PERFORMANCE-BASE REWARDS AND INNOVATIVE BEHAVIOUR

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**ABSTRACT**

Drawing on a structuring framework, this study investigates the effects of two internal factors, performance-related rewards and HR strength, and an external factor, uncertainty avoidance of a country, on employees’ innovative behavior. We first hypothesize that performance-related rewards will influence innovative behaviors in a positive direction, and secondly, that this relationship is stronger when employees understand Human Resource Management (HRM) as was intended by management (i.e. high HR strength). Finally, we assess the effect of uncertainty avoidance on the relationship between performance-based rewards and innovative behaviors. While the two-level data from 2741 employees and 383 supervisors in 55 organizations across 11 countries did not show a relationship between performance-based rewards and innovative behavior, the results show that HR strength positively moderates and uncertainty avoidance negatively moderates this relationship. The results offer novel insights into how firms can use internal factors in a systematic manner to promote innovative behavior in their workplace, and highlight the limitations of sustaining innovative behaviors in countries characterized by high levels of uncertainty avoidance.

Employees’ innovative behavior, defined as the ability to generate and implement creative ideas (De Jong & Den Hartog, 2010; Janssen, 2000; Scott & Bruce, 1994), is recognized as a major contributor to organizational innovation, leveraging the propensity of a firm to survive in dynamic and challenging contexts (Shalley, Gilson, & Blum, 2009). Innovative behavior manifests not only a propensity to generate new ideas, but also to weigh up the idea’s feasibility or fit with strategic needs. Although innovative behavior is required as part of the job for certain categories of employees, such as those working in high technology or creative industries, such behaviors may not be explicitly required, but instead emerge spontaneously under particular conditions for others, and perhaps the majority of employees (Montag, Maertz, & Baer, 2012). Because these behaviors are fragile and often
ephemeral (Yuan & Woodman, 2010), innovative behaviors that are above and beyond job requirements are especially important for the performance of an organization (Shalley et al., 2009).

In this study, on the basis of the structuring framework (Benyamin & Carmeli, 2009), we argue that structure in the workplace, or unambiguously defining what is required of employees might, counter-intuitively, encourages innovative behaviors. In particular, we propose that performance-based rewards are a facet of structuring that provides clarity about the performance matrices that guide individual action (Becker & Huselid, 1998; Snape & Redman, 2010; Zacharatos, Barling, & Iverson, 2005). Performance-based rewards are one of the most important components of Human Resource Management (HRM) within an organization because, when well designed, they provide a clear line of sight between how well employees perform and the non-financial and financial recognition that flows as a result of their performance (Sun, Aryee & Law, 2007). We would therefore expect that performance-based rewards would serve as a mechanism to encourage employees to aspire to the highest levels of performance, including initiating innovation (Amabile & Pillemer, 2012; Alpkan, Bulut, Gunday, Ulusoy, & Kilic, 2010; Hayton, 2005).

Performance-based rewards would, however, only provide this line of sight to the degree that employees understand HRM within their organization in the way it is intended by management. The notion that the link between HRM and performance is influenced by employees’ understanding of HRM is central to Bowen and Ostroff’s (2004) conceptualization of HR strength, which assumes that HR strength is high when employees perceive HRM as distinctive, consistent, and consensual and thereby understand HRM as intended by management. Thus, the higher the HR strength, the stronger the signals employees receive to understand the desired and appropriated responses (see also Sanders, Shipton, & Gomes, 2014). According to the structural framework, we maintain that the
clarity and understanding of HRM can be seen as way to structure the environment for employees. We therefore expect that HR strength will positively moderate the relationship between performance-based rewards and innovative behavior.

Although performance-related rewards and HR strength represent important internal conditions for innovative behaviors, it is also important to consider the context in which organizations operate. In this respect, culture has been researched as one of the key contextual factors shaping individual and organizational outcomes. Further, cultural factors have been shown to influence the extent to which HR practices influence a variety of performance outcomes at both the employee and organizational level (Rabi, Jayasinghe, Gerhart, & Kuhlmann, 2014). In this study, we focus on one specific facet of the wider context in which organizations operate, namely uncertainty avoidance (Hofstede, 1980; Hofstede & Hofstede, 2005). Uncertainty avoidance, which refers to the extent to which a society, organization, or group relies on social norms, rules, and procedures to alleviate the unpredictability of future events (House, Hanges, Javidan, Dorfman, & Gupta, 2004, 30) has been related to innovation (Hofstede, Hofstede & Minkov, 2010). Moreover, previous research has reported an inverse relationship between uncertainty avoidance and innovation (e.g. Shane, 1995), as employees in these cultures tend to make efforts to avoid risk taking and experimentation, which are necessary for successful innovation (Jones & Davis, 2000; see also Nam, Parboteeach, Cullen & Johnson, 2014). Similarly, Zhang and Zhou (2014) suggest that firms in cultures with high levels of uncertainty avoidance face challenges when promoting innovative behaviors. We therefore expect that uncertainty avoidance will negatively moderate the relationship between performance-based rewards and innovative behavior.

By investigating the relationship between performance-based rewards, HR strength, and the uncertainty avoidance of the country in which an organization operates, our contributions
to the field are three-fold. First, we develop knowledge on innovative behavior from a structuring framework (Binyamin & Carmeli, 2010) that provides opportunities for identifying internal and external factors that can encourage or restrict employees’ innovative behavior. It is vital to understand these factors, as employees’ contribution to innovation is vital for an organization (Janssen, 2005; Scott & Bruce, 1994; Shalley, 1995). Engaging in innovative behavior also poses a number of risks to employees such as exposing them to criticism for questioning existing work methods (Bednall, Sanders & Runhaar, 2014) and requires them to overcome resistance to change (Walker, Armenakis & Bernerth, 2007).

Secondly, we investigate the joint effects of HRM content, in this case performance-related rewards, and HRM process (i.e. the way in which elements of the entire HRM system shape employees’ perceptions and understanding of their expected behavior) on employees’ innovative behaviors. We thus build on endorsements to bring together HRM content and HRM process (Bowen & Ostroff, 2004; Sanders et al., 2014) in order to explain employee and organizational performance. Moreover, by investigating the impact of uncertainty avoidance of a country as an external factor that potentially influences the relationship between performance-based rewards and innovative behavior, we provide support for previous work that indicates that context matters (Akhtar, Ding, & Ge, 2008; Wei & Lau, 2008). In this way, our study addresses calls for more empirical evidence on how cultural context influences the effectiveness of both HRM practices and HRM process (Bjorkman & Welch, 2015; Rabi et al., 2014).

Finally, we address methodological issues often associated with studies investigating the relationship between HRM in general, and more specifically performance-based rewards and performance. Many studies on the effect of HR practices on performance apply a cross-sectional and single actor research design (Lin & Sanders, 2014; Bainbridge, Sanders, Cogin, & Lin, forthcoming), wherein employees or HR managers are asked to rate both HRM
and performance within their organization. In this study, we test our hypotheses using a cross-cultural, multi-actor, and multi-level research design, in which we asked supervisors to rate the performance-based rewards in their organization, and asked employees to rate their HR strength, and innovative behavior.

The remainder of the article proceeds as follows: First, we discuss the theoretical framework underpinning the study, including the mechanisms behind the proposed performance-based rewards – innovative behavior relationship. We then elaborate on the impact of two moderators: HR strength and uncertainty avoidance, on this relationship. The methodology of this study, the results and the discussion of the results are followed by an assessment of how the study findings fit within existing HR theory and research. We conclude with proposals for future research.

**HRM and employees’ innovative behaviors**

Employees exhibiting innovative behavior demonstrate not only a propensity to generate new ideas, but also to weigh up the ideas’ feasibility or fit with strategic needs (Scott & Bruce, 1994; Janssen, 2000). As well as embodying creativity, innovative behaviors also bring out the ‘real world’ orientation of employees (Janssen, 2000, 13) who are called upon to make a judgement call as to whether their activities and behaviors are welcome or not. Given the importance of employees’ innovative behavior, there is growing interest in the question of why and under which circumstances employees express innovative behavior, especially where such behaviors are not overtly required (Montag et al., 2012).

Although researchers are increasingly interested in the employee attitudes and behaviors that mediate the HRM - performance relationship (Sun et al., 2007; Nishii & Wright, 2008; Gong, Law Chang, & Xin, 2009; Takeuchi, Chen, & Lepak, 2009; Messersmith, Patel, & Lepak, 2011), insights from research are sparse and at times contradictory where innovative behaviors are concerned (e.g. Beugelsdijk, 2008; Shung,
Jeong, & Bae, in press). Intuitively we might expect that stability, repetition, order and routines would inhibit innovative behavior through limiting alternative options in the eyes of employees. However, Binyamin and Carmeli (2010) found that structuring, conceptualized as repetitive patterns of activities that are systematic, and entailing logic and order (Berger & Luckman, 1967; Cyert & March, 1963; Kollenscher, Ronen, & Farjoun, 2009) enhance employees’ creativity. Indeed, in their study of 213 employees in seven knowledge-intensive firms, they showed that structuring provides psychological availability, defined as “the sense of having the physical, emotional, or psychological resources to personally engage at a particular moment” (Kahn, 1990, 714), which is conducive to employee creativity. Benyamin and Carmeli (2010) further argue that the structuring associated with an unambiguous HRM system allows employees to turn their attention away from factors such as a lack of clarity on how their performance might be assessed towards more creative endeavors.

**Performance-related rewards and innovative behaviors**

Compensation based on pay-for-performance principles is effective not only in inducing higher levels of effort and productivity within organizations (Lazaer, 2000; Shearer, 2004), but also fostering innovative performance (Balkin & Bannister, 1993; Balkin, Markman, & Gomes-Mejia, 2000, see also Hayton, 2005). This positive influence is achieved by encouraging generally risk averse employees to embrace opportunities for challenging current practice, which is often necessary with the experimentation associated with innovation. Performance-based rewards also provide feedback on successful performance and contribute to the creation of sustained commitment and perseverance that is essential to the success of new ventures (MacMillan, 1987). As a consequence, performance-based rewards contribute to the creation of an innovative climate (Alpkan et al., 2010) by stimulating innovative contribution and accepting a greater risk (Steele & Baker, 1986).
Literature from psychology suggests however that those performance-based rewards may inhibit innovation through undermining employees’ intrinsic motivation (Amabile, 1988; Amabile, 1993). It is suggested that where individuals are required to conform to external parameters they are significantly less innovative than where they are driven by immersion in the task itself. Although compelling, scholars have proposed a more nuanced perspective. Drawing on cognitive evaluation theory (Deci & Ryan, 1985), Shalley and Perry-Smith (2001), for example highlight a distinction between controlling evaluation (being forced to conform) as opposed to informational evaluation (providing useful performance information). According to this perspective, the specific form and presentation of extrinsic motivators can dramatically affect the impact of evaluation and rewards on intrinsic motivation and creativity (Amabile & Pillemer, 2012). If competence rather than the achievement of specific targets is recognized and rewarded, intrinsic motivation is more likely to be retained. They also argue that the sequencing of rewards allocation is important, as the combination of tolerance for early failure and rewards for long-term success is effective in motivating individuals to become more innovative. Moreover, individuals working under incentive schemes tend to explore more and are more likely to be innovative than those working under fixed-wage and standard pay-for-performance incentive schemes (Ederer & Manso, 2013).

Overall, we argue that performance-based rewards provide structure for employees, and prevent managers from making capricious decisions, taking reactive managerial approaches or being shortsighted (Kollenscher et al., 2009). This structure increases employee job security that in turn allows employees to take risks and engage in innovative tasks. Consequently, employees are able to channel their resources to seek out new and more effective ways to complete their work tasks (see Binyamin & Carmeli, 2010). By structuring work activities and clarifying the performance matrices and expectations endorsed by the organization, performance-related rewards may save energy, free mental resources, and allow
employees to be proactive in addressing core organizational issues, and innovation in particular. Following this line of reasoning we formulate our first hypothesis as follows:

**Hypothesis 1:** Performance-based rewards will be positively related to employees’ innovative behavior.

**HR strength, performance-related rewards and innovative behaviors**

Bowen and Ostroff (2004) were among the first scholars to criticize the one-sided focus on the content-based approach and explicitly highlight the importance of the psychological processes through which employees attach meaning to HRM. To this end, they applied the covariation principle of attribution theory (Kelley, 1967; 1973) to the domain of HRM to develop a framework for understanding how HRM as a system “can contribute to organizational performance by motivating employees to adopt desired attitudes and behaviors that, in the collective, help to achieve the organization’s strategic goals” (Bowen & Ostroff, 2004, 204).

Drawing on the co-variation principle of the attribution theory (Kelley, 1967; 1973), a strong HR system is defined by three features: 1) distinctiveness of the HR practices (i.e. HR practices are visible, comprehensible and seen as legitimate), 2) consistency of HR practices (i.e. their purpose is presented in the same way across modalities and time), and 3) consensus about the practices (i.e. there is agreement among policy makers about the need for and purpose of the practices). When employees perceive HRM as distinctive, consistent, and consensual, they will have a better understanding of the kinds of behaviors management expects, supports, and rewards (see also Schneider, Brief, & Guzzo, 1996).

Consequently, when HR strength is high, employees can understand and make sense of HRM as intended by management. While Ostroff and Bowen (2016) argue that HR strength should be conceptualized and measured at the unit or organization level as a contextual
property of the unit or organization, we follow scholars within the process approach (e.g., Sanders et al., 2014; Bednall et al., 2014; Li, Frenkel & Sanders, 2011; Katou, Budhwar, & Patel, 2014; Sanders & Yang, 2016) who conceptualize HR strength as employees’ perception and understanding of the features of HRM. Ostroff and Bowen (2016, 7) argue that this conceptualization of HR strength at the employee level differs from their own, but is nonetheless a meaningful construct.

HR strength can also be conceptualized from a view of environmental structuring for employees. Lee, Edmondson, Thomke, and Worline (2004) pointed to the importance of consistency, finding that lack of coherence between organizational values and managerial practices (consistency) diminished employees’ tendency to try new things. Further, inconsistency reduces the sense of psychological security and amplifies perceived uncertainty, creating psychological pressure that depletes cognitive and emotional resources. Under such conditions, employees will cling to their habits rather than take risks and try out new ideas or actions (see Binyamin, & Carmeli, 2010).

Only recently a few studies have investigated the joint impact of HR practices and HR strength on innovative behavior (Bednall et al., 2014; Katou et al., 2014; Sanders & Yang, 2016). For instance, Bednall et al. (2014) found that the quality of performance appraisal was positively related to reflection, knowledge sharing, and innovative behavior, and that these relationships were stronger when employees perceived HRM as distinctive, consistent and consensual. Similarly, Sanders and Yang (2016) found that high-commitment HRM practices were related to innovative behavior, and that this relationship was intensified when the HRM system was perceived as strong (high HR strength).

On this basis, we expect the impact of performance-based rewards on innovative behavior to be stronger when employees perceive the HRM system as distinctive, consistent and consensual. In this case performance-based rewards and HRM processes are in alignment
and present an unambiguous message about strategic requirements that leaves no room for doubt in employees’ eyes about management’s intentions. Taken together, performance-based rewards and HRM processes convey a strong and unequivocal signal to the employees that innovative behaviors are important and valued, thereby freeing employees from anxiety about whether or not the organization expects such behaviors (Benyamin & Carmeli, 2010; Kollenscher et al., 2009). This leads to our second hypothesis:

*Hypothesis 2: HR strength will intensify the relationship between performance-based rewards and employees’ innovative behavior.*

**Uncertainty avoidance, performance-related rewards, and innovative behaviors**

Finally, we investigate the influence of a facet of national culture, defined as ‘the collective programming of the mind which distinguishes the members of one human group from another’ (Hofstede, 1980, 25), on the performance-based rewards – innovative behavior relationship. Indeed, there is growing evidence that although the effect of HR practices on organizational performance is robust across cultural settings (Rabi et al., 2014), that effect may result in different outcomes in diverse cultural settings cultures (Kassinis & Stavrou, 2013). This variation occurs because employees’ attitudes and behaviors are inevitably influenced by employees’ values, motivations and emotions, which are all rooted in culture (Hofstede, 1980; 1984; Taras, Rowney & Steel, 2009).

In particular, given the risk related element of innovative behavior, we investigate the role of *uncertainty avoidance* of a country on the relationship between performance-based rewards and innovative behavior. Uncertainty avoidance expresses the degree to which members of a society feel comfortable with uncertainty, ambiguity and risk taking (Hofstede, 1980; Hofstede, & Hofstede, 2005). Uncertainty avoidance explains whether and to what extent tense and vague situations are tolerated or avoided. This dimension is related to the acceptance of strenuous and uncomfortable situations and regarded by Hofstede as “what is
different, is dangerous” (Hofstede, 1996). Therefore, Hofstede (1980) proposed that innovation would be lower in countries in which uncertainty avoidance is high, as the reluctance to take risks would likely inhibit innovation. Recent studies by Nam et al. (2014) and Zhang and Zhou (2014) provide support for the impact on uncertainty avoidance on innovation.

More specifically, we suggest that in low uncertainty avoidance countries, organizational rules are often violated for pragmatic reasons, conflicts are considered as a natural part of life, and ambiguous situations are regarded as natural and interesting. Therefore, individuals in low uncertainty avoidance countries may be less concerned with confrontation and are more likely to challenge the status quo, which can be necessary when engaging in innovative behavior. As innovations are associated with some kind of change and uncertainty, individuals from high uncertainty avoidance countries would ostensibly be less prone to innovations (van Everdingen, & Waarts, 2005). To avoid uncertainty, these cultures adopt and rely on rules to minimize ambiguity, which in turn may constrain the opportunities to develop new solutions. Uncertainty-averse attitudes also mean that there is less incentive to come up with a novel idea, which will be possibly rejected (Williams & McQuire, 2005).

Further, we posit that innovative behaviors would be hindered when performance-based rewards are involved, because individuals from high uncertainty avoidance culture would be uncomfortable going out of the box when the risks of losing are more significant.

Therefore, our assertion is that people in low uncertainty avoidance can easily cope with the uncertainty in their environment, which triggers exploration behaviors whereas people from high uncertainty avoidance countries will develop social norms, rules and procedures that make it less likely that HR practices such as performance-oriented rewards will influence their innovative behaviors. Consequently, we predict that the complementarity
of a low uncertainty avoidance environment and performance-based rewards will result in more innovative behavior, and formulate our next hypothesis accordingly.

_Hypothesis 3: Uncertainty avoidance of a country will weaken the relationship between performance-based rewards and employees' innovative behavior._

**METHODS**

**Sample and procedure**

The data used for this study contains responses from 2741 employees and 383 supervisors in 55 organizations across 11 countries (China, Denmark, Indonesia, Nigeria, Norway, Malaysia, Portugal, Oman, Spain, Tanzania, and UK). Of the employees 46% were female, and 43% of the supervisors were female. Employees were on average 35.32 years of age (SD = 9.79), and supervisors were on average 38.33 years of age (SD = 11.09).

We surveyed employees and their respective supervisors, all of whom voluntarily participated in this study. An international team of researchers (authors of this article) prepared a questionnaire that was then translated and back translated in the languages in which the data was to be collected. A pilot survey was conducted, and then international scholars were asked to collect data from employees and supervisors in one organization in each of their home countries. In addition, the researchers within the team collected data in their respective countries. The organizations are from different sectors, including manufacturing, IT, hospitality, and finance, and are from profit and not-for-profit organizations. The organizations also vary in size, from small and medium enterprises (SME) to subsidiaries of multi nationals. Depending on the size of the organizations, researchers conducted a stratified sampling technique or approached all employees from the organization to achieve the desired sample size.
Measurements

The survey items were measured using a six-point Likert scale (1 = totally disagree to 6 = totally agree). The absence of a “neutral” option was intended to force participants to choose between an “agree” or “disagree” viewpoint. Peabody (1962) suggests that Likert scales provide a direction (i.e. respondents agree or disagree), more so than the intensity (i.e. level of agreement or disagreement). Eliminating the mid-point option in this study intends to capture this bipolar direction.

Performance-based rewards were measured using four items of the High Performance Work System scale of Sun, et al (2007). Supervisors were asked to complete this scale. An example item is “There is a strong link between how well employees perform their job and the likelihood of receiving a pay raise” (Cronbach’s α = .86). The intra-class correlation justified the aggregating to the organizational level, as the intra-class correlations (ICC1, Bliese, 2000) of the performance-based rewards scale was .26, meaning that 26% of the variance of managers’ perception of performance-based rewards in their organization can be explained by the organization in which the manager works.

HR strength was measured using the 15 item-scale of Coelho, Cunha, Gomes and Correia (2015; see also Pereira & Gomes, 2012). Example items are “HR practices are well known by everybody in my organization” (distinctiveness), “HR practices complement each other and contribute to meeting organizational goals” (consistency), and “HR practices are applied consistently across departments in my organization” (consensus). The reliability of this scale was high (Cronbach’s α = .96).

Innovative behavior was measured in the employee survey by four of the five items of the scale developed by De Jong and Den Hartog (2010). An example item is “I often generate creative ideas”. The reliability of this scale was good (Cronbach’s α = .85). Supervisors were
asked about the innovation of their organization in a four item-scale from West and Anderson (1996). An example item of the organizational innovation scale is “We are more innovative than our competitors in developing new ways of achieving our targets and objectives”. The reliability of this scale was good (Cronbach’s α = .84). Employees’ self-rated innovative behavior was related to supervisors’ rated organizational innovation (r = .44, p < .01).

Uncertainty avoidance of the countries was added to this dataset at the country level. Instead of the frequently cited Hofstede’s (1980) dimensions, we added the Globe (Global Leadership and Organizational Behavior Effectiveness; see House et al., 2004) dimension of uncertainty avoidance to our dataset, as the Globe data set distinguishes between values and practices. While the practices represent the “as is”, the values represent the “should be” state (Maseland & Van Hoorn, 2009). As such, this measure is more relevant to the goal of this study (Carl, Gupta, & Javidan, 2004). In our sample, scores ranged from 3.92 (Indonesia) to 5.32 (Denmark) for uncertainty avoidance.

Controls. Based on previous research (West & Farr, 1990; Shipton, West, Dawson, Birdi, & Patterson, 2006; Sanders & Yang, 2016), information regarding employees’ age in years and gender were included as controls.

Measurement Equivalence

To provide support that the measurement model is invariant between organizations, we conducted a Confirmatory Factor Analysis (CFA) and a multilevel CFA to establish a measure model (Dyer, Hangas, & Hall, 2005). Close model fit is indicated by a non-significant chi-square, a comparative fit index (CFI) above .90, a root mean square error (RMSEA) below .08 and a standardized root mean square residual (SRMR) below .08 (Hox, 2010; Hu & Bentler, 1999). For innovative behavior, the measurement shows a good fit (χ2 = 24.18 (2), p < .01, CFI = .99, RMSEA = .06, SRMR = .012). The good fit indicates no
particular need for a multilevel CFA, which also shows a good fit ($\chi^2 = 19.14 (4)$, $p < .01$, CFI = .99, RMSEA = .04, SRMR between = .02 and SRMR within = .049). The HR strength measurement model showed an adequate fit ($\chi^2 = 3388.15 (30)$, $p < .01$, CFI = .91, RMSEA = .11, SRMR = .04), multilevel CFA showed to improve RMSEA, however slightly decreases CFI and increases SRMR ($\chi^2 = 1792.55 (180)$, CFI = .89, RMSEA = .05, SRMR between = .05 and SRMR within = .05). In sum, the analysis shows sufficient configural and metric invariance across the 55 organizations and the 11 countries.

Analyses

As the employees were nested in organizations, and organizations were nested in countries we calculated intra-class correlations (ICC1, Bliese, 2000) for innovative behavior for the organization and country level. ICC1 for innovative behavior at the organizational level was .15, meaning that 15% of the variance in employees’ innovative behavior can be explained by the organization in which the employee works, and .05 at the country level, meaning that five per cent of the variance in employees’ innovative behavior can be explained by the country in which the employee resides. We analyzed the data using three level hierarchical linear modeling (HLM) with innovative behavior and HR strength on the employee level, performance-based rewards on the organizational level, and uncertainty avoidance as a country attribute. To test the interaction hypotheses (Hypotheses 2 and 3), we grand-mean centered the predictors following Hofmann and Gavin (1998) and Raudenbush (1989).
RESULTS

Descriptive statistics

Descriptive statistics, including means, standard deviations and correlations are presented in Table 1. Inspection of the data revealed that innovative behavior was positively associated (albeit marginally) with performance-based rewards at the organizational level \( r = .04, p < .05 \) and HR strength at the employee level \( r = .30, p < .01 \), meaning that the more performance-based rewards within an organization, and the more employees understand HRM as was intended by their management, the higher employees’ innovative behavior. Uncertainty avoidance of a country was not related to innovative behavior \( r = .02, n.s. \).

Table 1

Means, standard deviations and correlations between the variables (n=2741 employees and 383 managers in 55 organizations in 11 countries).

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>SD</th>
<th>1.</th>
<th>2.</th>
<th>3.</th>
<th>4.</th>
<th>5.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Innovative behavior</td>
<td>4.41</td>
<td>.85</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Performance-based rewards</td>
<td>4.31</td>
<td>.67</td>
<td>.04*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. HR strength</td>
<td>4.15</td>
<td>.97</td>
<td>.30**</td>
<td>.31**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Uncertainty avoidance</td>
<td>4.76</td>
<td>.51</td>
<td>.02</td>
<td>.02</td>
<td>.10**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Age in years</td>
<td>35.46</td>
<td>10.09</td>
<td>.01</td>
<td>-.13**</td>
<td>-.05*</td>
<td>-.16**</td>
<td></td>
</tr>
<tr>
<td>6. Gender</td>
<td>1.54</td>
<td>.49</td>
<td>.08**</td>
<td>.08**</td>
<td>.06**</td>
<td>.06**</td>
<td>-.04</td>
</tr>
</tbody>
</table>

\( a \) Organizational level; \( b \) Country level; \* \( p < .05 \); \** \( p < .01 \)
Hypotheses testing

Results of the HLM analyses to test the hypotheses are presented in Table 2. In model 1, we added the controls and performance-based rewards to the empty model to test Hypothesis 1. Gender was positively related to innovative behavior with male employees showing more innovative behavior ($\beta = .07, p < .01$). Age of the employees was not significantly related to employees’ innovative behavior ($\beta = -.02, n.s.$). Performance-based rewards was not significant related to employees’ innovative behavior ($\beta = .10, n.s.$), meaning we cannot confirm Hypothesis 1.
Table 2

Results of the HLM analyses with Employee Innovative Behavior as the DV

<table>
<thead>
<tr>
<th>Variables</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
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</thead>
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<tr>
<td><strong>Individual level</strong></td>
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<tr>
<td>Age in years</td>
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<td>-.02</td>
<td>-.02</td>
<td>-.02</td>
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<tr>
<td>Gender (2=male)</td>
<td>.07**</td>
<td>.07**</td>
<td>.07**</td>
<td>.07**</td>
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<tr>
<td>HR strength</td>
<td>.30*</td>
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<tr>
<td><strong>Organizational level</strong></td>
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</tr>
<tr>
<td>Performance-based rewards (PBR; H1)</td>
<td>.10</td>
<td>.07</td>
<td>.08</td>
<td>.07</td>
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<tr>
<td><strong>Cross level interaction</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PBR * HR strength (H2)</td>
<td>.06**</td>
<td></td>
<td></td>
<td>.05**</td>
</tr>
<tr>
<td><strong>Country level</strong></td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>Uncertainty Avoidance (UA)</td>
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<td>-.03</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Cross level interactions</strong></td>
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</tr>
<tr>
<td>PBR * Uncertainty Avoidance (H3)</td>
<td></td>
<td>-.23**</td>
<td>-.25**</td>
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<tr>
<td>HR strength * Uncertainty Avoidance</td>
<td>.02</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PBR * HR strength * UA (H4)</td>
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<td></td>
<td>-.09**</td>
<td></td>
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<tr>
<td><strong>Model fit</strong></td>
<td>5162.15</td>
<td>5020.89</td>
<td>5121.67</td>
<td>5015.97</td>
</tr>
<tr>
<td>Deviance in model fit</td>
<td>1991.08**</td>
<td>141.26**</td>
<td>40.48**</td>
<td>105.70**</td>
</tr>
<tr>
<td>Variance employee level</td>
<td>.77</td>
<td>.71</td>
<td>.77</td>
<td>.71</td>
</tr>
<tr>
<td>Variance organizational level</td>
<td>.13</td>
<td>.08</td>
<td>.08</td>
<td>.07</td>
</tr>
<tr>
<td>Variance country level</td>
<td>.04</td>
<td>.04</td>
<td>.02</td>
<td>.02</td>
</tr>
</tbody>
</table>

* p < .05; ** p < .01

To test Hypothesis 2, we added the effects of HR strength and the interaction with performance-based rewards to model 1 (see model 2, Table 2). HR strength (β = .30, p < .01)
was positively related to innovative behavior after controlling for age in years ($\beta = -.02, n.s.$) and gender ($\beta = .07, p < .01$). Moreover, we found a significant interaction effect ($\beta = .06, p < .01$). Specifically, Figure 1 shows that the relationship between performance-based rewards and innovative behavior is significant when employees perceive HRM as distinctive, consistent and consensual (high HR strength; simple slope $\beta = .17, p < .01$). In comparison, this relationship is not significant ($\beta = -.01, n.s.$) in the low HR strength condition, meaning that performance-based rewards are more effective on employees’ innovative behavior when employees can make sense of HR (high HR strength). This finding means that we can confirm Hypothesis 2.

**Figure 1**

Innovative behavior as a function of performance-based rewards at the organizational level and employee’s HR strength at the employee level.

To test Hypothesis 3, the effect of uncertainty avoidance on the relationship between performance-based rewards and innovative behavior, we ran HLM analyses with main effects of performance-based rewards, uncertainty avoidance and their interaction in model 3. While the effect of uncertainty avoidance is not significant ($\beta = -.03, n.s.$), the result of this two-way
interaction is significant ($\beta = -0.23$, $p < .01$). Figure 2 shows that while the relationship between performance-based rewards and innovative behavior is significant for low uncertainty country ($\beta = 0.40$, $p < .01$), this relationship is not significant for high uncertainty avoidance countries ($\beta = -0.07$, n.s.). These results mean that we can confirm Hypothesis 3.

**Figure 2**

Innovative behavior as a function of performance-based rewards at the organizational level and uncertainty avoidance at the country level.

Additional analyses

On an explorative base we examined the three way interaction effect of performance-based rewards, HR strength and uncertainty avoidance on innovative behavior (model 4). This three-way interaction effect is significant ($\beta = -0.09$, $p < .01$). To further interpret the results we plotted this three-way interaction (see Figure 3). The figure shows that in low uncertainty avoidance countries both for high and low HR strength, the relationship between performance-based rewards and innovative behavior is significant.
positive (β = .37, p < .05; β = .34, p < .05, respectively). In high uncertainty avoidance countries both for high and low HR strength, the relationship between performance-based rewards and innovative behavior is not significant (β = -.04, n.s.; β = -.03, n.s., respectively). While the interaction between performance-based rewards and HR strength is significant in low uncertainty countries (β = .14, p <.05), this two-way interaction is not significant for the high uncertainty avoidance countries (β = .02, n.s.).

**Figure 3**

Innovative behavior as a function of performance-based rewards at the organizational level, employee’s HR strength at the employee level and uncertainty avoidance at the country level.
DISCUSSION

Although performance-based rewards within an organization and innovative behavior were not related to each other, our findings indicate that this relationship is significant when employees perceive HRM in their organization as distinctive, consistent and consensual (i.e. HR strength is high). Hence, our study provides support for previous and emerging studies emphasizing the important role of employees’ understanding of HRM (Bowen & Ostroff, 2004; Bednall et al, 2014, Bednall & Sanders, in press, Sanders & Yang, 2016). Our findings also support the moderation effect of uncertainty avoidance on the relationship between performance-based rewards and employees’ innovative behavior. This relationship is stronger in countries in which risk-taking is more accepted (low uncertainty avoidance countries). We also found that the relationship between performance-based rewards and employees’ innovative behavior is strongest in low uncertainty avoidance countries when employees can make sense of HRM (high HR strength).

Theoretical Implications

The finding that the relationship between performance-based rewards and innovative behavior is contingent on both HR strength and uncertainty avoidance of a country speaks to the question of universality of performance-based rewards and HRM in general. Although there has been some support for the assumption that context matters (Akhtar et al., 2008; Wei & Lau, 2008; see also Li, Qin, Jiang, Zhang, & Gao, 2015), some scholars maintain that context (e.g. industry affiliation, strategy, culture) is largely irrelevant in terms of the HRM - performance relationship. More specifically, proponents of the universal perspective of HRM maintain that systems of HR practices will be effective in enhancing performance in any given situation. Moreover, Delery and Doty (1996, see also Delery, 1998) concluded in support of the universal perspective of HRM when reporting that the effect of HRM on performance is not contingent on firm strategy. More recently, Clinton and Guest (2013)
argued for a universal perspective on HRM after discovering that the effect of HRM on commitment, intention to quit, and employee well-being did not differ significantly across job level, which they identified as an internal contingency factor. Findings from our study suggest that, at the very least, performance-based rewards should not be positioned solely within the domain of the universal perspective.

The explorative finding that the performance-based rewards and employees’ innovative behavior relationship is strongest in the high HR strength and low uncertainty avoidance condition suggest a complementary effect (see also Jiang, Lepak, Hu, & Baer, 2012, Li et al., 2015). The complementary perspective suggests that two effects -HR strength and uncertainty avoidance- work in a synergistic fashion to enhance employees’ innovative behavior. In our case low uncertainty avoidance serves to enhance the impact of HR strength on the relationship between performance-based rewards and innovative behavior. In addition we found that while there is an effect of HR strength on the relationship between performance-based rewards and innovative behavior in low uncertainty avoidance countries this moderator effect is not found in high uncertainty countries. Research on the joint effect of an internal (HR strength) and an external (uncertainty avoidance) factor is rare (see for an exception Li, et al., 2015). We argue that future research should focus more often on the joint effect of an internal and external factor to explain the relationship between (bundles of) HR practices and employee and organizational performance. Future studies should also point out what type of HR practices, and combination of HRM content and HRM process elements may support innovative behavior in high uncertainty avoiding cultures. It can for instance the case that in high uncertainty avoidance countries other HR practices may take a critical role, such as skill development, goal setting and recruitment and selection towards a more diverse workforce to promote innovative behavior.
It should be noted that we partly relied on research done by Hofstede (1980) in our investigation of uncertainty avoidance. While intuitively attractive and cited frequently in the cross-cultural management literature, this model has received considerable criticism (e.g. McSweeney 2002; Sivakumar & Nakata, 2001), which ultimately provided the motivation for the Globe project (House, et al, 2004). Consequently, rather heated arguments have ensued regarding the relative strength of the two models, including a special issue of The Journal of International Business devoted to a discussion of which model represents and measures culture more accurately (McSweeney, 2002; Oyserman, Coon, & Kemelmeier, 2002; Tung & Verbeke, 2010). A major difference between Hofstede’s (1980) and the Globe’s conceptualization of the culture dimensions is that values are viewed as drivers of practice, and thus essentially the same according to Hofstede (1980), whereas values and practices are considered as being different by those involved in the Globe project. More specifically, the Globe’s conceptualization presents values as what “should be” and practices the “as is” state (House et al., 2004; Maseland & Van Hoorn, 2009). As the “should be” seemed more relevant to the goal of this study, we focused on values. Future research should focus on looking at the differences between the cultural values and the cultural practices in their interaction with HR strength, as well as how this interaction influences the relation between performance-based rewards and innovative behaviors.

Limitations and Directions for Future Research

Scholars argue that country designation is not necessarily a good proxy for measuring the culture values of individuals (Vaiman & Brewster, 2015), as doing so assumes that individuals correspond to the cultural norms of the country they inhabit. This assumption is often referred to as ecological fallacy. Employees could, however, have been born in another country and moved to the current country only recently. In this case, these employees would likely show more similarities with employees in the country in which they were born. In
addition, even when born in the same country, people can differ in their cultural values. Despite the critics of the country designation as a proxy for culture, our results showed that uncertainty avoidance is, however, a meaningful proxy, and has an influence on the performance-based rewards - innovative behavior relationship. Still, future research should consider using a more proximal measure of national culture such as one that accounts for the culture values of the individuals themselves. In particular, greater clarity on individual employees’ cultural values would be especially pertinent for multinational companies attempting to implement performance-based rewards to encourage innovative behaviors. Future research should also examine other cultural values, such as power distance and individualism, both of which can be expected to be related to innovative behavior (Hofstede, 1980).

Another limitation of this study rests with the cross-sectional research design, which does not allow conclusions regarding causality. Therefore, we cannot unequivocally conclude those performance-based rewards and HR strength lead to innovative behavior, or the other way around. Still, some of the effects in the model are unlikely to work reversed, for instance, it seems highly improbable that innovative behavior leads to more or less uncertainty avoidance.

Furthermore, the inclusion of only 11 countries in this study can be a concern for generalization of our results. Franke and Richey (2010) argue, however, that in order to draw “credible” generalizations in international business studies, a minimum of seven to ten countries must be used. These authors found that 53% of the empirical studies published in JIBS, AMJ, SMJ, MIR, and JWB that focused on multi country comparisons included fewer than ten countries. Thus, while we fulfilled this criterion, future research should strive towards data collection in a still larger number of countries.
Practical Implications

Several implications for practice can be derived from the results of this study. Firstly, our findings demonstrate that while the implementation of performance-based rewards can encourage employees’ innovative behavior, managers will achieve enhanced effects when these practices are implemented and communicated in a way that is understood by employees (see also Sanders & Yang, 2016). In other words, the combination of both performance-based rewards and a strong HRM message create a synergistic effect on innovative behavior. For this reason, management should consider the three information dimensions (distinctiveness, consistency and consensus) when communicating their HR policies to employees.

Secondly, the way in which management communicates its HRM message is of particular importance in cultures characterized by low uncertainty avoidance, where the effect of how managers communicate HRM is a stronger instrument in enhancing innovative behavior by performance-based rewards. Similarly, the findings from this study suggest that management should consider the effect of uncertainty avoidance of the country in which the organization is located, and how this cultural dimension may impede or encourage innovative behaviors. In particular, our findings suggest that performance-based rewards may present an avenue that allows organizations located within an environment where national culture is less than conducive for innovation to offset the potential impediments that such a setting presents. As it has been claimed that some national cultures impede change and innovation (Hofstede & Hofstede, 2005), managers should be aware of how they can counter the constraining influences of such cultures through their HR practices and the ways they are communicated to their employees.
CONCLUSION

In this study, we combine the cross-cultural literature (Rabi, et al., 2014) with insights from HR strength literature (Bowen & Ostroff, 2004; Sanders et al., 2014). Numerous scholars have already emphasized that employees do not always interpret HRM as intended by management (e.g., Liao, Toya, Lepak, & Hong, 2009; Kuvaas, & Dysvik, 2010; Guest, 2011). We build on these finding by integrating a cross-cultural framework with Bowen and Ostroff’s (2004) theoretical framework. Moreover, by including a cross-cultural framework in our study, this article makes a significant contribution concerning the process-based approach in HR from a cross-cultural perspective.

In addition, the study contributes by providing support for a structuring framework (Benyamin & Carmeli, 2009) to explain the interplay between performance-based rewards, HR strength, and uncertainty avoidance of a country on innovative behavior. In conclusion, our study demonstrates the importance of taking into account internal and external factors in the relationship between performance-based rewards and employees’ innovative behavior.

REFERENCES


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