.

2.2. *The mediating role of collective OCB on the relationship between unit-level HPWS perceptions and organizational service performance*

Collective OCB is an important contributor to shaping the service experience for customers (Borman & Motowidlo, 1993; Organ, 1988) and has served as the central behavioral construct in several studies that model the determinants of customer satisfaction (Schneider, Ehrhart, Mayer, Saltz, & Niles-Jolly, 2005; Schneider & Bowen, 1985). Although in-role performance behaviors may be strongly linked to organizational service performance, we suggest that collective OCB also plays an important role in contributing to organizational service performance for the following reasons. First, organizations with high levels of collective OCB are more likely to maintain a relation-based social and supportive climate for helping others, which leads to more cooperation and collaboration (Collins & Smith, 2006). In addition, the helping behavior of employees can facilitate the sharing of information, knowledge, and experience among coworkers, which may increase collective employee productivity and effectiveness (Sun et al., 2007). Accordingly, employees' willingness to identify and act on opportunities to contribute beyond task-related expectation, when considered at the organizational level, might improve the customer-service experience by forming a supportive climate, which increases coworker cooperation and coordination and the efficient and effective deployment of resources and information (Podsakoff & MacKenzie, 1997).

Of equal importance, in a dynamic service environment in which the customers and employees directly interact in the creation of the service, employees might be expected to make additional efforts to report and react to changing customer needs (Podsakoff & MacKenzie, 1997). Prior studies have shown positive associations between aggregate OCB levels and customer-service experience (Walz & Niehoff, 2000), product quality (Podsakoff et al., 1997), and operating efficiency and effectiveness (Sun et al., 2007; Walz & Niehoff, 2000). These findings are further supported by a meta-analytic review reporting a positive relationship of OCB with unit-level performance and customer satisfaction (Podsakoff, Blume, Whiting, & Podsakoff, 2009). Since unit-level HPWS perceptions influence the development of collective OCB, which then affects organizational service performance, we hypothesize:

Hypothesis 2. The relationship between unit-level HPWS perceptions and organizational service performance will be mediated by collective OCB.

2.3. *The moderating effect of procedural-justice climate*

Research suggests that organizational justice is a multi-dimensional construct consisting of perceptions of fairness related to various facets of the employee's experience with the organization (Colquitt, 2001; Cropanzano, Prehar, & Chen, 2002). Several sub-dimensions of justice perceptions have been empirically derived, including procedural, interpersonal, and interactional justice (Colquitt, 2001). Procedural justice describes generalized individual perceptions of the fairness of processes used in decisions affecting employees (Lind & Earley, 1992). In examining the effects of HPWS on critical organizational outcomes, the study of procedural-justice perceptions is appropriate, because it captures perceptions of the justice of the processes used in the exchange process between the individual and the organization (Cropanzano et al., 2002).

Whereas less attention has been given to understanding the dynamics

and consequences of justice perceptions at the group and organizational level, commonly referred to as the procedural-justice climate (Colquitt et al., 2002; Naumann & Bennett, 2000), a growing number of studies demonstrate the pivotal role that aggregated justice perceptions play in the development of improved unit-level attitudes, behavior, and performance outcomes (e.g., Colquitt et al., 2002; Naumann & Bennett, 2000; Whitman, Caleo, Carpenter, Horner, & Bernerth, 2012). The procedural-justice climate describes a distinct group-level cognition about the relative fairness experienced by a group and involves a referent shift from perceptions regarding their individual experiences to perceptions of the collective experience at the group or unit level (Naumann & Bennett, 2000; Colquitt et al., 2002). When collectively exposed to decision-making practices, employees develop shared perceptions of the fairness of various processes used within the organization. A meta-analytic review of the justice-climate literature showed positive associations between the procedural-justice climate and group-level attitudinal and performance outcomes (Whitman et al., 2012).

As some scholars have pointed out, mere exposure to various practices is not enough to elicit organizationally desirable behavioral responses (Bowen & Ostroff, 2004; Nishii, Lepak, & Schneider, 2008). Maintaining a good procedural-justice climate is necessary to make the HPWS effective. Colquitt et al. (2002) provide evidence of robust relationships between the procedural-justice climate and employee assessments of the quality of the exchange relationship (e.g., perceptions of leader-member exchange quality, trust, and perceived organizational support). This suggests that increases in procedural-justice perceptions affect the quality of the employee-organization exchange. In terms of HR practice deployment, procedural-justice perceptions provide important information about the quality of the exchange, whereas perceived HR practices provide information about the content, or currency, of the organization's offerings in the exchange relationship. Therefore, two organizations with employees reporting equivalent levels of perceived HPWS may experience different behavioral responses, depending on the relative effectiveness of implementation in practice.

The quality of exchange relationship can be judged by the attributes of the organizational decision-making processes that are important to procedural-justice perceptions, including consistency, accuracy, suppression, representativeness, correctability, and ethicality – i.e., if employees perceive that their interests are represented and that their perspectives are heard and valued (Cropanzano & Mitchell, 2005). Thus, organizational tendencies against each of these criteria are expected to reflect the quality of the exchange relationship guiding the execution of HR practices (Colquitt, LePine, Piccolo, Zapata, & Rich, 2012). For example, research suggests that the benefits of performance appraisals, a program common to most definitions of HPWS, depend not just on their establishment, but also on their fair and effective administration (Erdogan, 2002). Thus, although employees may report participation in a regular performance-appraisal process, employee responses to this practice depend on the quality of the exchange – i.e., the degree to which it is characterized by consistency, accuracy, and suppression of bias in its implementation, and this same logic could be applied to all facets of the HR system.

In fact, these attributes are consistent with the principles suggested by Bowen and Ostroff (2004), who argue that organizationally intended HR systems can signal to employees which behaviors are valued and rewarded and can be effectively implemented under a strong climate for HR systems that include consistency, consensus, and distinctiveness. For implementing HR practices, employees' attributions of 'Why does our organization use the set of specific HR practices it adopted?' shape their attitudes and behaviors at work. For this reason, an organization's use of HPWS can be effective if employees conclude that their employer uses the current HR practices to produce high-quality service and products, and foster employee well-being. Thus, we contend that the degree to which the HPWS elicits the desired behavioral responses will depend on

embedding these practices in the context of high-quality exchange relationships.

Beyond its effect on the exchange relationships between employees and employer, the procedural-justice climate will operate as a heuristic that will shape employee interpretations of the intents of the HPWS (Bowen & Ostroff, 2004; Nishii et al., 2008; Nishii & Wright, 2008). When employees are exposed to HPWS in a weak procedural-justice climate, they are unlikely to conclude that these practices are evidence of their value and importance to the organization. Moreover, because procedural justice affects employee trust in the organization (Colquitt et al., 2012), a weak procedural-justice climate will affect the perceived trustworthiness of the organization as an exchange partner, further eroding the strength of the linkage between HPWS and the desired behavioral outcome. However, when a strong procedural-justice climate is maintained within the organization, employees exposed to HPWS may regard their organization as a trustworthy exchange partner.

Taken together, we contend that the procedural-justice climate is a necessary condition for the realization of the theorized behavioral outcomes of the HPWS. As such, it serves as a potentially important source of inter-organization differences in understanding the linkage between the HPWS and employees' collective behavioral responses (i.e., OCB). That is, we contend that the procedural-justice climate provides an important indicator of the prevailing fairness in managerial decision-making and thus an important insight into the effect of the HPWS on the collective OCB. When the procedural-justice climate is strong, we expect that this climate helps ensure the effectiveness of managerial implementation of the HPWS and the desired employee interpretation of their value to the organization. Conversely, a weaker procedural-justice climate would make it less likely that these practices will be implemented in a fair and effective way – thereby reducing the likelihood that the HPWS will be interpreted as an expression of the employee's value to the organization.

Hypothesis 3. The procedural-justice climate will moderate the relationship between the unit-level HPWS and the collective OCB, such that the relationship will become stronger when the unit has a stronger procedural-justice climate.

Although Sun et al. (2007) demonstrated the mediating role of OCB in the relationship between HR practices, turnover, and productivity, the mediating role of the aggregate OCB in the relationship between perceived HPWS and service outcomes has not been tested directly. Although we anticipate that OCBs would operate as a mediating mechanism through which HPWS affects organizational service performance at the unit level, we expect that this relationship will depend on the strength of the procedural-justice climate within the organization. Specifically, we expect to find evidence of the mediating role of OCB in the relationship between HPWS and organizational service performance only within a strong procedural-justice climate.

Hypotheses 4. The mediated relationship between the unit-level HPWS and organizational service performance through the collective OCB will be moderated by the procedural-justice climate.

3. Methods

3.1. Data collection and sample

Data for this study were obtained through the cooperation of a hotel franchise and management company with brands representing low-cost, business-traveler, extended stay, and luxury market segments. Independent North American franchise locations were selected by corporate operational personnel in an effort to represent a diversity of locations, market orientations, and performance. Although the franchise agreements stipulate specific standardized physical plant, technological, and marketing requirements, franchise operators may adopt HR practices of their own choosing. Thus, the sample provides excellent natural controls

on extraneous sources of variance and can better isolate the focal effects of HR practices, the procedural-justice climate, and OCB on hotel service outcomes. Additionally, the service-intensive context of the hotel industry, and the fact that employees and customers interact directly in the creation of the service experience, make the meditational role of organizational citizenship especially appropriate (Bowen, Gilliland, & Folger, 1999).

In total, 204 hotels participated in the study. A team composed of doctoral-level researchers specialized in management administered the data collection, with the exception of the customer satisfaction survey. Hotel managers at the designated locations participated in a conference call in which the study methodology and requirements were explained. They were then sent instructions, survey packets, and a sealed collection box for the confidential return of completed surveys. The employee survey was administered for three months preceding the collection of customer-satisfaction data. In order to reduce common-source differences resulting from obtaining the perceptions of HR practices, procedural-justice climate, and OCB from the same employees, half of the employees were asked to answer a survey that included items measuring perceived HPWS, whereas the other half answered a survey that included items measuring procedural-justice perceptions and OCB. All employees were assured of the confidentiality of their responses and were provided with envelopes in which to seal their completed surveys before placing them in the sealed collection box.

Service performance data for the months following our employee data collection were provided by the corporate offices based on established and ongoing customer-satisfaction surveys conducted at each location. The headquarters surveyed approximately 50 customers who had stayed at each hotel that month. Customers visiting each hotel location had a chance to fill out a customer-satisfaction survey before they left the hotel. Following the collection of employee survey data, three monthly observations for each location were retained for analysis.

Out of 10,276 surveys sent out to the employees working for the 204 hotels, 5577 complete and useable responses were returned for an overall response rate of 54.2%. Specifically, the response rates were 53.9% (fairness and OCB survey) and 54.4% (HPWS survey). To generate meaningful unit-level averages for our variables, we limited our sample to hotels with at least three employee survey responses for all employee response variables. The final sample included 5290 employees across 180 hotels, for an average of 29.39 employees per hotel (divided equally between the two different employee surveys). The sample size was reduced to approximately 50% of the initial sample. Of the respondents, 64% were female; the average length of service in the industry was 6.28 years; and the average organizational tenure was 3.52 years. The mean values of number of rooms and hotel age were 167.29 rooms and 15.23 years, respectively.

Although the sample mostly consisted of employees who frequently interacted with hotel guests (approximate 94%), there were some employees, such as engineering and maintenance employees, who rarely interacted with hotel guests. Thus, we created a restricted sample that excluded the latter kind of employees. To find out how much the full sample differed statistically from the restricted sample, we compared the restricted sample with the full sample for HPWS, procedural justice, and OCB, and found that the two samples did not significantly differ from one another.

3.2. Measures

3.2.1. Perceived HPWS (unit level)

This measure was designed to capture employees' shared awareness of the organizational HR practices used in the hotel. Following the suggestions of Chan (1998) and Klein, Conn, Smith, and Sorra (2001), in order to capture meaningful unit-level differences, respondents were asked to report their awareness of the HR practices experienced by the group (hotel). In doing so, we intended to use employees as informants about HR practices used in the hotel, rather than capture their individual

experiences. We regarded the use of multiple employee informants as an appropriate way to capture employees' shared awareness without committing a level-based misspecification error arising from the use of a single or a few key informants (Arthur & Boyles, 2007). This approach also increased inter-rater reliability by reducing measurement errors (Gerhart, Wright, McMahan, & Snell, 2000).

We followed relevant review articles (e.g., Lawler, 1992) and empirical studies (e.g., Zacharatos, Barling, & Iverson, 2005) to construct a measure of perceived HR practices. The final measure included 15 items to measure job autonomy, participation in decision making, employee involvement, training, performance appraisal and feedback, pay for performance, and information sharing. These items are listed in Table 1. These HR practices were consistent with the HPWS outlined by Lepak, Takeuchi, and Snell (2003) and measures appearing in other studies of SHRM literature (e.g., Den Hartog, Boon, Verburg, & Croon, 2013; Liao et al., 2009).

We created a composite variable of perceived HR practices by averaging all 15 items, following empirical procedures of previous SHRM studies. The reliability of the scale was $\alpha = 0.89$. Because we conducted the analysis at the organizational level as the average rating for perceived HR practices across each location, we examined within-hotel agreement (and between-hotel differences) in perceived HR practices prior to aggregation. We calculated intra-class correlations (ICC), based on one-way ANOVA results (Gerhart et al., 2000); ICC(1) for this measure was 0.08 ($p < .001$), indicating significant between-hotel differences, and ICC(2) was 0.58, suggesting a moderate level of within-hotel agreement. Although the value of ICC(2) is slightly below the recommended level, this value is consistent with past published research on the organizational-level measures of HPWS provided by multiple employee respondents (e.g., Liao et al., 2009; Takeuchi et al., 2007). Also, the median within-group agreement (rwg) for this measure was 0.70, which exceeds the suggested criterion of 0.60 (James, 1982).

3.2.2. Procedural-justice climate

We adapted five items from past research (e.g., Niehoff & Moorman, 1993) to measure employee perceptions of justice. This measure captures the extent to which employees agree that the decision-making process is fair and transparent as well as the extent to which the workplace shares job- or organization-relevant information with employees. The literature on organizational justice has suggested the existence of a unit-level climate of procedural justice (Whitman et al., 2012). The climate of justice is the "favorability of the team's ratings of procedural justice" (Colquitt et al., 2002, p. 87). Based on Chan's (1998) composition approach, we used a group (hotel) referent in the survey to capture the collective experience of employees. These items are also listed in Table 1. The reliability of this measure was 0.88. We created a composite variable of the procedural-justice climate by averaging the five items. ICC(1) was 0.08 ($p < .001$), and ICC(2) was 0.55, again suggesting a moderate level of within-hotel agreement, which we deemed sufficient to justify aggregation. The median rwg for this measure was 0.55, which is around the recommended rule of thumb.

3.2.3. Collective OCB

We adopted four items from the work of Podsakoff, MacKenzie, Moorman, and Fetter (1990) to measure unit-level OCB. This measure indicates the extent to which employees are willing to engage in tasks or roles that are not required as part of their job responsibility. Although many early studies operationalized OCB at the individual level (e.g., Bateman & Organ, 1983; Williams & Anderson, 1991), many group-level studies have also used an OCB (e.g., Nishii et al., 2008; Walz & Niehoff, 2000). Organ's (1988) measure included five different dimensions: altruism, courtesy, civic virtue, conscientiousness, and sportsmanship. Because hotel employees were used for sampling, we used civic-virtue items, which are intended to capture helping behavior among employees to improve the service experience of customers.

Table 1
The result of confirmatory factor analysis.

Factor	Scale items	Second-/first-order factor loading	T-value	AVE ^a	CR ^b	
HPWS	Employees have lots of freedom to decide how to do their work.	0.90	0.50	fixed	0.44	0.92
	If a problem occurs, employees can fix it without involving management.		0.42	16.95		
	It is easy for employees to share their ideas with management.		0.76	24.06		
	Employees are encouraged to participate in decisions that affect their work.		0.73	23.65		
	Employees are not afraid to speak up if there is a problem.		0.67	22.72		
	If a decision is being made in my department, everyone is involved.		0.63	22.12		
	This hotel values performance more than how long you have worked here.	0.88	0.55	fixed		
	Managers let people know when they are doing a good job.		0.69	25.47		
	The pay system encourages employees to work hard.		0.59	23.14		
	Employees at this hotel will earn more money if they do a good job.		0.54	21.68		
	The hotel values employee training and growth.		0.81	27.78		
	Lots of training is provided to employees.		0.74	26.65		
	Employees have enough information to do their jobs well.	0.84	0.79	fixed		
	Employees are given information about hotel goals and performance.		0.68	31.64		
	Employees know what they need to do to perform their job well.		0.65	30.37		
Procedural justice	All job decisions in this department are made in a fair way.		0.68	fixed	0.59	0.88
	When making decisions about my job, our department offers reasons that make sense.		0.71	39.40		
	Information on decisions is provided when employees ask for it.		0.80	27.20		
	When decisions are made about our jobs, this hotel considers employee needs.		0.84	34.70		
OCB	When decisions are being made, this hotel attempts to make sure everyone is heard.		0.82	34.43		
	I make suggestions to improve this hotel.		0.53	fixed	0.52	0.81
			0.69	18.38		

(continued on next page)

Table 1 (continued)

Factor	Scale items	Second-/first-order factor loading	T-value	AVE ^a	CR ^b
	I volunteer for tasks that are not required.	0.82	24.88		
	I am willing to do things that help this hotel outside of my normal duties.				
	I am willing to work harder than I have to in order for this hotel to do well.	0.82	24.89		

Note. HPWS = high-performance work system; OCB = organizational citizenship behavior; a. AVE = Average variance extracted; b. CR = Construct reliability.

The Cronbach’s alpha for this measure was 0.81. We created a composite variable of OCB by averaging the four items. Again, we calculated the aggregation¹ statistics for this measure. ICC(1) was 0.03 and statistically significant ($p < .001$). ICC(2) was 0.32. ICC(2) values are sensitive to the size of the group (Bliese, 2002), and the level of ICC (2) in the current study was similar to those found in previous SHRM studies (e.g., Liao et al., 2009; Nishii et al., 2008; Takeuchi et al., 2007). The median rwg for this measure was 0.69.

3.2.4. Organizational service performance

Customer-service performance data were offered by the corporate head office. We used two service performance variables from this survey to test the hypothesized model: *overall customer satisfaction*, in which customers were asked to assess their total service experience at the hotel, and *intention to return*, which captures their willingness to use the hotel again. We used service performance data averaged over the three months following the completion of the employee data collection (e.g., Wright, Gardner, & Moynihan, 2003; Wright, Gardner, Moynihan, & Allen, 2005). The scale used to measure organizational service performance was 1–100. This was a bipolar scale, with 1 as the minimum possible (worst) score and 100 as the maximum possible (best) score.

3.2.5. Control variables

To further control for extraneous variance that might systematically affect our study variables, several control variables were included in the analysis. These controls included unit size, measured by the number of rooms, unit age (years since established), and hotel brand. Because four brand types were represented in the sample, dummy variables were created and included in the analysis.

4. Results

Before analysis, we checked the factor structure of the variables included in the study. Table 1 presents the results of confirmatory factor analysis (CFA) for the HPWS, procedural justice, and OCB. The service performance variables were not included, because they were qualitatively different (index scores averaging multiple responses over a period) from other variables. We needed two CFA models, because the three variables were collected from two different sources. For the HPWS,

¹ We were not necessarily interested in justifying the existence of a group-level construct of OCB. We used the average score of the within-unit responses of OCB, because we believed that more OCB at each hotel enabled customers to experience better service, and benefitted the hotel, as the service literature suggests (Bowen, Gilliland, & Folger, 1999; Schneider et al., 2005). In other words, the levels of within- and between-unit variance are less critical in testing our hypotheses. The effect of the overall level of OCB was what we were interested in. Thus, we used the average score of OCB to test our hypotheses.

we tested two alternative models to check the factor structure. First, we tested a single-factor model with all 15 items loaded to one factor. The fit statistics for this model were acceptable, but not strong enough (Chi-square = 19.43, $p < .01$, CFI = 0.89, NNFI = 0.88, RMSEA = 0.08, SRMR = 0.05). We then tested a second-order model that included three first-order factors loaded to a second-order factor. The second model showed good fit statistics (Chi-square = 8.25, $p < .01$, CFI = 0.96, NNFI = 0.95, RMSEA = 0.05, SRMR = 0.03); the change in Chi-square was 1019.90 and was statistically significant ($p < .01$). Thus, we retained the second-order factor structure. For the CFA testing of procedural justice and OCB, the fit statistics for the two-factor model were strong enough (Chi-square = 5.41, CFI = 0.99, NNFI = 0.99, RMSEA = 0.04, SRMR = 0.03), so we retained the factor structure. We also estimated the average variance extracted (AVE) and composite reliability (CR) for the three variables. The AVE and CR values were all acceptable and above the recommended cut-off (0.50 and 0.70 for AVE and CR, respectively), except for the AVE value of HPWS, which was slightly lower than 0.50; however, this was not a problem, because the CR was higher than 0.60 (Fornell & Larcker, 1981). Thus, we retained the current HPWS factor structure, given that the CR value of HPWS was sufficiently high at 0.92.

Table 2 presents the means, standard deviations, and inter-correlations between variables. The patterns of the correlations are consistent with the hypothesized relationships between variables. For example, the correlation between perceived HPWS and collective OCB was positive and statistically significant ($r = 0.42, p < .01$). The correlations between collective OCB and two service-performance variables, overall customer satisfaction ($r = 0.26, p < .01$) and intention to return ($r = 0.26, p < .01$), were also positive and statistically significant.

In testing hypotheses, we conducted a series of ordinary least-squares (OLS) regressions. Although we collected some data from individual responses, our conceptual and empirical interests in this study reside at the unit level. Because lower-level variables cannot be used to estimate the variance of higher-level variables, past studies aggregated individual-level responses to create unit-level variables and then conducted a single-level analysis (e.g., Lepak et al., 2003; Messersmith et al., 2011; Wright et al., 2003, 2005). Following Chan’s (1998) approach, we aggregated individual-level (Level 1) data to create unit-level (Level 2) variables and then tested unit-level relationships.

Hypothesis 1 predicted that HPWS would be positively associated with collective OCB. Table 3 (Model 2) shows that the perceived HPWS was positively and significantly related to the collective OCB ($b = 0.33, p < .001$) and, after accounting for the control, produced a change in R^2 of 0.14 ($p < .001$). Thus, the results supported Hypothesis 1.

Table 4 shows the results of testing Hypothesis 2, which predicted that collective OCB would mediate the relationship between the perceived HR practices and service performance. The result shows that collective OCB was a statistically significant predictor of customer satisfaction (Model 2: $b = 2.47, p < .05$) and intention to return (Model 6: $b = 2.95, p < .05$), when controlling for the perceived HPWS. To bolster our findings of significant mediation, we adopted the bootstrap approach suggested by Preacher and Hayes (2004). Compared to a more traditional test of mediation (e.g., Sobel test), bootstrap analysis adjusts for the non-normal distribution of mediated effects (MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002) and provides the most powerful and reasonable way to obtain confidence limits for indirect effects under different conditions (Preacher & Hayes, 2008). We estimated the 95% confidence intervals (CIs) using a bootstrap test based on 5000 samples with replacement (Preacher & Hayes, 2008). The result showed that the indirect effect of the perceived HPWS on overall customer satisfaction and intention to return was 0.79 (95% confidence interval [CI] = [0.05, 1.75]) and 0.95 (95% confidence interval [CI] = [0.15, 2.00]) for each. These results confirmed that the indirect effects via collective OCB were significant, which supports Hypothesis 2.

Hypothesis 3 predicted that the association between the perceived HPWS and the collective OCB is dependent on the level of the procedural-justice climate. To test the interaction, we followed the

Table 2
Means, standard deviations, and inter-correlations between study variables.

Variable	Mean	Standard deviation	1	2	3	4	5	6	7	8	9
1. Unit age	15.23	12.65									
2. Unit size	167.29	92.95	.34**								
3. Brand dummy 1	.36	.48	-.45**	-.58**							
4. Brand dummy 2	.08	.27	.01	.35**	-.22**						
5. Brand dummy 3	.03	.16	-.17*	-.13	-.13	-.05					
6. Perceived HPWS	3.56	.37	-.15*	-.26**	.23**	-.24**	.07				
7. Procedural-justice climate	3.73	.42	-.26**	-.34**	.29**	-.19*	.11	.56**			
8. Collective OCB	4.09	.31	-.08	-.17*	.17*	-.14	.02	.42**	.56**		
9. Overall customer satisfaction	86.47	5.88	-.43**	-.49**	.57**	-.15*	.02	.28**	.40**	.26**	
10. Intention to return	83.70	6.98	-.41**	-.49**	.53**	-.12	.13	.28**	.38**	.26**	.93**

Note. N = 180; HPWS = high-performance work system; for dummy coded variables, business class hotel is the omitted brand; *p < .05; **p < .01.

Table 3
Moderating effect of procedural-justice climate on the relationship between perceived high-performance work system and collective organizational citizenship behavior (OCB).

Variable	Model 1	Model 2	Model 3	Model 4
<i>Step 1</i>				
Constant	4.11***	4.10***	4.04***	4.03***
Brand dummy 1	.07	.04	.02	.01
Brand dummy 2	-.11	-.03	-.02	-.05
Brand dummy 3	.05	.01	-.04	-.03
Unit age	.00	.00	.00	.00
Unit size	.00	.00	.00	.00
<i>Step 2</i>				
Perceived HPWS		.33***	.12	.13*
<i>Step 3</i>				
PJC			.37***	.35***
<i>Step 4</i>				
Perceived HPWS × PJC				.25*
R-squared	.05	.18***	.34***	.36***
Change in R-squared		.14***	.16***	.02*

Note. N = 180; unstandardized regression coefficients; for dummy coded variables, business class hotel is the omitted brand; HPWS = high-performance work system; PJC = procedural-justice climate; *p < .05; **p < .01, ***p < .001.

Table 4
Mediating effect of collective organizational citizenship behavior (OCB) on the relationship between perceived high-performance work system and organizational service performance.

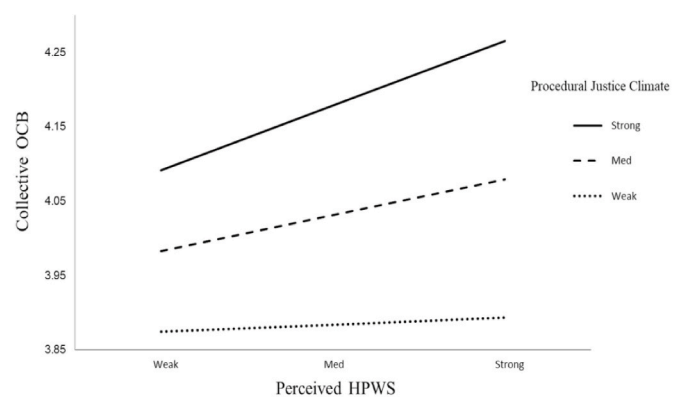
Variable	Collective OCB	DV = overall customer satisfaction		DV = intention to return	
	Model 1	Model 2	Model 3	Model 5	Model 6
Constant	4.10***	81.34***	74.13***	74.63***	68.40***
Brand dummy 1	.04	4.25***	4.15***	6.83***	4.67***
Brand dummy 2	-.03	.58	.65	5.98**	1.83
Brand dummy 3	.01	.15	.13	6.02*	4.53
Unit age	.00	-.09**	-.09**	-.07	-.08*
Unit size	.00	-.01*	-.01*	-.02**	-.02**
Perceived HPWS	.33***	1.96*	1.15	2.63*	1.50
Collective OCB			2.47*		2.95*
R-squared	.18***	.41***	.42***	.44***	.41***

Note. N = 180; unstandardized regression coefficients; for dummy coded variables, business class hotel is the omitted brand; DV = dependent variable; *p < .05; **p < .01, ***p < .001.

procedure suggested by Aiken and West (1991). Before analysis, we centered both variables on the mean of each variable, and created the interaction term, *Perceived HPWS * Procedural-justice Climate*. Table 3 (Model 4) shows that the interaction term was statistically significant ($b = 0.25, p < .05$) and produced a significant change in R^2 of 0.02 ($p < .05$).

To gain a better understanding of the nature of this interaction, Fig. 2 shows the interaction between the perceived HPWS and procedural-justice climate on collective OCB. The figure shows that in a weak procedural-justice climate ($b = 0.03, n.s.$; one standard deviation (SD) below the mean), the relationship between the perceived HPWS and collective OCB was not significant. However, consistent with Hypothesis 1, when there was a strong procedural-justice climate ($b = 0.23, p < .01$; one SD above the mean), this relationship was positive and significant, suggesting that the procedural-justice climate significantly strengthens the relationship between the perceived HPWS and the collective OCB. Therefore, Hypothesis 3 was also supported.

Finally, Hypothesis 4 suggested that the indirect effect of the perceived HPWS on customer-service performance through collective OCB is dependent on the strength of the procedural-justice climate. To test this hypothesis, we conducted moderated-mediation analysis (Edwards & Lambert, 2007). An important advantage of this type of analysis is that the moderation and mediation can be tested simultaneously. Table 5 shows the conditional indirect effects for weak or strong procedural-justice climates. For three different conditions (low, one SD below the mean; medium, mean; high, one SD above the mean) of procedural-justice climate, we calculated the indirect effects of perceived HPWS on both customer-service performance variables. We estimated the 95% CIs following the procedures we used for testing Hypothesis 2. Table 5 shows that the indirect effects on overall customer satisfaction under the medium condition were 0.32, and under the high condition, 0.58. The bootstrap CIs for these indirect effects did not include a zero, showing statistically significant indirect effects. However, in a weak procedural-justice climate, the indirect effect was not significant. In the model with customer intention to return as an



Note. High procedural-justice climate = one standard deviation above the mean; low procedural-justice climate = one standard deviation below the mean.

Fig. 2. Plot of interaction of perceived high-performance work system (HPWS) with procedural-justice climate on collective organizational citizenship behavior (OCB). Note. High procedural-justice climate = one standard deviation above the mean; low procedural-justice climate = one standard deviation below the mean.

Table 5

Bootstrap test of conditional indirect effect of perceived high-performance work system on customer-service performance at different levels of procedural-justice climate.

a. Overall customer satisfaction				
Perceived HPWS	Boot indirect effect	Boot SE	Boot lower CI	Boot upper CI
-1 SD (-0.42)	.06	.21	-.24	.69
Mean (0)	.32	.22	.03	.92
+1 SD (0.42)	.58	.32	.08	1.43
b. Intention to return				
Perceived HPWS	Boot indirect effect	Boot SE	Boot lower CI	Boot upper CI
-1 SD (-0.42)	.08	.23	-.29	.71
Mean (0)	.38	.25	.03	1.08
+1 SD (0.42)	.69	.38	.12	1.69

Note: N = 180; HPWS = high-performance work system; Confidence interval (CI) = 95%; SE = standard error; Bootstrap sample size = 5000.

outcome variable, the results from the bootstrap analysis were consistent with those of customer satisfaction. The indirect effects on intention to return for the medium and high conditions were .38 and .69, respectively, and the bootstrap CIs did not include a zero. However, under the low condition, the indirect effect was not statistically significant. Thus, the results supported Hypothesis 4.

5. Implications of the findings

5.1. Theoretical implications

We believe that our findings have several significant theoretical implications. First, the study provides significant insights into understanding the HPWS–performance linkage in the service and hotel sector. Although previous studies (e.g., Arthur, 1994; Jiang et al., 2012; Messersmith et al., 2011; Takeuchi et al., 2007) suggested several theoretical mechanisms and examined the empirical relationships of the linkage, our understanding of the linkage is not yet clear in that research findings are mixed (Kroon, Voorde, & Veldhoven, 2009), the causal relationship is unclear (Wright et al., 2003), and the connection between stated HR practices and actual HR is weak (Liao et al., 2009). Kloutsiniotis and Mihail (2020a) reported in their recent review of HPWS research in the tourism and hospitality sectors that only one of the 28 empirical studies investigated the causal process (i.e., the HR black box) of the HPWS-organizational service performance. Although there might be multiple approaches, one way to understand this HR black box is to focus on the issue of HR practice implementation. Recent studies of SHRM specifically focused on providing insights into ‘why effective implementation of HR practices is important’, and ‘how we can effectively implement HR practices’ (e.g., Sikora, Ferris, & Van Iddekinge, 2015; Yang & Arthur, 2019). We have added to this line of research to understand the HR black box from the viewpoint of HR practice implementation. Specifically, we have shown the robustness of the links between the HPWS and service performance at the unit levels, with collective, rather than individual OCB as a mediating mechanism.

Second, our research also underscores the pivotal role of fairness perceptions by demonstrating the effect on the expected return on organizational investments in HR practices, and thus contributes to exploring the contextual effect of the HPWS (e.g., Ployhart & Moliterno, 2011). Although a long line of research has demonstrated the importance of justice in shaping employee behavioral and performance outcomes (Colquitt, Conlon, Wesson, Porter, & Ng, 2001; Colquitt et al., 2013), organizations would be well served by paying attention to procedural-justice perceptions as a necessary context for HR practice implementation. In addition, as we have demonstrated, the effect of procedural-justice perceptions is also present at the unit level. Specifically, our study indicates that the robustness of the links between the

HPWS, OCBs, and service performance depends on the coupling of HR practices with a strong procedural-justice climate. Our findings show that the link between the HPWS and service performance is strengthened when a strong climate for procedural justice develops within an organization. This suggests that the procedural-justice climate may strengthen the signal to employees that the current HPWS is appropriate, acceptable, and fair, and thus boost the social-exchange relationships from the effect of the HPWS on organizational service performance via collective OCB. Hence, assessments of practice content and assessment of exchange quality jointly influence the prediction of unit-level behavioral responses, which allows us to test and examine the theory on the strength of the HR system (Bowen & Ostroff, 2004). Future research needs to further explore how different types of climate perceptions influence how content of the HPWS affect employee attitudes and behavioral outcomes.

Third, this study provides additional theoretical and methodological clarity to the HPWS research in the service and hospitality industry. Although some studies showed the positive effect of the HPWS on organizational performance in service settings (e.g., Liao & Chung, 2004), the findings are still unclear and need more empirical examination. For this reason, several calls for more rigorous research design and data usage in the service setting have been made (e.g., Kloutsiniotis & Mihail, 2020a). However, we have yet to observe many meaningful attempts or much progress. In this study, we tested the hypothesized moderated mediation model by using the data drawn from employees working in several different brands of a large hotel franchise and their customers. Moreover, we also used data drawn from hotel customers who visited each hotel location to measure the effectiveness of the services delivered to the customers. Along with this use of multi-sourced data, we used a lagged study design to address the issues of common-method variance (Podsakoff et al., 2003) and reverse causality (Guest, 2011; Wright et al., 2005). Based on these points, we believe that this study is meaningful, in that we explicitly incorporated several issues raised in past HPWS research in a service setting and found meaningful relationships between focal constructs.

Finally, we also tap into the issue of the within-organizational variance of HR systems. As previous studies (e.g., Nishii & Wright, 2008) have pointed out, employee perceptions of the HPWS that their organization uses differ significantly across employees. This finding may not be surprising. However, what is surprising is that most SHRM studies assumed that the effect of HPWS was uniform across employees within a single organization. This assumption is problematic, not only for individual employees, but also at the work group and organization (unit) levels, because the assumption (1) masks different effects of HPWS across individuals and work units and (2) weakens the overall effects of HPWS on multiple organizational outcomes. In this study, the levels of justice climate become the source weakening the effect of the HPWS on the organization’s service performance. Organizations cannot develop a strong justice climate when they are not effective in implementing HPWS and when employees do not agree on their experiences of the HPWS (Nishii & Wright, 2008). Consequently, as demonstrated here, it is likely that considerable differences remain in the quality of the unit-level exchange relationships in which HPWS are embedded.

5.2. Managerial implications

Our study provides several important managerial implications for the tourism and hotel industry. First, the findings reveal the importance of the HPWS in terms of its desirable effects on employees and organizational performance in the hotel industry. In tourism organizations, such as hotels, human-capital resources are often considered to be a cost center rather than an investment center. Our study clearly shows that implementing a set of HPWS improved the service performance of hotels through the collective OCB of employees. Given the competitive market situation, high-quality human-capital resources can be a good source of sustainable competitive advantages to differentiate a hotel

from others, in providing customized services for demanding consumers. Our results provide a clue as to how the HPWS affects a hotel's organizational service performance; that is, employees under HPWS are likely to make an extra effort in serving customers. This empirical evidence can be recommended to senior managers who make a strategic decision to properly allocate organizational resources that in the hotel industry are often limited (Ivanova, Ivanov, & Magnini, 2016). For example, our findings suggest that to better understand how HPWS influences organizational service performance, hotel companies (franchisors) need to monitor the performance of each property (franchisee) in terms of the extra-role behavior of employees within each hotel (collective OCB).

Second, our findings about the moderating function of a procedural-justice climate also present an interesting implication for tourism and hospitality professionals to successfully facilitate the HPWS. Given that with technological advances, employees can now easily access internal and external information about organizational processes (Wenzel, Krause, & Vogel, 2019), how fairly managers conduct organizational processes should be brought to the attention of tourism and hospitality managers. The salient effects of the HPWS can be expected, particularly when hotel employees collectively perceive their organization as fair in the organizational process. In other words, even if hotels invest in their human-capital resources, they are unlikely to obtain desirable organizational outcomes in an unfair organizational climate. Accordingly, we suggest that a hotel corporation should help each hotel establish a fair organizational climate to maximize the contribution of HPWS and monitor the level of the justice climate across hotels on a regular basis.

Last, the finding that both the content and the process of HR systems jointly affect important outcomes of hotel operations also provides managerial implications. Recent studies of SHRM clearly showed the critical role of frontline managers in implementing HR practices (e.g., Sikora et al., 2015; Yang & Arthur, 2019). Although HR practices are designed by HR people (HR directors, managers, practitioners), it is the frontline manager who actually uses them. For this reason, frontline managers need to know their HR systems in depth and to properly use such systems. To make this happen, each hotel needs to find ways to increase managers' awareness of the HR practices that the hotel adopts. One way of doing this is to provide hotel managers with training programs. Given that in our sample, each hotel had much discretion in designing its own HR system, each unit itself should design and provide training programs to its managers. However, frontline managers also need to properly use the HR practices adopted by their hotel, because the way HR practices are applied to each employee affects the employee perception of HR practices. Managerial training and development in the effective use of HR practices can also be useful (Bos-Nehles, Van Riemsdijk, & Kees).

6. Conclusions, limitations, and future research

As the SHRM literature suggests, the clear divide between 'content' and 'process' is artificial (e.g., Helfat, 2009, pp. 30–34). The same logic would apply to the case of observing the effect of HPWS on employee behavior and organizational performance (Arthur, Herdman, & Yang, 2016). In this study, we examined the effect of the HPWS (content) on the collective OCB and organizational service performance under the influence of the procedural-justice climate (process). We found that employee responses to the HPWS and consequently the effect of the HPWS on organizational service performance (i.e., *overall customer satisfaction* and *intention to return*) are contingent on the strength of the procedural-justice climate. This finding suggests that the content and implementation of HPWS might indicate independent constructs but should work simultaneously with the process to present the intended effect of HPWS adopted by the organization. For the organization hoping to promote organizational performance through people, more efforts to effectively implement the HPWS appear indispensable.

There are several features of the study that limit our capacity to

generalize these findings. First, the hotel industry represents an especially intensive service context, so it is appropriate to examine the causal linkages that are important for improving customer-service outcomes. However, we limited our sample to a single hotel franchise group in a single industry. Although this limitation is offset in part by the natural controls of extraneous variance imposed by the sample, to ensure generalizability, future research should focus on other industries and more diverse samples. Indeed, research conducted in other service-delivery contexts also represent an important research direction.

Also, we used lagged service performance data to provide more confidence in the hypothesized causal direction of the proposed relationships. However, given the cross-sectional nature of the employee-provided measures, definitive conclusions about the causal direction of these relationships are not possible. Additional longitudinal research is necessary to further confirm the temporal ordering of these effects (Schneider et al., 2005; Wright et al., 2003, 2005).

Last, a cursory review of items employed in past research to assess perceived HR practices reveals that measures often include both items requesting objective assessments of the adopted HR practices and items targeting subjective judgments of the quality of implementation (e.g., Patel & Conklin, 2012). For this reason, research should pay attention to the measurement of HR practices perceived by employees to ensure clarity about whether these assessments target the content of practices or evaluative judgments of the exchange quality between an employer and employees through HR practices. Therefore, empirical attention to the measurement of perceived HR practices is warranted.

Credit author contribution statement

Jaewan Yang: Conceptualization, Data curation, Investigation, Methodology, Formal analysis, Writing – original draft. Youngsang Kim: Formal analysis, Methodology, Writing – original draft. Peter B. Kim: Conceptualization, Methodology, Writing – original draft.

Funding

In conducting this work, Jaewan Yang was supported by the Hankuk University of Foreign Studies Research Fund.

Impact statement

This study examines how human resource systems can be useful for generating positive employee behaviors and higher organizational performance in hotels. Our findings benefit not only the hotel industry, but also the overall society in three ways. First, the study demonstrates the idea "investment in people pays off". Although employees are often considered as costs in tough competitions, this study provides a strong justification for the pursuit of a more employee-centered organization. Second, the study suggests a powerful way that would benefit the service economy. When high investment and fair treatment are experienced, service employees would display more positive behaviors fulfilling customer expectations. Finally, our findings can be applied to many different organizations and institutions. That is, it is not just about 'what' but also 'how' when it comes to the implementation of practices and policies that are adopted to benefit our society.

Declaration of competing interest

The authors have no conflicts of interest to declare.

References

- Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. New York, NY: Sage Publications.
- Arthur, J. B. (1994). Effects of human resource systems on manufacturing performance and turnover. *Academy of Management Journal*, 37(3), 670–687.

- Arthur, J. B., & Boyles, T. (2007). Developing the human resource system structure: A levels-based framework for strategic HRM research. *Human Resource Management Review*, 17(1), 77–92.
- Arthur, J. B., Herdman, A. O., & Yang, J. (2016). How top management HR beliefs and values affect high-performance work system adoption and implementation effectiveness. *Human Resource Management*, 55(3), 413–435.
- Arthur, J. B., Herdman, A. O., & Yang, J. (2021). Which way to high performance? Comparing performance effects of high-performance work system components in small-to medium-sized establishments. *ILR Review*, 74(2), 352–387.
- Bateman, T. S., & Organ, D. W. (1983). Job satisfaction and the good soldier: The relationship between affect and employee "citizenship. *Academy of Management Journal*, 26(4), 587–595.
- Blau, P. (1964). *Power and exchange in social life*. New York, NY: John Wiley & Sons.
- Bliese, P. D. (2002). Multilevel random coefficient modeling in organizational research: Examples using SAS and S-PLUS. In F. Drasgow, & N. Schmitt (Eds.), *Modeling in organizational research: Measuring and analyzing behavior in organizations* (pp. 401–445). San Francisco, CA: Jossey-Bass.
- Borman, W. C., & Motowidlo, S. J. (1993). Expanding the criterion domain to include elements of extrarole performance. In N. Schmitt, & W. C. Borman (Eds.), *Personnel selection in organizations* (pp. 71–98). San Francisco, CA: Jossey-Bass.
- Bos-Nehles, A. C., Van Riemsdijk, M. J., & Kees Looise, J. (2013). Employee perceptions of line management performance: Applying the AMO theory to explain the effectiveness of line managers' HRM implementation. *Human Resource Management*, 52(6), 861–877.
- Bowen, D. E., Gilliland, S. W., & Folger, R. (1999). HRM and service fairness: How being fair with employees spills over to customers. *Organizational Dynamics*, 27(3), 7–23.
- Bowen, D. E., & Ostroff, C. (2004). Understanding HRM–firm performance linkages: The role of the "strength" of the HRM system. *Academy of Management Review*, 29, 203–221.
- Chan, D. (1998). Functional relations among constructs in the same content domain at different levels of analysis: A typology of composition models. *Journal of Applied Psychology*, 83, 234–246.
- Chen, Z., Zhu, J., & Zhu, M. (2015). How does a servant leader fuel the service fire? A multilevel model of servant leadership, individual self-identity, group competition climate, and customer service performance. *Journal of Applied Psychology*, 100, 511–521.
- Collins, C., & Kehoe, R. (2017). Examining strategic fit and misfit in the management of knowledge workers. *ILR Review*, 70(2), 308–335.
- Collins, C. J., & Smith, K. G. (2006). Knowledge exchange and combination: The role of human resource practices in the performance of high-technology firms. *Academy of Management Journal*, 49(3), 544–560.
- Colquitt, J. A. (2001). On the dimensionality of organizational justice: A construct validation of a measure. *Journal of Applied Psychology*, 86, 386–400.
- Colquitt, J. A., Conlon, D. E., Wesson, M. J., Porter, C. O. L. H., & Ng, K. Y. (2001). Justice at the millennium: A meta-analytic review of 25 years of organizational justice research. *Journal of Applied Psychology*, 86, 425–445.
- Colquitt, J. A., LePine, J. A., Piccolo, R. F., Zapata, C. P., & Rich, B. L. (2012). Explaining the justice–performance relationship: Trust as exchange deepener or trust as uncertainty reducer? *Journal of Applied Psychology*, 97(1), 1–15.
- Colquitt, J. A., Noe, R. A., & Jackson, C. L. (2002). Justice in teams: Antecedents and consequences of procedural justice climate. *Personnel Psychology*, 55, 83–109.
- Colquitt, J. A., Scott, B. A., Rodell, J. B., Long, D. M., Zapata, C. P., Conlon, D. E., et al. (2013). Justice at the millennium, a decade later: A meta-analytic test of social exchange and affect-based perspectives. *Journal of Applied Psychology*, 98, 199–236.
- Cropanzano, R., & Mitchell, M. (2005). Social exchange theory: An interdisciplinary review. *Journal of Management*, 31(6), 874–900.
- Cropanzano, R., Prehar, C. A., & Chen, P. Y. (2002). Using social exchange theory to distinguish procedural from interactional justice. *Group & Organization Management*, 27(3), 324–351.
- Cropanzano, R., Rupp, D. E., Mohler, C. J., & Schminke, M. (2001). Three roads to organizational justice. In J. Ferris (Ed.), *Research in personnel and human resource management* (Vol. 20, pp. 1–13). New York, NY: JAI.
- Den Hartog, D. N., Boon, C., Verburg, R. M., & Croon, M. A. (2013). HRM, communication, satisfaction, and perceived performance: A cross-level test. *Journal of Management*, 39(6), 1637–1665.
- Edwards, J. R., & Lambert, L. S. (2007). Methods for integrating moderation and mediation: A general analytical framework using moderated path analysis. *Psychological Methods*, 12(1), 1–22.
- Ehrhart, M. G. (2004). Leadership and procedural justice climate as antecedents of unit-level organizational citizenship behavior. *Personnel Psychology*, 57(1), 61–94.
- Erdogan, B. (2002). Antecedents and consequences of justice perceptions in performance appraisals. *Human Resource Management Review*, 12(4), 555–578.
- Evans, W. R., & Davis, W. D. (2005). High-performance work systems and organizational performance: The mediating role of internal social structure. *Journal of Management*, 31, 758–775.
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39–50.
- Gerhart, B., Wright, P. M., McMahan, G. C., & Snell, S. A. (2000). Measurement error in research on human resources and firm performance: How much error is there and how does it influence effect size estimates? *Personnel Psychology*, 53(4), 803–834.
- Guest, D. E. (2011). Human resource management and performance: Still searching for some answers. *Human Resource Management Journal*, 21(1), 3–13.
- Helfat, C. E., Finkelstein, S., Mitchell, W., Peteraf, M., Singh, H., Teece, D., et al. (2009). *Dynamic capabilities: Understanding strategic change in organizations*. John Wiley & Sons.
- Ivanova, M., & Ivanov, S. (2015). Affiliation to hotel chains: Hotels' perspective. *Tourism Management Perspectives*, 16, 148–162.
- Ivanova, M., Ivanov, S., & Magnini, V. P. (2016). *The Routledge handbook of hotel chain management*. New York, NY: Routledge.
- Jackson, S. E., Schuler, R. S., & Jiang, K. (2014). An aspirational framework for strategic human resource management. *The Academy of Management Annals*, 8(1), 1–56.
- James, L. R. (1982). Aggregation bias in estimates of perceptual agreement. *Journal of Applied Psychology*, 67, 219–229.
- Jiang, K., Lepak, D. P., Hu, J., & Baer, J. C. (2012). How does human resource management influence organizational outcomes? A meta-analytic investigation of mediating mechanisms. *Academy of Management Journal*, 55(6), 1264–1294.
- Kandampully, J., Keating, B. W., Kim, B., Mattila, A. S., & Solnet, D. (2014). Service research in the hospitality literature: Insights from a systematic review. *Cornell Hospitality Quarterly*, 55(3), 287–299.
- Karatepe, O. M., & Olugbade, O. A. (2016). The mediating role of work engagement in the relationship between high-performance work practices and job outcomes of employees in Nigeria. *International Journal of Contemporary Hospitality Management*, 28(1), 2350–2371.
- Kilijci, S. E., & Wang, X. (2006). 'Intended' and 'implemented' HRM: The missing linchpin in strategic human resource management research. *International Journal of Human Resource Management*, 17(7), 1171–1189.
- Kim, P. B., Gazzoli, G., Qu, H., & Kim, C. S. (2016). Influence of the work relationship between frontline employees and their immediate supervisor on customers' service experience. *Journal of Hospitality Marketing & Management*, 25(4), 425–448.
- Klein, K. J., Conn, A. B., Smith, D. B., & Sorra, J. S. (2001). Is everyone in agreement? An exploration of within-group agreement in employee perceptions of the work environment. *Journal of Applied Psychology*, 86(1), 3–16.
- Kloutsiniotis, P. V., & Mihail, D. M. (2020a). High performance work systems in the tourism and hospitality industry: A critical review. *International Journal of Contemporary Hospitality Management*, 32(7), 2365–2395.
- Kloutsiniotis, P. V., & Mihail, D. M. (2020b). The effects of high performance work systems in employees' service-oriented OCB. *International Journal of Hospitality Management*, 90, Article 102610. <https://doi.org/10.1016/j.ijhm.2020.102610>
- Kroon, B., Voorde, K. V. D., & Veldhoven, M. V. (2009). Cross-level effects of high-performance work practices on burnout: Two counteracting mediating mechanisms compared. *Personnel Review*, 38(5), 509–525.
- Lawler, E. E., III (1992). *The ultimate advantage: Creating the high-involvement organization*. San Francisco, CA: Jossey-Bass.
- Lepak, D. P., Takeuchi, R., & Snell, S. A. (2003). Employment flexibility and firm performance: Examining the interaction effects of employment mode, environmental dynamism, and technological intensity. *Journal of Management*, 29(5), 681–703.
- Liao, H., & Chung, A. (2004). A multilevel investigation of factors influencing employee service performance and customer outcomes. *Academy of Management Journal*, 47, 41–58.
- Liao, H., Toya, K., Lepak, D. P., & Hong, Y. (2009). Do they see eye to eye? Management and employee perspectives on high-performance work systems and influence processes on service quality. *Journal of Applied Psychology*, 94(2), 371–391.
- Lind, E. A., & Earley, P. C. (1992). Procedural justice and culture. *International Journal of Psychology*, 27(2), 227–242.
- Li, Y., Wang, M., van Jaarsveld, D. D., Lee, G. K., & Ma, D. G. (2018). From employee-experienced high-involvement work system to innovation: An emergence-based human resource management framework. *Academy of Management Journal*, 61, 2000–2019.
- MacKinnon, D. P., Lockwood, C. M., Hoffman, J. M., West, S. G., & Sheets, V. (2002). A comparison of methods to test mediation and other intervening variable effects. *Psychological Methods*, 7(1), 83–104.
- Messersmith, J. G., Patel, P. C., Lepak, D. P., & Gould-Williams, J. S. (2011). Unlocking the black box: Exploring the link between high-performance work systems and performance. *Journal of Applied Psychology*, 96(6), 1105–1118.
- Mossholder, K. W., Richardson, H. A., & Settoon, R. P. (2011). Human resource systems and helping in organizations: A relational perspective. *Academy of Management Review*, 36(1), 33–52.
- Naumann, S. E., & Bennett, N. (2000). A case for procedural justice climate: Development and test of a multilevel model. *Academy of Management Journal*, 43, 881–889.
- Niehoff, B. P., & Moorman, R. H. (1993). Justice as a mediator of the relationship between methods of monitoring and organizational citizenship behavior. *Academy of Management Journal*, 36(3), 527–556.
- Nishii, L. H., Lepak, D. P., & Schneider, B. (2008). Employee attributions of the "why" of HR practices: Their effects on employee attitudes and behaviors, and customer satisfaction. *Personnel Psychology*, 61, 503–545.
- Nishii, L. H., & Wright, P. (2008). Variability within organizations: Implications for strategic human resource management. In D. B. Smith (Ed.), *The people make the place* (pp. 225–248). Mahwah, NJ: Lawrence Erlbaum Associates.
- Organ, D. W. (1988). *Organizational citizenship behavior: The good soldier syndrome*. Lexington, MA: Lexington Books.
- Patel, P. C., & Conklin, B. (2012). Perceived labor productivity in small firms: The effects of high-performance work systems and group culture through employee retention. *Entrepreneurship: Theory and Practice*, 36(2), 205–235.
- Pham, N. T., Tučková, Z., & Jabbour, C. J. C. (2019). Greening the hospitality industry: How do green human resource management practices influence organizational citizenship behavior in hotels? A mixed-methods study. *Tourism Management*, 72, 386–399.
- Ployhart, R. E., & Moliterno, T. P. (2011). Emergence of the human capital resource: A multilevel model. *Academy of Management Review*, 36(1), 127–150.

- Podsakoff, P. M., Ahearne, M., & MacKenzie, S. B. (1997). Organizational citizenship behavior and the quantity and quality of work group performance. *Journal of Applied Psychology, 82*(2), 262–270.
- Podsakoff, N. P., Blume, B. D., Whiting, S. W., & Podsakoff, P. M. (2009). Individual- and organizational-level consequences of organizational citizenship behaviors: A meta-analysis. *Journal of Applied Psychology, 94*(1), 122–141.
- Podsakoff, P. M., & MacKenzie, S. B. (1997). Impact of organizational citizenship behavior on organizational performance: A review and suggestions for future research. *Human Performance, 10*(2), 133–151.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology, 88*(5), 879–903.
- Podsakoff, P. M., MacKenzie, S. B., Moorman, R. H., & Fetter, R. (1990). Transformational leader behaviors and their effects on followers' trust in leader, satisfaction, and organizational citizenship behaviors. *The Leadership Quarterly, 1*(2), 107–142.
- Preacher, K. J., & Hayes, A. F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior Research Methods, Instruments, & Computers, 36*(4), 717–731.
- Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods, 40*(3), 879–891.
- Safavi, H. P., & Karatepe, O. M. (2018). High-performance work practices and hotel employee outcomes. *International Journal of Contemporary Hospitality Management, 30*, 1112–1133.
- Schneider, B., & Bowen, D. E. (1985). Employee and customer perceptions of service in banks: Replication and extension. *Journal of Applied Psychology, 70*(3), 423–433.
- Schneider, B., Ehrhart, M. G., Mayer, D. M., Saltz, J. L., & Niles-Jolly, K. (2005). Understanding organization-customer links in service settings. *Academy of Management Journal, 48*(6), 1017–1032.
- Sikora, D. M., Ferris, G. R., & Van Iddekinge, C. H. (2015). Line manager implementation perceptions as a mediator of relations between high-performance work practices and employee outcomes. *Journal of Applied Psychology, 100*(6), 1908–1918.
- Subramony, M. (2009). A meta-analytic investigation of the relationship between HRM bundles and firm performance. *Human Resource Management, 48*(5), 745–768.
- Sun, L., Aryee, S., & Law, K. S. (2007). High-performance human resource practices, citizenship behavior, and organizational performance: A relational perspective. *Academy of Management Journal, 5*, 558–577.
- Takeuchi, R., Lepak, D. P., Wang, H., & Takeuchi, K. (2007). An empirical examination of the mechanisms mediating between high-performance work systems and the performance of Japanese organizations. *Journal of Applied Psychology, 92*(4), 1069–1083.
- Walton, R. E. (1985). From control to commitment in the workplace. *Harvard Business Review, March–April*, 77–84.
- Walz, S. M., & Niehoff, B. P. (2000). Organizational citizenship behavior: Their relationship to organizational effectiveness. *Journal of Hospitality & Tourism Research, 24*(3), 301–319.
- Wenzel, A. K., Krause, T. A., & Vogel, D. (2019). Making performance pay work: The impact of transparency, participation, and fairness on controlling perception and intrinsic motivation. *Review of Public Personnel Administration, 39*(2), 232–255.
- Whitman, D. S., Caleo, S., Carpenter, N. C., Horner, M. T., & Bernerth, J. B. (2012). Fairness at the collective level: A meta-analytic examination of the consequences and boundary conditions of organizational justice climate. *Journal of Applied Psychology, 97*(4), 776–792.
- Williams, L. J., & Anderson, S. E. (1991). Job satisfaction and organizational commitment as predictors of organizational citizenship and in-role behaviors. *Journal of Management, 17*(3), 601–617.
- Wong, I. A., Xu, S., Chan, S. H. G., & He, M. (2019). A cross-level investigation of the role of human resources practices: Does brand equity matter? *Tourism Management, 75*, 418–426.
- Wright, P. M., Gardner, T. M., & Moynihan, L. M. (2003). The impact of HR practices on the performance of business units. *Human Resource Management Journal, 13*(3), 21–36.

- Wright, P. M., Gardner, T. M., Moynihan, L. M., & Allen, M. R. (2005). The relationship between HR practices and firm performance: Examining causal order. *Personnel Psychology, 58*(2), 409–446.
- Wu, P. C., & Chaturvedi, S. (2009). The role of procedural justice and power distance in the relationship between high performance work systems and employee attitudes: A multilevel perspective. *Journal of Management, 35*(5), 1228–1247.
- Yang, J., & Arthur, J. B. (2019). *Implementing commitment HR practices: Line manager attributions and employee reactions*. The International Journal of Human Resource Management. <https://doi.org/10.1080/09585192.2019.1629986>
- Zacharatos, A., Barling, J., & Iverson, R. D. (2005). High-performance work systems and occupational safety. *Journal of Applied Psychology, 90*(1), 77–93.



Jaewan Yang is an assistant professor of organization and human resource management at the college of business, Hankuk University of Foreign Studies. His research interests include strategic human resource management, HR digital transformation, group process and leadership, and workplace climate. He has served on numerous committees and advisory boards for the Korean government.



Youngsang Kim is an assistant professor of organization and human resources at SKK Business School, Sungkyunkwan University. He received his PhD from the University of South Carolina. His primary research focuses on strategic human capital, strategic human resource management, contingent workers, turnover, workplace diversity, and environmental sustainability.



Peter B. Kim is a professor in the School of Hospitality and Tourism and an associate director of New Zealand Tourism Research Institute at the Auckland University of Technology. He received his PhD from the Pamplin College of Business at the Virginia Tech University. His primary research focuses on service management and marketing in the contexts of hospitality and tourism.