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### The power of workplace rewards: Using Self-Determination theory to understand why reward satisfaction matters for workers around the world

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Keywords:	Self-Determination Theory, reward satisfaction, psychological needs, employee functioning, organizational outcomes
Abstract:	<p>How do workplace rewards promote well-being and engagement? We utilized Self-Determination Theory to examine whether reward satisfaction predicted well-being, job satisfaction, intrinsic motivation and affective commitment, as well as valuable organizational outcomes, including workplace contribution and loyalty. Specifically, we investigated the role of the three universal psychological needs—autonomy, competence, and relatedness—in explaining why reward satisfaction matters for employees worldwide. We tested our model in a large, cross-sectional study with full-time employees working for multinational corporations in six main world regions: Asia, Europe, India, Latin America, North America, and Oceania. In line with our theorizing, we found cross-cultural evidence that reward satisfaction promotes greater employee functioning through psychological need satisfaction, contributing to better organizational outcomes. Our results were consistent regardless of geographic location. This study highlights the usefulness of using a human motivational theory from social psychology to understand the mechanisms underlying the motivational power of workplace rewards.</p>

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## Abstract

How can workplace rewards promote employee well-being and engagement? To answer these questions, we utilized Self-Determination Theory to examine whether reward satisfaction predicted employee well-being, job satisfaction, intrinsic motivation and affective commitment, as well as valuable organizational outcomes, such as workplace contribution and loyalty. Specifically, we investigated the role of three universal psychological needs—autonomy, competence, and relatedness—in explaining whether and why reward satisfaction matters for employees' well-being. We tested our model in a large, cross-sectional study with full-time employees working for multinational corporations in six main world regions: Asia, Europe, India, Latin America, North America, and Oceania ( $N=5,852$ ). Consistent with our theorizing, we found cross-cultural evidence that reward satisfaction promoted greater employee functioning through psychological need satisfaction, contributing to better organizational outcomes. Critically, our results were consistent regardless of geographic location. As such, this study provides some of the strongest evidence to date for the power of understanding psychological mechanisms in the workplace: regardless of the actual rewards that employees received, how workplace rewards made employees feel significantly predicted their optimal functioning.

**Keywords:** Self-Determination Theory, reward satisfaction, psychological needs, employee functioning, organizational outcomes, well-being.

### Introduction

Throughout the last several decades, both researchers and practitioners alike have expressed the need for additional research on employee compensation (Dulebohn & Werling, 2007; Gupta & Shaw, 2014; Shaw, 2014), especially in light of emerging total reward strategies (Brown, & Reilly, 2013; Hackman & Oldham, 1976; Morrell, 2011; Tims, Bakker, & Derks, 2013; Spreitzer, Bacevine, & Garrett, 2015; Srivastava, 2012). Workplace reward options have multiplied, ranging from cash rewards such as bonuses and stock ownership; cash-like rewards such as pre-paid cash cards and gift cards; non-cash tangible rewards such as merchandise and redeemable points; and intangible rewards such as skill training and developmental opportunities (Brown, & Reilly, 2013; Morrell, 2011; Tims, Bakker, & Derks, 2013; Spreitzer, Bacevine, & Garrett, 2015; Srivastava, 2012). With these increased reward options, organizations strive to increase employees' contribution and loyalty to their workplace (McMullen, 2013).

The need for additional research to understand why reward satisfaction matters, and how reward satisfaction drives key organizational outcomes, is further highlighted by the fact that total reward strategies constitute a core determinant of the quality of companies' workforce. Both applicants and employees consider the vast array of workplace rewards that are offered when deciding where to work. Thus, in addition to being intimately tied to labor costs, reward programs and the affective reactions that these reward programs spark influence the characteristics of the candidates who apply and are hired as well as the attitudes and behaviors of employees who stay or leave any particular organization (e.g., Way, Lepak, Fay, & Acker, 2010). To this point, a growing body of research shows that workplace rewards play a significant role in prospective employees' decisions to apply for a position as well as current employees' turnover intentions (e.g., Highhouse, Brooks-Laber, Lin & Spitzmuller, 2003; Messersmith,

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Guthrie, Ji & Lee, 2011; Riddell, 2011; Ali & Ahmed, 2009; Danish & Usman, 2010; Kuvaas, Buch, Gagné, Dyvsik & Forest, 2016).

Despite the growing interest in this topic, there is a dearth of information available to help practitioners understand the psychological mechanisms by which workplace rewards might elicit employees' contribution and loyalty to their workplace (e.g., Berber, Morley, Slavić & Poór, 2017). To begin to answer this critical question, we propose using the claims of Self-Determination Theory (SDT; Deci & Ryan, 1985). Stemming from social psychology, SDT provides a theoretical framework for understanding human motivation and the psychological mechanisms that could explain why reward satisfaction could increase workplace functioning for employees across industries and around the world. Based on SDT's theoretical framework, we argue that worldwide, greater satisfaction with workplace rewards should promote greater functioning, contribution and loyalty, by positively contributing to the satisfaction of employees' three basic psychological needs for autonomy, competence, and relatedness.

First, we describe the theoretical concepts from SDT that serve as the foundation of our proposed model (as illustrated in Figure 1). Next, we describe the specific model that we tested with a large, heterogeneous sample of workers from various professional backgrounds and industries. We provide empirical evidence for this model in six main regions encompassing twelve countries, strengthening the cross-cultural validity of our proposed model and addressing an important call to action for organizational scholars to study larger, heterogeneous samples to establish generalizability. Finally, we engage readers in an open discussion about the theoretical and practical implications of our findings and suggest potential avenues for future research.

### **Self-Determination Theory and the three basic psychological needs**

Self-Determination Theory (SDT) is a universal motivational theory that has been tested

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3 and refined for the past three decades in a variety of settings with workers from different  
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5 countries including teachers, nurses, salespeople, and HR professionals in Europe, North  
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7 America and Asia (e.g., Gagné et al., 2014; Fernet et al., 2012; Van den Broeck, Lens, De Witte,  
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9 & Van Coilli, 2013; Deci et al., 2001; Kuvaas, 2006). According to SDT, individuals have  
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11 intrinsic motivation when they genuinely enjoy the activity they are pursuing, derive pleasure  
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13 and fun from it, and feel that it is interesting and congruent with their goals and identity (Deci &  
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15 Ryan, 2002). In the workplace, studies conducted with employees in various industries and  
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17 countries show that greater intrinsic motivation leads employees to demonstrate greater  
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19 contribution, including effort, innovation, and performance at work (e.g., Brien, Forest, Mageau,  
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21 Boudrias, Desrumaux, Brunet, & Morin, 2012; Deci, Olafsen, & Ryan, 2017; Ntoumanis, 2005;  
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23 Sebire, Standage, & Vansteenkiste, 2009; Trépanier, Forest, Fernet, & Austin, 2015).

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28 According to SDT, whether individuals thrive and experience intrinsic motivation depends  
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30 on whether the activity that they are pursuing positively contributes to the satisfaction of their  
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32 three basic psychological needs for competence, autonomy, and relatedness (Deci & Ryan,  
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34 2000). The psychological need for competence tends to be satisfied when individuals believe that  
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36 they have the necessary skills to overcome challenges, influence their environment, and achieve  
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38 their desired outcomes. The psychological need for autonomy tends to be satisfied when  
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40 individuals experience a sense of volition in choosing to partake in an activity and when acting in  
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42 concordance with their personal values (Deci & Ryan, 2000; Sheldon & Bettencourt, 2002;  
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44 White, 1959). Finally, the psychological need for relatedness tends to be satisfied when  
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46 individuals feel emotionally and meaningfully connected with others in their surroundings  
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48 (Baumeister & Leary, 1995; Deci & Ryan, 2000). Across diverse life domains, including the  
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workplace, satisfaction of these three basic psychological needs facilitates greater intrinsic motivation as well as optimal functioning and psychological health (Ryan & Deci, 2008).

Indeed, much empirical evidence supporting the importance of psychological need satisfaction has been gathered in organizational settings around the world (e.g., De Cooman, Stynen, Van den Broeck, Sels, & De Witte, 2013; Olafsen, Halvari, Forest, & Deci, 2015; Ryan, Bernstein, & Brown, 2010; Van den Broeck, Vansteenkiste, De Witte, & Lens, 2008; Vansteenkiste, Neyrinck, Niemiec, Soenens, Witte, & Van den Broeck, 2007; Van den Broeck, Ferris, Chang, & Rosen, 2016). For example, Van den Broeck, Vansteenkiste, DeWitte and Lens (2008) studied a sample of workers in Belgium from diverse professional backgrounds and found that psychological need satisfaction positively predicted employees' self-reported psychological health. Van de Broeck and colleagues (2010) later replicated these findings with two large samples of call centre agents and HR professionals, and expanded their original findings by showing that psychological need satisfaction predicted employees' affective commitment, performance, and actual turnover six months later.

### **Psychological need satisfaction and reward satisfaction**

Despite a great deal of research showing that the satisfaction of three basic psychological needs can promote positive outcomes in organizational settings, little research to date has examined psychological need satisfaction in relation to workplace rewards. More specifically, research has not examined whether psychological need satisfaction could constitute the psychological mechanism explaining the relationship between employees' reward satisfaction and workplace functioning. Thus, the goal of our research is to test a model based on SDT's framework to better understand why and how reward satisfaction drives greater workplace

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3 contribution and loyalty, using the basic human psychological needs for autonomy, competence,  
4 and relatedness as well as the psychological mechanisms underlying this relationship (Figure 1).  
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8 In line with SDT's framework, we propose that experiencing greater reward satisfaction  
9 should lead workers to experience greater satisfaction of their needs for competence, autonomy  
10 and relatedness. We hypothesize this on the basis that rewards are typically used to acknowledge  
11 good work; hence greater reward satisfaction should be associated with employees feeling that  
12 their organization is aware of the quality of their work, positively contributing to competence  
13 need satisfaction. Furthermore, rewards require an exchange between the giver (in this case the  
14 organization) and the receiver (the employee), therefore greater reward satisfaction should be  
15 associated with employees feeling that they are socially connected and appreciated by their  
16 organizations, positively contributing to relatedness need satisfaction. Finally, to the extent that  
17 rewards are tied to specific organizational goals, greater reward satisfaction should be associated  
18 with employees feeling empowered, positively contributing to their autonomy need satisfaction.  
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### 33 **The current study**

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35 We have several goals for the current study. Our first goal is to test the role of SDT's  
36 three psychological needs as the psychological mechanisms that explain how reward satisfaction  
37 can lead to greater workplace functioning. Our second goal is to replicate previous findings in  
38 the SDT literature in a workplace setting, and to further strengthen the applicability of these  
39 findings across industries and countries. To this end, we test our hypothesized model with a  
40 diverse group of workers (in terms of age and professional backgrounds) in a variety of  
41 industries (including agriculture, automotive, banking, communication, construction, consulting,  
42 education, engineering, government, insurance, manufacturing, pharmaceuticals, real estate,  
43 restaurants, retail and the technology sector) and countries (Argentina, Australia, Canada, China,  
44 Germany, India, Japan, Mexico, Singapore, South Africa, the United Kingdom, and the United  
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3 States). By encompassing such diversity in our study, we seek to strengthen the validity of our  
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5 model and to build strong evidence for the usefulness of SDT in understanding the importance of  
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7 reward satisfaction for workers worldwide. In summary, we intend to provide empirical support  
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9 for the role of the three basic psychological needs for competence, relatedness and autonomy in  
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11 explaining how reward satisfaction drives workplace functioning for employees across the world.  
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15 We also chose to measure psychological health, as this outcome constitutes an emerging  
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17 concern for organizations. In one nationally representative survey of Americans, 54% of  
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19 employees reported that they would switch organizations if they experienced psychological  
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21 stress in their current position (Walters, 2016). Given the growing importance of workplace well-  
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23 being, organizations are increasingly seeking ways to foster psychological health (Merril, Hyat,  
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25 Aldana & Kinnersley, 2011; Optum, 2015; Salas, Kozlowski, & Chen, 2017). Thus, we include  
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27 psychological stress and job satisfaction to understand how satisfaction with workplace rewards  
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29 contributes to psychological health through greater psychological need satisfaction. Similarly, we  
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31 extend our investigation by assessing whether reward satisfaction has benefits for employees'  
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33 contribution at work, including innovation, collaboration, networking, knowledge-sharing,  
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35 performance, and loyalty, as indicated by turnover intentions and tenure.  
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41 We focus on these organizational outcomes as they are directly tied to organizational  
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43 profitability and survival (Eli, Chonko, Rangarajan, & Roberts, 2007; Podsakoff, LePine &  
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45 LePine, 2007). Focusing on a broader range of outcomes (psychological health and employee  
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47 commitment) constitutes a significant advance in this literature, which typically focuses on  
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49 motivation and organizational commitment. Understanding whether and how reward satisfaction  
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51 has downstream implications for the emergence of attitudes and behaviors at work is particularly  
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53 important and relevant in our modern-day knowledge-world economy (Frey & Osborne, 2015;  
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Codagnone, Biagi, Abadie, 2016). In light of this work, our final aim is to help researchers and practitioners understand how to encourage more and healthier employee contributions to their workplace and to retain significant contributors (Eli et al., 2007; Podsakoff et al., 2007).

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Insert Figure 1  
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## Methodology

### Participants and Procedure

Participants were contacted as part of a private firm's listserv for a larger project on international workplace engagement. Survey invitations were sent from various panel vendors in twelve countries, namely Argentina, Australia, Canada, China, Germany, India, Japan, Mexico, Singapore, South Africa, the United Kingdom, and the United States. Participants received the survey electronically and completed the survey on a voluntary and anonymous basis in their preferred language. In order to be eligible to participate, employees had to be working full-time in companies with five-hundred or more employees.

In total, 5,852 full-time employees completed the survey. Overall socio-demographic information and region-specific socio-demographic information are presented in detail in Table 1. The six main region groupings were completed on theoretical grounds based on previous literature (e.g., Gomez-Mejia & Welbourne, 1991; Schuler & Rogovsky, 1998; Townsend, Scott, & Markham, 1990). As such, participants from China, Japan, and Singapore were combined to represent Asia ( $N = 1338$ ; 22.8%); participants from Germany and the United Kingdom were combined to represent Europe ( $N = 842$ ; 14.4%); and participants from India represent their own region ( $N = 931$ ; 15.9%). Participants from Mexico and Argentina were combined to represent

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Latin America ( $N = 642$ ; 11%); participants from Canada and the United States were combined to represent North America ( $N = 1268$ ; 21.7%); and participants from Australia and South Africa were combined to represent Oceania ( $N = 831$ ; 14.2%).

**Measures**

To prioritize the recruitment of a large and diverse sample of employees and to maximize sample size, we reduced participant burden by minimizing the survey length as much as possible, using single items for key constructs of interest when methodologically sound.

**Reward satisfaction.** Employees' reward satisfaction was assessed using the single item "All things considered, on a scale from 0 to 100, with 0 being completely dissatisfied and 100 being completely satisfied, how would you rate your overall satisfaction with the incentives and rewards, beyond your base compensation and benefits, that you receive through your company?" Single-item measures for similar constructs including life and job satisfaction have been shown to be adequately representative and highly correlated with broader, multiple-item measures of the same construct (Fisher, Matthews & Gibbons, 2015; Wanous, Reichers, & Hugu, 1997).

**Psychological need satisfaction.** Employees rated the extent to which they felt that their psychological needs for competence, autonomy, and relatedness were satisfied in their workplace on a 5-point Likert scale ranging from 1 "Strongly disagree" to 5 "Strongly agree". Competence and relatedness needs were assessed using four items (e.g., competence: "I am provided with the training necessary to excel in my role"; relatedness: "I have good friends at work") while autonomy need satisfaction was assessed using six items (e.g., autonomy: "My direct manager involves me in important decisions"). These items are in line with SDT's conceptualization of the three basic needs and are very similar to other validated measures such as the Work-Related

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3 Basic Need Scale that is used in the literature to assess psychological need satisfaction (e.g.,  
4 relatedness: " Some people I work with are close friends of mine," Van den Broeck et al., 2010)

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8 **Psychological stress.** Employees rated the extent to which they experienced psychological  
9 stress due to their work using three items (e.g., "My job creates a great deal of negative stress in  
10 my life") with a 5-point Likert scale ranging from 1 "Strongly disagree" to 5 "Strongly agree."

14  
15 **Job satisfaction.** Employees rated the extent to which they derived satisfaction from their  
16 job using an average composite score of four items that measured specific work components.  
17 The distinct components included employees' satisfaction with their job, their direct manager,  
18 the workplace culture, and the leaders of their organization. All items were rated on a scale from  
19 0 "Completely dissatisfied" to 100 "Completely satisfied."

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27 **Intrinsic motivation.** Employees reported their intrinsic motivation using four items (e.g.,  
28 "I am highly motivated to contribute to the success of the organization") on a 5-point Likert scale  
29 ranging from 1 "Strongly disagree" to 5 "Strongly agree." These items are in line with SDT's  
30 conceptualization and are very similar to other validated measures, such as the Motivation at  
31 Work Scale, used in the literature to assess motivation (e.g., Gagné et al., 2014).

37  
38 **Affective commitment.** Employees reported their affective commitment to their current  
39 organization using six items (e.g., "I am proud to tell others I work for my organization") on a 5-  
40 point scale with 1 corresponding to "Strongly disagree" and 5 corresponding to "Strongly agree."  
41 These items are in line with Allen and Meyer's (1990) conceptualization of affective  
42 commitment (e.g., "I enjoy discussing my organization with people outside of it").

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50 **Workplace contribution.** Employees assessed their contribution to their workplace using  
51 a three-dimensional scale assessing the extent to which they engaged in innovative work (e.g., "I  
52 brought together concepts and ideas that hadn't been combined before"; 3 items), sought support  
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3 and leveraged their network to do daily work (e.g., “I expanded my network of contacts as to  
4 have a sounding board about my work”; 3 items), and felt personal ownership over their work  
5 (e.g., “I felt a continued sense of ownership in my work as it was rolled out”; 4 items). All ten  
6 items were rated on a 5-point scale with 1 corresponding to “Strongly disagree” and 5  
7 corresponding to “Strongly agree”. These items are in line with conceptualization of innovative  
8 work in the literature (e.g., Yuan & Woodman, 2010; Scott & Bruce, 1994) and are very similar  
9 to other validated measures, such as the Innovative Work Behavior Scale, used to assess  
10 innovation and collaboration (e.g., “I often search out new working methods, techniques and  
11 instruments,” De Jong & Den Hartog, 2008).

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24 **Productivity.** Employees evaluated their performance over the past twelve months on a  
25 scale ranging from 0 “Not producing at all” to 100 “Producing at maximum capacity.”

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**Likelihood of recommending the organization.** Employees were asked to rate the  
likelihood that they would recommend the company they worked for to others on a scale from 0  
“Not likely at all” to 10 “Extremely likely.”

**Turnover intentions.** Employees reported their intentions to quit their current organization  
if they were offered a similar job with equivalent pay, location, and benefits, on a scale ranging  
from 0 “Not likely at all” to 100 “Extremely likely.” Past research has shown that single item  
measurement of turnover is a valid predictor of turnover behavior (e.g., Tett & Meyer, 1993).

**Forecasted tenure.** To supplement the subjective assessment of turnover intentions,  
employees estimated the amount of time, in months and years, that they projected to remain  
employed at their current organization.

## Results

### Preliminary analysis

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**Overall sample.** Descriptive statistics, correlations and reliability coefficients for all the variables for the overall sample are presented in Table 2. All correlation coefficients reported are significant at  $p < .001$ . Preliminary analysis of the correlation matrix provided initial support for the hypothesized relations between our variables. As expected, reward satisfaction was positively correlated with satisfaction of all three psychological needs (competence:  $r^2 = .56$ , autonomy:  $r^2 = .57$ , relatedness:  $r^2 = .53$ ). In turn, satisfaction of these three psychological needs was positively correlated with job satisfaction (competence:  $r^2 = .67$ , autonomy:  $r^2 = .74$ , relatedness:  $r^2 = .66$ ), intrinsic motivation (competence:  $r^2 = .69$ , autonomy:  $r^2 = .71$ , relatedness:  $r^2 = .68$ ), affective commitment (competence:  $r^2 = .74$ , autonomy:  $r^2 = .74$ , relatedness:  $r^2 = .70$ ), and negatively with psychological stress (competence:  $r^2 = -.38$ , autonomy:  $r^2 = -.28$ , relatedness:  $r^2 = -.40$ ). Intrinsic motivation was positively and significantly correlated with all facets of workplace contribution (innovation:  $r^2 = .77$ , ownership:  $r^2 = .73$ , network:  $r^2 = .35$ ) and with productivity ( $r^2 = .51$ ). Affective commitment was significantly and positively correlated with the likelihood of recommending the organization ( $r^2 = .42$ ) and forecasted tenure ( $r^2 = .04$ ), and negatively with turnover intentions ( $r^2 = -.05$ ).

**Region-specific.** Descriptive statistics, correlations and reliability coefficients for all the variables for each region are presented in Tables 3 to 8. All correlation coefficients reported are significant at  $p < .001$ . In all six region groupings, preliminary analysis of the correlation matrix provided initial support for the hypothesized relations between our variables. Replicating the pattern observed in the overall sample, reward satisfaction was positively correlated with satisfaction of all three psychological needs (competence:  $r^2$  ranging from .51 to .58, autonomy:  $r^2$  ranging from .51 to .58, relatedness:  $r^2$  ranging from .47 to .53). As in the overall sample, satisfaction of the three psychological needs was positively correlated with job satisfaction

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(competence:  $r^2$  ranging from .62 to .71, autonomy:  $r^2$  ranging from .70 to .77, relatedness:  $r^2$  ranging from .63 to .66), intrinsic motivation (competence:  $r^2$  ranging from .66 to .71, autonomy:  $r^2$  ranging from .64 to .77, relatedness:  $r^2$  ranging from .63 to .71), affective commitment (competence:  $r^2$  ranging from .71 to .76, autonomy:  $r^2$  ranging from .70 to .77, relatedness:  $r^2$  ranging from .68 to .72), and negatively with psychological stress (competence:  $r^2$  ranging from -.27 to -.49, autonomy:  $r^2$  ranging from -.03 to -.42, relatedness:  $r^2$  ranging from -.29 to -.50). Intrinsic motivation was positively and significantly correlated with all facets of workplace contribution (innovation:  $r^2$  ranging from .50 to 0.68, ownership:  $r^2$  ranging from .55 to .68, network:  $r^2$  ranging from .35 to .61) and with productivity ( $r^2$  ranging from .45 to .52). Affective commitment was significantly and positively correlated with the likelihood of recommending the organization ( $r^2$  ranging from .71 to .80) and forecasted tenure ( $r^2$  ranging from .20 to .26), and negatively with turnover intentions ( $r^2$  ranging from -.07 to -.45), with the only exception being in the Indian sample where affective commitment was not significantly negatively associated with turnover intentions ( $r^2 = .02$ ).

**Model testing**

The suggested model with the hypothesized paths was tested through full structural equation modelling using the Bootstrapping Macro with 1,000 bootstrapped samples using *Mplus* version 7.31 (Múthen & Múthen, 2014). Based on the correlation matrix reported above, the outcomes under study, including stress, job satisfaction, intrinsic motivation and affective commitment, as well as workplace contribution, productivity, likelihood of recommending the organization, forecasted tenure and turnover intentions were allowed to co-vary.

Four goodness-of-fit indices were used: the Comparative Fit Index (CFI), the Tucker Lewis Index (TLI), the Root Mean Square Error of Approximation (RMSEA), and the Standardized

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3 Root Mean Square Residual (SRMR). Generally, values above .90 for the CFI and for the TLI  
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5 (Hoyle, 1995; Schumacher & Lomax, 1996), and below .06 for the RMSEA and the SRMR  
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7 indicate a very good fit (Browne & Cudeck, 1993; Hu & Bentler, 1999).  
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10 **Overall sample testing.** The original hypothesized model provided a very good fit to the  
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12 data:  $X^2(954) = 18\,984.27$ ,  $p < 0.05$ , CFI = 0.90, RMSEA = 0.056, 90% confidence interval =  
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14 .056-.057, and SRMR = 0.059 (see Table 9). Results of hypothesis testing for the overall sample  
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16 are presented in Table 10. All unstandardized path coefficients reported are significant at  $p < .001$ .  
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19 Reward satisfaction predicted greater psychological need satisfaction, defined by  
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21 competence, autonomy and relatedness need satisfaction, ( $B = .02$ ,  $s.e. = .00$ ).  
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24 In turn, psychological need satisfaction predicted lower psychological stress ( $B = -.49$ ,  $s.e.$   
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26 = .02) as well as greater job satisfaction ( $B = 19.28$ ,  $s.e. = .46$ ), intrinsic motivation ( $B = .93$ ,  
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28  $s.e. = .02$ ) and affective commitment ( $B = 1.03$ ,  $s.e. = .02$ ).  
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31 Intrinsic motivation predicted greater workplace contribution, as indicated by network,  
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33 innovation and ownership ( $B = .68$ ,  $s.e. = .01$ ), and productivity ( $B = 11.53$ ,  $s.e. = .33$ ).  
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36 Affective commitment predicted a greater likelihood of recommending the organization ( $B$   
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38 = 2.34,  $s.e. = .04$ ) and longer forecasted tenure ( $B = 2.52$ ,  $s.e. = .17$ ), as well as lower turnover  
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40 intentions ( $B = -7.40$ ,  $s.e. = .56$ ).  
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43 **Region-specific testing.** The hypothesized model was further replicated with a good fit in  
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45 each of the six specific region groupings, showing measurement invariance in all regions. Model  
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47 fit indices for all region groupings are summarized in Table 9. Detailed results, including  
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49 unstandardized  $B$  path coefficients with their associated standard errors (all significant at  
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51  $p < .001$ ), for each specific region model are summarized in Table 10.  
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54 The unstandardized path coefficients for each subsample replicated the patterns observed  
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3 in the overall sample. More specifically, in all six region groupings, namely Asia, Europe, India,  
4 Latin America, North America, and Oceania, reward satisfaction predicted greater psychological  
5 need satisfaction, defined by competence, autonomy and relatedness need satisfaction, ( $Bs = .02$ ,  
6  $s.e. 's = .02$ ). As in the overall sample, psychological need satisfaction predicted in turn lower  
7 psychological stress ( $Bs$  ranging from  $-.12$  to  $-.81$ ,  $s.e. 's$  ranging from  $.06$  to  $.09$ ), greater job  
8 satisfaction ( $Bs$  ranging from  $14.78$  to  $21.45$ ,  $s.e. 's$  ranging from  $.98$  to  $1.58$ ), intrinsic motivation  
9 ( $Bs$  ranging from  $.94$  to  $1.14$ ,  $s.e. 's$  ranging from  $.05$  to  $.06$ ) and affective commitment ( $Bs$   
10 ranging from  $.94$  to  $1.21$ ,  $s.e. 's$  ranging from  $.05$  to  $.07$ ).

11  
12 In turn, intrinsic motivation predicted greater workplace contribution, as indicated by  
13 network, innovation and ownership ( $Bs$  ranging from  $.55$  to  $.74$ ,  $s.e. 's$  ranging from  $.70$  to  $1.09$ ),  
14 and productivity ( $Bs$  ranging from  $10.23$  to  $13.73$ ,  $s.e. 's$  ranging from  $.04$  to  $.07$ ).

15  
16 Finally, as in the overall sample, in all six region groupings, affective commitment  
17 predicted a greater likelihood of recommending the organization ( $Bs$  ranging from  $1.82$  to  $2.61$ ,  
18  $s.e. 's$  ranging from  $.09$  to  $.15$ ), longer forecasted tenure ( $Bs$  ranging from  $2.55$  to  $4.23$ ,  $s.e. 's$   
19 ranging from  $.04$  to  $.75$ ), and lower turnover intentions ( $Bs$  ranging from  $-1.91$  to  $-19.02$ ,  $s.e. 's$   
20 ranging from  $1.28$  to  $2.00$ ).

### General Discussion

21  
22 Our results indicate that when employees are satisfied with the rewards that are offered at  
23 their workplace, they experience greater psychological need satisfaction, leading to greater job  
24 satisfaction, and conversely, lower psychological stress. Employees also experience more  
25 intrinsic motivation, which predicts greater workplace contribution and productivity, and greater  
26 affective commitment, which predicts a higher likelihood of recommending their organization,  
27 lower turnover intentions, and longer forecasted tenure. Overall, these findings highlight the  
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## UNDERSTANDING REWARD SATISFACTION FROM AN SDT PERSPECTIVE 16

critical importance of reward satisfaction in fostering positive workplace experiences and driving key organizational outcomes that companies value. These results corroborate past findings showing that employees' satisfaction with compensation can have a significant influence on their work attitudes and behaviors (Gerhart, Milkovich, & Murray, 1992; Heneman & Schwab, 1985; Lawler, 1971; Williams, McDaniel, & Nguyen, 2006; Brown, 2014; Petrescu & Simmons, 2008; Trevor & Wazeter, 2006) and that satisfaction with workplace rewards can have downstream benefits for the organization, leading employees to express a greater desire to stay in their current job (Williams, McDaniel, & Nguyen, 2006; Dulebohn & Werling 2007; Carraher, 2011; Miceli & Mulvey, 2000; Motowildo, 1983; Currall, Towler, Judge & Kohn; 2005). These results emphasize the importance of looking beyond the compensation that employees receive to understand what these rewards signal to employees and how rewards make employees feel.

Importantly, our results provide cross-cultural evidence regarding why employees' satisfaction with their company's reward practices influence the psychological experience of their workplace, indicated by psychological need satisfaction, and ultimately influence the extent to which they contribute to their organization (e.g., Lum, Kervin, Clark, Reid & Sirola, 1998; DeConinck & Stilwell, 2004; Vandenberghe & Tremblay, 2008; Tang & Chiu, 2003). In this light, our paper provides evidence, using the Self-Determination Theory framework, that reward satisfaction matters in determining employees' contribution and loyalty to their workplace by contributing to their psychological needs for competence, autonomy, and relatedness.

Lending support to the universal nature of SDT, we provide cross-cultural evidence that reward satisfaction can positively contribute to employees' psychological health (as shown by lower psychological stress and greater job satisfaction), intrinsic motivation, and affective commitment via psychological need satisfaction, in turn promoting enhanced workplace

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2  
3 contribution and loyalty. As our findings suggest, this mechanism does not appear to be  
4  
5 idiosyncratic to particular countries or organizational settings. For organizations around the  
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7 world, of various sizes, and from various industries (as diverse as education, government  
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9 services, healthcare, technology, retail, manufacturing, and banking), the more that employees  
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11 report being satisfied with the rewards that they receive at work, the more that employees feel  
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13 competent, autonomous and connected to their work, therefore encouraging higher levels of  
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15 motivation, commitment and contribution. These findings further suggest that what matters when  
16  
17 it comes to rewards is the affective reactions that these rewards elicit (Thibault Landry et al.,  
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19 2018). Hence, rewards should be designed to spark, reinforce and satisfy the basic and universal  
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21 psychological needs of autonomy, competence and relatedness (e.g., Gagné & Forest, 2008).  
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### 26 **Practical implications**

27  
28 Our results suggest that organizational leaders, supervisors, and human resource practitioners  
29  
30 should focus on using workplace rewards that contribute to fulfilling employees' basic  
31  
32 psychological needs. The current research suggests that as long as workplace rewards bring  
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34 employees satisfaction and fulfill their psychological needs for competence, autonomy, and  
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36 relatedness, rewards of any type—cash or non-cash, tangible or intangible—can fuel employees'  
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38 functioning, and foster contribution and loyalty. In this light, rewards that are perceived by  
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40 employees as contributing to the satisfaction of their psychological needs can promote optimal  
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42 functioning and drive valuable key organizational outcomes, thereby becoming attractive assets  
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44 for companies to leverage in order to attract prospective candidates and retain current employees.  
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49 Organizations should therefore be mindful when they elaborate and launch their reward  
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51 programs to avoid instilling financial incentives and cash rewards simply based on the  
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53 assumption that money is a sufficient motivator for employees (see also: Thibeault-Landry,  
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Schweyer & Whillans, 2018). Designing companies' reward strategy should be done with forward and strategic thinking to ensure that these rewards positively contribute to employees' psychological experience of feeling competent, autonomous, and connected at work. These results suggest that all rewards, whether cash or non-cash, tangible or intangible (including restaurant vouchers, gift cards, luxury goods and products, or travel incentives), should be used as symbols of appreciation – i.e. “nudges” – to reinforce employees' positive psychological experience at work. In so doing, organizations and stakeholders will stand to benefit from key organizational outcomes such as greater productivity, innovation, collaboration, and loyalty that can arise from employees feeling more competent, autonomous and connected at work.

**Future research**

Our findings provide a first step into understanding how workplace rewards can motivate employees in a psychologically healthy way. Future research should further investigate what features of workplace rewards can lead to greater reward satisfaction, such as distinct aspects of reward types (e.g., cash vs non-cash, tangible vs intangible), reward allocation (e.g., perceived justice), reward characteristics (e.g., reward memorabilia), and reward meaning (e.g., recognition, appreciation, gratitude). This additional research would allow researchers and practitioners to determine when specific rewards are the most valuable and effective in attracting and motivating specific employee populations.

Finally, since attitudes and behavioral intentions such as motivation, commitment, and loyalty emerge, evolve and fluctuate over time (Chandler & Connell, 1987; Gillet, Vallerand, & Lafrenière, 2012; Guay, Ratelle, Roy, & Litalien, 2010; Guzman & Kingston, 2012; Morin, Rodriguez, Fallu, Maïano, & Janosz, 2012; Morin, Maïano, Marsh, Nagengast, & Janozs, 2013; Morin, Maïano, Marsh, Janozs, & Nagengast 2013; Boudrias, Gaudreau, Savoie, & Morin,

2009; Boudrias, Morin, & Lajoie, 2014; Morin, Morizot, Boudrias, & Madore, 2011), empirical investigations spanning over months and years are needed. Longitudinal designs with baseline measures at the onset of reward programs, as well as with close monitoring throughout the program duration, would clarify how employees' reward satisfaction, psychological needs, intrinsic motivation, affective commitment, psychological health, productivity, contribution, and loyalty, unfold over time in relation to the rewards employees receive. Such designs would provide additional insight into the internal, psychological processes that generate quantifiable returns for companies. Going beyond productivity levels, concrete outcomes of effective reward programs could also be reflected in actual turnover rate. To this point, in line with the current findings, longitudinal designs would allow researchers to study how employees' lack of satisfaction or dissatisfaction with workplace rewards might lead to greater turnover.

### **Conclusion**

The present research offers empirical evidence in support of the universal importance of employees' psychological need satisfaction in the link between reward satisfaction and employee functioning. The current research shows that by thinking about the workplace through an SDT lens, researchers can better understand the psychological processes that employees experience when they are exposed to rewards in various work settings, and how these processes influence workplace experiences and functioning. By providing empirical support for our model in six diverse regions, our study offers convincing evidence that satisfaction with workplace rewards universally contributes to employees' psychological needs for competence, autonomy, and relatedness at work. When reward satisfaction positively contributes to these needs, rewards can be leveraged to foster psychological health and motivation and drive greater workplace contribution and loyalty. This paper highlights the importance of carefully elaborating reward

## UNDERSTANDING REWARD SATISFACTION FROM AN SDT PERSPECTIVE 20

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3 programs and points to the need for additional research to better understand the impact of  
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5 specific types and timing of rewards on employees' psychological experience of their workplace  
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7 and subsequent functioning over time. These results call for a re-evaluation of compensation  
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9 programs to take into account employees' psychological experiences of the rewards they receive.  
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For Peer Review

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## UNDERSTANDING REWARD SATISFACTION FROM AN SDT PERSPECTIVE

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For Peer Review

Figure 1. Our hypothesized model depicting the relations (paths) between reward satisfaction, psychological need satisfaction, psychological stress, job satisfaction, intrinsic motivation, affective commitment, workplace contribution, productivity, likelihood of recommending the organization, forecasted tenure and turnover intentions. Continuous lines represent expected positive relations between the connected variables, and dotted lines represent expected negative relations between the connected variables.

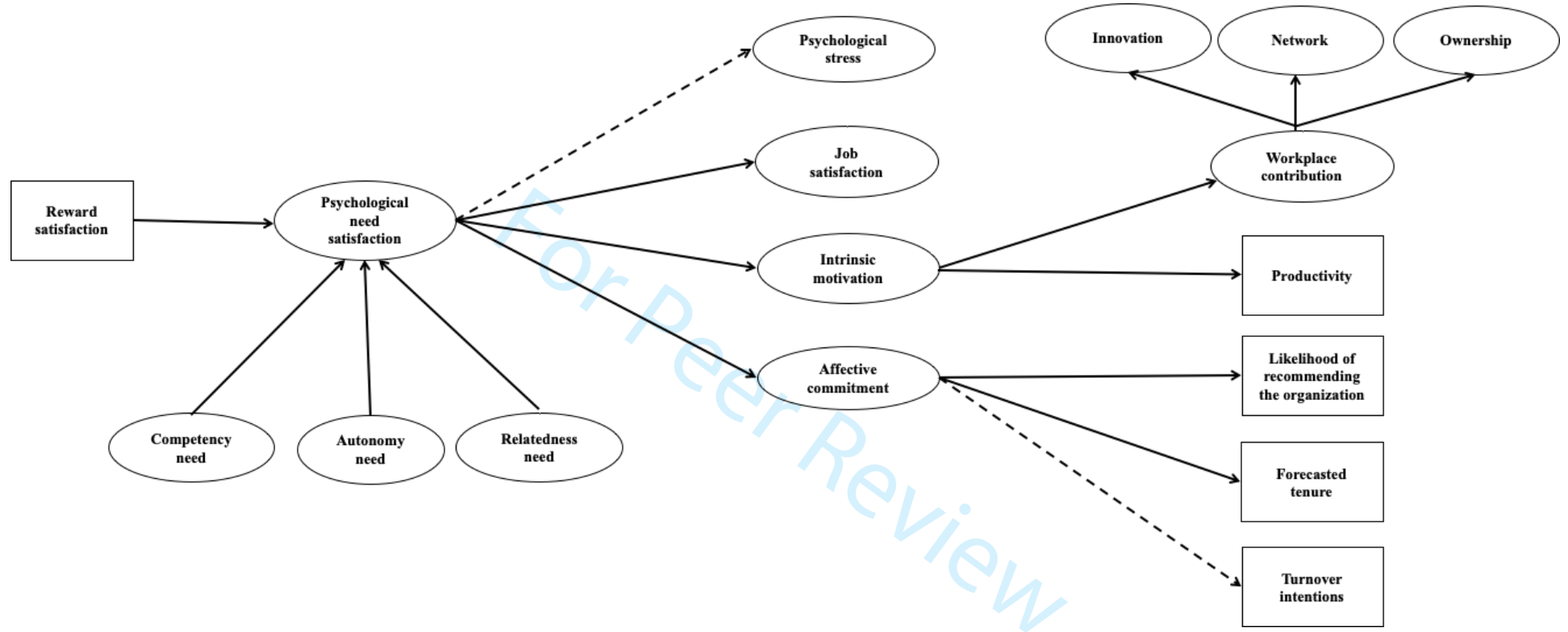


Table 1. Socio-demographic sample composition for the overall sample and by region

	Overall Sample	Asia	Europe	India	Latin America	North America	Oceania
<b>Sample size (N)</b>	5 852	1338	842	931	642	1268	831
<b>Origin</b>	22.8% Asia 14.4% Europe 15.9% India 11.0% Latin America 21.7% North America 14.2% Oceania	24.2% China 51.4% Singapore 24.4% Japan	31.5% Germany 68.5% UK	100% India	49.3% Argentina 50.7% Mexico	49.8% Canada 50.2% US	68.5% Australia 31.5% South Africa
<b>Gender</b>	49.4% women, 50.6% men	48.6% women, 51.4% men	50.0% women, 50.0% men	59.2% women, 50.8% men	49.0% women, 51.0% men	49.8% women, 50.2% men	49.8% women, 50.2% men
<b>Bachelor's degree or more</b>	70.2%	78.2%	51.1%	95.7%	71.2%	73.1%	57.6%
<b>Age</b>	41.6 years (sd = 11.4)	39.7 years old (sd = 10.2)	44.8 years (sd = 11.3)	34.1 years (sd = 7.8)	38.0 years (sd = 10.0)	44.8 years (sd = 11.6)	43.9 years (sd = 12.1)
<b>Tenure</b>	9.4 years (sd = 8.6)	8.7 years (sd = 8.2)	11.4 years (sd = 9.5)	5.8 years (sd = 5.1)	8.0 years (sd = 7.7)	11.0 years (sd = 9.1)	9.5 years (sd = 8.7)
<b>Title</b>	5.6% executive, 2.6% vice president, 7.3% director, 29.4% manager, 43.1% individual contributor, 12% other	5.3% executive, 2.1% vice president, 9.6% director, 35.0% manager, 38.4% individual contributor, 9.6% other	3.8% executive, 2.1% vice president, 4.4% director, 27.1% manager, 52.1% individual contributor, 10.5% other	17.0% executive, 6.8% vice president, 11.1% director, 43.2% manager, 19.1% individual contributor, 2.8% other	7.5% executive, 2.8% vice president, 11.9% director, 25.7% manager, 30.9% individual contributor, 21.2% other	3.3% executive, 2.5% vice president, 6.3% director, 22.9% manager, 51.5% individual contributor, 0.5% other	2.2% executive, 0.9% vice president, 3.1% director, 26.4% manager, 52.4% individual contributor, 15.0% other
<b>Wage</b>	79.8% Salary, 20.2% hourly	93.6% Salary, 6.4% hourly	81.5% Salary, 18.5% hourly	92.4% Salary, 7.6% hourly	89.0% Salary, 11.0% hourly	81.5% Salary, 18.5% hourly	77.1% Salary, 22.9% hourly
<b>Hours</b>	2.0% less than 10 hours, 3.9% 11-20 hours, 8.0% 21-30 hours, 36.3% 31-40 hours, 49.8% 40 hours or more	1.8% less than 10 hours, 2.9% 11-20 hours, 5.1% 21-30 hours, 27.7% 31-40 hours, 62.4% 40 hours or more	1.2% less than 10 hours, 5.7% 11-20 hours, 10.6% 21-30 hours, 47.7% 31-40 hours, 34.8% 40 hours or more	3.3% less than 10 hours, 2.9% 11-20 hours, 9.2% 21-30 hours, 32.8% 31-40 hours, 51.8% 40 hours or more	3.3% less than 10 hours, 5.8% 11-20 hours, 9.3% 21-30 hours, 28.7% 31-40 hours, 52.9% 40 hours or more	1.2% less than 10 hours, 5.7% 11-20 hours, 10.6% 21-30 hours, 47.7% 31-40 hours, 34.8% 40 hours or more	2.8% less than 10 hours, 4.3% 11-20 hours, 9.8% 21-30 hours, 37.7% 31-40 hours, 45.4% 40 hours or more
<b>Functional department</b>	11.6% customer service, 11.3% executive/general administration, 7.4% finance/finance/purchasing, 4.5% human resources, 19.1% IT, 2.5% marketing, 15.5% operations, 6.2% sales, 5.5% training/learning, 16.4% other	8.4% customer service, 15.1% executive/general administration, 7.7% finance/purchasing, 5.4% human resources, 18.9% IT, 3.7% marketing, 15.0% operations, 6.7% sales, 4.8% training/learning, 14.3% other	15.3% customer service, 11.0% executive/general administration, 6.5% finance/purchasing, 4.6% human resources, 16.0% IT, 1.2% marketing, 15.3% operations, 8.0% sales, 3.1% training/learning, 19.0% other	2.2% customer service, 13.3% executive/general administration, 10.3% finance/purchasing, 4.9% human resources, 44.4% IT, 2.9% marketing, 10.3% operations, 2.8% sales, 3.2% training/learning, 5.7% other	10.8% customer service, 15.9% executive/general administration, 7.1% finance/purchasing, 6.0% human resources, 14.1% IT, 2.4% marketing, 11.5% operations, 6.2% sales, 10.8% training/learning, 15.2% other	15.3% customer service, 11.0% executive/general administration, 6.5% finance/purchasing, 4.6% human resources, 16.0% IT, 1.2% marketing, 15.3% operations, 8.0% sales, 3.1% training/learning, 19.0% other	15.3% customer service, 8.1% executive/general administration, 8.5% finance/purchasing, 3.3% human resources, 12.9% IT, 2.3% marketing, 18.6% operations, 7.1% sales, 6.5% training/learning, 17.4% other

Table 2. Overall sample, coefficient alphas (along the diagonal), and correlations between variables (N=5852)

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Reward satisfaction	72.13	22.05	-													
2. Psychological need satisfaction - Competence	3.21	0.79	.56**	0.77												
3. Psychological need satisfaction - Autonomy	3.45	0.91	.57**	.72**	0.88											
4. Psychological need satisfaction - Relatedness	3.34	0.75	.53**	.73**	.71**	0.67										
5. Psychological stress	2.21	0.83	-.17**	-.38**	-.28**	-.40**	0.84									
6. Job satisfaction	44.47	14.65	.70**	.67**	.74**	.66**	-.37**	0.89								
7. Intrinsic motivation	2.95	0.72	.55**	.69**	.71**	.68**	-.30**	.70**	0.87							
8. Workplace contribution - Innovation	3.57	0.80	.40**	.48**	.53**	.48**	-.02**	.42**	.57**	0.82						
9. Workplace contribution - Ownership	3.60	0.88	.40**	.45**	.55**	.51**	-.09**	.46**	.61**	.77**	0.88					
10. Workplace contribution - Network	3.28	0.98	.32**	.38**	.43**	.38**	.07**	.34**	.44**	.73**	.61**	0.81				
11. Productivity	77.89	18.02	.43**	.40**	.39**	.39**	-.15**	.46**	.50**	.35**	.40**	.23**	-			
12. Affective commitment	2.97	0.84	.64**	.74**	.74**	.70**	-.34**	.78**	.82**	.51**	.54**	.42**	.42**	0.92		
12. Likelihood of recommending the organization	6.60	2.68	.61**	.64**	.64**	.60**	-.34**	.81**	.67**	.40**	.42**	.33**	.39**	.78**	-	
14. Turnover Intentions	58.00	31.62	-0.02	-.26**	-.17**	-.23**	-.43**	-.26**	-.20**	-.04**	-.03**	.09**	-.05**	-.25**	-.25**	-
15. Forecasted Tenure	8.44	9.71	.16**	.19**	.15**	.16**	-.14**	.20**	.18**	.06**	.07**	.04**	.11**	.21**	.21**	-.14**

Note. \*\*p<.01

Table 3. Asia, coefficient alphas (along the diagonal), and correlations between variables (N=1338)

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Reward satisfaction	68.89	21.06	-													
2. Psychological need satisfaction - Competence	2.17	0.67	.54**	0.75												
3. Psychological need satisfaction - Autonomy	3.36	0.81	.56**	.73**	0.88											
4. Psychological need satisfaction - Relatedness	3.27	0.65	.50**	.70**	.69**	0.62										
5. Psychological stress	2.28	0.70	-.12**	*	-.22**	-.45*	0.80									
6. Job satisfaction	42.76	13.60	.72**	.66**	.71**	.66**	*	0.90								
7. Intrinsic motivation	2.77	0.65	.58**	.70**	.75**	.68**	*	.72**	0.87							
8. Workplace contribution - Innovation	3.54	0.69	.45**	.52**	.60**	.49**	*	.47**	.62**	0.78						
9. Workplace contribution - Ownership	3.58	0.73	.43**	.48**	.57**	.50**	*	.46**	.63**	*	0.84					
10. Workplace contribution - Network	3.31	0.82	.42**	.46**	.53**	.36**	.06**	.41**	.56**	*	.64**	0.77				
11. Productivity	71.55	17.58	.55**	.44**	.47**	.38**	*	.53**	.51**	*	.50**	*	-			
12. Affective commitment	2.80	0.74	.64**	.74**	.75**	.70**	*	.77**	.83**	*	.54**	*	*	0.90		
12. Likelihood of recommending the organization	6.03	2.56	.60**	.60**	.62**	.60**	*	.80**	.67**	*	.43**	*	*	.74**	-	
14. Turnover Intentions	58.53	2.74	.052*	-.15*	-.08*	-.26*	*	-.09*	-.09*	*	-.01*	.09*	*	-.07*	-.01*	
15. Forecasted Tenure	8.32	9.01	.20**	.20**	.17**	.17**	*	.23**	.18**	*	.13**	*	*	.22**	.21**	*

Note. \*\* $p < .01$

Table 4. Europe, coefficient alphas (along the diagonal), and correlations between variables (N=842)

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14			
1. Reward satisfaction	68.62	23.56	-																
2. Psychological need satisfaction - Competence	2.12	0.81	.58**	0.78															
3. Psychological need satisfaction - Autonomy	3.33	0.91	.58**	.72**	0.87														
4. Psychological need satisfaction - Relatedness	3.24	0.75	.53**	.71**	.68**	0.62													
5. Psychological stress	2.27	0.80	-.24*	-.38*	-.30*	-.40*	0.83												
6. Job satisfaction	42.39	15.15	.73**	.71**	.77**	.65**	-.43*	0.89											
7. Intrinsic motivation	2.87	0.72	.57**	.69**	.68**	.68**	-.32*	*	.69**	0.88									
8. Workplace contribution - Innovation	3.36	0.82	.39**	.47**	.51**	.50**	-.02*	*	.41**	.52**	0.83								
9. Workplace contribution - Ownership	3.35	0.97	.41**	.50**	.54**	.40**	-.11*	*	.45**	.58**	*	0.91							
10. Workplace contribution - Network	3.03	1.01	.31**	.38**	.43**	.36**	.06**	.34**	.40**	*	.76*	*	.62**	0.81					
11. Productivity	77.46	18.68	.54**	.33**	.33**	.33**	-.15*	*	.38**	.45**	*	.34**	*	-					
12. Affective commitment	2.83	0.86	.67**	.74**	.73**	.68**	-.36*	*	.79**	.80**	*	.54**	*	.34**	0.92				
12. Likelihood of recommending the organization	6.25	2.78	.67**	.64**	.64**	.57**	-.38*	*	.81**	.65**	*	.39**	*	.30**	.74**	-			
14. Turnover Intentions	58.24	31.54	-.10	*	*	*	*	.43**	*	*	*	-.01	*	-.08*	.03*	-.84*	-.07*	-.31*	
15. Forecasted Tenure	9.20	10.19	.17**	.19**	.15**	.18**	-.16*	*	.24**	.17**	*	.07*	*	.03*	*	.09**	.22**	.23**	-.14*

Note. \*\*p<.01

Table 5. India, coefficient alphas (along the diagonal), and correlations between variables (N=931)

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Reward satisfaction	80.71	15.79	-													
2. Psychological need satisfaction - Competence	3.69	0.77	.52**	0.78												
3. Psychological need satisfaction - Autonomy	4.01	0.8	.58**	.69**	0.87											
4. Psychological need satisfaction - Relatedness	3.82	0.73	.49**	.71**	.68**	0.62										
5. Psychological stress	3.23	1.18	0.05	-.27**	-.03**	-.29**	0.83									
6. Job satisfaction	77.25	17.01	.72**	.62**	.70**	.63**	-0.03	0.9								
7. Intrinsic motivation	4.08	0.8	.57**	.70**	.77**	.71**	-.08**	.68**	0.87							
8. Workplace contribution - Innovation	4.06	0.73	.47**	.51**	.65**	.54**	.07*	.51**	.68**	0.78						
9. Workplace contribution - Ownership	4.06	0.71	.47**	.50**	.65**	.53**	.08*	.53**	.68**	.80**	0.84					
10. Workplace contribution - Network	3.9	0.8	.42**	.45**	.59**	.44**	.15**	.49**	.61**	.69**	.68**	0.77				
11. Productivity	82.76	14.91	.63**	.44**	.52**	.47**	-0.02	.63**	.52**	.50**	.50**	.42**	-			
12. Affective commitment	4	0.84	.60**	.72**	.77*	.71**	-.06*	.73**	.85**	.65**	.64**	.60**	.49**	0.9		
12. Likelihood of recommending the organization	7.76	2.08	.63**	.59**	.64**	.57**	-0.01	.80**	.65**	.50**	.50**	.47**	.55**	.71**	-	
14. Turnover Intentions	67.54	30.6	0.24	-.11**	-.06*	-.10**	.45**	.06*	-0.01	.13**	.13**	.18**	.10**	-0.02	0.04	-
15. Forecasted Tenure	6.34	6.64	.26**	.25**	.29**	.24**	-0.01	.31**	.32**	.24**	.24**	.22**	.24**	.34**	.32**	.03**

Note. \*\* $p < .01$

Table 6. Latin America, coefficient alphas (along the diagonal), and correlations between variables (N=642)

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Reward satisfaction	78.18	20.56	-													
2. Psychological need satisfaction - Competence	3.5	1.01	.55**	0.79												
3. Psychological need satisfaction - Autonomy	3.57	1.01	.54**	.74**	0.89											
4. Psychological need satisfaction - Relatedness	3.59	0.86	.52**	.73**	.73**	0.66										
5. Psychological stress	2.76	1.2	-.24**	-.48**	-.34**	-.44**	0.84									
6. Job satisfaction	71.46	22.09	.66**	.67**	.74**	.65**	-0.37	0.9								
7. Intrinsic motivation	0.82	0.1	.51**	.71**	.74**	.71**	-.37**	.68**	0.87							
8. Workplace contribution - Innovation	3.72	0.91	.32**	.46**	.52**	.54**	-.12*	.41**	.59**	0.76						
9. Workplace contribution - Ownership	3.85	0.88	.33**	.52**	.59**	.54**	-.17*	.48**	.67**	.72**	0.84					
10. Workplace contribution - Network	3.36	1.02	.22**	.27**	.29**	.32**	0.01	.26**	.35**	.62**	.50**	0.76				
11. Productivity	83.15	15.55	.45**	.43**	.44**	.43**	-.21**	.52**	.51**	.36**	.44**	.19**	-			
12. Affective commitment	3.64	1.02	.61**	.76**	.77*	.72**	-.39**	.77**	.82**	.50**	.57**	.33**	.46**	0.92		
12. Likelihood of recommending the organization	7.28	2.59	.56**	.65**	.63**	.60**	-0.35	.81**	.64**	.35**	.42**	.24**	.45**	.76**	-	
14. Turnover Intentions	60.08	31.53	-0.06	-.23**	-.14*	-.19**	.37**	-.13**	-.15**	0.01	0	.10**	-0.02	-.17**	-0.16	-
15. Forecasted Tenure	9.86	12.01	.12**	.19**	.15**	.17**	-.14**	.17**	.19**	.09**	.08**	0.04	.12**	.21**	.20**	-.14**

Note. \*\*p<.01



Table 7. North America, coefficient alphas (along the diagonal), and correlations between variables (N=1268)

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Reward satisfaction	73.4	21.71	-													
2. Psychological need satisfaction - Competence	3.26	0.93	.54**	0.77												
3. Psychological need satisfaction - Autonomy	3.43	0.91	.53**	.69**	0.86											
4. Psychological need satisfaction - Relatedness	3.4	0.9	.52**	.73**	.69**	0.65										
5. Psychological stress	2.8	1.17	.27**	-.43**	.38**	.47**	0.87									
6. Job satisfaction	67.55	22.13	.64**	.67**	.75**	.65**	-0.48	0.88								
7. Intrinsic motivation	3.67	0.93	.51**	.66**	.64**	.65**	.37**	.68**	0.87							
8. Workplace contribution - Innovation	3.34	0.91	.30**	.44**	.45**	.42**	-0.03	.34**	.50**	0.81						
9. Workplace contribution - Ownership	3.51	0.9	.30**	.49**	.49**	.49**	.15**	.41**	.59**	.76*	0.88					
10. Workplace contribution - Network	3.11	1.01	.22**	.33**	.34**	.32**	0.05*	.26**	.37**	.72**	.57**	0.83				
11. Productivity	79.37	18.06	.35**	.37**	.33**	.33**	.18**	.37**	.48**	.30*	.36**	.15*	-			
12. Affective commitment	3.5	0.99	.61**	.71**	.71**	.69**	.45**	.78**	.81**	.42*	.49**	.33*	.37*	0.92		
12. Likelihood of recommending the organization	6.74	2.72	.58**	.63**	.62**	.60**	.43**	.81**	.65**	.33*	.39**	.28*	.31*	.79**	-	
14. Turnover Intentions	51.95	32.97	-0.14	.36**	-.28*	.33**	.46**	.38**	.31**	-0.01	.11**	0.04	-0.12	.39**	-0.39	-
15. Forecasted Tenure	9.39	10.08	.15**	.16**	.12**	.16**	.13**	.16**	.17**	0.03	0.04	0.02	.07*	.20**	.20*	.13**

Note. \*\*p<.01

Table 8. Oceania, coefficient alphas (along the diagonal), and correlations between variables (N=831)

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Reward satisfaction	68.46	24.09	-													
2. Psychological need satisfaction - Competence	2.17	0.95	.51**	0.79												
3. Psychological need satisfaction - Autonomy	3.31	0.92	.51**	.71**	0.86											
4. Psychological need satisfaction - Relatedness	3.36	0.79	.47**	.73**	.69**	0.65										
5. Psychological stress	2.93	1.12	.27**	-.49**	.42**	.50**	0.85									
6. Job satisfaction	63.58	23.19	.63**	.69**	.71**	.64**	.52**	0.89								
7. Intrinsic motivation	3.56	0.94	.46**	.66**	.66**	.63**	.43**	.68**	0.86							
8. Workplace contribution - Innovation	3.35	0.92	.27**	.37**	.41**	.36**	-.06*	.31**	.50**	0.82						
9. Workplace contribution - Ownership	3.53	0.9	.32**	.43**	.46**	.42**	.17**	.39**	.55**	.75*	0.89					
10. Workplace contribution - Network	3.21	0.96	.19**	.28**	.31**	.27**	0.01	.24**	.38**	.72*	.58**	0.82				
11. Productivity	77.83	18.77	.30**	.36**	.33**	.33**	.22**	.40**	.46**	.27*	.35**	.16*	-			
12. Affective commitment	3.37	1.01	.58**	.73**	.70**	.68**	.50**	.78**	.81**	.40*	.46**	.31*	.37*	0.92		
12. Likelihood of recommending the organization	6.28	2.73	.53**	.64**	.61**	.60**	.48**	.81**	.66**	.31*	.36**	.25*	.34*	.80**	-	
14. Turnover Intentions	57.64	32.29	.21**	.42**	-.35*	.37**	.49**	.45**	.37**	-.03	.12**	0.01	-.016	.45**	.45**	-
15. Forecasted Tenure	7.07	9.25	.19**	.24**	.19**	.20**	.16**	.24**	.23**	.08*	.11**	.0**	.14*	.26**	.26**	.19**

Note. \*\*p<.01

Table 9. Summary of Model Indices for the overall sample and the region-specific groupings

	N	AIC	BIC	Sample Size Adjusted BIC	Chi Square	Degrees of Freedom	RSMEA	90% CI RSMEA	CFI	TLI	SRMR
Overall sample	5852	891542.35	892685.96	892142.57	18984.27**	954	0.056	.056-.057**	0.90	0.89	0.059
Asia	1338	191221.43	192110.45	191567.26	4403.47**	954	0.052	.05-.054**	0.90	0.89	0.052
Europe	858	130623.46	131436.49	130893.44	4264.88**	954	0.064	.062-.066**	0.88	0.87	0.067
India	931	130810.97	131637.97	131094.89	3381.49**	954	0.052	0.050-0.054**	0.90	0.89	0.059
Latin America	642	98799.03	99563.80	99020.88	2961.40**	954	0.057	.055-.059**	0.89	0.88	0.058
North America	1268	200343.94	201228.94	200685.76	6230.98**	954	0.065	0.064-0.067**	0.87	0.86	0.069
Oceania	831	131293.79	132105.03	131561.98	3833.57**	954	0.06	0.058 -0.062**	0.88	0.87	0.064

Note. \*\* $p < .01$

Table 10. Unstandardized b path coefficients and standard errors for the tested model for the overall sample and the region-specific groupings

Paths	Overall Sample		Asia		Europe		India		Latin America		North America		Oceania	
	b	s.e.	b	s.e.	b	s.e.	b	s.e.	b	s.e.	b	s.e.	b	s.e.
Reward satisfaction -> Psychological need satisfaction	0.02	0	0.02	0	0.02	0	0.02	0	0.02	0	0.02	0	0.02	0
Psychological need satisfaction -> Job satisfaction	19.29	0.47	21.04	1.22	21.45	1.19	14.78	0.98	15.77	1.58	19.75	1.02	21.35	1.29
Psychological need satisfaction -> Psychological stress	-0.49	0.03	-0.36	0.07	-0.44	0.06	-0.12	0.08	-0.81	0.09	-0.78	0.07	-0.77	0.07
Psychological need satisfaction -> Intrinsic motivation	0.93	0.02	1.14	0.06	0.95	0.05	1.04	0.06	0.94	0.08	0.98	0.05	0.95	0.06
Psychological need satisfaction -> Affective commitment	1.03	0.02	1.21	0.06	0.98	0.05	1.1	0.07	0.96	0.09	1.02	0.05	0.94	0.07
Intrinsic motivation -> Workplace contribution	0.68	0.02	0.7	0.04	0.7	0.05	0.74	0.05	0.65	0.07	0.55	0.04	0.62	0.05
Intrinsic motivation -> Productivity	11.53	0.33	13.73	0.76	10.23	0.92	10.96	0.89	10.52	1.09	10.51	0.7	12.06	0.94
Affective commitment -> Likelihood of recommending	2.34	0.04	2.11	0.09	2.65	0.11	1.82	0.09	2.23	0.15	2.54	0.09	2.61	0.13
Affective commitment -> Turnover intentions	-7.4	0.56	-1.91	1.28	-10.6	1.62	2.91	1.52	-11.63	2	-13.95	1.19	-19.02	1.5
Affective commitment -> Forecasted tenure	2.52	0.17	2.58	0.32	2.75	0.41	2.85	0.29	4.23	0.75	2.55	0.04	3.32	0.52

Note. All unstandardized b path coefficients are significant at p < .01.