

Abstract

This study investigates the effects of two internal factors, performance-based rewards and employee perceptions of HR strength, and one external factor, country-level uncertainty avoidance, on employee innovative behaviors. Drawing on situational strength theory, we first hypothesize that performance-based rewards will positively relate to innovative behaviors, and secondly, that this relationship is stronger when employees understand the wider Human Resource Management (HRM) system as intended by management, referred to as HR strength. Finally, we assess the effect of uncertainty avoidance on the relationship between performance-based rewards and innovative behaviors. Three-level data from 1598 employees and 186 managers in 29 organizations across ten countries showed that both employee perceptions of HR strength and uncertainty avoidance of a country differentially influence the relationship between performance-based rewards and innovative behaviors. However, a significant relationship between performance-based rewards and innovative behaviors was not found. The study offers novel insights into how organizations can use internal factors in a systematic manner to promote innovative behaviors in their workplace and highlights the limitations of sustaining innovative behaviors in countries characterized by high levels of uncertainty avoidance.

Introduction

Employee innovative behaviors are recognized as a major contributor to organizational innovation, leveraging the propensity of firms to survive in dynamic and challenging contexts (Shalley, Gilson, & Blum, 2009). Innovative behaviors manifest not only as a propensity to generate and implement new and creative ideas (De Jong & Den Hartog, 2010; Janssen, 2000; Scott & Bruce, 1994), but also to evaluate their feasibility. Given the importance of innovative behavior for organizations, practitioners and scholars try to answer the question how to enhance this way of working. We are however still at an early stage of understanding the role that Human Resource Management (HRM) (Sanders & Lin, 2015; Shipton, Sanders, Bednall, Lin & Escobar, 2016) might play in fostering innovative behaviors, especially given the multilevel dynamics that innovation entails (Gupta, Tesluk & Taylor 2007; Shipton, Sparrow, Budhwar, & Brown, 2017). Hence, research in this area is important and timely.

In this study, we draw on situational strength theory (Meyer, Dalal, & Hermida, 2010; Mischel, 2009), which provides a powerful theoretical lens for understanding what factors evoke innovative behavior, to investigate relationships between financial and non-financial performance-based rewards, employee perceptions of HR strength, and the uncertainty avoidance of the country within which an organization operates. Situational strength theory comprises four underlying facets: *consequences*, *clarity*, *constraints* and *consistency* (Meyer et al., 2010). We argue that financial and non-financial performance-based rewards signal the *consequences* that that will occur where innovative behaviors are exhibited. In addition, we also consider how employee perceptions of HR strength defined as the degree to which employees understand HRM as intended by management (Bowen & Ostroff, 2004; Sanders,

Shipton & Gomes, 2014), would influence employees' acceptance of those practices, in turn fostering innovative behaviors. HR strength provides *clarity* and *consistency* as to what employees are expected to deliver and why. Finally, we consider the wider context within which organizations operate. Cultural values have been shown to influence the extent to which HR practices shape performance outcomes (Rabl, Jayasinghe, Gerhart, & Kuhlmann, 2014; Rode, Huang, & Flynn, 2016; Farndale & Sanders, 2017). In this study, we focus on one specific facet of the wider context in which organizations operate, namely the uncertainty avoidance of the country, that is 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).

This study intends to contribute to the HR and innovation literatures in three ways. First, it draws upon situational strength theory as a lens for explaining the way in which the internal and external context influence innovative behavior across multiple levels. Innovation is inherently multilevel, where change at one level is set in motion by a corresponding influence at a higher or lower level (Gupta et al., 2007; Shipton et al., 2017; Lin & Sanders, 2017). Situational strength theory offers a framework to reflect on ways in which influences at various levels – individual, organizational and societal- play out in fostering and/or hindering innovative behavior. Thus, by integrating situational strength theory with insights from strategic HR literature, we show that innovative behavior arises where all four facets posited by Meyer et al. (2010) are in alignment.

Second, our paper provides further insight on the importance of considering both HR content and HR process, which has been lacking (Bowen & Ostroff, 2004; Sanders et al.,

2014). Specifically, we suggest that recognizing and rewarding high performance (HR content) fosters innovation when there is a corresponding clarity and consistency across the wider HR system (HR process). Although researchers are starting to explore some of these complex dynamics for HR practices such as performance appraisal and formal training (Bednall, Sanders & Runhaar, 2014; Bednall & Sanders, 2017; Cunha & Cunha, 2009), scholars have not yet applied a similar logic for performance-based rewards. Considering that there has been wide debate about the role of performance-based rewards, especially where innovation is concerned, our study contributes to the understanding of the conditions under which performance-based rewards may foster innovative behaviors.

Thirdly, our paper contributes to understanding the impact of a country-level cultural value, namely uncertainty avoidance, on the relationship between performance-based rewards and innovative behaviors. In investigating the moderating role of uncertainty avoidance on this relationship, we extend previous work that indicates that cultural context matters for HRM (Akhtar, Ding, & Ge, 2008; Rode et al., 2016; Wei & Lau, 2008; Farndale & Sanders, 2017). While previous cross-cultural research has focused on differences in HR practices across cultures, we examine how performance-based rewards influence innovative behaviors in high versus low uncertainty avoidance contexts. Thus, our study addresses the call for more empirical evidence on how cultural context influences the effectiveness of both HR practices and HR process (Bjorkman & Welch, 2015; Rabl et al., 2014; Anderson, Potočnik, & Zhou, 2014).

Innovative behavior: A situational strength perspective

Employees exhibiting innovative behavior demonstrate not only a propensity to generate new ideas, but also to weigh up their feasibility or fit with strategic needs (Scott & Bruce, 1994; Janssen, 2000). Given the importance of innovative behavior, there is growing interest in the question of why and under which circumstances employees express innovative behaviors, especially where such behaviors are not overtly required (Montag, Maertz, & Baer, 2012). One might expect that a context clearly and unambiguously defining the behaviors required of employees might inhibit rather than release innovation through suppressing untrammelled free thought. However, it has been shown that structure in the wider context has the potential to draw out individual qualities that may otherwise lie dormant. For example, personality traits, such as openness to experience that are conducive to creativity are only expressed where the wider context offers support, encouragement and tolerance for taking risks (Rogers, 1954). Indeed, Benyamin and Carmeli (2009) show that structure in the work environment, such as clarifying job requirements, promotion criteria, and reward mechanisms, does enhance employee creativity. They posit that structure is important in that it frees employees from unhelpful distractions about what actions are required and why, allowing them to focus cognitive efforts on the task at hand. In essence, structure helps people to be more available in cognitive terms, and more inclined to work in a creative way as a result.

Linked with these ideas, early theorizing about situational strength holds that three facets of structure are important to support desirable employee behaviors such as innovative behavior to emerge, namely: the way in which stimuli are defined, the extent to which freedom is constrained and the rewards and punishments that are offered (Forehand & von Haller Gilmer,

1964). It is further proposed that while the organization presents a conditioning environment for the release of employee innovative behavior, the wider external context presents cues that either reinforce or diminish organizational influences. Drawing on a similar logic, Mullins and Cummings (1999) argued that senior leaders embrace strategic change where contextual factors such as environmental uncertainty release dispositional qualities like individual tolerance for ambiguity.

Recently, Meyer et al. (2010, p.122), who define situational strength theory as “implicit or explicit cues provided by external entities regarding the desirability of potential behaviors”, developed a taxonomy of situational factors characterizing a strong situation. More specifically, a strong situation is uniformly detected by key parties (conveying *clarity*), while cues from separate sources emphasize the same or similar priorities (*consistency*). Furthermore, a strong system motivates members to respond appropriately by presenting *consequences* for actions and *constrains* the effect of contextual factors that might threaten their realization. Meyer et al. (2010) posit that each facet operates through a unique set of psychological mechanisms, each presenting distinct conceptual information. For example, a situation of high clarity, which clearly communicates the need for innovation will stand out more in employees’ eyes where motivational triggers around the *consequences* of actions are also in place.

The link between performance-based rewards and innovative behaviors

From a situational strength perspective (Meyer et al., 2010), performance-based rewards indicate to employees the consequences of certain actions and provide incentives that draw out an appropriate response. Mischel (1977) argued that even when encoding is uniform (i.e. consistent) and the appropriate response clearly signaled (offering clarity) the situation may

nonetheless be a weak one if incentives are lacking. Where employees perceive that no material change will occur in terms of valued outcomes, they may not comply with what is required. Therefore, rather than the actual bonus or pay that is awarded it, is important to signal, communicate and present consequences for actions achieve a high strength situation.

There has however been wide debate about whether performance-based rewards are conducive to innovation, with some scholars arguing that performance-based rewards may exert an inhibitory effect through undermining employees' intrinsic motivation (Amabile, 1988; 1993). This perspective maintains that employees are significantly less innovative when conforming to external parameters than where they are driven by immersion in the task itself. Cognitive evaluation theory (CET; Deci & Ryan, 1985; Shalley & Perry-Smith, 2001) suggests a more nuanced perspective, in that individuals weigh up and balance a range of factors, such as the degree to which the rewards reflect competence and ability rather than the achievement of targets and whether it offers praise and recognition as well as pay measured in financial terms. This perspective further highlights a distinction between controlling evaluation (being forced to conform) as opposed to informational evaluation (providing useful performance information). Hence, 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).

Drawing on CET (Deci & Ryan, 1985), we argue that performance-based rewards have the potential to foster innovative behavior through raising intrinsic motivation given that they induce feelings of competence. Our conceptualization of rewards encompasses financial as well as non-financial aspects (e.g. praise and recognition) insofar as each separate channel

reinforces the focus that the organization has on competence and capability. From a situational strength perspective, the message is stronger where this is conveyed through a variety of sources such as contingent pay based on assessments of competence, supervisor feedback, acknowledgement of individual and team actions that demonstrate capability. In addition, research show that pay-for-performance incentives vary in their level of instrumentality (Kuvaas, Buch, Gagne, Dysvik & Forest, 2016). This means that employees understand the long-term consequences of striving to work in this way, which corresponds well with an experience of high situational strength. Following this line of reasoning, we formulate our first hypothesis as follows:

Performance-based rewards are positively related to innovative behavior (hypothesis 1).

The link between HR strength, performance-based rewards and innovative behaviors

While performance-based rewards are important to denote the consequences of innovative behavior, HR strength provides clarity about the extent to which “cues regarding work related responsibilities or requirements are available and easy to understand” (Meyer et al., 2010, p. 125). Situation strength theory aligns with Bowen and Ostroff’s seminal piece (2004), which turns the spotlight on employee perceptions of HR practices rather than the practices themselves. Drawing on the covariation principle of attribution theory (Kelley, 1967; 1973), a strong HR system is defined by three (meta-)features¹: 1) distinctiveness, 2) consistency, and 3) consensus. When employees perceive HRM as distinctive, consistent, and consensual, they will

¹ Although not consistent with Bowen and Ostroff (2004), we follow Ostroff and Bowen (2016, p. 197) and refer to distinctiveness, consistency and consensus as the *meta-features* and to visibility, understandability, legitimacy, relevance, instrumentality, validity, consistent HRM, agreement among principal HRM decision makers and fairness as the nine *features*.

have a better understanding of the kinds of behaviors management expects, supports, and rewards (see also Schneider, Brief, & Guzzo, 1996).

Relying on message-based persuasion and social influence literature, Bowen and Ostroff (2004) translated the three meta-features of the co-variation principle of the attribution theory distinctiveness, consistence and consensus into nine features for the HR field. More specifically, Bowen and Ostroff (2004) viewed distinctiveness within the HR sphere as equating with four features: visibility, understandability, legitimacy and relevance. Consistency exists as instrumentality, validity and consistent HR practices. Finally, consensus was viewed as agreement among principal HRM decision makers and fairness (indicating that employees understand the distribution rules by which they receive rewards).

Any lack of clarity or consistency presents an ambiguous situation that diminishes the likelihood of employees exhibiting the attitudes or behaviors that the organization wishes to encourage (Meyer et al., 2010). For innovation, a lack of coherence between organizational values and managerial practices (consistency) may be especially problematic. Research shows that such incongruence may diminish employees' tendency to try new things (Lee, Edmondson, Thomke, & Worline, 2004). It also may reduce the sense of psychological security that helps bring out innovation and create psychological pressure that deplete cognitive and emotional resources. Under such conditions, it seems likely that employees will cling to their habits rather than take risks and try out new ideas (see also Binyamin, & Carmeli, 2010).

Other research suggests that innovative behavior is more likely where situational strength is high. 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 HR as distinctive, consistent and consensual. Cunha and Cunha (2009) provide support to the influence of HR strength on leading indicators of organizational performance, such as time-to-market and rate of innovation. Similarly, Sanders and Yang (2016) found that high-commitment HR practices were related to innovative behavior, and that this relationship was intensified in the condition of high HR strength.

On this basis, we expect the impact of performance-based rewards on innovative behavior to be stronger when employees perceive the HR system as distinctive, consistent and consensual. In this case performance-based rewards and HR processes are aligned and present an unambiguous message about strategic requirements that leaves no room for doubt in employees' eyes about management's intentions. Performance-based rewards present the consequences of actions, while employee perceptions of HR strength highlight the extent to which the situation presents clarity. Hence, various sources of information reinforce the desirability of behaving in a certain way. This leads to our second hypothesis:

HR strength will intensify the relationship between performance-based rewards and innovative behavior (hypothesis 2).

The link between uncertainty avoidance, performance-based 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, p. 25), on the performance-based rewards – innovative behavior relationship. Uncertainty avoidance expresses the degree to which members of a society feel comfortable with uncertainty, ambiguity and risk taking (Hofstede, & Hofstede,

2005) and it explains whether and to what extent tense and vague situations are tolerated or avoided. This dimension is described by Hofstede as “what is different, is dangerous” (Hofstede, 1996) and is the basis for his assertion that innovation would be lower in countries in which uncertainty avoidance is high, as the reluctance to take risks would likely inhibit innovation (Hofstede, 1980). Recent studies by Nam, Parboteeah, Cullen and Johnson (2014) and Zhang and Zhou (2014) provide support for the impact on uncertainty avoidance on innovative behavior.

Like Forehand and von Haller Gilmer (1964), Meyer et al. (2010) highlight the hierarchical nature of situational strength, arguing that the phenomenon is multi-faceted, with national culture being a macro level factor argued to influence situational strength. Uncertainty avoidance may dampen the tendency of employees to use their own discretion in dealing with work-related challenges and make it less likely for idiosyncratic decisions to occur. Low levels members will probably attach less credence to precedent while at high levels employees may feel more comfortable with stability rather than change (Meyer et al., 2010). The wider context therefore presents constraints that may or may not align with cues presented by the organization.

Indeed, Rabi et al. (2014) show that although there is growing evidence about the effect of commitment-based HR practices on organizational performance across cultural settings, that effect may result in different outcomes in different cultural settings (Kassinis & Stavrou, 2013). This variation occurs because employees’ attitudes and behaviors are inevitably influenced by their values, motivations and emotions, which are all rooted in culture (Hofstede, 1980; 1984; Taras, Rowney & Steel, 2009). 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 about confrontation and are more likely to challenge the status quo, as necessary for innovative behavior. As innovations are associated with change and uncertainty, individuals from high uncertainty avoidance countries would ostensibly be less inclined to innovate (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. 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 consequences of losing are more significant. Thus, our assertion is that people in low uncertainty avoidance readily 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:

Uncertainty avoidance of a country will weaken the relationship between performance-based rewards and innovative behavior (hypothesis 3).

Method

Sample and procedure

The data used for this study contains responses from 1589 employees and 186 managers in 29 organizations across ten countries (China, Denmark, Indonesia, Nigeria, Norway, Malaysia, Portugal, Oman, Tanzania, and UK). Table 1 presents the distribution of the organizations across the countries, and some main characteristics of the organizations. Scholars have pointed to the importance, and challenge, of investigating the effect of HRM on performance outcomes in a global context (e.g. Roehling et al., 2005; De Cieri, Cox & Fenwick, 2007). Inspired by these and other academics, this study adopts a multilevel design drawing on data at individual, organization and country-levels, with breadth (ten countries) as well as depth (multiple respondents within each organization). Like other international HR studies (e.g. Lin et al., 2015), the organizations represented in the sample are from different industries and vary in size (see Table 1). We surveyed employees and managers, all of whom voluntarily participated in this study. Employees were not nested within managers. Of the employees, 47% were female, and 42% of the managers were female. Employees were on average 34.44 years of age ($SD = 9.24$), and managers were on average 38.71 years of age ($SD = 11.02$).

 INSERT TABLE 1 HERE

An international team of researchers (authors of this article) prepared a questionnaire that was then translated and back translated into the languages in which the data were to be collected. A pilot survey was conducted to ensure readability of the survey items, and then international scholars were asked to collect data from employees and managers in one or more organizations in each of their home countries. 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*).

Performance-based rewards were measured using four items of the performance-based rewards scale by Riordan, Vandenberg, and Richardson (2005; See Appendix 1). Managers 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 $\alpha = .85$). 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’ perceptions of performance-based rewards in their organization can be explained by the organization in which the manager works (ICC₂ = .85, $r_{wg} = .65$).

Employee perceptions of HR strength were measured using the 15 item-scale of Coelho, Cunha, Gomes, and Correia (2015; see also Pereira & Gomes, 2012). Building on the work of Delmotte, De Winne and Sels (2012) who developed and validated a questionnaire to measure HR strength based on line and union representatives in Belgium, Coelho et al (2015) developed a questionnaire to measure HR strength based on employee data. ‘Agreement among principal HRM decision makers’ as a feature of consensus was excluded from the measurement as respondents did not consider it as independent from other features, especially because it showed overlap with ‘consistent HRM messages’ (a feature of consistency). Therefore, consensus is measured with only one feature: fairness.

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 $\alpha = .95$), consistently high for each country (Cronbach’s α between .90 and .97, median .95) and for each organization (Cronbach’s α between .87 and .96, median .94).

Innovative behavior was measured in the employee survey by five items of the scale developed by Scott and Bruce (1994; see Appendix 1). An example item is “I often generate creative ideas”. The reliability of this scale was good (Cronbach’s $\alpha = .87$) and demonstrated sufficient consistency in each country (Cronbach’s α between .76 and .92, median .89) as well as in each organization (Cronbach’s α between .67 and .94, median .86). To validate this measure at the employee level, managers were asked about the innovation of their organization in a four item-scale from West and Anderson (1996; see Appendix 1). Managers in 19 out of the 29 organizations answered these questions. 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 $\alpha = .84$). Employee self-rated innovative behaviors were related to manager’s rated organizational innovation ($r = .44, p < .01$). Since the focus of our study is on innovative behavior, and we do not have data on innovation for all organizations in our sample, we analyzed and reported innovative behaviors as the dependent variable of our model². Given the high correlation

² We also analysed our results while controlling for innovation at the organizational level for 19 organizations. The results were similar and results in terms of hypotheses testing did not differ as we report in this study. Because these analyses reduce our sample size, we decided not to control for innovation at the organizational level in our cross-level analyses.

between innovative behaviors and innovation for the organizations from which we had both individual and firm level data, we can conclude that innovative behavior is a valid measure.

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 practices represent the "as is", values represent the "should be" state of the dimensions (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 3.34 (Norway) to 5.34 (China)³, with a mean of 4.75 (SD=.58).

Controls. We controlled for employee and organizational characteristics that are theoretically related and which have been found to be empirically related to performance-based rewards or innovative behavior, in line with Becker et al. (2016). Similarly, Link and Bozeman (1991) found that organization size is important in determining the level of innovative behavior in small-sized firms. Therefore, we controlled for three organization characteristics: organizational size (1 = less than 25 employees; 2 = 26 – 100 employees; 3 = 101 – 500 employees; 4 = 501 – 1000 employees; 5 = more than 1001 employees), industry (1 = service; 0 = manufacturing), and type of organization (1 = for profit organizations, 0 = others). 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 also included as controls.

³ The scale of uncertainty avoidance in 62 countries runs from 3.16 to 5.61 (M=4.62, SD=.61).

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, Hanges, & 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 behaviors, the measurement model shows a sufficient fit ($\chi^2 = 56.248$ (5), $p < .01$, CFI = .99, RMSEA = .09, SRMR = .02). The sufficient fit of the measurement model indicates no need for conducting a CFA at the multiple levels; however, a sufficient fit of the measurement model at the multiple levels provides an indication of measurement invariance. Analysis shows small improvement of the fit for the multilevel model for the organization level ($\chi^2 = 39.309$ (10), $p < .01$, CFI = .98, RMSEA = .07, SRMR between = .07 and SRMR within = .02). Comparable results were obtained for the country level ($\chi^2 = 74.932$ (10), $p < .01$, CFI = .98, RMSEA = .05, SRMR between = .04 and SRMR within = .02).

Similarly, the employee perceptions of HR strength measurement model showed a good fit ($\chi^2 = 1129.09$ (90), $p < .01$, CFI = .94, RMSEA = .08, SRMR = .04). The multilevel CFA for the organization level showed to improve RMSEA, however slightly decreases CFI ($\chi^2 = 682.957$ (180), CFI = .94, RMSEA = .04, SRMR between = .10 and SRMR within = .04). For the country level ($\chi^2 = 820.563$ (180), CFI = .92, RMSEA = .05, SRMR between = .09 and SRMR within = .04). In sum, the analyses show sufficient configural and metric invariance across the 29 organizations and the ten 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 behaviors for the organization and country level. ICC₁ for innovative behaviors at the organizational level was .17, meaning that 17% of the variance in innovative behaviors can be explained by the organization in which the employee works (ICC₂ = .92; rwg = .81), and .05 at the country level, indicating that 5% of the variance in innovative behaviors can be explained by the country in which the employee resides (ICC₂ = .86; rwg = .78). We analyzed the data using three level hierarchical linear modeling (HLM) with innovative behaviors and employee perceptions of 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) and analyzed the cross-level interaction effects.

Results

Descriptive statistics

Descriptive statistics, including means, standard deviations and correlations are presented in Table 2. Inspection of the data revealed that innovative behaviors were positively associated (albeit marginally) with performance-based rewards at the organizational level ($r = .04, p < .05$) and employee perceptions of HR strength ($r = .33, p < .01$). Uncertainty avoidance values of a country were not related to innovative behaviors ($r = .03, n.s.$).

 INSERT TABLE 2 HERE

Hypotheses testing

Results of the HLM analyses to test the hypotheses are presented in Table 3. In model 1, we added the controls to the empty model. Gender was positively related to innovative behaviors, with men showing marginally more innovative behaviors ($\beta = .07, p < .05$). Age of the employees was not significantly related to innovative behaviors ($\beta = -.02, n.s.$). None of the organizational characteristics (size, industry, and type) added significant value to the explanation of innovative behaviors⁴.

 INSERT TABLE 3 HERE

In model 2, to test the first hypothesis, we added performance-based rewards to model 1. Performance-based rewards were not significantly related to innovative behaviors ($\beta = .11, n.s.$), meaning Hypothesis 1 was not supported. To test Hypothesis 2, we added the effects of employee perceptions of HR strength and the interaction term with performance-based rewards to model 2 (see model 3). Employee perceptions of HR strength ($\beta = .28, p < .01$) were positively related to innovative behaviors after controlling for age in years, gender, and organizational characteristics. Moreover, we found a significant interaction cross-level moderation ($\beta = .09, p < .05$). Specifically, Figure 1 shows that the relationship between performance-based rewards and innovative behaviors is significant when employees perceive HRM as distinctive, consistent and consensual (high HR strength; $\beta = .22, p < .01$). In comparison, this relationship is not significant ($\beta = -.01, n.s.$) in the low employee perceptions of HR strength condition, meaning that performance-based rewards are more effective in

⁴ Since performance-based rewards could potentially have a different effect in ‘for profit’ and ‘not-for-profit’ organizations, we ran the analyses for both ‘for profit’ and ‘not-for-profit’ organizations. The results for the two types of organizations did not show any difference.

influencing innovative behaviors when employees can understand HR in their organization.

Thus, Hypothesis 2 was supported.

 INSERT FIGURE 1 HERE

To test Hypothesis 3, the effect of uncertainty avoidance on the relationship between performance-based rewards and innovative behaviors, we ran HLM analyses with main effects of performance-based rewards, uncertainty avoidance, and their cross-level interaction in model 4. While the effect of uncertainty avoidance is not significant ($\beta = -.06, n.s.$), the result of the two-way interaction is significant ($\beta = -.24, p < .01$). Figure 2 shows that while the relationship between performance-based rewards and innovative behaviors is significant for low uncertainty countries ($\beta = .42, p < .01$), this relationship is not significant for high uncertainty avoidance countries ($\beta = -.01, n.s.$). These results mean that Hypothesis 3 was supported⁵.

 INSERT FIGURE 2 HERE

Additional analyses

We also ran additional analyses. First, we examined the three-way interaction effect of performance-based rewards, employee perceptions of HR strength and uncertainty avoidance on innovative behaviors. This three-way cross-level interaction effect was not significant ($\beta = -.03, n.s.$). Secondly, we examined the moderator effect of HR strength at the organizational level as suggested by Ostroff and Bowen (2016). Statistics justify the aggregation of employee perceptions of HR strength to the organizational level ($ICC_1 = .31; ICC_2 = .96, r_{wg} = .58$). The

⁵ Similar effects were found when dividing the countries into two categories: low and high uncertainty avoidance countries.

results show that HR strength at the organizational level was not related to innovative behaviors ($\beta = .17, n.s.$). In addition, we did not find a significant interaction of HR strength on the organizational level on the relationship between performance-based rewards and innovative behaviors ($\beta = -.04, n.s.$). Finally, since HR strength is sometimes defined as the *shared perceptions of HR strength*, we also calculated the inversed standard deviation of HR strength. This new construct was not significant ($\beta = .08, n.s.$), nor was the interaction significant ($\beta = .04, n.s.$).

We also analyzed two other GLOBE values that can be related to innovative behaviors, namely power distance and individualism (see Hofstede, 1980), for both main and interaction effects on the relationship between performance-based rewards and innovative behaviors. Power distance did not show a significant main effect ($\beta = .44, n.s.$), nor did we find a significant interaction effect of power distance on the relationship between performance-based rewards and innovative behaviors ($\beta = .42, n.s.$). For individualism, neither the main effect ($\beta = -.10, n.s.$), nor the interaction effect of individualism on the relationship between performance-based rewards and innovative behaviors ($\beta = -.09, n.s.$) were significant.

Discussion & Conclusion

The findings from our analyses indicate that the relationship between performance-based rewards and innovative behaviors was significant stronger in the condition of high HR strength and low uncertainty avoidance. Hence, our study provides support for previous and emerging studies emphasizing the important role of employee understanding of HR practices (Bowen & Ostroff, 2004; Bednall et al., 2014, Bednall, & Sanders, 2017; Sanders, & Yang, 2016).

Performance-based rewards were not associated with innovative behaviors. This finding may

be attributable to several causes, the most likely being that the financial and non-financial rewards were not viewed as a part of a wider HR system. More specifically, performance-based rewards implemented on their own and without reference to a wider HR system may not signal sufficient consequences. Also, the small standard deviation of performance-based rewards (.50) can be an explanation for this finding. Performance-based rewards do however influence innovative behaviors in circumstances where other contextual contingencies are aligned, i.e. HR strength is strong and uncertainty avoidance is low.

Theoretical Implications

The question of how to elicit innovative behaviors is of growing importance given an increasingly competitive global environment, technological change and ever-higher consumer expectations. Although strategic HR research has brought the employee center stage (Jiang, Lepak, Hu & Baer, 2013), scholars are only just starting to reflect on the implications of this body of work for employee creativity and innovation (e.g. Shipton et al., 2017; Lin & Sanders, 2017). Furthermore, despite wide acknowledgement outside the field of HRM that innovation arises in context, precipitated or constrained by influences from within and outside the organization (e.g. Gupta et al., 2007), so far, few studies have empirically tested this way of thinking from an HR perspective. Our paper is amongst the first to examine not only one crucial element within the HRM armory- performance-based rewards- but also the role of employee perceptions of the wider HR system in predicting employee innovative behavior. More than that, we consider a country-level orientation- uncertainty avoidance, which has been shown to influence innovation, to ascertain whether it exerts a moderating effect on the relationships highlighted above.

Our findings speak to the first contribution of this paper which bring out the role of situational strength in enabling, rather than constraining, employee innovation. Building on Meyer et al. (2010) and Mischel (2009), we argue that performance-based rewards indicate to employees the long-term consequences of certain actions and provide the incentives necessary to engender to appropriate responses. Although we did not find a direct relationship between performance-based reward and innovative behaviors, importantly, the relationship was significant once we considered employee perceptions of the HR system. HR strength reinforces the role of performance-based rewards, through highlighting clarity and consistency as to what they are expected to deliver and why. This is an important and novel finding. Not only do we pinpoint the types of practices that are important in eliciting employee reactions in this way, but we also give some indication of how the effect comes about, i.e. through allowing employees the space to express innovative behavior, a finding that aligns well with the foundations of Cognitive Evaluation Theory where autonomous motivation is considered essential for creativity and innovative processes (Deci & Ryan, 2000).

This latter observation highlights our second contribution, which, premised by scholars of the HR process school of thought (Bowen & Ostroff, 2004; Sanders et al., 2014), advocates the bringing together of both HR content (performance-based rewards) with HR process (HR strength). In these circumstances, the effects of specific HR practices are amplified, because employees make sense of the management system in a way that is intended by management. We add to this sense-making perspective by arguing that a strong HR process provide clarity and consistency to employees about what is expected from them. This effect is based on a research design that emphasizes the potential for ‘ordinary’ employees to play their part, hence

speaks to the idea that incremental rather than radical innovation is to the forefront for the majority of employees. Incremental innovation nonetheless offers significant potential for organizations seeking to maximize the scope for enhanced performance outcomes at the organizational level and is therefore an important direction for this line of research.

Our third contribution relates to the impact of uncertainty avoidance on the relationship between performance-based rewards and innovative behaviors. We argued that national culture would influence the performance-based rewards – innovative behaviors relationship. Accordingly, we find that in low uncertainty avoidance countries, employees respond positively to performance-based rewards in terms of their innovative behaviors. By contrast, in countries where uncertainty avoidance is high, this is not the case. Although employees in low uncertainty avoidance can cope with the uncertainty in their environment needed for innovative behaviors to occur, employees from high uncertainty avoidance countries are less likely to have developed social norms, rules and procedures that allow HR practices such as performance-based rewards to influence them in this way. Hence, for those from high uncertainty contexts, performance-based reward is not sufficient to override the anxiety that innovation present.

Our study suggests that uncertainty avoidance can be viewed as a constraint that inhibits certain behaviors, including risk-taking behaviors and as consequence innovative behaviors. Innovative behavior would be hindered when performance-based rewards are involved, because individuals from high uncertainty avoidance countries would be uncomfortable when the consequences of losing are more important. On the other hand, people in low uncertainty avoidance countries can cope with uncertainty which will positively influence innovative behavior. We predicted and found that the complementarity of a low uncertainty avoidance

environment with performance-based rewards results in more innovative behaviors. This means that both the HR strength at the employee level as an internal condition and the uncertainty avoidance at the country level as an external condition support the situational strength approach (Meyer et al, 2010) to consider the relationship between performance-based rewards and innovative behavior.

While Ostroff and Bowen (2016) argue that HR strength should be conceptualized and measured at the unit or organization level as a contextual property, we followed 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 employee perceptions and understanding of the features of HRM. Ostroff and Bowen (2016, p. 7) consider that this conceptualization of HR strength at the employee level differs from their own, but is nonetheless a meaningful construct. We conducted additional analyses that showed that neither mean nor shared perceptions (inversed standard deviation) of employee perceptions of HR strength were related to innovative behaviors, nor did they influence the relationship between performance-based rewards and innovative behaviors. This means that we did not find evidence for the importance of HR strength as an organizational level construct. We did however find strong evidence for HR strength as an employee perception, both as a main effect and as a cross-level interaction effect. We would argue this makes sense given that employees perceive HR strength in their own idiosyncratic way, as described in the co-variation model of attribution theory (Kelley, 1967; 1973).

The employee perception of HR strength concept assumes that when employees perceive HRM as distinctive, consistent and consensual, they will have a better understanding of the

kinds of behaviors management expects, supports, and reward. This concept can be considered as a measure of the strength of the link between performance and rewards, and performance-based rewards in particular. The results show that the performance-based reward measure as assessed by the managers and the employee perceptions of HR strength are correlated ($r = .11$, $p < .01$; see Table 1), suggesting that there is indeed a relationship between these two measures, yet medium in strength. This implies that performance-based rewards in certain situations may not necessarily relate to employee perception of HR strength. Therefore, it is important to take the concepts into account, and examine how the two concepts intertwine when predicting innovative behaviors.

Limitations and Directions for Future Research

A limitation of this study rests with the cross-sectional research design, which does not allow conclusions regarding causality. Therefore, we cannot unequivocally conclude that performance-based rewards and employee perceptions of HR strength lead to innovative behaviors rather than the other way around. Many studies on the effects of HR practices on performance apply a cross-sectional and single actor research design (Lin & Sanders, 2014; Bainbridge, Sanders, Cugin, & Lin, 2017), whereby employees or HR managers are asked to rate both HRM and performance within their organization. In our study, we applied a cross-sectional, but multi actor (managers rated the performance-based rewards and employees rated their innovative behavior), multi-level and cross-cultural research design. Still, some of the effects in the model are unlikely to work in the reverse; for instance, it seems highly improbable that innovative behaviors lead to uncertainty avoidance of the country. Future

research can conduct a more advance study and include for instance a longitudinal research design in order to claim causality.

In addition, instead of matched data (employees nested within managers) within every organization, managers and employees were asked to complete the questionnaires independently. It can be that the managers and employees who completed the survey are not associated with each and may not have even met. However, we can assume that even when managers and employees who completed the survey are not associated, the managers can provide a valid rating of the performance-based rewards in their organization. In addition, we argue that employee ratings are a valid source of their perceptions of the HR strength and their innovative behaviors. Nonetheless, studies including matched data with employees nested with managers are warranted.

We should also note that for five out of the ten countries in our sample, data were collected from a single organization, which may limit distinguishing between effects at the organizational level (performance-based rewards) and national level (uncertainty avoidance). To address this issue, we ran additional tests with the countries with more organizations, and the countries with only one organization. For both samples of countries, the hypothesized model was confirmed. Therefore, the decision was made to include all data to represent a wider diversity of the cultural dimension uncertainty avoidance.

Finally, Ostroff and Bowen (2016; see also Sanders, Shipton, & Gomes, 2014), argue that, to date, a comprehensive and sophisticated measure of HR strength has not been developed, which is “unfortunate given the amount of research being conducted on the topic” (Ostroff & Bowen, 2016, p. 109). According to Ostroff and Bowen (2016) existing measures like the one

we used to assess employee perceptions of HR strength have been based on perceptions at the individual level and factor structures are inconsistent. As a consequence, “it is unknown whether the inconsistencies across studies are due to problems with the theoretical framework or to measurement and methodology issues” (Ostroff & Bowen, 2016, p. 109). They conclude that a comprehensive measure of HR that combine multiple sources of data stills need to be developed. We agree that a sophisticated measure of HR strength is needed.

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 innovative behaviors, managers will achieve these effects only when these practices are implemented and communicated in a way that is understood by employees (see also Sanders & Yang, 2016), and provide clarity and consistency. In other words, the combination of both performance-based rewards and a strong HR message create a synergistic effect on innovative behaviors. For this reason, management should consider clarity and consistency when communicating their HR policies to employees. They should be aware that HRM plays a key role in structuring the work environment, hence allaying fears about how they will be measured or judged in performance terms. Line managers can further supplement the positive messages provided by HRM systems in their daily interactions with employees, to ensure that employees detect unambiguous signals about where to direct their efforts and why.

Secondly, 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 for managers to offset the potential impediments to innovation found in some cultures. 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.

In sum, in this study we combine the cross-cultural literature (e.g. Rabl et al., 2014) with insights from HR strength literature (Bowen, & Ostroff, 2004; Sanders et al., 2014; Ostroff, & Bowen, 2016). 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. The study contributes by providing support for a situational strength theory (Meyer et al., 2010) to explain the interplay between performance-based rewards, employee perceptions of HR strength, and uncertainty avoidance of a country on innovative behaviors. In conclusion, this study makes a significant contribution towards demonstrating the importance of considering internal and external factors in the relationship between performance-based rewards and innovative behaviors.

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Appendix 1. Items of the performance-based rewards, innovative behaviors and innovation used in this study.

Performance-based rewards (managers)

1. There is a strong link between how well I perform in my job and the likelihood of receiving recognition and praise
2. There is a strong link between how well I perform in my job and the likelihood of receiving a pay raise
3. There is a strong link between how well I perform in my job and the likelihood of receiving high performance appraisal ratings
4. There is a strong link between how well my team performs and the likelihood of receiving a pay raise

Innovative behaviors

1. I often generate creative ideas
2. I promote and champion ideas to others
3. I investigate, and secure funds needed to implement new ideas
4. I develop adequate plans and schedules for the implementation of new ideas
5. I am an innovative person

Innovation (managers)

1. Organizational innovation compared with competitors - work methods
2. Organizational innovation compared with competitors - process/systems innovation
3. Organizational innovation compared with competitors - new ways to reach goals
4. Organizational innovation compared with competitors - job content changes

Figure 1. Innovative behaviors as a function of performance-based rewards at the organizational level and employee perceptions of HR strength at the employee level.

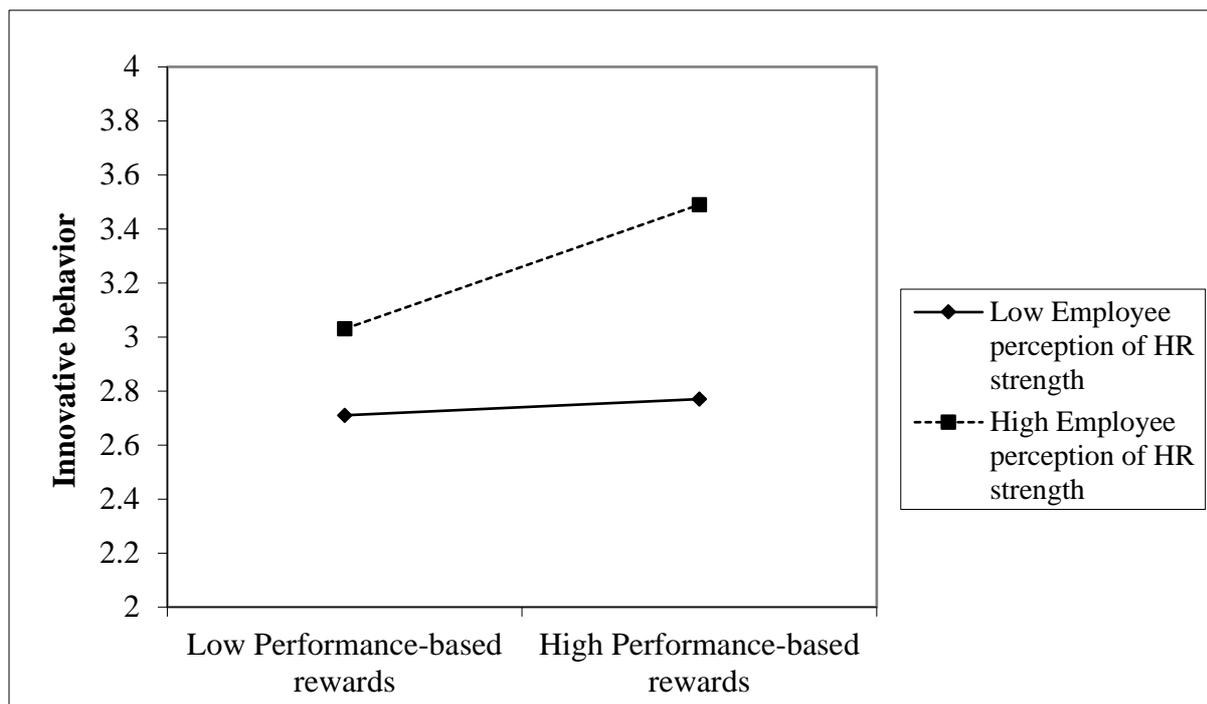


Figure 2. Innovative behaviors as a function of performance-based rewards at the organizational level and uncertainty avoidance at the country level.

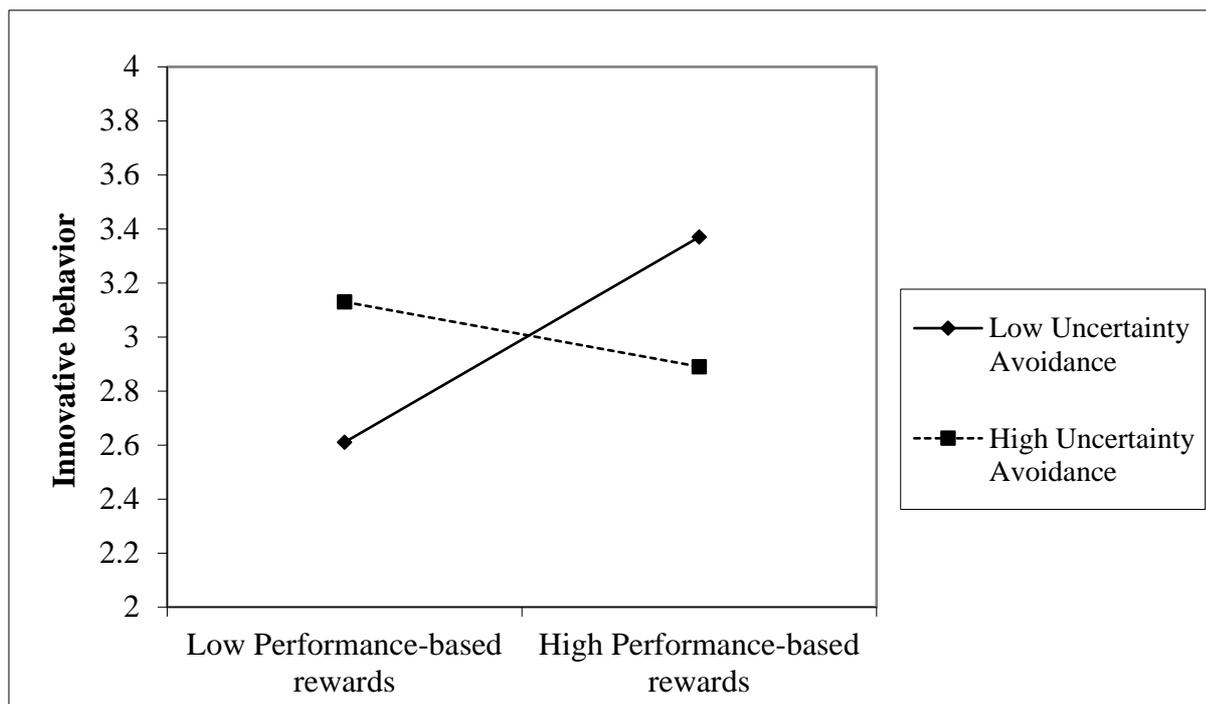


Table 1. Characteristics of the 29 organizations in 10 countries in terms of number of organizations, number of managers, number of employees, mean employee innovative behaviors, organizational size, industry (service), type (profit organizations) and uncertainty avoidance values score for the countries.

Country	Managers	Employees	IB	Size	Service	Type	UA
1.Oman	6	101	4.25	4	0	0	4.65
2.UK	16	84	4.84	4	0	1	3.99
3.Denmark	7	52	4.36	4	0	0	4.01
4.Denmark	6	79	4.41	3	1	1	4.01
5.Denmark	2	25	5.48	2	0	1	4.01
6.Denmark	8	52	4.30	3	0	0	4.01
7.Denmark	3	31	4.17	2	0	1	4.01
8.China	4	59	4.52	2	1	0	5.34
9.China	3	37	3.68	2	1	0	5.34
10.China	2	12	3.23	3	1	0	5.34
11.China	2	15	3.91	5	1	0	5.34
12.China	2	42	3.64	2	1	0	5.34
13.Tanzania	9	101	4.46	5	1	1	5.42
14.Nigeria	6	109	4.55	5	0	0	5.45
15.Nigeria	10	104	4.81	5	0	1	5.45
16.Malaysia	3	98	4.44	4	0	1	4.91
17.Indonesia	18	96	3.94	5	0	1	5.04
18.Portugal	16	83	4.81	2	1	1	4.81
19.Portugal	14	112	4.16	2	0	0	4.81
20.Portugal	2	13	4.10	2	0	1	4.81
21.Portugal	5	20	4.05	2	0	1	4.81
22.Portugal	4	22	4.34	2	0	1	4.81
23.Portugal	6	22	3.62	2	0	13	4.81
24.Portugal	2	98	4.19	2	0	1	4.81

PERFORMANCE-BASED REWARDS AND INNOVATIVE BEHAVIORS

25.Portugal	7	52	4.51	5	0	0	4.81
26.Portugal	6	12	4.25	3	0	0	4.81
27.Norway	4	31	3.95	5	0	0	3.34
28.Norway	9	29	4.02	5	0	0	3.34
29.Norway	4	7	3.86	4	0	0	3.34
Total	186	1598	4.43	3.3	.27	.48	4.74

IB = Employee Innovative Behaviors; Organizational size: 1= <25, 2=26-100; 3=101-500, 4=501-1000; 5=>1001; Service: 1=service industry; 0=manufacturing; Type: 1=for profit; 0=others; UA = Uncertainty Avoidance

PERFORMANCE-BASED REWARDS AND INNOVATIVE BEHAVIORS

Table 2. Means, standard deviations and correlations between the variables (n=1598 employees and 186 managers in 29 organizations in 10 countries).

Variables	Mean	SD	1.	2.	3.	4.	5.	6.	7.	8
1. Innovative behaviors	4.43	.86								
2. Performance-based rewards ^a	4.39	.50	.04**							
3. Employee perceptions of HR strength	4.16	.89	.33**	.11**						
4. Uncertainty avoidance ^b	4.75	.58	.03**	.04**	.15**					
5. Age in years	35.34	10.14	.02**	-.15**	-.07**	-.29**				
6. Gender (2=male)	1.56	.50	.07**	.05**	.07**	.04**	-.05**			
7. Organizational size ^a	3.53	1.28	.07**	.04**	.05**	.11**	-.10**	.11**		
8. Industry ^a (1=service industry)	.36	.48	.10**	-.11**	.04**	.41**	-.20**	.13**	.04**	
9. Type ^a (1=profit organization1)	.58	.49	.15**	-.10**	.23**	.12**	-.19**	.16**	-.09**	-.01

^a Organizational level; ^b Country level; * p < .05; ** p < .01

Table 3. HLM results with Employee Innovative Behaviors as the Dependent Variable.

Variables	Model 1	Model 2	Model 3	Model 4
<i>Individual level</i>				
Age in years	-.02**	-.02**	-.02**	-.02**
Gender (2=male)	.07**	.07**	.06**	.07**
Employee perceptions of HR strength			.28**	
<i>Organizational level</i>				
Organization size	.03**	.02**	.01**	-.01**
Industry (1=service)	.10**	.09**	.06**	.07**
Type (1=profit organization)	.05**	.07**	.05**	.07**
Performance-based rewards (PBR; H1)		.11**	.10**	.10**
<i>Cross level interaction</i>				
PBR * Employee perceptions of HR strength (H2)			.09**	
<i>Country level</i>				
Uncertainty Avoidance (UA)				-.06**
<i>Cross level interactions</i>				
PBR * Uncertainty Avoidance (H3)				-.24**
<i>Model fit</i>				
Deviance in model fit	3429.45	3418.01	3336.18	3312.34
	130.81**	11.44*	81.83**	105.67**
Variance employee level	.80	.75	.74	.70
Variance organizational level	.16	.12	.09	.12
Variance country level	.04	.04	.04	.01

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