

Psychological detachment: a creativity perspective on the link between intrinsic motivation  
and employee engagement

Debjani Ghosh

Indian Institute of Management, Ranchi

Tomoki Sekiguchi

Kyoto University

Yuka Fujimoto

Sunway University

Ghosh, D., Sekiguchi, T., & Fujimoto, Y. (2020). Psychological detachment: a creativity perspective on the link between intrinsic motivation and employee engagement. *Personnel Review*, <https://doi.org/10.1108/PR-12-2018-0480>

Psychological detachment: a creativity perspective on the link between intrinsic motivation  
and employee engagement

**Abstract**

**Purpose** – The purpose of this paper is to develop an additional perspective on when and why intrinsic motivation predicts employee engagement by presenting a contextual boundary of psychological detachment regarding the relationship between intrinsic motivation, employee creativity, and employee engagement.

**Design/methodology/approach** – Data were collected from 288 full-time Japanese workers using an online survey. We used a bootstrap method (Preacher & Hayes, 2008) to test mediation and a Hayes method (2013) to test moderation and a first-stage moderated mediation model.

**Findings** – Employee creativity mediated the relationship between intrinsic motivation and employee engagement, and the relationship between intrinsic motivation and creativity was moderated by psychological detachment. Additionally, the indirect effect of intrinsic motivation on employee engagement via creativity was moderated by psychological detachment.

**Research limitations/implications** – The cross-sectional design may have limited the empirical inferences; however, the proposed model was based on robust theoretical contentions, and the study included an unrelated “marker variable” (Neuroticism) as an effective means of identifying common method variance (CMV), thus mitigating the limitation of the design.

**Practical implication** – This study has shown that intrinsically motivated employees who practice psychological detachment from work achieve higher creativity and stronger employee engagement.

**Originality/value** – Based on the unconscious thought theory (UTT), job demand resource theory (JD-R), recovery processes (i.e., effort-recovery model), and self-determination theory (SDT), this paper adds to the literature by demonstrating the mediating and moderating mechanisms driving intrinsic motivation and employee engagement relationships.

**Keywords**- Intrinsic motivation, Employee Creativity, Employee engagement, Psychological detachment.

**Paper type**- Research paper

## **1. Introduction**

Employee engagement is defined as a positive, fulfilling work-related state of mind characterized by vigor, dedication, and absorption (Schaufeli, Bakker, and Salanova, 2006). The concept is becoming more and more important these days because research evidence shows that engaged workers perform better (Bakker and Xanthopoulou, 2013). Consistent with this trend, research on employee engagement is growing (e.g., O'Connor and Crowley Henry, 2019). Past research has identified intrinsic motivation, as doing an activity voluntarily for its own sake, and the inherent pleasure and satisfaction derived from such participation (Baker, 2004) as a critical antecedents of employee engagement (Kordbacheh, Shultz, and Olson, 2014; Saks, 2006). Intrinsic motivation has been linked to increased employee productivity, employee engagement, (Cerasoli, Nicklin, and Ford, 2014; Van Den Broeck, Ferris, Chang, and Rosen, 2016) and employee creativity (Leung, Chen, and Chen, 2014; Zhang and Bartol, 2010). It is sustained by the situations which promote the satisfaction of the basic psychological need. The dominant theory used in the intrinsic motivation-employee engagement relationship is self-determination theory (SDT).

According to SDT, intrinsic motivation encourages employee engagement because it satisfies basic psychological need such as the need for autonomy, competence, and relatedness. That is, employees can use their personal discretion to decide which tasks they want to pursue and when and how to complete them. Intrinsically motivated employees are also more likely to accept challenging work and enjoy novelty and the need to use a variety of skills. Additionally they facilitate idea exchange, coordination, and collaboration to make meaningful contributions and further influencing employee engagement levels (Amabile and Pratt, 2016; Kordbacheh, Shultz and Olson 2014; Saks, 2006).

However, existing research has largely overlooked the possibility of other mechanisms linking intrinsic motivation and employee engagement namely the role of creativity. To the best of our knowledge, no study has examined how creativity plays into the relationship between intrinsic motivation and employee engagement. This is a serious omission because intrinsic motivation is also the major contributor to creativity. That is, creativity should be involved in the intrinsic motivation-employee engagement process. Thus, we focus on this mechanism and develops an additional perspective of how intrinsic motivation promotes employee engagement.

We built theory and strengthen the validity and usefulness of our new perspective via this study by positing and testing a potentially important moderator of the intrinsic motivation and employee engagement via employee creativity: psychological detachment, which refers to mental disengagement from work during off-hours (Sonnentag, 2012). Examining the above relationships provides an answer to the question of whether psychological detachment from work makes employees more creative enabling them to better engage with their jobs. In addition, some scholars have proposed that constructs derived from other management theories can be subsumed within or otherwise integrated with basic psychological needs and that would be the best way to advance the understanding of and attention to basic psychological needs research and, by proxy, SDT as a whole. (Nie, Chua, Yeung, Ryan and Chan, 2014; Van Den Broeck et al. 2016).

We address this gap in the literature. In developing a new perspective, first, we integrate the literature on SDT and JD-R model, we argue that satisfying basic psychological needs such as autonomy, competence and relatedness promotes intrinsic motivation which helps employees to become creative. Creativity then further elevates the satisfaction of such innate psychological needs which in turn provides job resources that engage employees.

Second, we argue that there are two mechanisms through which detachment helps engaging employees. One with creative thinking and the other with more traditional function of detachment. Drawing on the perspective of UTT (Dijksterhuis and Nordgren, 2006) and research on effort-recovery model (Meijman and Mulder, 1998) with the literature on SDT, we argue that for intrinsically motivated employees, creative solutions may be discovered via unconscious thought under the condition of psychological detachment.

Psychological detachment, provides opportunities to temporarily distract attention allowing employees to be more creative that were less constrained by conventional association. Psychological detachment also provides an opportunity to halt work-related resource loss, thus conserving resources to provide employees with the energy (vigor) to engage. On the basis of the above explanation we argue that psychological detachment moderates the relationship between intrinsic motivation and employee engagement via creativity such that this relationship is stronger when psychological detachment is high but weakens when psychological detachment is low.

The current study contributes to the literature on intrinsic motivation and employee engagement in the following ways. First, we highlight a new mechanism i.e. creativity by demonstrating that the creativity of intrinsically motivated employees is likely to make them more engaged with their jobs. Second, we examine the moderating role of psychological detachment through two paths. First one with creative thinking and the other more traditional function of detachment, regarding intrinsic motivation and employee engagement- via employee creativity. A summary of our model is presented in Figure 1. We test this theoretical model via data from the multiple industries in Japan, offering insights on intrinsic motivation, creativity, and psychological detachment.

Insert Fig 1 about here

## **2. Theory Development and Hypotheses**

### *2.1 The mediating role of employee creativity*

SDT is one of the most widely applied theories of intrinsic motivation (Hon, 2011). According to SDT, the satisfaction of the needs for competence, relatedness, and autonomy is considered essential for understanding the *what* (i.e., content) and *why* (i.e., process) of goal pursuit (Deci and Ryan, 2000). The need for autonomy refers to the experience of behavior as volitional and reflectively self-endorsed (Niemic and Ryan, 2009). Second, the need for competence refers to the experience of behavior as effectively enacted (Niemic and Ryan, 2009). Third, the need for relatedness refers to the desire to feel connected to others to love and care, and to be loved and cared for (Deci and Ryan, 2000).

Intrinsically motivated employees engage with tasks that interest them. These tasks are characterized by novelty and challenge, thus satisfying the need for autonomy, competence, relatedness (Deci and Ryan, 2000) and leading to creativity. Creativity is generally defined as the production of novel, useful ideas or solutions; it refers to both the process of idea generation or problem-solving and the actual idea or solution (Amabile, Barsade, Mueller, and Staw, 2005). Creativity prompts the satisfaction of innate psychological needs which in turn provides job resources, explaining the mechanism through which intrinsic motivation is related to employee engagement.

To make this argument, we must first establish the relationship between intrinsic motivation and creativity. Research shows that intrinsic motivation is one of the major determinants of employee creativity (Leung, Chen, and Chen, 2014; Zhang and Bartol, 2010). According to these researchers, intrinsic motivation promotes creativity by “making the difference between what an individual can do and what an individual will do” (Zhang and Bartol, 2010). Zhang and Bartol (2010) indicated that the primary function of intrinsic

motivation is the control of attention. When individuals are intrinsically involved in their work, they are more likely to devote all of their attention to the problems they encounter and in creative processes. Internally motivated employees have a sense of working on something important and are attracted by challenges. Thus they explore various pathways, learn new skills, and search for the most interesting connections (Amabile, 1988; Hon 2011) carrying out the creative process and find solutions.

Engagement refers to a persistent and pervasive affective-cognitive state consisting of vigor, dedication, and absorption that is not focused on any particular object, event, individual, or behavior (Schaufeli and Bakker, 2006). “Vigor refers to a willingness and determination to exert energy and effort in one’s work and to be resilient and persistent when confronted with obstacles. Dedication deals with the emotional component of engagement in that dedication refers to finding the meaning and purpose of one’s work and being enthusiastic, and proud of one’s work. Absorption deals with cognitive component of engagement which entails being totally immersed and content with one’s work” (Menguc, Auh, Fisher and Haddad, 2013).

The concept of employee engagement was developed in combination with the JD-R model (Bakker and Demerouti, 2007). We posit that the JD-R model along with SDT provides an explanation for the mediating effect of creativity on employee engagement. The JD-R model says that high job demands and limited job resources creates negative working conditions that leads to energy depletion and undermine employee motivation (Demerouti, Bakker, Nachreiner and Schaufeli, 2001). Job demands are physical, social or organizational aspects of a job that require sustained physical or mental effort and are therefore associated with certain physiological and psychological costs. Job resources are physical, social or organizational aspects of a job that are functional in achieving work goals, reducing job

demands and the associated physiological and psychological costs, and stimulating personal growth and development (Demerouti et al., 2001).

SDT suggests that employee creativity promotes work engagement by satisfying basic innate psychological needs for autonomy, competence, and relatedness through creativity. Creative employees are more likely to fully endorse and participate in creative work as they find it enjoyable and interesting. Hence, they expend a higher degree of intensity or effort and persist longer at the task after achieving initial success (Amabile, 1988). They explore new pathways rather than accepting well-known guaranteed solution and adopt working styles conducive to persistent and energetic pursuit (Amabile, 1988), which leads to the development of the vigor dimension of employee engagement. Creative employees take up work assignments that are well matched to their interests and objectives that reflects their deeply held values which provides meaning and purpose to their work (Amabile and Pratt, 2016). Creativity provide positive challenges, such as forming new perspectives on problems, considering various idea, thinking broadly, and making unusual associations (Amabile and Pratt, 2016). This cognitive and perceptual style leads to the development of domain knowledge and technical expertise needed to explore innovation. Thus, interesting challenges and opportunities for personal growth could make employees content with their work and absorbed in their jobs. In addition to the above Amabile et al. (2005) found creative activity to be an affectively charged event, in which complex cognitive processes are shaped by, cooccur with, and shape emotional experiences. It often evokes positive emotions, ranging from mild feelings of pleasure or pride to extreme elation or relief (Amabile et al., 2005). This could be a determining factor of the “dedication” dimension of employee engagement.

Creative employee’s concepts concern the deep structure of the human psyche; they refer to innate and life-span tendencies toward achieving effectiveness and coherence (Deci



and Ryan, 2000). Employees who embody aspects of creativity tends to internalize work rules, standards, and procedures (Menguc et al., 2013). Therefore, the beliefs that one is resilient and able to deal with work tasks successfully seem to be the most proximal drivers of engagement (Bakker and Xanthopoulou, 2013).

This is consistent with the JD-R model because employee creativity promotes psychological job resources such as autonomy, learning, personal growth, recognition, increased satisfaction better interpersonal communication (Huhtala and Parzefall, 2007) and positive emotions (Amabile et al., 2005). These resources are considered the equivalent of job resources under the JD-R model (Bakker, Demerouti, and Euwema, 2005). In the context of creative work, the potentially positive outcomes of creativity present valuable job-specific resources that will further foster employee engagement in work and protect employees from the demanding aspects of the work.

H1. Employee creativity mediates the relationship between intrinsic motivation and employee engagement

## *2.2 The moderating role of psychological detachment*

We have argued that intrinsic motivation influences employee engagement via employee creativity, and we expect the strength of this relationship to differ based on the levels of psychological detachment. Psychological detachment refers to an "individual's sense of being away from the work situation" (Sonnentag, Binnewies, and Mojza, 2010). It implies that one is not working or thinking about job-related issues, problems, or opportunities at home or after work. In everyday life, psychological detachment from work means leaving the workplace temporarily behind oneself physically and mentally (Sonnentag et al., 2010). Empirical research has shown that employees who experience more detachment from work

have better mental health and experience fewer symptoms of psychological strain, without being less engaged while at work (e.g., Kanagawa et al., 2016; Sonnentag, 2012).

Creativity has been related to cognitive abilities, expertise, and practice and one may expect that creativity mainly thrives on extensive conscious thought. However, creative individuals, in describing their work habits or the process of creative problem solving, have suggested that creative ideas often result from a period of incubation (Ritter and Dijksterhuis, 2014); a process in which an individual does not consciously think about the task, but the mind continues to work on it below the level of consciousness (Ritter, Van Baaren, and Dijksterhuis, 2012). Dijksterhuis and Nordgren (2006) defined unconscious thought as “object relevant or task-relevant cognitive or affective thought processes that occur while conscious attention is directed elsewhere” (p. 96). According to UTT theory, there are two modes of thought; conscious and unconscious (Dijksterhuis and Nordgren, 2006). These two modes of thought have different characteristics, making them differentially applicable or appropriate under various circumstances. Unconscious thought generates newer, creative, less accessible ideas (Dijksterhuis and Meurs, 2006). In addition, it has been found to perform better than conscious thought in recognizing the most and least creative ideas (Ritter et al., 2012).

We propose that psychological detachment, or being away from work psychologically, provides opportunities for unconscious thought to happen such that more effective psychological detachment prompts a stronger relationship between intrinsic motivation and creativity. Psychological detachment might provide employees with an opportunity to evaluate problems with a “fresh look” or simply help reduce associations with incorrect answers, allowing correct ones to surface. A higher level of psychological detachment

through unconscious thought seems to help employees think actively and, facilitates the discovery of remote associations.

H2. Psychological detachment moderates the relationship between intrinsic motivation and employee creativity such that intrinsic motivation will be more strongly associated with employee engagement when psychological detachment is high but weakens when psychological detachment is low.

### *2.3. The moderating role of psychological detachment on the indirect effect of intrinsic motivation on employee engagement via employee creativity.*

We have argued that intrinsic motivation influences employee engagement via employee creativity, and we expect the strength of this relationship to differ based on the levels of psychological detachment. To explain this we propose two paths through which psychological detachment helps the process. First, as we explained in Hypothesis 2, psychological detachment spurs unconscious thought and strengthens the relationship between intrinsic motivation and creativity, which strengthens the indirect effect of intrinsic motivation on employee engagement. Second, according to the effort-recovery model, psychological detachment helps reduce perceived job demands stemming from working and thinking hard, which we explain below in more detail.

Intrinsically motivated employees may spend a lot of time at work and continuously think about their work putting a lot of cognitive demand upon the individual (Jonge de, Spoor, Dormann, Sonnentag, and Vanden, 2012). This tires employees and encourages emotional exhaustion. At this point psychologically detachment provides an opportunity to halt work-related resource and avoid resource drain during which the detrimental effects of stressful situations are eliminated. This implies that recovery strategies such as psychological detachment during off-work time can be an opportunity to stabilize resources; thus enabling

the employee to recover from strain. Psychological detachment has been found to be the most relevant recovery experience (Sonnentag and Fritz, 2007). The recovery experience provides employees with the necessary energy to meet work demands and gain cognitive, emotional, and physical resources to further engage them in the organization. Integrating Hypotheses 1 and 2 and the additional theoretical argument based on the effort-recovery model we have made here, we offer the following integrated moderated mediation hypothesis.

H3. The indirect effect of intrinsic motivation on employee engagement via employee creativity is moderated by psychological detachment, such that this relationship is stronger when psychological detachment is high but weakens when psychological detachment is low.

### **3. Method**

#### *3.1 Sample and procedure*

A specialized online data-collection company was used to administer surveys among 1028 full-time Japanese workers for companies with more than 100 employees. We wanted to ensure that the companies which employed our sample had formal human resource management (HRM) policies and practices. Past research suggests that HRM plays a crucial role in enabling employee creativity (Binyamin and Carmeli, 2010) and facilitating employee engagement (Albrecht, Bakker, Gruman, Macey and Saks, 2015). We suspected that small Japanese companies may not have formal HRM policies and practices as they often practice informal ways of HRM, hence we included only those companies which employs formal HRM practices. There were 295 responses to the online surveys, of which seven were unusable because they were incomplete: - the final usable sample was 288 including 208 males and 80 females. Table I contains a general description of the sample.

Insert Table I

### 3.2 Measures

As an online data-collection company administered the survey in Japanese, a NAATI accredited Japanese translator translated all measurement items. After the translation, a professor in Japan re-examined all items in order to ensure the accuracy of the data.

*Intrinsic motivation.* We used the 6-item scale developed by Warr, Cook, and Wall (1979) to measure intrinsic motivation. “I feel a sense of personal satisfaction when I do this job well”. Responses were measured with a 5-point scale (1= strongly agree 5= strongly disagree) ( $\alpha = .88$ ).

*Employee creativity.* Employee creativity was measured with the 13-item creativity scale developed by Zhou and George (2001). Respondents answered on a five-point scale ranging from “not at all characteristic” to “very characteristic.” The survey included questions such as, “Does your pay reflect the effort you have put into your work?” ( $\alpha = .97$ ).

*Employee engagement-* We used the 17-item version of the Utrecht Work Engagement scale (Schaufeli et al., 2006). Example items included “At my work, I feel bursting with energy”, “I am enthusiastic about my job.” Respondents answered items on a 6-point Likert-type scale ranging from 0 (never) to 6 (always). ( $\alpha = .82$ ).

*Psychological detachment.* Was assessed with a 4-item scale based on Sonnentag and Fritz, (2007). The item included “I don’t think about work at all”. Responses were measured with a 5-point scale (1= I do not agree at all, 5= fully agree). ( $\alpha = .86$ ).

### 3.3 Control variables

We controlled several variables that could influence the relationship spuriously between our independent variables, the mediator, moderator and the outcomes in this study. We controlled respondents' gender by coding male = 1 and female = 2. Given the age, education, and job tenure were categorical variables, these variables were dummy coded using one of the categories within each variable as the reference group (Peeters, Wattez, Demerouti, and deRegt, 2009). Additionally, because all of our variables were collected from the same respondent, the potential existed for our data to have been influenced by common method concerns. To address this concern, and hopefully provide evidence that common method biases played a minimal role in our analyses, we included an unrelated “marker variable” (Neuroticism). Marker-based techniques have been tentatively suggested as effective means of identifying CMV (Simmering, Fuller, Richardson, Ocal, and Atinc, 2015) and we used one as a surrogate for method variance (Podsakoff, MacKenzie, Lee, and Podsakoff, 2003). Neuroticism was measured with a 10-item scale from (IPIP) developed by Goldberg (1998); a sample item is “I rarely feel melancholy” (scale anchors: 1 = strongly disagree, 5 = strongly agree). We then ran our analyses twice, once without Neuroticism and once with the “marker variable.” Results holding under both sets of analyses, would present evidence that common method concerns were minimal in the study. However, if the results were different with and without the method variance “marker variable,” evidence would indicate that that common method biases influenced the findings (Podsakoff et al., 2003).

Table II reports the means, standard deviations and correlation coefficients between the dependent, independent, and control variables. We assessed the measures in terms of convergent and discriminant validity using work by Anderson and Gerbing (1988) and Fornell and Larcker (1981). The results are shown in table III. The average variance extracted by each latent variable was greater than or equal to 0.50. These results showed that there was

evidence of convergent validity (Anderson and Gerbing, 1988; Fornell and Larcker, 1981). There was evidence of discriminant validity, as the shared variances between pairs of variables were not larger than the average variance extracted by each latent variable (Fornell and Larcker, 1981). The measures also proved to be reliable, because each construct's composite reliability was greater than the recommended threshold value of 0.60 (Bagozzi and Yi, 1988).

Insert Table II

Insert Table III

As demonstrated in Table IV, to test hypotheses 1, we used the bootstrap method (Preacher and Hayes, 2008) to evaluate the mediation role of employee creativity. Bootstrapping has been shown to be a good method for testing significance in models, as it does not make any assumption about the normality of the distribution of the variables tested (Preacher and Hayes, 2008). We generated 5,000 bootstraps based on 288 observations with a 95% bias-corrected confidence interval (CI) and bootstrapped percentile for indirect effects. If a CI does not include the value of zero, that population correlation is judged to be “statistically significant” (Preacher and Hayes, 2008).). We requested bootstrap estimates of indirect, direct, and total effects. As shown in table 3, the interval between lower level CI and upper-level CI does not include zero, hence we can conclude that intrinsic motivation is partially mediated by creativity (as both the direct and indirect effect are significant). Thus, these results provide support for Hypotheses 1.

Insert Table IV here

Insert Fig 2 here

In Hypothesis 2, we predicted that psychological detachment would moderate the relationship between intrinsic motivation and creativity. In Step 1, both intrinsic motivation ( $\beta=.38, p < .001$ ) and psychological detachment ( $\beta=.13, p < .05$ ) were positively associated with creativity. In Step 2, results suggested that after the inclusion of the interaction term the model explained significantly more variance (adjusted  $R^2=.26 \Delta R^2=.01, p < .05$ ). The interaction term of psychological detachment and intrinsic motivation had a significant positive impact on creativity, after controlling for age, gender, job tenure and education ( $b=.07, \leq p .05, LLCI = 0.0181, ULCI= 0.1237$ ). For the hypothesized interaction we grand-mean-centered the independent variable and moderator (Aiken and West, 1991). We then utilized the methods of Hayes (2013) to test Hypothesis 2 in an integrative fashion at one standard deviation above and below the mean and at the mean of the moderator (psychological detachment). Each of the simple slope tests revealed a significant positive association between intrinsic motivation and creativity, but intrinsic motivation was more strongly related to creativity for high levels of psychological detachment ( $b = 1.06, p < .001, LLCI = 0.7799, ULCI= 1.3524$ ) than for moderate ( $b = .81, p < .001, LLCI = 0.5847, ULCI= 1.0360$ ) or lower ( $b = .55, p < .001, LLCI = 0.2499, ULCI= 0.8591$ ) of psychological detachment. To aid interpretation, the interaction effect is plotted in Figure 2.

Insert Table V here

As demonstrated in TableV, to test our hypotheses 3 first-stage moderated mediation model, we began by examining the interactive effect of psychological detachment and intrinsic motivation on creativity. Results suggested that the interaction term was significant ( $b=.07, \leq p .05, LLCI = 0.0181, ULCI= 0.1237$ ). Additionally we found that mediator (creativity) ( $b=1.29, \leq p .001, LLCI = 0.7812, ULCI= 1.7900$ ) was positively associated with the dependent variable (engagement). We then utilized the methods of Hayes (2013) to test



Hypothesis 3 in an integrative fashion at one standard deviation above and below the mean of the moderator (i.e., psychological detachment). Our analysis indicates that indirect effects were significant at the levels of detachment both 1SD higher (conditional indirect effect = 1.181, SE = .25, 90% CI LLCI = 0.1267, ULCI = 1.1061) and 1SD low (conditional indirect effect = 0.61, SE = .25, 90% CI, LLCI = 0.1267, ULCI = 1.1061) than the mean. However, the magnitude of the indirect effect was larger for +1SD than -1SD, which is consistent with our moderated mediation. For the purpose of presentational parsimony, we thus present the results without marker variable. However, the results were the same with and without the marker variable “Neuroticism”.

#### **4. Discussion**

First and foremost, our research makes meaningful contributions to the literature on intrinsic motivation and employee engagement by highlighting a new mechanism i.e., creativity and demonstrating that the creativity of intrinsically motivated employees is likely to encourage employees to engage with their jobs. We conducted our study to provide insight into the pathways and boundary conditions that underlie the positive effects of intrinsic motivation on employee engagement. Our study is unique in explicating the connection of psychological detachment with intrinsic motivation, employee engagement and employee creativity. More specifically our study showed that intrinsically motivated employees who can psychologically detached from work will be more creative. This study also demonstrates that mediation of employee creativity between intrinsic motivation and employee engagement is particularly strong at high levels of psychological detachment. These findings point to important theoretical and practical implications.

By theoretically developing and empirically testing the role of intrinsic motivation on employee engagement, our findings advances the prior understanding of basic psychological

needs by integrating SDT with the JD-R model, UTT and effort-recovery model (e.g., Nie et al., 2014; Van Den Broeck et al. 2016). Our results hold significant promise as new perspective in understanding the mediating role of employee creativity and the moderating role of psychological detachment regarding why and how intrinsic motivation predicts employee engagement. Finally, it extends prior research by explaining that even in a highly collectivist culture such as Japan where people might value interdependence more than individual autonomy, the satisfaction of autonomy and competency provides support for employees that are similar to western culture (e.g., Taylor, 2014).

Although our results clearly demonstrated that creativity mediated the association between intrinsic motivation and employee engagement, we wanted to make sure that this was the most accurate representation of the relationships. One post hoc analysis we conducted, which we believed could be a potential alternative depiction of reality, involved employee creativity moderating rather than mediating the intrinsic motivation and employee engagement relationship. We examined the interaction of these two variables on our outcome and found no support for this representation of relationships between our focal variables. For the moderator variable, the standardized  $\beta = .015$ ,  $p \geq .05$ .

Within the Japanese workforce, conformity, social connectedness, long working hours, workaholism and avoidance of uncertainty are heavily embedded as socio psychological conditions (Fujimoto, Ferdous, Sekiguchi and Sugianto, 2016). Under these conditions psychological detachment from work was found to strengthen the effect of intrinsic motivation on employee creativity and on employee engagement via employee creativity. This finding is consistent with the study done by Shimazu, Matsudaira, De Jonge, Tosaka, Watanabe and Takahashi (2016) among Japanese employees ‘in which moderate levels of psychological detachment were associated with the highest levels of work

engagement. Similarly Kawakubo and Oguchi (2019) conducted their research among Japanese employees and demonstrated that the recovery experienced during vacations can potentially promote employees promote their creative behaviors. In contrast, a study done by Shimazu and Schaufeli (2009) found a weak but positive correlation between workaholism (a construct contrasting with psychological detachment) and work engagement among Japanese employees. The authors explained the relationship by suggesting that workaholics are propelled by an obsessive inner drive to work whereas engaged employees are intrinsically motivated to work. Another study reported that mobile technology (MT) usage that met Japanese needs for social connectivity inside and outside work have enhanced employee engagement, providing indirect support for the moderating effect of psychological detachment (Fujimoto et al.,2016).

## **5. Implications for Practice**

Our findings suggest that intrinsically motivated employees who practice psychological detachment from work achieve higher creativity. Employees can attain psychological detachment by actively separating work and home. Hahn and Dormann (2013) found that when employees agree on certain “work-home segmentation rules,” such as keeping the weekend free of work or not checking work related mails on the mobile phones after dinner. Couples may also limit the time they spend talking about work or talk about work as a way of mentally closing the work day and then avoiding talking about work-related issues during the rest of the evening. Employees can complete their tasks before leaving the workplace and pursue off-job activities in restorative environments (Sonnentag, 2012). Organizations can encourage and support employees in leisure activities that require one's full presence and awareness (language classes, sport activities, etc.) to minimize associations with work (Boekhorst, Singh and Burke, 2017). Organizations could further support their

employees' detachment from work with policies that 24/7 employee availability is not necessarily what defines a committed and high performing workforce (Sonnentag, 2012).

In Japan where conformity, social connectedness, long working hours, and avoidance of uncertainty are heavily embedded as socio-psychological conditions (Hamamura, 2012), managers should schedule breaks that provide sufficient revitalization and encourage employees to actually take these breaks. To improve psychological detachment from work during off-job time, it is important to teach time management skills so that individuals will be able to finish work tasks more quickly, which in turn will help in detaching from work during off-job time (Sonnentag and Krueger, 2006).

Our research suggests that employee engagement can also be attenuated by allowing intrinsically motivated employees to be creative. In terms of practice, we believe that creativity is an important underlying driver of employee engagement. Organizations can strengthen employee's creative skill by accepting and encouraging risk taking behavior, which will create enthusiasm for new ideas (Amabile, 1988). Managers may provide fair and supportive evaluation of new ideas and also ensuring the translation of deserving ideas across organizational barriers. Organizations may ensure that employees are engaged in tasks that they find inherently interesting and enjoyable and have the freedom to decide how to achieve project goals. This provides them with a sense of control over their work and ideas (Amabile, 1988).

## **6. Directions for Future Research**

The effects of employee creativity through intrinsic motivation and psychological detachment on employee engagement will need to be explored in future research. Future research could involve identifying other boundary conditions, beyond psychological detachment, of the relationship between intrinsic motivation and creativity. Other contextual

factors, such as supervisory support which facilitates employees' coping actions, and helps them feel less anxious (Kickul and Posig, 2001) might be appropriate to study. Supervisors build social exchange relationship with employees and fulfill employee perceptions of the organization's obligations through providing social support (Zhang, Tsui, Song, Li, and Jia, 2008) which may positively influence the effect of intrinsic motivation and psychological detachment on creativity and employee engagement.

We focused our theory at the individual-level as an initial step toward investigating the functional effects of intrinsic motivation. We encourage scholars to expand these findings to the team level and investigate the effects of intrinsic motivation on workgroup innovation. Innovation as 'the intentional introduction and application within a role, group or organization of ideas, processes, products or procedures, new to the relevant unit of adoption, designed to significantly benefit role performance or the wider society (Anderson and West, 1998). Innovation originates and is subsequently developed by a team into routinized practice within organizations. For example, a management team may initiate changes in organization procedures or a marketing team may modify approaches to advertising product lines (Anderson and West, 1998). It is therefore important to address the topic of workgroup innovation as an outcome. Furthermore, future research can replicate this study to examine whether the same result holds in nations with similar cultural norms to Japan.

## **7. Limitations and Conclusion**

We acknowledge a few limitations of this study. There may be questions about the accuracy of the responses as the data were obtained only through self-reports i.e. all the variables studied were measured from the same source at the same time. We adopted scale reordering as a procedural option for minimizing this bias, and the survey instrument was structured such that intrinsic motivation, psychological detachment, and employee creativity

items preceded the employee engagement items (Podaskoff and Organ, 1986). We have incorporated the marker variable of neuroticism to detect and remove method variance in same-source cross-sectional data. A cross-sectional study presents a potential bias and any reference to causation is an interpretation of covariance, as causation is not supported by our methodology. Nevertheless, we encourage future research to temporally separate measures of intrinsic motivation, creativity and employee engagement (i.e., utilize a two-wave design), and to examine other potential positive consequences of employee engagement.

This study, with a relatively small sample, was only conducted in Japan. Thus, the findings can't be generalized, as workers' experiences regarding psychological detachment, intrinsic motivation, creativity, and employee engagement may vary across nations depending on attributes such as personality, expectations of colleagues, and organizational and national cultural norms and practices. Another potential limitation is that creativity was measured by employees and not by supervisors; thus, in future research, creativity should be measured by supervisors to get a more objective picture of creativity. Ultimately, this study showed that the effect of psychological detachment and employee creativity on employee engagement suggests further insights into how and why intrinsic motivation can lead to employee engagement.

## References

- Aiken, L. S., and West, S. G. (1991), "*Testing and interpreting interactions in multiple regression*", New York, NY: Sage.
- Albrecht, Simon L., Bakker, Arnold B., Gruman, Jamie A., Macey, William H. and Saks, Alan M. (2015), Employee engagement, human resource management practices and competitive advantage, *Journal of Organizational Effectiveness*, Vol. 2, no. 1, pp. 7 - 35.
- Amabile, T.M., Pratt, M.G., 2016. The dynamic componential model of creativity and innovation in organizations: making progress, making meaning. *Research in Organizational Behavior*, Vol.36, pp. 157–183.
- Amabile, T.M., Barsade S.G., Mueller, J.S., and Staw, B.M. (2005), "Affect and creativity at work." *Administrative Science Quarterly*, Vol. 50 No. 3, pp. 367–403.
- Amabile, T.M. (1988), "A model of creativity and innovation in organizations". *Research in Organizational Behavior*, Vol. 10, pp. 123-167.
- Anderson, J. C., and Gerbing, D. W. (1988), "Structural equation modeling in practice: A Review and recommended two-step approach", *Psychological Bulletin*, Vol. 103, No.3 pp. 411-423.
- Anderson, N., and West, M.A. (1998), "Measuring climate for work group innovation: Development and validation of the team climate inventory", *Journal of Organizational Behavior*, Vol. 19 No. 3, pp. 235–258.

- Bakker, A.B. and Schaufeli, W.B. (2008), "Positive organizational behavior: engaged employees in flourishing organizations", *Journal of Organizational Behavior*, Vol. 29 No. 2, pp. 147-154.
- Bakker, A.B. and Demerouti, E. (2007), "The job demands-resources model: State of the art". *Journal of Managerial Psychology*, Vol 22 No, pp.309-328.
- Bakker, A.B., Demerouti, E. and Euwema, M.C. (2005), "Job resources may buffer the impact of job demands on burnout" *Journal of Occupational Health Psychology*, Vol 10 No.2, pp. 170-180.
- Baker, S.R. (2004), "Intrinsic, extrinsic, and a motivational orientations: their role in university adjustment, stress, well-being, and subsequent academic performance". *Current Psychology*, 2004; Vol.23 No. 3, pp. 189–202.
- Bakker, A.B. and Xanthopoulou, D. (2013), "Creativity and charisma among female leaders: The role of resources and work engagement" *The International Journal of Human Resource Management*, Vol 24 No.1, pp. 2760–2779.
- Binyamin, G., and Carmeli, A. (2010). Does structuring of human resource management processes enhance employee creativity? The mediating role of psychological availability. *Human Resource Management*, Vol.49, No.6 pp. 999–1024.
- Boekhorst, J., Singh, P. and Burke, R. (2017), "Work intensity, emotional exhaustion and Satisfaction", *Personnel Review*, Vol. 46 No. 5, pp. 891-907.
- Cerasoli, C.P., Nicklin, J. M., and Ford, M.T. (2014), "Intrinsic motivation and extrinsic Incentives jointly predict performance: A 40-year meta-analysis. *Psychological Bulletin*, Vol. 140 No. 4, pp. 980-1008.



- Demerouti, E., Bakker, A. B., Nachreiner, F., and Schaufeli, W. B. (2001). The job demands-resources model of burnout. *Journal of Applied Psychology*, Vol 86, 499-512.
- Dijksterhuis, A., and Meurs, T. (2006), “Where creativity resides: The generative power of unconscious thought”, *Consciousness and Cognition*, vol. 15 No. 1, pp.135–146.
- Dijksterhuis, A., and Nordgren, L.F. (2006), “A theory of unconscious thought”, *Perspectives on Psychological Science*, Vol. 1 No. 2, pp. 95-109.
- Deci, E.L., and Ryan, R.M. (2000), “The ‘what’ and ‘why’ of goal pursuits: Human needs and the self-determination of behavior”, *Psychological Inquiry*, Vol. 11 No. 4, pp. 227-268.
- Fornell, C., and Larcker, D.F. (1981), “Evaluating structural equation models with unobservable variables and measurement error”, *Journal of Marketing Research*, Vol. 18 No. 1, pp. 39-50.
- Fujimoto, Y., Ferdous, A, Sekiguchi, T., and Sugianto, L. (2016), “The effect of mobile technology usage on work engagement and emotional exhaustion in Japan”. *Journal of Business Research*, Vol.69, pp.3315-3323
- Goldberg, L. R. (1998), “International Personality Item Pool: A scientific collaboratory for the development of advanced measures of personality and other individual differences. [http// ipip.ori.org/ipip/ipip.html](http://ipip.ori.org/ipip/ipip.html) (accessed 15 April 2012).
- Gong, Y., Huang, J., and Farh, J. (2009), “Employee learning orientation, transformational leadership, and employee creativity: The mediating role of employee creative self-efficacy”. *Academy of Management Journal*, Vol.52 No. 4, pp.765-778.

- Hamamura, T. (2012), “Are cultures becoming individualistic? A cross-temporal comparison of individualism–collectivism in the United States and Japan”, *Personality and Social Psychology Review*, Vol. 16 No. 1, pp. 3-24.
- Hayes, A. F. (2013), “*Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*”, New York, NY: Guilford Press.
- Hahn, V. C., and Dormann, C. (2013), “The role of partners and children for employees' psychological detachment from work and well - being”. *Journal of Applied Psychology*, Vol.98 No1, pp. 26– 36.
- Hon, A.H. (2011), “Enhancing employee creativity in the Chinese context: The mediating role of employee self-concordance”, *International Journal of Hospitality Management*, Vol.30 No. 2, pp. 375-384.
- Huhtala, H. and Parzefall, Marjo-Riitta (2007), “A review of employee well-being and innovativeness: An opportunity for a mutual benefit”, *Creativity and Innovation Management*, Vol.16 No. 3, pp. 299-306.
- Kickul, J., and Posig, M. (2001), “Supervisory emotional support and burnout: An explanation of reverse buffering effects.” *Journal of Managerial Issues*, Vol. 13 No.3, pp.328-344.
- Kawakubo,A. and Oguchi,T.(2019). “Recovery experiences during vacations promote life satisfaction through creative behavior”, *Tourism Management Perspectives*, Vol 30, pp. 240-250.
- Kordbacheh,N., Shultz,K.S. and Olson (2014). Engaging mid and late career employees: the relationship between age and employee engagement, intrinsic motivation, and meaningfulness, *Journal of Organizational Psychology*, Vol.14, No 1, pp. 11-25.

- Leung, K., Chen, T., and Chen, G. (2014), "Learning goal orientation and creative performance: The differential mediating roles of challenge and enjoyment intrinsic motivations, *Asia Pacific Journal of Management*, Vol. 31 No. 3, pp. 811-834.
- Menguc, B., Auh, S., Fisher, M. and Haddad, A. (2013), "To be engaged or not to be engaged: The antecedents and consequences of service employee engagement" , *Journal of Business Research*, Vol. 66 No. 11, pp.2163 - 2170.
- Nie Y., Chua B.L., Yeung, A.S., Ryan, R.M., and Chan, W.Y. (2015), "The importance of autonomy support and the mediating role of work motivation for well-being: Testing self-determination theory in a Chinese work organisation", *International Journal of Psychology*, Vol. 50 No. 4, pp. 245–55.
- Niemiec, C. P., and Ryan, R. M. (2009), "Autonomy, competence, and relatedness in the classroom: Applying self-determination theory to educational practice", *Theory and Research in Education*, Vol. 7 No. 2, pp. 133–144.
- O'Connor, E.P. and Crowley Henry, M. (2019), "Exploring the relationship between exclusive talent management, perceived organizational justice and employee engagement: Bridging the literature. *Journal of Business Ethics*.Vol. 156 No. 4, pp. 903–917.
- Peeters, M., Wattez, C., Demerouti, E., and de Regt, W. (2009), "Work-family culture, work family interference and well-being at work: Is it possible to distinguish between a positive and a negative process?" *Career Development International*, Vol. 14 No. 7, pp. 700–713.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J., and Podsakoff, N. P. (2003), "Common methods

- biases in behavioral research: A critical review of the literature and recommended remedies”, *Journal of Applied Psychology*, Vol. 88, pp. 879–903.
- Podaskoff, P. M., and Organ, D. W. (1986), “Self-reports in organizational research: problems and prospects”, *Journal of Management*, Vol.2 No. 4, pp. 531–544.
- Preacher, K. J., and Hayes, A. F. (2008), “A symptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models”, *Behavior Research Methods*, Vol. 40 No. 3, pp. 879-891.
- Ritter, S., and A. Dijksterhuis. (2014), “Creativity – The unconscious foundation of the incubation period”, *Frontiers in Human Neuroscience*, Vol. 8, pp. 1–10.
- Ritter, S. M., Van Baaren, R. B., and Dijksterhuis, A. (2012), ”Creativity: The role of unconscious processes in idea generation and idea selection”, *Thinking Skills and Creativity*, Vol. 7 No. 1, pp. 21–27.
- Saks A.M. (2006), “Antecedents and consequences of employee engagement”, *Journal of Managerial Psychology*, Vol. 21 No. 7, pp. 600–619.
- Schaufeli, W.B., Bakker, A.B. and Salanova, M. (2006), “The measurement of work engagement with a brief questionnaire: Across-national study”, *Educational and Psychological Measurement*, Vol. 66 No. 4, pp. 701-16.
- Shimazu,A., Matsudaira,K., De Jonge,J., Tosaka,N., Watanabe,K., and Takahashi.(2016). Psychological detachment from work during non-work time: linear or curvilinear relations with mental health and work engagement? *Industrial Health*, Vol. 54, No 3, pp.282-292.

- Shimazu, A. and Schaufeli, W.B. (2009). "Is workaholism good or bad for employee well-being? The distinctiveness of workaholism and work engagement among Japanese employees". *Industrial Health*, Vol. 47, pp.495–502.
- Simmering, M.J., Fuller, C.M., Richardson, H.A., Ocal, Y., and Atinc, G. (2015), "Marker variable choice, reporting, and interpretation in the detection of common method variance: A review and demonstration", *Organizational Research Methods*, Vol. 18 No. 3, pp. 473–511.
- Sonnentag, S. (2012), "Psychological detachment from work during leisure time: The benefits of mentally disengaging from work", *Current Directions in Psychological Science*, Vol. 21 No. 2, pp. 114–118.
- Sonnentag, S., Binnewies, C., and Mojza, E. J. (2010), "Staying well and engaged when demands are high: The role of psychological detachment", *Journal of Applied Psychology*, Vol. 95 No. 5, pp. 965–976.
- Sonnentag, S., and Fritz, C. (2007), "The recovery experience questionnaire: Development and validation of a measure assessing recuperation and unwinding from work", *Journal of Occupational Health Psychology*, Vol. 12 No. 3, pp. 204–221.
- Sonnentag, S., and Krueger, U. (2006), Psychological detachment from work during off-job time: The role of job stressors, job involvement, and recovery-related self-efficacy. *European Journal of Work and Organizational Psychology*, Vol.15, No. 2, pp. 197–217
- Taylor, G., Jungert, T., Mageau, G. A., Schattke, K., Dedic, H., Rosenfield, S., and Koestner, R. (2014), "A self-determination theory approach to predicting school achievement

over time: the unique role of intrinsic motivation”, *Contemporary Educational Psychology*, Vol. 39 No. 4, pp. 342-358.

Van Den Broeck A., Ferris D.L., Chang ,C-H., and Rosen C.C. (2016), “A review of self-determination theory’s basic psychological needs at work”, *Journal of Management*, Vol. 42 No. 5, pp. 1195–229.

Warr, P. B., Cook, J. D., and Wall, T. D. (1979), “Scales for the measurement of some work attitudes and aspects of psychological well-being”, *Journal of Occupational psychology*, Vol. 52 No. 2, pp. 129-148.

Zhang, X and Bartol,K.M. (2010), “Linking Empowering Leadership and Employee Creativity: The Influence of Psychological Empowerment, Intrinsic Motivation, and Creative Process Engagement”, *Academy of Management Journal*, Vol. 52 No. 2, pp. 107-128.

Zhang, A., Tsui, A. S., Song, L., Li, C., and Jia, L. (2008), “How do I trust thee? The employee– organization relationship, supervisory support, and middle manager trust in the organization”, *Human Resource Management*, Vol. 47 No. 1, pp. 111-132.

Zhou, J., and George, J. M. (2001), “When job dissatisfaction leads to creativity: Encouraging the expression of voice”, *Academy of Management Journal*, Vol. 44 No. 4, pp. 682 696.

**Table 1.** General description of the sample

Age	18–25 (4.2%)	26–34 (20.8%)	35–44 (24.7%)	45–54 (32.6%)
Work types	Senior managers (25%)	Professional service providers (21.2%)	Frontline employees (53.8%)	
Job tenure	< 5 years (57.6%)	5–10 years (22.6%)	10–15 years (11.5%)	>15 years (8.3%)

**Table II.** Descriptive statistics

Variables	Mean	S.D	1	2	3	4	5	6	7	8
1 Intrinsic motivation	3.4	.79	(.88)							
2 Employee engagement	4.2	1.43	.46**	(.97)						
3 Psychological detachment	3.3	.91	0.07	0.08	(.86)					
4 Employee creativity	3.15	.80	.42**	.60**	.17**	(.97)				
5 Education	2.6	1.06	.15*	.19**	0.05	.21**				
6 Age	3.3	1.12	0.05	0.11	0.07	0.08	0.02			
7 Gender	1.2	.45	0.01	-0.11	0.05	-.13*	-.19**	-.15**		
8 Job tenure	5.3	1.56	0.09	0.11	0.12*	0.17**	0.06	.28**	0.01	.10
9 Neuroticism	2.99	0.5	-0.01	0.21**	0.15*	.09	.04	.12*	-.02	

a<sup>n</sup> = 288. Internal reliabilities (alpha coefficients) for the overall constructs are given in parentheses on the diagonal.

\*  $p \leq .05$

\*\*  $p \leq .01$



**Table III.** Convergent and discriminant validity of the key variables.

Variable	Composite reliability (CR)	Average variance square	Square root of average variance extracted
Intrinsic motivation	0.89	0.55	0.74
Employee engagement	0.97	0.68	0.83
Psychological detachment	0.86	0.62	0.79
Employee Creativity	0.97	0.67	0.83

**Table IV.** Results of mediation analysis predicting employee engagement.

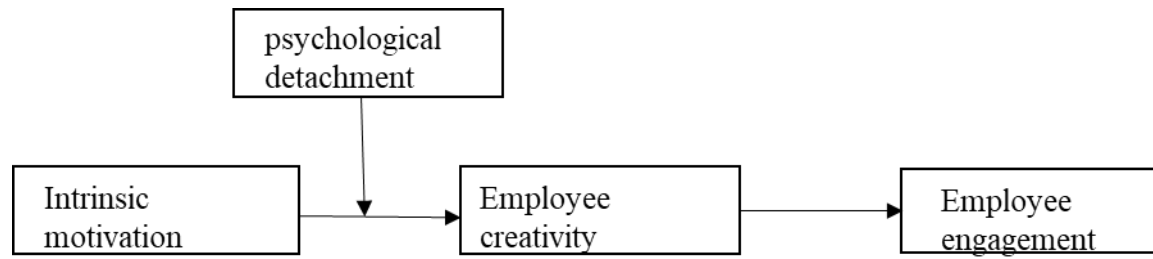
Bootstrapping	Direct effect w/o med	Direct effect w med	Indirect effect	Boot SE	95% Confidence interval	
With Marker variable					LLCI	ULCI
Intrinsic motivation →	.44**	.27**	.19**	.04	.13	.28
Employee creativity →						
Employee engagement						
Without Marker Variable						
Intrinsic motivation →	.44**	.26**	.20**	.04	.13	.29
Employee creativity →						
Employee engagement						

*Note.* N=288; LLCI= lower level confidence interval; ULCI = upper level confidence interval; \*\* p <.01.

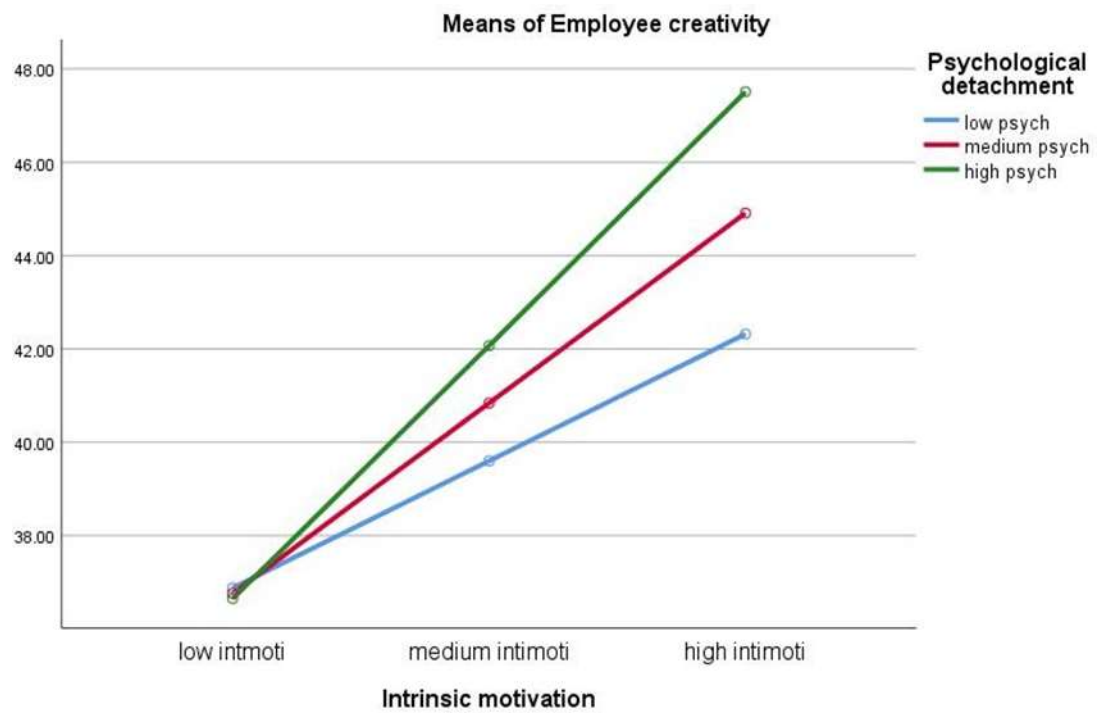
**Table V.** Effects of intrinsic motivation via employee creativity on employee engagement at low, mean and high levels of psychological detachment

	Bootstrapping indirect effect	SE	p	90% CI (LL, UL)
Moderator: Psychological detachment				
- 1 SD (-3.62)	.55	.15	.00	.30, .81
Mean (0)	.81	.12	.00	.62, 1.00
+ 1 SD (+3.62 )	1.06	.15	.00	.83, 1.31

*Note.* CI \_ confidence interval; LL \_lower limit; UL \_ upper limit; \*\* p<.01.



**Figure1.** Theoretical model of the current research



**Figure II.** The intercatve effect between intrinsic motivation and psychological detachment on employee creativity.