LEVERAGING EMPLOYEE CREATIVITY THROUGH HIGH PERFORMANCE WORK SYSTEMS: A MULTILEVEL PERSPECTIVE

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Thesis summary

Research has looked at single rather than a configuration of human resource management (HRM) practices to influence creativity so it is not yet clear how these practices synergistically facilitate creativity and organisational performance. I address this significant but unanswered question in a three-part study. In Study 1, I develop a high performance work system (HPWS) for creativity scale. I use Study 2 sample to test the validity of the new scale. In Study 3, I test a multilevel model of the intervening processes through which branch HPWS for creativity influences creativity and branch performance. Specifically, at the branch level, I draw on social context theory and hypothesise that branch HPWS for creativity relates to climate for creativity which, in turn, leads to creativity, and ultimately, to profit. Furthermore, I hypothesise environmental dynamism as a boundary condition of the creativity-profit relationship. At the individual level, I hypothesise a cross-level effect of branch HPWS for creativity on employee-perceived HPWS. I draw on self-determination theory and argue that perceived HPWS for creativity relate to need satisfaction and the psychological pathways of intrinsic motivation and creative process engagement to predict creativity. I also hypothesise climate for creativity as a cross-level moderator of the intrinsic motivation-creativity and creative process engagement-creativity relationships. Results of hierarchical linear modeling (HLM) indicate that ten out of the fifteen hypotheses were supported. The findings of this study respond to calls for HPWS to be designed around a strategic focus by developing and providing initial validity evidence of an HPWS for creativity scale. The results reveal the underlying mechanisms through which HPWS for creativity simultaneously influences individual and branch creativity leading to profit. Lastly, results indicate environmental dynamism to be an important boundary condition of the creativity-profit relationship and climate for creativity as a cross-level moderator of the creative process engagement-creativity.

Key words: Human resources management, creativity climate, need satisfaction, organisational performance.

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Chapter One

Introduction

1.1 Research problem overview and objectives

A growing number of service sector organisations have responded to the pressures of creating and sustaining competitive advantage in a globalised marketplace by adopting a service excellence strategy (Heskett, Sasser, & Schlesinger, 2003; Schneider & White, 2004). Underpinning this strategy is the observed transition from a mass to a molecular market requiring customer contact employees to customise the service delivery to the unique needs of their customers (Day & Montgomery, 1999). In today's economic climate, customers not only demand high quality and innovative products and services, but also a unique customer experience at every point of contact with organisations. Service organisations have long realised that customer contact employees play a critical role in shaping their customer experience (Crosby, Evans, & Cowles, 1990; Liao & Chuang, 2007) and that their growth and profitability are greatly influenced by incremental improvements implemented by customer contact employees at every point of customer contact (Grewal, Levy, & Kumar, 2009).

Given the link between customer contact employees' service delivery and the effective implementation of a service excellence strategy, much research has focused on understanding the drivers of service delivery behaviours (Bettencourt, Dorr, Charlton, & Hume, 2001; Coelho, Augusto, & Lages, 2011; Gwinner, Bitner, Brown, & Kumar, 2005; Hong, Liao, Hu, & Jiang, 2013; Wang & Netemeyer, 2004). One such behaviour that is critical to the ability of customer contact employees to customise the service delivery and provide customers with unique experiences is creativity defined as

“the amount of new ideas generated and novel behaviours exhibited by the salesperson in performing his or her job activities” (Wang & Netemeyer, 2004, p. 806).

Despite the observation that “creative customer contact service employees are likely to have a substantial impact on producing superior customer experiences, customer satisfaction, quality relationships and, thus, on organisational performance” (Coelho et al., 2011, p. 32), there is a dearth of research on the drivers of creativity in customer contact service roles (Coelho et al., 2011; Kelly, Longfellow, & Malehorn, 1996; Madjar & Ortiz-Walters, 2009; Martinaityte & Sacramento, 2013; Merlo, Bell, Menguc, & Whitwell, 2006; Van Dyne, Jehn, & Cummings, 2002) relative to the organisational literature which is mostly based on creativity in non-service contexts. While the extant creativity research has shown individual and contextual factors as well as their interactions (Amabile, 1996; Amabile, Conti, Coon, Lazenby, & Herron, 1996; Gong, Huang, & Farh, 2009; Hirst, van Knippenberg, & Zhou, 2009; Madjar, Greenberg, & Chen, 2011; Scott & Bruce, 1994; Shalley, Gilson, & Blum, 2009; Shalley, Zhou, & Oldham, 2004; Shin & Zhou, 2003; Woodman, Sawyer, & Griffin, 1993) to relate to creative performance, there is a dearth of research on human resource management systems as antecedents of creative performance. Consequently, not only do we not know much about creativity in service contexts but also little is known about the influence of human resource practices on creativity in both service and non-service contexts.

The sparse research to date has examined the influence of individual human resource practices such as training (Basadur, Wakabayashi, & Graen, 1990; Ma, 2006; Scott, Leritz, & Mumford, 2004), rewards (Byron & Khananchi, 2012; Eisenberger & Armeli, 1997), and job design factors such as complexity (Oldham & Cummings, 1996) on creativity. Recent research in this stream has, however, called for a more integrated or systems approach to understanding the role of human resource practices in creative performance (Binyamin & Carmeli, 2010; Gibb & Waight,

2005; Mumford, 2000; Shalley & Gilson, 2004). Shalley and Gilson (2004, p. 46) for example, suggested that "the human resource practices used to select, train, appraise, and reward employees all need to be systematically linked together so employees know what is expected of them, when and how." This dovetails with research in strategic human resource management (SHRM) that has focused on bundles of HRM practices and their influence on organisational outcomes (Batt, 2002; Becker & Huselid, 1998; Buller & McEvoy, 2012; Combs, Liu, Hall, & Ketchen, 2006; Delery & Shaw, 2001; Huselid, 1995; Jiang, Lepak, Hu, & Baer, 2012). Research that responds to Shalley and Gilson's (2004) call is particularly pressing because creativity in service delivery has become central to the efforts of service organisations to develop and sustain competitive advantage through a service excellence strategy.

Central to SHRM research is the construct of high performance work systems defined as "a system of HRM practices that are designed to enhance employee's skills, motivation and productivity in such a way that employees become a source of competitive advantage" (Datta, Guthrie, & Wright, 2005, p. 135). As an intervention strategy, the adoption of HPWS enables organisations to develop a human resource pool and a facilitative context that enables them to leverage this human resource pool to create and sustain competitive advantage. Although a very few recent studies examined the influence of a set HRM practices on creativity (Chang, Jia, Takeuchi, Cai, 2014) and innovation (Jime´nez-Jime´nez & Sanz-Valle, 2008), none of the studies focused on developing and validating a creativity-specific HPWS measure. In addition, while Liao and colleagues (2009) reported an HPWS for service quality, to the best of my knowledge and despite the importance of creativity in enhancing service quality, an HPWS for creativity in service delivery has yet to be developed.

This is unfortunate because the aforementioned transition from a mass to a molecular market and the concomitant requirement that customer contact employees customise the service delivery requires creativity. The absence of a creativity-specific

HPWS scale constitutes a constraint on the ability of service organisations to develop the human resource pool and the facilitative conditions needed to leverage this human resource pool to implement a service excellence strategy. Consistent with Bowen and Ostroff's (2004) suggestion that HRM systems must be designed around a strategic focus, the first objective of this study therefore, is to develop and validate a high performance work systems for creativity scale.

As the aforementioned research on individual HRM practices on creativity focused on their direct effects (Basadur et al., 1990; Eisenberger & Armeli, 1997), little is known about the psychological mechanisms that underpin these relationships (Binyamin & Carmeli, 2010). A principal focus of SHRM research is to understand how HPWS works to influence organisational performance (Bowen & Ostroff, 2004; Lepak, Liao, Chung, & Harden, 2006). Much research has therefore, examined the 'black box' linking human resource systems or more specifically, HPWS and organisational performance (Aryee, Walumbwa, Seidu, & Otaye, 2012; Chuang & Liao, 2010 ; Liao et al., 2009; Sun, Aryee, & Law, 2007; Takeuchi, Lepak, Wang, & Takeuchi, 2007). However, based on the notion that organisations do not perform but it is rather individuals' attitudes and behaviours that lead to organisational performance (Bowen & Ostroff, 2004), it is important to understand how an organisational level variable such as HPWS, influences creativity at the individual and branch/unit levels and ultimately, firm performance. Based on SHRM theorising of how HPWS works (Bowen & Ostroff, 2004; Ostroff & Bowen, 2000), a second objective of this study is to test a multilevel model of why and how HPWS at the branch level influences creativity at the individual level which then emerges at the branch level to influence branch-level performance. Specifically, at the branch level, this study examines climate for creativity as a mediator of the relationship between branch-level HPWS for creativity and the creative performance of customer contact service employees. Given recent calls to account for an individual employee's experience and perception of HPWS (Kehoe & Wright, 2013),

this study examines cross-level effect of branch-level HPWS for creativity on employee-perceived HPWS for creativity. Additionally, this study examines need satisfaction, intrinsic motivation, and creative process engagement as psychological pathways through which employee-perceived HPWS influences creativity. Finally, central to creativity research is the influence of social and organisational factors that determine how strongly individual characteristics lead to creative outputs (Hirst, Van Knippenberg, Chen, & Sacramento, 2011; Oldham & Cummings, 1996; Tierney, Farmer, & Graen, 1999). Consistent with this orientation, this study examines the cross-level moderating influence of climate for creativity on the intrinsic motivation-creativity and creative process engagement-creativity relationships.

A primary motivation for the steady stream of creativity research is the assumption that creativity enhances organisational performance (Amabile, 1996; Gilson, 2008; Shalley et al., 2004). This is consistent with a principal tenet of SHRM research that posits HPWS as fostering the internal capability including behaviours that facilitate implementation of an organisation's strategic objectives and therefore success. While much research has examined the influence of employee behaviours on organisational performance in the SHRM literature (Aryee et al., 2012; Liao et al., 2009; Sun et al., 2007), there is a paucity of creativity research in service contexts that has examined whether creativity influences organisational performance (Merlo et al., 2006; Sung & Choi, 2012) and if so, under what conditions. Adopting a contingency orientation, the final objective of this study is to examine the influence of branch-level creativity on branch financial performance and the moderating influence of environmental dynamism on this relationship.

1.2 Research contributions

This study contributes to the literature in a number of ways. First, it develops and validates an HPWS for creativity scale. Although service organisations now consider service excellence as a strategic objective and creativity is essential to this objective, research has yet to develop an instrument for examining how organisations can implement this strategic objective. Liao and colleagues (e.g., Chuang & Liao, 2010 ; Liao et al., 2009) recently proposed a measure of HPWS for service quality which they defined as "a system of HR practices designed to enhance employees' competencies, motivation, and performance in providing high-quality service to external customers" (Liao et al., 2009, p. 373). While this measure is aligned with the strategic objective of promoting service quality it does not capture the essence of the behaviours that customer contact employees must demonstrate in order to customise the service delivery to meet the unique needs of customers. As Wang and Netemeyer observed "…tasks such as finding new prospects, identifying the real needs for a customer, and seeking tailored solutions to customer problems all require creative thinking and solutions suggesting creativity may be an inherent requirement of the sales job" (2004, p. 805). The development and validation of an HPWS for creativity focuses attention on the foundation human resource issues (Schneider, White, & Paul, 1998) that must be addressed if the strategic objective of service excellence is to be accomplished (Bowen & Ostroff, 2004).

Second, this study contributes to SHRM research by adopting a multilevel perspective to account for the influence of HPWS on creativity. With a few exceptions (Aryee, Zhou, Sun, & Lo, 2009; Liao et al., 2009; Snape & Redman, 2010; Takeuchi, Chen, & Lepak, 2009) much of the research in SHRM focused on a single level perspective and examined the HPWS-performance relationship at the organisational level. As organisations do not "perform", but rather individuals do, organisational performance is the outcome of individual and organisational characteristics (Kozlowski

& Klein, 2000). Nonetheless, little is known about the processes through which organisational-level factors such as HPWS simultaneously affect individual and branch-level outcomes such as creativity. Similarly, from a creativity research perspective, the focus has usually been on a single-level perspective (Hennessey & Amabile, 2010). Given that creativity occurs through a system of interconnected factors operating at multiple levels, it is important to investigate cross-level effects in order to better understand how to promote creativity in organisations (Hennessey & Amabile, 2010). Responding to this aforementioned need for multilevel research in both SHRM and creativity literatures, this study contributes to both these literatures by examining psychological mechanisms through which HPWS for creativity influences individual and branch-level creative performance and ultimately, branch profit.

Consistent with theorising on how HPWS works (Bowen & Ostroff, 2004), this study examines climate for creativity and its branch-level mediating and cross-level moderating effects. While much research has examined organisational climate as a mediating mechanism and therefore, a key component of the 'black box' of the HPWS-organisational performance relationship with a few exceptions (Aryee et al., 2012; Chuang & Liao, 2010), this research has not anchored the climate construct in a strategic objective. By examining climate for creativity as a mediating mechanism, not only did this study examine a contextual antecedent of this climate but also highlights the criticality of climate in the implementation of a service excellence strategy. Specifically, this study highlights how HPWS for creativity fosters a context that signals to employees the organisation's emphasis on creativity in service delivery, rewards creativity, and provides the socio-emotional and task supports for creativity which collectively, motivates customer contact employees' creativity in service delivery. By examining climate for creativity as a cross-level moderator, this study also tests Woodman and colleagues' (1993) interactionist perspective of creativity. Specifically, it examines climate for creativity as a boundary condition of the documented influence of

intrinsic motivation and creative process engagement on creativity (Zhang & Bartol, 2010). By examining multiple roles of climate in the HPWS-creativity linkage, this study also contributes to the SHRM literature by demonstrating that climate does not only constitute a key component of the 'black box' in the HPWS-firm performance relationship, but also a boundary condition of the processes that have been shown to influence individual-level creativity.

To the best of my knowledge, this study is probably the first to draw on self-determination theory to examine cross-level effects of branch-level HPWS on individual creativity. Specifically, it examines how branch-level HPWS relates to employee perceptions of HPWS which, in turn, leads to employee need satisfaction, intrinsic motivation and creative process engagement to predict employee creativity. While Amabile (1996) suggested that organisational factors affect employee creativity via intrinsic motivation, we do not yet know how these influences occur. By examining need satisfaction as a mechanism through which organisational factors lead to intrinsic motivation and creative process engagement to predict creativity this study contributes to our understanding of the cross-level influence of organisational variables on individual-level creativity.

Although the impetus for the flurry of creativity research stems from the assumption that it enhances performance (Gilson, 2008; Gong et al., 2009), there is a dearth of research that has examined this assumption, particularly at the branch level. A core postulate of the HPWS literature is that it fosters the development of internal capabilities including behaviours that collectively contribute to the effective implementation of strategy (Bowen & Ostroff, 2004; Buller & McEvoy, 2012; Jiang, Lepak, Hu, et al., 2012). While research has shown service performance to relate to customer satisfaction, customer loyalty, and market performance (Aryee et al., 2012; Chuang & Liao, 2010 ; Liao & Chuang, 2004), little is known about the influence of creativity on organisational performance, particularly in service contexts, and the limited research has reported mixed or inconsistent findings. For example, while Merlo

and colleagues (2006) reported retail store creativity to be unrelated to store performance, Sung and Choi (2012) reported creativity to positively relate to financial performance. A final contribution of this study is that it probes the inconsistent findings by examining environmental dynamism as a boundary condition of the creativity-organisational performance relationship (Gong, Zhou, & Chang, 2013). By so doing, this study highlights a potential explanation of Merlo and colleagues' (2006) counterintuitive findings and provides actionable knowledge that could help organisations more effectively address the foundation human resource issues critical to the implementation of a service excellence strategy.

1.3 Thesis structure

Chapter 2

This chapter positions the present study in the broader picture of organisational creativity research. I review seminal creativity theories and define the type and scope of creativity and levels of analysis on which this study focuses. I then provide a definition of creativity adopted for this study. The second part of the chapter reviews contextual antecedents of creativity and highlights a need for a systematic approach to research on the influence of HRM practices on creativity.

Chapter 3

This chapter develops a theoretical framework of the multilevel processes through which HPWS for creativity influences individual and unit-level outcomes. At the unit level, I draw on social context theory to explain intermediate mechanisms in the HPWS for creativity–unit profit relationship. Specifically, I hypothesise that branch-level HPWS for creativity creates a social context (climate for creativity), which, in turn, motivates unit-level creativity and ultimately, profit. Drawing on a contingency perspective, I hypothesise that the strength of the unit-level creativity-profit relationship depends on the level of environmental dynamism. At the individual level, I draw on

self-determination theory to explain the cross-level effects of HPWS for creativity. Specifically, I hypothesise that unit-level HPWS for creativity influences employee need satisfaction through employee-perceived HPWS for creativity. Employee need satisfaction, in turn, influences creativity indirectly through the psychological pathways of intrinsic motivation and creative process engagement. Drawing on an interactionist perspective, I also hypothesise that climate for creativity moderates the intrinsic motivation-creativity and creative process engagement-creativity relationships.

Chapter 4

The objective of this chapter is to develop and validate an HPWS scale for creativity. To that end, I draw on Amabile's componential model of creativity to build a foundation for a new HPWS measure using both deductive and inductive approaches to scale development. Consistent with recommended procedures for scale development, Study 1 focuses on the procedures I use to generate a pool of items for the proposed HPWS scale. Specifically, I conduct interviews that aim first, to ascertain whether practices that have been presented in extant HPWS measures can be tailored to enhance creativity, and second, to explore additional HRM practices that organisations employ to promote creativity. Study 2 describes the sample, data collection procedures, and data analysis to test the validity of the newly developed HPWS for creativity scale.

Chapter 5

This chapter describes the method and data analysis employed to test my research hypotheses (Study 3). Specifically, I describe the research setting, sample, data collection procedures, measures of variables in the study, and data analytic techniques. Pertaining to data analytic techniques, I use Confirmatory Factor Analysis (CFA) with Mplus (Muthén & Muthén, 1998-2010) to test the measurement model and Hierarchical Linear Modelling (Raudenbush & Bryk, 2002) to test the research

hypotheses. I first present the unit-level results followed by the cross-level results. The chapter closes with a brief discussion of the findings.

Chapter 6

This chapter provides an overall discussion of the findings of this thesis. First, I recap the objectives of my research and the major findings from the three studies. Next, I discuss the theoretical and practical implications of the findings. Finally, I highlight the limitations of the studies and discuss some directions for future research. I conclude the chapter with a restatement of the salient findings of the studies.

Creativity is contagious. Pass it on.

Albert Einstein

Chapter Two

Review of creativity models and literature

2.1 Introduction

This chapter examines the construct of creativity and provides a systematic review of creativity models and the extant literature. Specifically, I discuss the complex nature of the construct in terms of creativity type, scope and level of creativity as well as provide a conceptual definition of creativity in a service delivery context. I then discuss two seminal theoretical frameworks that underpin this study, Amabile's componential (Amabile, 1983, 1996; Amabile & Pillemer, 2012) and Woodman, Sawyer, and Griffin's (1993) interactionist models of creativity. Drawing on the creativity and strategic human resource management literatures, this chapter reviews research on HRM practices that have been found to be associated with creativity and uses this body of research as a conceptual platform to establish a case for a systematic approach to the examination of the influence of HRM practices on employee creativity in service delivery contexts.

2.2 Conceptualisation of creativity

2.2.1 Creativity – a domain specific construct

Creativity has been examined through multiple perspectives: person, process, product, and press (Runco, 2004). For this reason, understanding creativity within an organisational context requires acknowledging the complexity of the construct (Woodman et al., 1993). From a person perspective, creativity is viewed as a quality of individual talents and traits (Hennessey & Amabile, 2010; Runco, 2004) while a

process perspective views it as a process with different stages through which ideas are generated (Runco, 2004). Research that examines creativity from a press (situational influences on creativity) perspective examines situational and environmental influences: cultural, organisational and familial that influence creative person and/or creative process (Hennessey & Amabile, 2010; Hunter, Bedell, & Mumford, 2007; Runco, 2004). For the past 30 years, a product view of creativity, which considers creativity as a product of individuals working together, has become widely acknowledged in theory development and research on the construct (George, 2007; Hennessey & Amabile, 2010; Shalley et al., 2004).

The present study conceptualises creativity as a product, commonly defined as *novel (original, new) ideas about the processes, services, and products that have a potential to be valuable (useful, appropriate) to an organisation either in the short- or long term* (Amabile & Pillemer, 2012; Hennessey & Amabile, 2010; Zhou & Shalley, 2003). Wang and Netemeyer (2004, p. 806) adapted this definition to the service delivery context and defined creative sales behaviours as "the amount of new ideas generated and novel behaviours exhibited by a salesperson when performing his or her job activities". Implicit in this definition is the notion of usefulness because if new ideas are generated and/or novel behaviours performed, it is because they are considered beneficial in solving sales problems (Wang & Netemeyer, 2004).

It is important to clarify the "novelty" and "usefulness" aspects of creativity as some authors suggested that it is challenging to judge ideas based on such criteria. Indeed, what is original in one field has already been discovered in another field (George, 2007). For instance, methods that have been established in a design firm to develop new products can be very new to the service delivery process in a banking industry. In their earlier review of the creativity literature, Shalley and colleagues (2004) noted that ideas are considered novel if they are unique in relation to other ideas currently available in an organisation. Thus, for an idea to be considered creative, it

does not necessarily have to be new in a specific context, but novel for an organisation. The question of “useful for whom?” has also been raised by researchers. Ideas are considered useful if they have the potential for direct or indirect value to an organisation, in either the short or long term. Furthermore, in addressing these matters, creativity scholars agree that novelty and value of a creative product is a domain-specific and subjective judgment (Ford, 1996). Amabile and Pillemer (2012) suggest that to assess novelty and usefulness of a creative product, one should be an external observer with a domain-relevant experience and should use his/her own subjective judgments of creativity. One cannot expect to avoid subjectivity in assessing novelty and usefulness of ideas because researchers assign attributes of people, processes, and places as contributors to creative products and acts (Amabile, 1983; Amabile & Pillemer, 2012).

Overall, this study adopts the view that creativity is a domain-specific construct and that ideas are considered novel if they are unique in relation to other ideas currently available in the organisation (Shalley et al., 2004). Ideas are considered useful if they have the potential to be of a direct or indirect value to the organisation, in either the short or long term (Shalley et al., 2004).

2.2.2 Creativity and innovation

Researchers agree that although there is some overlap between creativity and innovation, these are not the same. Creativity is considered a driver of innovation in organisations (Amabile, 1996; Runco, 2004; Shalley et al., 2004). For example, Vehar (2008, p. 8) noted that “Creativity is required for innovation, but is not the same thing, since innovation goes beyond the phenomenon of the creative product to its introduction, launch, commercialisation or exploitation”. Similarly, some researchers have suggested that while creativity is about idea generation, innovation in contrast,

encompasses two different activities - the development of novel, useful ideas and their implementation (Baer, 2012; Gong et al., 2009).

I depart from this view and suggest that in a service delivery context the boundary between creativity and innovation is blurred. Ideas that are generated when interacting with customers can be concurrently implemented. For instance, a project manager comes up with a novel idea of a value proposition to a client. It is plausible that a manager will implement this idea promptly by incorporating this new idea into the proposal to the client. A sales manager working in an international insurance company and interviewed for this study described creativity thus: "*Creativity is about finding solutions to my customers' problems. I treat every customer individually and find the best solution for him/her. It is also about trying new sales techniques, and how to personalise the interaction with clients. Creativity is about giving suggestions on how to work better and how to improve job effectiveness in the office."* This quote implies that creativity in service delivery is not just about generating ideas, but also about converting ideas into new behaviours (new ways of doing things).

Indeed, Amabile and Pillemer (2012) suggest that different aspects of creativity (novelty and usefulness) are needed when going through the creative process. Novelty is needed in the idea generation stage and usefulness in idea evaluation stage. Therefore in theory, creativity is not merely about the generation of dozens of new ideas without any judgment of the value of those ideas. Rather, the generation and evaluation processes proceed simultaneously. Therefore, I suggest that when studied at the individual level, creative and innovative behaviours in service delivery are essentially the same. This view is in line with numerous studies that have not distinguished between creativity and innovation either in their conceptual arguments or in their empirical analyses (Chen, Farh, Campbell-Bush, Wu, & Wu, 2013; Scott & Bruce, 1994; Yuan & Woodman, 2010). Accordingly, I used creative and innovative behaviours interchangeably in this study.

2.2.3 Creativity types

Unsworth (2001) identified four types of creativity (Table 1), which are categorised along two dimensions: (i) driver for engagement in creative activity (internal/external) and (ii) type of problem (closed/ open). External driver for engagement in creative activity can be a situation or a specific job that requires an individual to be creative, whereas internal driver can be one's inner desire to be creative. Open problem in organisational setting is characterised by employees discovering problems themselves, whereas a closed problem is one formulated and presented to employees. Unsworth's model (2001) represents four major categories: expected, proactive, responsive, and contributory types of creativity, but these dimensions represent a continua rather than defined categories. Expected creativity in organisational settings reflects situations/jobs that by definition require creative solutions to self-discovered problems and entail employee discretion in the choice of problems. Total Quality Management practices are an example of expected creativity. Responsive creativity is driven by external conditions and closed problems - a person has the least choices over problem. Jobs that by definition require creativity for solving stakeholders' presented problems fall under this category. For instance, the work of designers, architects, and R&D scientists require creative solutions for specific offered problems. As mentioned above, Unsworth's types of creativity are context-specific even for the same type of job. For instance, a web designer could work on a customer-specific problem, but in another context will proactively discover problems him/herself and suggest improvements. Contributory creativity is an internally driven (self-determined) response to a formulated problem. It involves voluntary behaviours such as when employees from one department voluntarily help to solve a specific problem in another department. Finally, proactive creativity occurs when individuals are internally driven to search for problems and generate solutions. For instance, in

customer contact jobs employees can be internally driven to engage in a creative process to solve self-discovered or stakeholder-presented problems.

Although it is possible for creativity to be required in customer contact jobs in some organisations, it is usually not specified in the job description and therefore it constitutes a discretionary behaviour or an output of an internal drive (Gong et al., 2009; Martinaityte & Sacramento, 2013). Customer contact employees constantly deal with challenges their customers face and therefore are motivated to discover problems (open problem) which then need novel solutions. In addition to discovering problems, customer contact employees can also be invited to respond to a framed/proposed problem by their managers or customers. For instance, employees may be asked to suggest ideas for reducing operational costs in their unit. In such a case, employees would be dealing with closed problems. Based on Unsworth's (2001) taxonomy, this research focuses on proactive and contributory types of creativity, which are internally driven responses to either self-discovered and/or proposed problems. While the extant creativity research has focused predominantly on externally-driven creativity, driven by job requirements or situational demands (Amabile, 1996; Bommer & Jalajas, 2002; Elsbach & Kramer, 2003; Hirst et al., 2009; Sundgren, Dimenas, Gustafsson, & Selart, 2005; Tierney & Farmer, 2004; Tierney et al., 1999) recent research examines creativity in jobs where creativity may not be a requirement such as sales and customer service (Gong et al., 2009; Martinaityte & Sacramento, 2013; Wang & Netemeyer, 2004). Given that creativity is a key behaviour in fostering excellent customer experience (Coelho et al., 2011), it is important to extend this line of research by examining creative behaviours in service delivery, and understanding how such behaviours can be facilitated.

Table 1: Matrix of creativity types

Problem solving	Driver for engagement	
	External	Internal
Open	**Expected**	**Proactive**
	Required solution to discovered problem	Volunteered solution to discovered problem
	Example: A web-designer comes up with a creative solution to improve client's brand.	*Example: a sales person discovers a problem and suggests ideas for service delivery, operational effectiveness, or new product.*
Closed	**Responsive**	**Contributory**
	Required solution to specified problem	Volunteered solution to specified problem
	Example: Responses produced by think tank (designers, architects).	*Example: a service delivery employee voluntary contributes to the improvement of an on-line customer experience.*

2.2.4 Creativity scope

It is germane to discuss the scope of creative ideas since some ideas are radical - they develop into blockbusters and technological breakthroughs (e.g., Google glasses with augmented reality), whereas others are incremental - small in scope, for instance, creating unique experiences for customers by adopting changes at the point of service delivery (e.g. Southwest airlines employees sing the safety instructions before boarding). In both academic and practitioner literatures, Big 'C' and little 'c' refer to the scope of creativity. Big 'C' refers to radical creativity, and little 'c' - incremental creativity (Hennessey & Amabile, 2010).

In a service delivery context, creativity is about adopting novel behaviours while performing daily activities. In other words, creativity in this study is about incremental modifications of routine behaviours, and therefore it is little 'c' rather than Big 'C'. Indeed, Hennessey and Amabile (2010) refer to "Little c" (everyday) creativity: as a daily problem solving and ability to change. Gilson and Madjar (2011) found that radical creativity is associated more with problem-driven and abstract theory-related creative ideas, whereas incremental creativity ideas are solution-driven and developed on the basis of concrete practices.

One regional director of a telecommunication company interviewed for this study describes creativity thus: "*The process of selling is creative. If one doesn't sell creatively, he or she is not a top performer. It is not what you do, but how you do things. To prepare a proposal to a client, it is already creativity. Creativity is also the ability to adapt to a customer when you speak on a phone. Being creative is about creating value for a customer and salary for you*."

A pharmaceutical sales agent interviewed for this study describes creativity in her job thus: *"Creativity is about finding novel solutions to individual customer needs. It is about trying new sales techniques and finding new ways to reach a client. Creativity is about generating ideas how to improve the way we work in the office and as a team."*

Considering that creativity in service delivery is a particular form of incremental creativity, an examination of creativity in such a context will broaden our understanding about antecedents, processes, and outcomes of incremental creativity.

2.2.5 Multiple levels of creativity

Fundamental to levels perspective is the notion that micro phenomena are embedded in a macro context and that macro phenomena emerge through the interaction and dynamics of lower level constructs. Therefore, neither single level (macro or micro) perspective can fully explain how organisations behave (Kozlowski &

Klein, 2000). Despite the recognition that creativity happens at different levels in an organisation and with the exception of a few recent cross-level research (Chen et al., 2013; Gong, Kim, Zhu, & Lee, 2013; Yuan & Woodman, 2010), research in creativity has mainly focused on a single level perspective (Anderson, De Dreu, & Nijstad, 2004; Hennessey & Amabile, 2010; Zhou & Shalley, 2008) - individual or group (Gong, Cheung, Wang, & Huang, 2012; Hirst et al., 2011). Since it is not organisations that 'create' but rather individuals and groups (Kozlowski & Klein, 2000), to fully understand creativity, we need to recognise that organisational factors can simultaneously affect creativity at different levels. As Woodman and colleagues (1993) suggested, firm creativity is the input from the group and organisational influences, and group creativity is the input from the individual, social and organisational influences. However, we know little about how organisational level variables influence individuals and groups simultaneously to produce creative outputs.

Responding to the call for a multilevel approach in creativity research (Zhou & Shalley, 2008), this thesis examines creativity across levels, micro (individual) and meso (unit) levels by examining how organisational level variables such as high performance work systems and unit climate for creativity simultaneously affect individual and branch-level creativity.

2.2.6 Creativity in service delivery: An extended definition

Drawing on the preceding discussion, it is worth clarifying that this study focuses on creativity in service delivery which is characterised as a proactive and contributory type and incremental in scope. For the purposes of this study therefore, creativity in service delivery is defined *as a product of ideas and behaviours that are both original and valuable for certain organisations which are driven internally rather than externally, thus it is a proactive and/or contributory action taken while performing*

everyday job activities and the scope of these activities is incremental rather than radical.

2.3 Theoretical frameworks of creativity

2.3.1 Componential model of creativity

Scholars in the field of organisational behaviour concur that creativity is an outcome of individual and environmental factors and their interplay (Amabile, 1983, 1996; Ford, 1996; Hennessey & Amabile, 2010; Woodman et al., 1993). Corroborating this view, a few seminal theoretical frameworks have been developed to explain how creative outputs occur in organisations.

Amabile's (1983, 1996) componential model postulates that three individual currencies are necessary to produce novel and useful ideas: domain-relevant skills, creativity-relevant processes/skills, and intrinsic motivation. These elements are characterised as being multiplicative - resulting in lower levels or absence of creativity if one of the elements is missing. In addition to individual characteristics, Amabile (1996) emphasises the role of organisational environment in nurturing these creativity components and facilitating their manifestation. Although Amabile's componential model has received much empirical support and attained paradigmatic status in the literature, little is known about how organisations systematically facilitate and nurture domain-relevant, creativity-relevant skills, and intrinsic motivation, which operate in concert to influence employee creativity particularly in a service delivery context.

Domain-relevant skills are related to knowledge, abilities, and skills in the specific field in which a person operates and are considered a result of innate cognitive abilities, formal and informal education, and work experience and training (Amabile, 1983, 1996; Hennessey & Amabile, 2010). For instance, cognitive ability has consistently been found to predict creativity (Kuncel, Hezlett, & Ones, 2004; Ma, 2009).

Work experience reflects work-relevant knowledge and skills gathered over time through behaviours, practice, and observation (Sturman, 2003), and often operationalised as job tenure. However, empirical findings on the influence of job tenure, experience, and education on creativity are inconsistent. Job tenure was found to be positively related to creativity in a sample of manufacturing, but not operations' employees (Tierney & Farmer, 2002), while education but not tenure was found to relate to innovative behaviours (Hammond, Neff, Farr, Schwall, & Zhao, 2011). These findings suggest that domain-relevant skills are important but not sufficient conditions for creativity. Indeed, Eder and Sawyer (2007) found that domain-relevant, creativity-relevant skills and intrinsic motivation did not have direct effects but interacted to predict creativity. This reinforces the aforementioned argument that for organisations to enhance creativity they concurrently need to facilitate not only job-specific skills but also creativity-relevant processes/skills and intrinsic motivation.

Creativity-relevant process/skills comprise personality characteristics, cognitive style, creative thinking, and creative problem-solving skills, and/ or knowledge on creative techniques. Some creativity-relevant processes and skills such as personality traits and cognitive style (Hunter, Cushenbery, & Friedrich, 2012) are more stable while others can be developed through training (Ma, 2006; Scott et al., 2004), and reinforced with performance appraisal and rewards.

In fact, personality characteristics measured by Creative Personality Scale (CPS, Gough, 1979), which comprises a list of positively and negatively weighted adjectives (e.g., humorous, interests' wide, inventive, conservative, conventional, dissatisfied) were found to be highly correlated with creativity in two meta-analyses (Hammond et al., 2011; Ma, 2009). The Big-Five Factor Model (FFM, Costa & McCrae, 1992) is a seminal framework that implies broader personality domains which have been found to be stable over time. For example, the personality trait of openness to new experience has been consistently associated with creativity (Feist, 1998;

Hammond et al., 2011). The documented evidence suggests that certain situations can facilitate the manifestation of these personality traits (George & Zhou, 2001). For instance, George and Zhou (2001) reported that openness to experience resulted in high levels of creative behaviour when feedback was positive and when job holders had unclear means and ends on their jobs. Their results also suggested that other personality traits such as high conscientiousness may inhibit creative behaviour when the situation supports conformist behaviours and closed monitoring of employees who are high on conscientiousness. These results further suggest that even if organisations select employees based on creative characteristics, other management practices are needed to ensure that creative potential is leveraged.

Another individual characteristic that has been shown to relate to creativity is cognitive style. Adaption-Innovation Theory posits that individuals solve problems in different ways (Kirton, 1976, 1994). Specifically, Kirton proposes that individuals with an adaptive cognitive style tend to solve problems in their established paradigms without looking for alternative ways, whereas those with innovative cognitive style tend to question the validity of existing paradigms and develop solutions that are novel. Tierney and colleagues (1999) found innovative vs adaptive cognitive style to be positively associated with two different markers of creativity, supervisor ratings and research reports (see also Houtz et al., 2003; Lowe & Taylor, 1986).

In general, personality characteristics and cognitive style imply tacit strategies for generating ideas, and shows the importance of selection practices based on creativity-relevant skills in promoting creativity. However, as already mentioned, creativity-relevant processes can also be developed. For instance, organisations can implement training and development programmes through which individuals develop creative problem solving skills.

To conclude, certain personality traits (e.g. openness) and cognitive style (innovative vs adaptive) have been found to be beneficial for creativity and

organisations can select individuals based on those characteristics. Yet, it is also important to acknowledge that to maximise the benefits of those characteristics organisations need to create a facilitative context if they are to leverage these attributes to promote creativity.

Intrinsic motivation refers to "any motivation that arises from an individual's positive reaction to qualities of the task itself; this reaction can be experienced as interest, involvement, curiosity, satisfaction or positive challenge" (Amabile, 1996, p. 115). Although, intrinsic motivation can also be conceptualised as a more stable trait (Prabhu, Sutton, & Sauser, 2008), much of the creativity research has conceptualised and examined state intrinsic motivation which increases or decreases based on contextual influences (Amabile et al., 1996; Amabile & Pillemer, 2012; Hennessey & Amabile, 2010; Shalley, 1991, 1995). Although empirical evidence suggests that the intrinsic motivation - creativity relationship is not straightforward but rather complex (Gilson & Madjar, 2011; Grant & Berry, 2011), a general tendency is to posit intrinsic motivation as a direct antecedent of product and process creativity (Amabile & Gryskiewicz, 1989; Amabile, Hill, Hennessey, & Tighe, 1994; de Jesus, Rus, Lens, & Imaginário, 2013; Eisenberger & Aselage, 2009; Eisenberger & Rhoades, 2001; Shin & Zhou, 2003). Given that intrinsic motivation is considered a key antecedent of creativity, it is surprising that little is known about psychological processes, through which contextual/organisational factors such as HRM system influences intrinsic motivation which, in turn, leads to creativity.

In conclusion, the preceding section highlights two key findings. First, individual characteristics constitute antecedents to the display of creative outputs. Second, while some personality traits and cognitive style are innate other characteristics such as creative thinking skills, domain-specific knowledge and experience as well as intrinsic motivation can be nurtured in an environment supportive of creativity. From a strategic human resource management perspective, organisations that aim to implement a

service excellence strategy by enhancing employee creativity levels, should select employees with creative potential. However, selection practices alone are not sufficient (Hunter et al., 2012) and that other HRM practices aligned with that purpose are necessary. Yet, the question that arises is what these HRM practices are and how all three components of Amabile's model should be leveraged to maximise creative output in a service delivery context.

In the succeeding section, I discuss an interactionist model of organisational creativity (Woodman et al, 1993) and review extant research that has examined the influence of HRM-related organisational factors on creativity.

2.3.2 An interactionist model of organisational creativity

Woodman and colleagues' (1993) interactionist model of organisational creativity constitutes an important extension to Amabile's componential model. This seminal theoretical framework addresses cross-level influences, which are particularly important for understanding organisational creativity. Woodman and colleagues' (1993) creativity framework draws on an interactionist perspective in social contexts (Schneider, 1983; Terborg, 1981) and examines influences among individual, group, and organisation characteristics on creative outcomes. Individual creativity in this model is a function of individual inputs (cognitive style, personality, knowledge and intrinsic motivation), social influences of the group (group composition, characteristics, processes), and contextual influences of organisation (culture, structure, rewards, strategy) as well as their interactions. Group level creativity is a function of the output of individual creativity, group characteristics, composition and group processes, contextual influences and interaction amongst these, whereas creativity at organisational level is a function of the outputs of group level creativity, contextual influences, and their interaction.

Indeed, Woodman and colleagues' (1993) model has been extensively tested by creativity researchers. The last decade or so has seen several extensive reviews of individual and contextual antecedents of creativity (Amabile & Pillemer, 2012; George, 2007; Shalley & Gilson, 2004; Shalley et al., 2004). Most of the factors that have been found to be associated with creativity can be summarised into several categories (Figure 1): individual characteristics (personality, cognitive ability, thinking style), psychological processes (mood, emotion, affect, self-regulatory processes, psychological empowerment), team characteristics (diversity), team processes (reflexivity, conflict, support), leadership styles (transformational, transactional, empowering styles), relationship approach to leadership (leader-member exchange), and organisational variables (job design, HR practices, climate for creativity, bureaucracy).

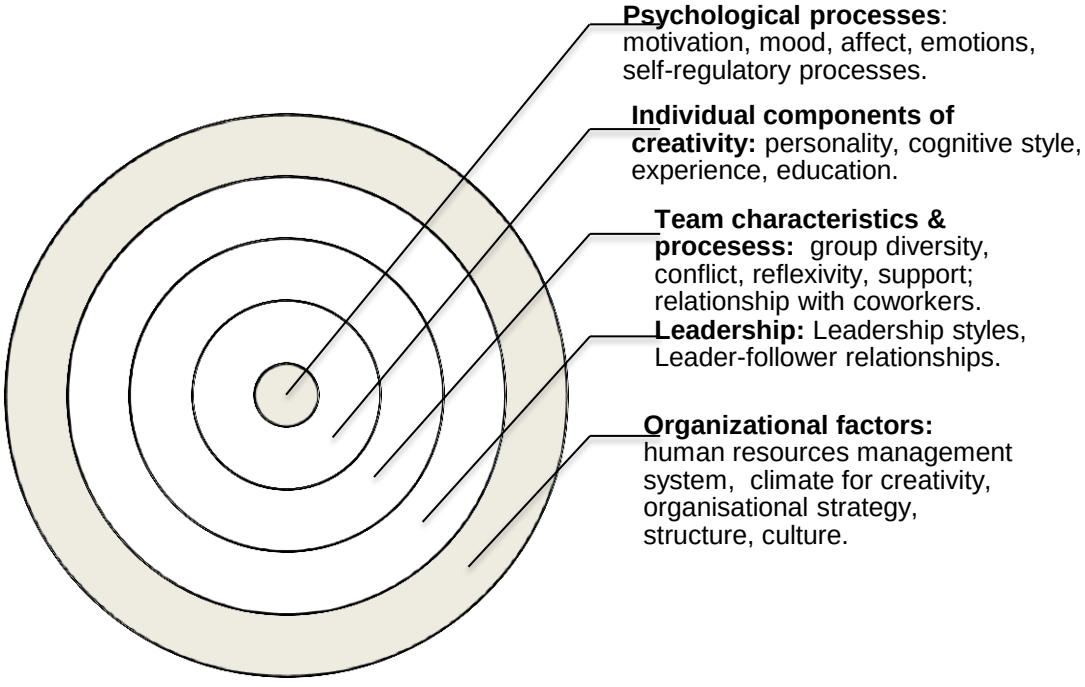

Figure 1: The taxonomy of creativity antecedents

Grey circles in Figure 1 represent the focus of the present study. Although contextual and social influences are salient across individual, group, and organisational levels in Woodman and colleagues' (1993) model, little is known about such contextual factors as HRM systems and their effects on individual and unit creativity (Jiang, Wang, & Zhao, 2012; Jiménez-Jiménez & Sanz-Valle, 2008). If managers aim to implement a service excellence strategy, it is critical to understand how they can develop an internal capability or a social structure to facilitate the strategically important behaviour of creativity in the service delivery process. Therefore, it is essential to examine HRM systems as contextual antecedents of creativity. Moreover, only a few studies have examined cross-level pathways to predict individual creativity. Consequently, it is not yet clear through what psychological processes organisational influence such as HRM systems, simultaneously affect individual and unit-level creativity.

It is important to note that research in organisational behaviour has examined a few HRM-related antecedents of creativity such as job characteristics (Binnewies, Ohly, & Niessen, 2008; Oldham & Cummings, 1996), feedback (George & Zhou, 2001), rewards (Byron & Khananchi, 2012; Eisenberger & Armeli, 1997) and training (Basadur et al., 1990; Ma, 2006; Scott et al., 2004). Given the flurry of research on creativity over the last three decades, it is surprising that researchers have not yet adopted a systematic approach to examining how these individual HR practices synergistically influence creativity. The purpose of the present study is to fill this void by developing a high performance work systems for creativity scale. However, in order to do so, it is imperative to review the extant research on individual HRM practices that have been shown to relate to creativity.

2.4 HRM-related antecedents of employee creativity

2.4.1 Job characteristics

In a recent meta-analysis, job characteristics such as job complexity and job autonomy demonstrated the strongest relationships with individual innovation relative to other antecedents such as personality, motivation, and leadership, which had only moderate effect on innovation process phases (Hammond et al., 2011). Earlier, Tierney and Farmer (2002) found a positive, significant relationship between supervisory ratings of creativity and objective measures of job complexity derived from the Dictionary of Occupational Titles. Job complexity characteristics, specifically, job control (Ohly & Fritz, 2010) and job autonomy have been found to encourage creativity (Liu, Chen, & Yao, 2011).

In sum, research has extensively showed that higher levels of creativity can be expected in those jobs where employees are autonomous and perform complex and challenging jobs. Accordingly, it is important to consider these elements when designing an HRM system for creativity.

2.4.2 Feedback

"Feedback typically contains a wealth of information including, but not limited to information concerning individual performance level" (Sansone, 1989, p. 344). There are many types of feedback. For instance, in a creativity context, competence feedback is the information provided by others, such as supervisors or co-workers, regarding the extent to which the ideas or solutions generated by an individual are creative, relative to normative or situational criteria (Zhou, 1998).

Empirical findings on feedback practices yield consistent results with developmental/competence feedback being beneficial and controlling feedback-detrimental for creativity (George & Zhou, 2001; Shalley, 1995; Shalley & Perry-Smith, 2001; Zhou & Oldham, 2001). Zhou (1998) found developmental feedback style ("You did very well. Congratulations! Keep up the good work."), but not controlling feedback (You did very well, just as you should. But remember, you must keep your creativity at

this level so that we can use your data") produced higher creativity on a following task. In fact, Zhou (2003) reported that individuals with less creative personalities benefit from developmental feedback when creative workers were present. Feedback is also a part of assessment. Zhou and Oldham (2001) examined developmental assessment strategies (self-administered, other-administered, and no assessment strategies) and found that creativity was higher in the presence of self-assessment strategy when individuals had a chance to evaluate themselves in order to develop their competencies.

In sum, these findings suggest that developmental and informative feedback is conducive whereas controlling feedback can be detrimental for creativity. In many organisations, formal feedback takes the form of performance appraisals; hence, these findings should be taken into account as they have direct implications when designing HRM practices for creativity.

2.4.3 Rewards

Reward practices are probably the most controversial of the antecedents of creativity. Many researchers have attempted to answer the question of whether organisations need to reward creative endeavour and how.

Based on cognitive evaluation theory, one stream of research has found that rewards undermine intrinsic motivation and therefore creativity. For example, Amabile's findings suggested that extrinsic rewards undermine intrinsic motivation and therefore - creativity (Amabile, 1996; Amabile et al., 1996; Amabile, Hennessey, & Grossman, 1986), because rewards will lead people to feel controlled by the situation (Ryan & Deci, 2000). A meta-analysis by Deci, Koestner, Ryan (1999a) reported that all rewards for performance (tangible and verbal) undermined intrinsic motivation. However, it is important to note that in this particular meta-analytic study, rewards were not specified for creativity; hence it is difficult to draw any firm conclusions.

Drawing on the theory of learned industriousness, Eisenberger and Rhoades (2001) postulated that individuals learn about desired dimensions in their performance by getting a reward for delivering a task. According to these authors, extrinsic rewards do not undermine intrinsic motivation, but rather provide information about the desired behaviours in an organisation. In other words, if employees perceive that creative aspects of performance are rewarded they will endeavour to be creative. This line of research confirmed that giving rewards for high creativity in one task motivated creativity in a following task (Eisenberger & Cameron, 1996; Eisenberger & Rhoades, 2001). More recently, Eisenberger and Aselage (2009) in an experiment with university students demonstrated that perceived rewards for creative ideas were associated with higher creativity.

In fact, a recent meta-analysis by Byron and Khananchi (2012) provides some clarity summarizing 60 experimental studies and 69 field studies on rewards and creativity. The findings suggest that in order for rewards to encourage creativity, they should be tailored to creativity, but not to task performance. When individuals are informed that creativity is valued and desired over routine performance, then they will enhance their endeavours for creativity. However, the findings also suggest that under certain conditions such as in a more choice (choice of rewards and job control) and more feedback environment both performance-contingent and creativity-contingent rewards were positively associated with creativity. Hence, in the presence of other HR practices, performance–contingent rewards may also lead to creativity.

2.4.4 Training

Complex training interventions and single techniques yield consistent results across studies in the literature on creativity. Indeed, research has shown that even a single training session can enhance creative abilities and outcomes (Clapham, 1997; Dahl, Chattopadhyay, & Gorn, 1999). In addition, two recent meta–analytic studies

support the notion that creativity training can help develop creativity skills which, in turn, lead to creative outcomes. Scott and colleagues (2004) reviewed and evaluated creativity training content (some authors report 70-172 creativity techniques) and methods of delivery. The findings suggest that creative thinking training had the largest effect sizes on divergent thinking (*A* = 0.75; *SE* = 0.11) and problem solving (*A* = 0.84, *SE* = 0.13). Moreover, creativity training was effective in both academic (*A* = 0.65; *SE* = 0.08) and organisational (*A* = 1.41; *SE* = 0.37) settings. Ignoring the small number of studies conducted in organisational settings (4), creativity training seems to have higher effect size than in academic settings. Ma (2006) reported overall effect size of 0.77 of creativity training which is similar to the one reported by Scott and colleagues (2004). These findings suggest that training is an important dimension that influence the levels of employee creativity and should be taken into account when designing HPWS for creativity.

2.5 Strategic human resources management and creativity

Earlier in this chapter I have reviewed creativity literature and studies that have shown HR practices such as job characteristics, rewards, feedback, and training to influence creativity. These studies indeed mainly focused on single practices and their effects on individual-level creativity. Consequently, there is a lack of understanding of how these practices combine together to influence creativity at both individual and organisational levels. Theory and research in strategic human resource management (SHRM) provides a theoretical rationale for the system vs single HRM practices approach to facilitate creativity in organisations. Therefore, in this part of the chapter, I review some of the theoretical debates and empirical findings of SHRM research.

The central proposition underlying SHRM research is that HRM practices should be configured towards a common strategic objective to achieve higher levels of alignment (Buller & McEvoy, 2012; Subramony, 2009) and organisational performance.

In addition ‘bundling’ of work practices is critical in HPWSs as it is not single HR practices but the combination of them that shapes the way managers and employees interact (MacDuffie’s, 1995).

It is important to note that the development of theory and research on Strategic HRM began around 1980s when researchers started to link business strategy with HRM (Miles & Snow, 1984; Schuler & Jackson, 1987). However, only over the last 10-15 years, in search of the ways organisations can achieve competitive advantage sparkled the new term in SHRM - high performance work systems (HPWS) - bundles of HR practices that lead to superior performance (Boxall & Macky, 2009). Recent research evidence suggest that HPWS - certain bundles of HR practices significantly and positively related to firm market performance (Aryee et al, 2012), customer service quality (Chuang & Liao, 2010) and financial outcomes (Huselid, 1995; Guest, Michie, Convey, Sheehan, 2003). However, this new term inherited the fuzziness that underpinned HRM and performance research from the very beginning. First, because organisational performance is a multifaceted construct and can be studied and measured in a variety of ways (Boxall & Macky, 2009); second because since 1990s researchers have employed different modes of theorising in HRM. The key debate is “the best practices” versus “the best fit” approach (see Delery & Doty, 1996; Purcell, 1999), has not yet reached a consensus.

Delery and Doty (1996) suggested alternative perspectives for studying HRM–performance relationship. First, is the universalistic perspective, which defines a set of best practices across different contexts (Huselid, 1995; Osterman, 1994; Pfeffer, 1996). Scholars supporting this perspective posit that certain high performance work practices (HPWPs) will be always better than others across organisations and provide empirical evidence to support these claims (Huselid, 1995; Osterman, 1994; Pfeffer, 1996). Purcell (1999, p. 36) criticized the universalistic approach saying that pluralism “leads us into utopian cul-de-sac and ignores the powerful and highly significant changes in

work, employment and society visible inside organisations and in the wider community." Purcell's work supports contingency perspective, which posits human resource practices to be in alignment with other internal and external aspects of an organisation, including organisational strategy (Balkin & Gomez-Mejia, 1987; Wright & Snell, 1991), other functions of the organisation (e.g., marketing and sales), industries, production technologies, and so forth (Chadwick, 2010). This type of synergy has been labelled vertical fit, external fit, or complementarities in the HRM literature. Studies that tested contingency perspective do not provide consistent results. For instance, Huselid (1995) found support for the effects of HPWPs for measures of corporate financial performance, but did not find the support for the impact of HPWS on performance being contingent on interrelationships between HPWPs and links with strategy. On the other hand, contingencies such as industry characteristics (Batt, 2002; Datta, et al 2005) and business strategy (Sun et al 2007; Youndt 1996) were found to be significant for the HRM effect on performance. In line with contingency perspective research has also shown that the levels of investments in human resource practices can be successfully aligned with organisational strategies to enhance organisational performance (Cooke, 2007; Sirmon & Hitt, 2009). Lastly, the configurational (internal fit, alignment) perspective proposes that HPWS components should not have only a vertical fit, but also horizontal fit - create synergies amongst them. The practices within HPWS can be purposefully set together to achieve higher levels of synergy and thereby do even more to improve organisation performance (Buller & McEvoy, 2012; Huselid, 1995; Subramony, 2009; Chadwick, 2010). Although, configurational perspective is theoretically plausible, there is a theoretical ambiguity on how synergy occurs and therefore there is no agreement on how synergies can be tested (Chadwick, 2012). Because of these reasons empirical evidence is inconsistent: it is difficult to draw any firm conclusions on the existing synergies within HPWS system, some authors even argue against such an effect (see Gerhart, 2007).

Nonetheless, the evidence suggesting that system of HRM has a stronger effect on organisational performance than single HR practices cannot be ignored. Combs et al. (2006) in their eminent meta-analysis report that HRM systems measures have significantly larger impacts on organisational performance than individual HRM practices. Also other researchers have concluded that additive index of HRM measures is superior than separate effects of single HRM practices (Way, 2002) and explains greater variance in sales growth, labour productivity, and profitability (Guest et al, 2005). Birdi, Clegg, Patterson, Robinson, Stride, Wall, & Wood (2008) in their study also found some support for synergies amongst HRM practices by testing their interaction effects.

Furthermore, recently prominent scholars Chuang, Jackson, and Jiang (2013, p. 7) stated that universalistic and contingency approaches to HRM theorising are not competing but rather complementary: “as firms increasingly adopt a common set of best practices, the ability of a particular firm to achieve competitive advantage depends on how well it adopts its management practices to address its own strategic imperative.” Becker and Huselid (2006, p. 899) argue that “Strategy is about building sustainable competitive advantage that in turn creates above-average financial performance” and encouraged to theorise and examine contingencies in SHRM, despite the lack of empirical support. In fact, to achieve competitive advantage, companies need to think how to design an HRM system which is rare, difficult to imitate or substitute. Similarly, Chadwick (2010) suggested that an HRM system should be related to particular performance criteria, as it is not possible to configure a system to maximise a broad variety of performance indicators. Researchers have already examined the effects of objective-specific HPWS on specific performance indicators such as service quality (Liao et al., 2009) and safety performance (Zacharatos, Barling, & Iverson, 2005). Given the current emphasis on creativity and innovation as a strategic objective of most organisations, it is surprising that research

has not yet developed and validated an HPWS for creativity scale and examined how the adoption of such an HPWS works to influence creativity and ultimately, organisational performance.

In sharp contrast to the view that HRM practices do not function in isolation but rather have additive, reinforcing, and synergistic effects (Chadwick, 2010; Jimenez-Jimenez & Sanz-Valle, 2008), researchers have continued to examine the effects of single HRM practices on creativity and innovation. Shipton, West, Dawson, Birdi, and Patterson (2006) revealed in their longitudinal study that training, induction, team working, appraisal and exploratory learning focus predicted innovation in 22 UK manufacturing companies. Alge, Ballinger, Tangirala, and Oakley (2006) found information privacy to be associated with creativity. HRM practices, specifically, communication and involvement, were found to be positively related to creativity climate in 2,000 performing firms in Ireland (Dundon, Harney, Cafferkey, & Heffernan, 2009). Walsworth and Verma (2007) found that training was positively associated with creativity and innovation while flexible pay schemes had a negative effect. Teamwork enabling practices have been shown to be beneficial for technological innovation (Perdomo-Ortiz, González-Benito, & Galende, 2009). The results of a recent study by Jiang, Wang and colleagues (2012) showed that four HRM practices, hiring and selection, reward, job design and teamwork, were positively related to employee creativity while training and performance appraisal were not (See Table 2 for a summary). Although these studies have enhanced our understanding of the influence of single HR practices on creativity, they are not consistent with the logic that underpins SHRM. Consequently, these findings are limited in the extent to which they can generate actionable knowledge that organisations can use to develop the internal capability to implement a service excellence strategy through creativity in service delivery.

Table 2: HR practices and creativity/innovation relationship

Reference	Setting	Level of depend variable	HR practice related to creativity/ innovation
Li, Zhao, and Liu (2006)	194 high-tech firms in China.	ORG level technological innovation	Training, immaterial motivation and process control; material motivation* and outcome control*
Shipton et al. (2006)	Manufacturing UK firms	ORG level innovation	Training, induction, team working, appraisal and exploratory learning focus predicted innovation
Alge et al. (2006)	Study 1 administrative positions within a large public university Study2: college graduates of a large public university	Individual creative performance	Information privacy
Dundon et al. (2009)	2,000 performing firms in Ireland	ORG level Creativity climate	Communication and involvement
Beugelsdijk (2008)	988 Dutch firms	ORG level radical innovation	Task autonomy and flexible working hours
Beugelsdijk (2008)	988 Dutch firms	ORG level Incremental innovation	Task autonomy, training and performance-based pay.
Jiménez-Jiménez and Sanz-Valle (2008)	173 Spanish firms	ORG level innovation	HRM system including a) flexible job design & empowerment; b) team working; c) long-term &skill-oriented staffing; d) extensive-and long-term oriented training; e) broad career opportunities f) behaviour-based appraisal g) organic compensation system
Walsworth and	Canadian Workplace and Employee Survey	ORG level product and	Training, employee involvement

Verma (2007)	(1999-2002)	process innovation	practices Flexible pay schemes *
Perdomo-Ortiz et al. (2009)	106 Spanish industrial firms	Technological innovation	Teamwork practices
Harden, Kruse, and Blasi (2010)	Dataset with over 25,000 employee surveys in over 200 worksites of a large multinational organisation	Innovation culture and willingness to engage in innovative activity.	Owning company stock
Lin (2011)	86 information and electronics companies in Taiwan.	ORG level innovation	E-HRM (IT and virtual organisation adoption) self and VO adoption.
Jiang, Wang, et al. (2012)	106 firms in China in manufacturing and non – manufacturing sector.	Employee creativity	Hiring and selection, reward, job design and teamwork; Training and performance appraisal were not

*A negative relationship with a dependent variable; ORG=Organisational.

2.6 Conclusion

Creativity is a multifaceted and context-specific construct. Consequently, in this chapter I extended the definition of creativity in service delivery by specifying type, scope and level of creativity in this study. Against this backdrop, I first reviewed Amabile's (1983) componential model and Woodman and colleagues (1993) interactionist model of creativity to underscore the importance of the social context for creativity. I then reviewed research that has shown single human resource practices to relate to creativity. Consistent with recent calls for a move away from the focus on single human resource practices to a more systematic examination of a bundle of these practices, I posit that a bundle of human resource practices will foster a social context that builds an internal capability to implement an organisation's service excellence strategy through frontline employees creative behaviour in the service delivery process.

In the next chapter, I develop a theoretical framework that explicates why and how the social context fostered by the adoption of an HPWS for creativity builds the internal capability to promote organisational performance. Specifically, I proposed intermediate mechanisms through which branch HPWS for creativity influences branch profit, as well as the cross-level intermediate pathways through which branch HPWS for creativity influences individual creativity.

Creativity is so delicate a flower that praise tends to make it bloom while discouragement often nips it in the bud.

Alex Osborn

Chapter Three

HPWS for creativity and cross-level outcomes: Theory and hypothesis development

3.1 Introduction

This chapter discusses the theories that underpin this study and inform the relationships depicted in the research model. At the unit level, I use social context theory to account for the intermediate mechanisms through which HPWS influences organisational performance. I hypothesise that the use of HPWS for creativity leads to unit climate for creativity which, in turn, influences unit creativity leading to unit profit. Drawing on contingency theory framework, I posit environmental dynamism to moderate the unit creativity–performance relationship. At the individual level, I hypothesise the use of HPWS for creativity to influence employee-perceived HPWS for creativity which, in turn, influences creative process engagement through employee need satisfaction and intrinsic motivation. Drawing on Woodman and colleagues' (1993) model of creativity, I hypothesise climate for creativity to have a cross-level moderating influence on the intrinsic motivation-creativity and creative process engagement-creativity relationships.

3.2 Theoretical rationale and research model

Social context theory (Ferris et al., 1998) provides the theoretical grounding for explicating the hypothesised influence of HPWS on organisational performance defined as unit quarterly profit. Ferris and colleagues (1998, p. 238) emphasise the role of social context as "the very essence of organisational science" and a mechanism through which HRM systems influence organisational effectiveness.

Social context theory highlights symbolic and rational aspects of managerial action in designing a work environment or organisational systems and processes that facilitates strategy implementation. Reflecting the view of creativity as a social process (Perry-Smith, 2006; Perry-Smith & Shalley, 2003), social context theory focuses on how the adoption of HPWS for creativity, for example, fosters the development of a work environment and the inherent work relationships that facilitate the learning of valued behaviours and the social support that make these possible. Indeed, Evans and Davis (2005) describe this work environment as an internal social structure that promotes the development of a shared mental model or an overlapping, similar, compatible, or distributed knowledge regarding tasks, teammates, and attitudes/beliefs that is used to coordinate behaviour which, in turn, leads to organisational effectiveness and flexibility.

Social context theory dovetails with creativity research that focuses on the social facets of the work environment such as the network of social relationships and the resources that can be mobilised through this network to motivate creativity (Amabile et al., 1996; Shalley et al., 2004). Thereby, I posit the adoption of HPWS for creativity as a symbolic and rational managerial action to develop a work environment (climate for creativity) that engenders employee behaviours (unit creativity) critical to the implementation of a strategic objective leading to organisational success, specifically unit quarterly profit. However, given the inconsistent findings regarding the influence of creativity on organisational performance (Gong et al., 2013; Merlo et al., 2006; Sung & Choi, 2012) and grounded in contingency theory (Burns & Stalker, 1961), I examine the moderating influence of environmental dynamism on the unit creativity-unit quarterly profit relationship.

To understand intermediate mechanisms through which HPWS for creativity affects individual-level creativity, I draw on Self-Determination Theory (SDT, Deci, Koestner, & Ryan, 1999b; Ryan & Deci, 2000). SDT posits that individual performance

will be enhanced if work environments promote basic needs satisfaction - autonomy, competence, and relatedness - which are universal necessities vital for optimal human development (Gagne & Deci, 2005). Need for autonomy is an individual's need/desire to make decisions and act upon their free will. It is about ownership of one's actions. The desire to be autonomous refers to experiencing choices that are not forced by others or one's criticism, but rather are determined by one's own choice and/or feeling like the initiator of one's actions (Ryan & Deci, 2000). Need for competence is about feeling knowledgeable and skilled in the job. It is a general feeling of effectiveness and represents feeling at a present moment rather future oriented (Van den Broeck, Vansteenkiste, De Witte, & Lens, 2008). Need for belongingness or relatedness refers to a desire to feel connected and belonging to others; it comprises caring and being cared for, doing things that support other people and being supported. SDT posits that satisfaction of these three needs leads to increased intrinsic motivation which is essential for task required creativity and cognitive flexibility (Gagne & Deci, 2005). Intrinsic motivation is at the core of SDT and refers to the desire to extend effort, because of enjoyment of the work task itself (Amabile et al., 1994; Gagne & Deci, 2005). SDT dovetails with Amabile's componential model of creativity (Amabile, 1983, 1996) because it focuses on intrinsic motivation as a key antecedent of creativity and also posits that context influences creativity via intrinsic motivation.

I posit that unit-level HPWS for creativity creates conditions which influence the satisfaction of psychological needs (autonomy, competence, and relatedness) leading to enhanced levels of intrinsic motivation and engagement in creative process, and ultimately, to creative performance. However, consistent with recent calls in the SHRM literature to account for employees' perceptions on implemented HPWS (Kehoe & Wright, 2013), I hypothesise that the level of employee need satisfaction will not necessarily depend on actual HPWS, but rather on employee-perceived HPWS. Therefore, employee–perceived HPWS for creativity mediates the relationship

between unit-level HPWS for creativity and employee need satisfaction. Following the interactionist model of creativity (Woodman et al., 1993) that posits individual creativity as a function of individual and social/contextual factors for creativity, I hypothesise that climate for creativity moderates the intrinsic motivation-creativity as well as creative process engagement-creativity relationships. Figure 2 presents a schematic representation of the relationships examined in this study. The succeeding section draws on the theories that underpin this work as well as the extant literature to account for the hypotheses tested in this study.

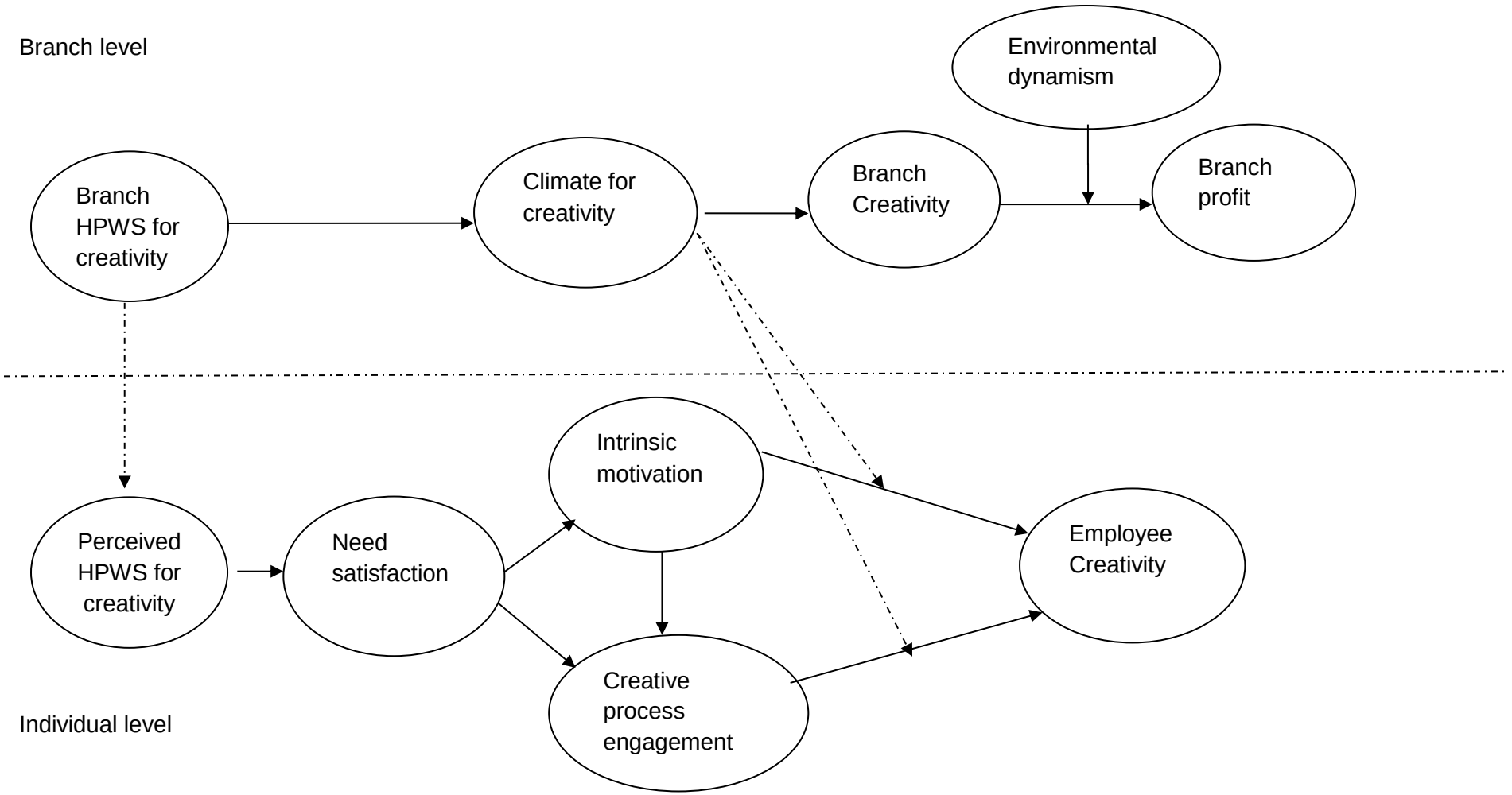

Figure 2: A schematic representation of the relationships examined in this study.

3.2.1 HPWS for creativity and climate for creativity

A challenge for service organisations that compete on the basis of the provision of service excellence is the development of an internal capability or unique structure to motivate customer contact employees to engage in creative behaviours in the service delivery process. To implement such a strategy and following Bowen and Ostroff's (2004, p. 206) view that "the foci of human resource management practices must be designed around a particular strategic focus", I developed and validated an HPWS for creativity scale. HPWS for creativity describes a system of HRM practices designed to enhance employees' competencies, motivation, and creativity.

Although the constituent components of HPWS differ across studies, there is convergence in some of these which include extensive training, information sharing, compensation, job design, performance appraisal, employment security, and selective hiring (Batt, 2002; Delery & Doty, 1996; Liao et al., 2009; Sun et al., 2007; Takeuchi et al., 2007; Zacharatos et al., 2005). Building on this stream of research and informed by Amabile's (1996) componential model of creativity, I identified an initial set of items to be included in the HPWS for creativity scale. Amabile's (1996) model highlights the three components of domain-relevant skills, creativity-relevant skills, and intrinsic motivation which are posited to be influenced by the work environment. The initial pool of items included such dimensions as selective hiring, extensive training, performance appraisal, and rewards because they have implications for domain-relevant skills and creativity-relevant skills. Additionally, I included job autonomy, employee participation, and communication as they may have implications for intrinsic motivation. After identifying the initial domains, I then conducted an extensive literature review to generate a list of items previously used to capture these domains. In addition to this deductive approach, I also used an inductive approach which entailed semi-structured interviews with managers in

service organisations. In the interviews, I asked respondents to indicate specific practices that their organisations use in each of the domains as well as practices that are not reflected in these domains but which they use to foster creativity of their customer contact employees. In addition to the six dimensions mentioned above and based on interview findings, a new dimension of playfulness at work emerged. I provide a more detailed description of the scale development and validation process in Chapter 4.

From a social context theory perspective, HPWS constitutes an internal organisation structure that determines organisational climate (Ferris et al., 1998) or "the shared perceptions of employees concerning the practices, procedures, and kinds of behaviours that get rewarded and supported in a particular setting" (Schneider et al., 1998, p. 151). Human resource practices that are unique, consistent, and influence the development of shared mental models result in a strong organisational climate (Bowen & Ostroff, 2004; Evans & Davis, 2005). Underpinning the climate construct is the idea of climate for 'something' (Schneider, Gunnarson, & Niles-Jolly, 1994) such as safety (e.g., Zohar, 2000), service (e.g., Schneider et al., 1998), empowerment (e.g., Seibert, Silver, & Randolph, 2004), and innovation (e.g., Anderson & West, 1998). Climate for creativity is defined as "the extent to which individuals perceive that organisational policies, practices, and procedures specify goals related to the development of new products, ideas, services or processes and the means to function creatively" (Tesluk, Farr, & Klein, 1997, p. 33).

Drawing on social context theory, HPWS for creativity serves a symbolic or signalling function about a creative work environment by communicating messages that employees use to make sense of and therefore define their work context (Bowen & Ostroff, 2004; Salancik & Pfeffer, 1978). Recruitment and selection practices that are designed to select creative employees communicate the organisation's emphasis on creativity. Training for creativity fosters the perception that everyone can be creative and that

creativity is an organisationally valued skill. Rewards for creativity further enhance employees' belief that the organisation acknowledges and appreciates novel approaches and new ways of doing things. Employee autonomy practices signal the organisation's trust in employees' ability to effectively execute their job tasks as well as create opportunities for employees to exercise discretion in the performance of these tasks. Communication practices ensure employees are kept informed about the organisation's performance, challenges, and expectations from employees to respond to these challenges. An emphasis on communication and information sharing may also encourage employees to offer suggestions on how to improve organisational processes to meet customer needs and expectations and ultimately, organisational goals.

In support of these theoretical arguments, research has documented an influence of HPWS on organisational climate. Aryee and colleagues (2012) reported branch-level HPWS to relate to empowering climate among a sample of retail banks. Takeuchi and colleagues (2009) found HPWS to be associated with a concern for employees' climate across industry sectors. Chuang and Liao (2010) reported HPWS to relate to concern for customers and concern for employees climate in 133 stores in Taiwan. Zacharatos and colleagues (2005) found HPWS for safety to be associated with safety climate in a sample of 189 customer contact employees in the petroleum and telecommunications industries. Accordingly, I expect HPWS for creativity to relate to climate for creativity.

Hypothesis 1: Branch-level HPWS for creativity positively relates to branch-level climate for creativity.

3.2.2 HPWS, climate for creativity, and branch creativity

As earlier noted and based on social context theory, the adoption of an HPWS for creativity reflects a managerial action to foster the development of an internal social

structure that facilitates the behaviours necessary for strategy implementation and therefore, organisational success. Further, I argue that as an internal social structure, climate for creativity will facilitate creative attitudes and behaviours in service delivery. This is because climate is a commonly held belief about a work environment which, in turn, influences employees' perceptions about required behaviours, attitudes, interactions and outcomes in a particular group, department or organisation (Parker et al., 2003). I therefore expect climate for creativity to foster creative approaches to service delivery.

The ability of customer contact employees to customise the service delivery and satisfy the unique needs of customers requires them to possess extensive knowledge about products or services and benefits they bring to the customer (Verbeke, Dietz, & Verwaal, 2011). The teamwork nature of the production and delivery of service with its inherent collaborative relationships and face-to-face interactions provides opportunities for learning and the transfer of tacit knowledge. Following Perry-Smith and Shalley's (2003) view of creativity as a social process, the learning that takes place in such an interactive work environment will be augmented in a climate for creativity given the priority attached to learning and experimentation in work contexts characterised by such a climate. The level of trust and social support (from both leaders and co-workers) inherent in a climate for creativity provides a context in which customer contact employees can learn from each other (either vicariously or formally) leading to the development of creativity-relevant skills such as problem-solving as well as domain-relevant skills such as knowledge about the product and/or service (Amabile, 1996), which should enable customer contact employees to customise this knowledge to meet the unique needs of the customer. The ability of customer contact employees to learn and therefore acquire creativity-relevant and domain-relevant skills has become particularly critical given their emergent role as knowledge brokers (Verbeke et al., 2011). As knowledge brokers, customer contact

employees have to diagnose problems, think creatively, and develop novel solutions to the unique needs of customers (Skaggs & Youndt, 2004). Thus, a climate for creativity does not only foster normative expectations about the importance of creativity, but also motivates knowledge exchange among customer contact employees leading to creativity in service delivery.

In support of the preceding arguments, research has documented an influence of climate for service on service performance (Chuang & Liao, 2010 ; Hong et al., 2013). Research on creativity has also extensively emphasised the role of climate (Amabile, 1996; Anderson & West, 1998; Gilson & Shalley, 2004; Scott & Bruce, 1994). Extensive evidence in the literature indicates individual and group climate perceptions to predict creativity (Tesluk et al., 1997). Recent meta-analysis examining 42 studies (Hunter et al., 2007) shows that climate for creativity is a significant predictor of creative achievement across different contexts. Therefore, I hypothesise that:

Hypothesis 2: Climate for creativity positively relates to branch creativity.

As previously noted HPWS for creativity constitutes an organisational action to implement a service excellence strategy and should therefore engender behaviours such as customer contact employees' creativity in the service delivery process. As a form of communication, HPWS signals to employees the behavioural prerequisites for implementing an organisation's strategy as well as provide the skills, motivation, and opportunities to engage in these behaviours. For example, selective hiring and extensive training (e.g., creative problem-solving) can foster the development of creativity-relevant skills (such as ability to generate alternative solutions) as well as the development of domain-relevant skills (such as product knowledge and customer service skills) necessary to demonstrate creativity in the service delivery process. Performance appraisal and

creativity-contingent compensation system signal the importance of creativity and therefore motivate employees to demonstrate this behaviour. Job design features such as discretion in decision making can give customer contact employees the freedom to adapt their sales approach to meet the unique needs of their customers. Playfulness at work, a component of HPWS for creativity, provides opportunities for employees to experiment and engage in divergent problem-solving leading to the acquisition of creativity-relevant skills. In support of these arguments, research has shown contextual or work environment factors such as job design, work setting, and relationships with co-workers and supervisors (Amabile, 1996; George, 2007; Shalley et al., 2004), which reflect components of HPWS to relate to creativity. However, consistent with theorisations of how HPWS works (Bowen & Ostroff, 2004; Ferris et al., 1998; Jiang, Lepak, Han, et al., 2012), I expect the influence of HPWS on unit creativity to be indirect through climate for creativity. This is because HPWS for creativity fosters the development of a climate for creativity which, in turn, provides the motivation and resources to engender creativity in the service delivery process.

Hypothesis 3: HPWS for creativity positively relates to branch creativity but indirectly through climate for creativity.

3.2.3 Branch creativity and branch financial performance

Although the steady stream of research on creativity is predicated on the assumption that it enhances performance (Gilson, 2008), as Shalley and colleagues (Shalley et al., 2004) observed, this research has focused disproportionately on the antecedents rather than the performance implications of creativity. To address this imbalance and in view of George and Bettenhausen (1990) observation that the outcomes of service performance such as sales may be weaker at the individual level (because

many of the benefits of customer-oriented behaviours tend to be reaped overtime and across employees), I examined the influence of branch creativity on branch financial performance. Singh, Darwish, Costa and Anderson (2012, p.659) concluded that “a financial measure is an objective measure of performance and an ideal candidate for representing a firm’s performance to serve as a dependent variable in the multivariate analysis of data”. In line with Sigh et al. 2012 arguments I have measured financial performance in terms of branch quarterly profit.

As creativity in service delivery is a behavioural prerequisite in implementing a service excellence strategy, it constitutes an internal capability or a source of competitive advantage because in addition to being valuable it’s immobile and difficult to imitate (Barney, 1991; Barney, Wright, & Ketchen, 2001). At the branch level, creativity in service delivery may come to define a unit’s normative expectation not only because of the interactive nature of the production and delivery of service (therefore the cues that help individuals learn what are appropriate behaviours) but also through social processes that ensure uniformity in behaviour across the unit. Schneider’s (1987) attraction, selection, and attrition (ASA) model suggests that unit members tend to develop behavioural expectations, and ultimately demonstrate homogenous behaviours within the unit. Similarly, Salancik’s and Pfeffer’s (1978) social influence processing framework depicts groups as a powerful instrument of social influence and as a form of social control, this influence process operates to ensure uniformity in the display of unit behaviours. Units that demonstrate high levels of creativity in service delivery will by implication have the product/service knowledge, problem-solving skills, and ability to foresee and pursue alternative solutions which collectively, will enable customer contact employees in the unit to customise the service delivery to meet the unique needs of customers leading to improved unit performance (Kelly et al., 1996). As customer experience is often

determined by the customer's interactions with multiple employees (Raub & Liao, 2012), and creativity in service delivery comes to characterise the unit, it (the unit) develops a reputation for service excellence (akin to word of mouth advertisement), which will promote such customer-focused outcomes as customer satisfaction, customer retention, and sales leading to unit profit.

Despite the preceding discussion, only a handful of studies in a service context have examined the creativity-performance relationship at the unit/firm level and even those few studies report mixed findings. For example, Sung and Choi (2012) found team creativity to positively relate to team financial performance over a period of 6 months in a Korean insurance company. Intriguingly, Merlo and colleagues (2006) reported store creativity not to be significantly related to retail store performance. Similarly, a recent study by Gong and colleagues (2013) also reported a non-significant relationship between core knowledge employee creativity and a composite measure of firm performance in relation to competitors. These and other relevant studies are summarised in Appendix A. Though not directly related to creativity in service delivery, related constructs such as customer-oriented behaviour that enable customer contact employees to customise the service delivery has been shown to relate to sales (George & Bettenhausen, 1990; Hong et al., 2013). In addition, unit proactive customer service performance was found to positively relate to the organisational performance indicator of customer service satisfaction (Raub & Liao, 2012). I therefore hypothesise that:

Hypothesis 4: Branch creativity in service delivery positively relates to branch quarterly profit.

3.2.4 Moderating role of environmental dynamism

Models of how HRM systems work generally depict collective employee behaviour as a proximal antecedent to organisational performance (Ferris et al., 1998; Lepak et al., 2006; Ostroff & Bowen, 2000). However, given that organisations operate in an environmental context, it is important to understand the conditions under which collective employee behaviour or aggregated unit creative performance (as in this context) influences unit financial performance. Much research in strategic management has highlighted the role of industry influences on organisational actions and their consequences (Dess & Beard, 1984; Henderson, Miller, & Hambrick, 2006). Singh, Darwish, Costa and Anderson (2012) proposed a contingency framework and summarised internal organisational factors and external factors that interact together to predict organisational performance. Sigh and colleagues suggested that external factors specific to organisations such as demand for organisational product and services, market structure, and competitive conditions, interact with internal organisational factors such as HRM systems to influence organisational performance.

Accordingly and drawing on contingency theory (Burns & Stalker, 1961), I examined environmental dynamism as a boundary condition of the relationship between aggregated unit creative performance and unit quarterly profit. I focused on environmental dynamism because of the environmental characteristics such as complexity and munificence, dynamism is considered to have the most impact on organisational variables, and their adaptation and survival (Dess & Beard, 1984; Dess, Ireland, & Hitt, 1990).

Environmental dynamism refers to the rate of change and degree of uncertainty in an organisation's external environment (Dess & Beard, 1984). Highly dynamic and uncertain environments are characterized by a high degree of change in competitors' actions, customer preferences, and overall pace of technological changes in a particular industry (Hauschild, Knyphausen-Aufsess, & Rahmel, 2011). Highly uncertain

environments are described as fast changing, unpredictable and thus potentially threatening (Bstieler, 2005; Rueda-Manzanares, Aragón-Correa, & Sharma, 2008).

Indeed, scholars have noted that ambiguous environments often caused by changes in markets or technologies, can be regarded as both a constraint and an opportunity for the firm (Burns & Stalker, 1961; Lawrence & Lorsch, 1967). In a highly competitive environment, the differences in product quality and the switching costs for customers are becoming increasingly lower, turning the interaction between the salesperson and the customer into a critical factor for performance effectiveness (Baldauf & Cravens, 2002; Borucki & Burke, 1999). Hence, if companies are able to generate creative approaches to their sales and promotion strategies, as well as find ways to satisfy new customer needs, environmental uncertainty could become an opportunity to capitalise on creativity and achieve competitive advantage. In those units where employees explore new ways of doing things, rapid changes will present new opportunities for creativity. On the other hand, if the external environment is more stable, trying new approaches might not be the most effective way. In environments where customers have already developed their attitudes and habits and do not have a need for new products or services, they may be less receptive to employees' creative approaches to service delivery; at the same time employees can develop better knowledge about customers' needs and tastes, and find common strategies to satisfy those needs. Gong and colleagues (2013) reported that core knowledge employee creativity was positively related to firm performance when realised absorptive capacity (the capacity to transform and apply new knowledge) was high, but negatively related to firm performance when riskiness orientation (the tendency to make large and risky resource commitments concerning entry into new businesses or markets) was high. While this finding provides an insight into the boundary conditions of the outcomes of creativity it does not examine the moderating influence of the external

environment on these outcomes. A recent study by Choi and colleagues (2012) examined environmental uncertainty as a boundary condition of knowledge utilisation and team creativity but not as a boundary condition of the creativity-organisational performance relationship. Thus, the extent to which characteristics of the external environment such as dynamism can support or inhibit the creativity-financial performance relationship is not yet known. Although I am unaware of organisational research that has examined the moderating influence of environmental dynamism on the relationship between creativity in service delivery and unit profit, there is a growing body of research in the marketing literature (Homburg, Workman Jr, & Krohmer, 1999; Kumar, Jones, Venkatesan, & Leone, 2011; Voss & Voss, 2000) that has examined the moderating influence of environmental factors on the relationship between marketing strategy and business performance. For example, Kumar and colleagues (2011) reported that the positive influence of marketing orientation on business performance was enhanced under high competitive intensity. Similarly, Suh and Shin (2005) found a positive relationship between marketing campaign creativity and job performance in the profit-driven sector but not in the non-profit-driven sector possibly because of the low level of dynamism that characterises the non-profit-driven sector. Thus, I propose that:

Hypothesis 5: The relationship between branch-level creativity and branch-level profit is moderated by environmental dynamism in such a way that the relationship is more positive for units with high rather than low environmental dynamism.

3.2.5 Branch-level HPWS for creativity, employee-perceived HPWS for creativity, and employee need satisfaction

People perceive reality differently (Fiske & Taylor, 1989; Ichheiser, 1949), which implies a potential gap between reality (branch HPWS) and the perception of HPWS. Indeed, the influence of HPWS on employee attitudes and behaviours is likely to originate from employees' perceptions and experience of HPWS (Boxall & Macky, 2009; Kehoe & Wright, 2013). Individual perceptions are important because even working within the same branch individuals may be treated differently in terms of the amount of feedback they receive, the amount of training they are provided or the extent to which they are involved in decision making and other HRM practices resulting in their distinctive interpretations of HPWS (Liao et al., 2009). Thus, within group differences is also a source of variability among individuals.

These views are in line with the central proposition of social information processing theory (Salancik & Pfeffer, 1978) which posits that conditions of the workplace are not given but constructed by individuals. Although HPWS defines the context/reality within which customer contact employees work, the way this objective reality is interpreted (subjective reality) influences the work attitudes and behaviours of customer contact employees. Indeed, researchers have noted that managers' reports on HPWS might not be the reality of employees and have therefore focused on the influence of employees perceptions of HPWS on their job attitudes and behaviours (Aryee et al., 2012; Kehoe & Wright, 2013; Liao et al., 2009). Kehoe and Wright (2013) found that employee perceptions of HPWS were related to organisational citizenship behaviour and intention to leave. These findings reinforce the motivation to examine HPWS from both managers and employees' views. Aryee and colleagues (2012) based on a study of 37 branches of two banking institutions reported that branch-level HPWS related to employee-experienced

HPWS. Consequently, I expect branch-level HPWS to relate to perceived HPWS. Thus, I hypothesise that:

Hypothesis 6: Branch-level HPWS relates to employee-perceived HPWS.

Underpinning self-determination theory is the influence of organisational context on employees' need satisfaction: autonomy, competence and relatedness. With this in mind, I hypothesise that HPWS will influence the level of employee need satisfaction. HPWS for creativity components such as selection and training practices, enhance the level of job-required and creativity-related skills. Performance appraisal and reward practices reinforce those competencies via feedback, recognising and rewarding behaviours that employees acquired in training programs. In this way, HPWS for creativity augments employee level of knowledge, skills and self-efficacy, satisfying the need for competence. The autonomy components of HPWS such as designing the work in a way that employees have discretion to make decisions and providing employees with autonomy to organise their work enhances employees' feelings of control and choice, which satisfies their autonomy need. Finally, sharing financial and strategic information with employees should enhance their sense of belonging to the broader social group (team or organisation). Information sharing practices enhance meaning of work as people can relate how individual inputs contribute to organisational goals and stakeholders interests. In this way, employees feel important and connected with each other to work for the common purpose. In addition, the playfulness at work component facilitates and strengthens the relationships among employees as through various play activities they can create shared experiences, connections, and develop social networks thereby satisfying the belongingness need. Although these practices define the objective reality of the work context, they are likely to be differentially perceived and experienced. Therefore, it is

important to examine employee-perceived HPWS as a more proximal antecedent of how employees feel about their work. I expect unit-level HPWS to relate to need satisfaction indirectly through employee-perceived HPWS. In support of my argument, experienced HPWS has been reported to relate to psychological empowerment (Aryee et al., 2012; Liao et al., 2009; Seibert, Wang, & Courtright, 2011) and to mediate the influence of branch-level HPWS on psychological empowerment.

I therefore hypothesise that:

Hypothesis 7a: Employee-perceived HPWS relates to need satisfaction.

Hypothesis 7b: Branch-level HPWS indirectly relates to need satisfaction through perceived HPWS.

3.2.6 Employee-perceived HPWS for creativity, need satisfaction, intrinsic motivation, and creative process engagement

According to Gagne and Deci (2005), satisfaction of psychological needs such as autonomy, competence, and relatedness is important because it fuels intrinsic motivation by increasing the interest, enjoyment, satisfaction, and challenge of the work itself. If employees feel they have enough discretion to make decisions and organise their work (need for autonomy), they feel challenged and learning new skills and knowledge (need for competence) and connected with others (need for belongingness), these conditions collectively enhance their level of satisfaction and enjoyment of the work tasks or intrinsic motivation. Research has found need satisfaction to be related to intrinsic motivation (Gagné et al., 2010; Richer, Blanchard, & Vallerand, 2002). Consequently, I expect employee need satisfaction to lead to intrinsic motivation.

I also theorise need satisfaction to relate to creative process engagement. Creative process engagement is a form of involvement and engagement in creativity-relevant cognitive processes, including (1) problem identification, (2) information searching and encoding, and (3) idea generation (Amabile, 1983; Reiter-Palmon & Illies, 2004). Need satisfaction can facilitate creative process in a number of ways. First, if a customer contact employee feels knowledgeable and skilled as well as has discretion to customise services to meet customer needs, he/she will proactively engage in discovering customer problems and generating alternative and novel solutions. Second, when an employee feels a part of the team and broader organisational social network, then most likely he/she will consult others, and exchange ideas increasing the quality of the creative process. Gilson and Shalley (2004) found that highly creative teams are characterised by high levels of socialisation. Plausibly, through socialisation employees can feel that they relate to others, learn about the normative expectations of the group and knowledge sharing, which may provide a psychologically safe environment for engaging in creative processes. Consequently, it is expected that need satisfaction will be positively related to creative process engagement.

Hypothesis 8a: Need satisfaction relates to intrinsic motivation and creative process engagement

In addition to the direct effect of need satisfaction on creative process engagement, it is intuitively plausible that need satisfaction will also indirectly lead to creative process engagement via intrinsic motivation. Simon (1967) noted that the primary goal of intrinsic motivation is ability to focus and control attention. If individuals are enjoying the work itself and are intrinsically engaged with their work tasks, they are more likely to devote attention to the problems they encounter. Indeed, underpinning intrinsic motivation is vigour and dedication (Vansteenkiste et al., 2007), which are also key to creative process

engagement (Ryan & Deci, 2000). This is because problem identification requires time to understand the nature of the problem and thinking about the problem from multiple perspectives while connecting different sources of information requires dedication. It is possible that an intrinsically motivated employee will engage in creative process because of the inherent enjoyment in solving customer problems or looking for ways to improve customer relationships. Zhang and Bartol (2010) found that intrinsic motivation was related to creative process engagement. As need satisfaction is a prerequisite for intrinsic motivation, it is expected that intrinsic motivation will constitute a mediating mechanism between need satisfaction and creative process engagement.

Hypothesis 8b: Intrinsic motivation fully mediates the relationship between need satisfaction and creative process engagement.

Ryan and Deci (2000) noted that features of the work environment can facilitate or impede intrinsic motivation depending on how these features enhance or undermine satisfaction of psychological needs. Environments that provide employees with a high degree of autonomy, choice, informative feedback and challenging tasks will enhance intrinsic motivation. In contrast, work environments that undermine employee autonomy, choice and control on the job will be detrimental for intrinsic motivation. Yet, as mentioned previously, HR practices are likely to have desired consequences on employees' attitudes and behaviours only when they are perceived by employees in intended ways (Bowen & Ostroff, 2004). For instance, the way employees perceive some aspects of HPWS like playfulness at work, job autonomy and employee participation will determine the level of intrinsic motivation. Humorous and fun activities should fuel positive emotions about one's work, which can enhance once enjoyment and satisfaction with job tasks. Participating in decision making also can enhance intrinsic motivation as it is related to intellectual

stimulation, challenge and having control, which are prerequisites for enjoyment of job tasks.

Similar to its influence on intrinsic motivation, perceived HPWS for creativity influences employee engagement in creative processes. Employees will engage in creative processes if they have received the necessary training and therefore have the knowledge and resources to engage in creative processes. Information sharing allows employees to re-frame problems, which is the initial stage of creativity process. Through other HPWS components such as employee participation and playfulness practices, employees will feel that they have time and space to engage in creative processes. Accordingly, I theorise that perceived HPWS for creativity enhances both intrinsic motivation and creative process engagement. Hypothesis 7a postulates that perceived HPWS for creativity is related to need satisfaction, and Hypothesis 8a posits need satisfaction to relate to intrinsic motivation and creative process engagement. Thus, I propose that:

Hypothesis 8c: Employee-perceived HPWS indirectly relates to intrinsic motivation and creative process engagement through need satisfaction.

3.2.7 Need satisfaction, intrinsic motivation, creative process engagement, and creativity.

Self-determination theory (SDT) underpins the hypothesised influence of intrinsic motivation on creativity in service delivery. Creativity is an intellectually challenging activity requiring problem solving, risk taking, experimenting and continuous learning. Intrinsic motivation will enhance employee creativity in several ways. Foremost, intrinsically motivated individuals are curious and willing to learn which enhances their cognitive flexibility: they are willing to experiment and take risks as well as become open to complex problems (Gagne & Deci, 2005; Grant & Berry, 2011). Intrinsically motivated employees

are not only stimulated by intellectual challenges but are also persistent which is critical to creativity. Generating a novel solution is not a straightforward action, but rather comprises uncertainty and trial and error. Consequently, employees who enjoy their work will be more open to the challenges inherent in meeting the varied demands and needs of their customers, listen to them and use the information to improve their ideas. Intrinsically motivated employees will persistently experiment with ideas till the best solution is achieved leading to higher levels of creativity. This is in contrast to employees who are not intrinsically motivated and are therefore more likely to pursue routine ways of doing things rather that devoting time and effort to come up with novel solutions. Although intrinsic motivation has been shown to positively relate to creativity, this finding is equivocal suggesting that the relationship is rather complex. Grant and Berry (2011) noted intrinsic motivation has been more consistently linked with jobs that externally require creative thinking like R&D and art work, versus jobs where ideas and solutions are internally driven such as in sales or customer service. For example, Zhang and Bartol (2010) reported intrinsic motivation to be directly and indirectly associated with creativity through creative process engagement in a sample of software engineers and new product developers, whose work required substantial creativity. Nonetheless, Shalley and Perry-Smith (2001), in their experimental study, did not find intrinsic motivation to significantly relate to creativity. Findings of a recent meta-analytic study reported intrinsic motivation to positively relate to creativity in both student and employee samples (de Jesus et al., 2013; Hammond et al., 2011). Given that research findings overwhelmingly suggest a positive association between intrinsic motivation and creativity, it is to be expected that intrinsic motivation will positively relate to employee creativity.

As previously noted, creative process engagement involves meticulous problem identification from different perspectives, gathering relevant information from different sources, and generating alternative solutions, which collectively results in creative output.

When customer contact employees consciously engage in creative activities, they listen to customers and aim to better understand customers' views, needs and expectations, which collectively help to broaden their perspective on the problem or/and re-frame the question. Once the problem is clearly stated and relevant information collected, then the next step in the process is idea generation, evaluation and selection, leading to creative output. If such a creative process is interrupted, then the creative output presumably will not be achieved. It has been mentioned above that intrinsically motivated employees are willing to engage in creative process (Hypothesis 8b), because they are open to challenges and enthusiastic about solving complex issues which, in turn, leads to creative output. Zhang and Bartol (2010) report creative process engagement to mediate the relationship between intrinsic motivation and creativity. Thus I hypothesise that:

Hypothesis 9a: Intrinsic motivation indirectly relates to creativity through creative process engagement.

Drawing on SDT, I previously hypothesised that employee need satisfaction leads to intrinsic motivation and creative process engagement. SDT also posits that need satisfaction leads to important job outcomes particularly in tasks requiring cognitive flexibility, conceptual understanding, and creativity (Gagne & Deci, 2005). Therefore, I posit that need satisfaction will directly stimulate creativity in a number of ways. First, creative behaviours involve stepping out of one's comfort zone and experimenting without fear of failure. This can be achieved if employees experience high self-efficacy – a belief that one can achieve a specific goal or outcome, which should motivate them to further search for new challenges and suggest new improvements in service. In addition to the experience of competency, employees must enjoy some discretion in the performance of their jobs if they are to experiment with new ideas and/or ways of performing their jobs.

For instance, in the context of customer-service, employees are often asked to follow behavioural scripts, which might be useful for new starters. However, for experienced employees, following a behavioural script will undermine their discretion to customise the service delivery to the needs of the customer and therefore creativity in the service delivery process. Finally, trying new behaviours and going out of one's comfort zone can lead to failure and frustration. Therefore, a feeling of belongingness is also critical to retain levels of creativity because it enables employees to overcome negative emotions of failure or frustration. Plausibly, employees will sustain their creative efforts when they feel that team members and managers care about them, provide necessary support and contribute to the development of ideas. Although not directly related to creativity, research has documented evidence that the satisfaction of autonomy, competence, and relatedness needs leads to job engagement and wellbeing (Deci et al., 2001), higher performance evaluations, and psychological adjustment (Baard, Deci, & Ryan, 2004). I therefore expect need satisfaction to positively relate to creativity. However, given that need satisfaction is hypothesised to relate positively to intrinsic motivation and creative process engagement (Hypothesis 8a), as well as intrinsic motivation and creative process engagement are hypothesised to relate positively to creativity (Hypothesis 10a), I therefore expect need satisfaction to relate positively to creativity via the psychological pathways of intrinsic motivation and creative process engagement.

Hypothesis 9b: Need satisfaction indirectly relates to creativity through intrinsic motivation and creative process engagement

3.2.8 Cross-level moderating influence of climate for creativity

In a service delivery context, customer contact employees face multiple pressures to achieve sales and productivity targets while at the same time enhancing customer

experiences and satisfaction. Given that creative process engagement is inherently time consuming for employees and managers, an organisational context may influence the extent to which employees can capitalise on their creative process. A core feature of prominent creativity frameworks (e.g., Woodman et al., 1993) is an interaction between individual inputs (e.g., creative process engagement and intrinsic motivation), and contextual influences of an organisation (culture, structure, climate) to predict creativity. Consistent with recent calls to examine how creative process eventually leads to creative outcomes (Mumford, 2000; Shalley et al., 2004) and given the importance of social context (climate) in creativity theories (Woodman et al., 1993), I theorise that the extent to which employees stay engaged in their creative activities till the creative output is achieved is much contingent upon climate for creativity.

I define climate for creativity as "the extent to which individuals perceive that organisational policies, practices, and procedures specify goals related to the development of new products, ideas, services or processes and the means to function creatively" (Tesluk et al., 1997, p. 33). Tesluk and his colleagues (1997) specifically highlighted the components of such a climate to comprise an emphasis placed on creativity goals, rewards for creativity, task support provided for creativity efforts, and socio-emotional support for creativity.

Employees engaging in creative process will benefit from such a context because they are likely to be encouraged to share information and knowledge possessed by other group members (Perry-Smith, 2006) as well as receive support from their co-workers and managers ultimately increasing the quality of their creative process leading to more creative outputs. Creative process is characterised by frustration (Sapp, 1992) and at such times employees may fail to find high quality ideas (Lubart, 2001) and accept less creative solution. Therefore socio-emotional support, which is inherent in climate for creativity, is

necessary to facilitate moving to new direction, perhaps reconceptualising a native problem, and finding new alternatives resulting in the best quality creative output. In addition, in a climate where emphasis is placed on creativity goals and ideas are rewarded, management will expect employees to demonstrate creative behaviours, notice and appreciate them. Therefore, customer contact employees will be motivated to persist in their idea generation and come up with more original solutions.

In contrast, a non-facilitative creativity context is characterised by a lack of socio-emotional support and resources (including time and feedback), as well as by emphasis on routine approaches to problem solving. Such a climate will most likely negatively impact the extent to which employees' effort and persistence leads to high quality creative solutions. Even though employees may engage in creative process (re-framing problem, searching for information and generating ideas), their efforts and experimentations may not reach the highest levels of creativity. This is because such an environment signals to employees an emphasis on routine behaviours and therefore less original solutions will most likely be accepted. Additionally, in a low creativity climate, managers can have negative attitudes towards creativity. Even when employees engage in creative activities and come up with ideas, managers may not perceive them as a beneficial behaviour leading towards negative bias when rating their employees' creativity. Finally, in a non-creative environment, a customer contact employee might engage in creative activities such as initiate information search to solve a customer's problem, but those novel solutions may not be communicated to managers and thus remain undeveloped. Accordingly, I hypothesise that:

Hypothesis 10a: Climate for creativity moderates the relationship between creative process engagement and creativity such that this relationship will be stronger when climate for creativity is high rather than low.

The previously noted inconsistent findings relating to the influence of intrinsic motivation on creativity suggests a need to examine the conditions under which intrinsic motivation leads to creativity. Although intrinsic motivation engenders a willingness to exert effort, this (effort exertion) can be attenuated if a customer contact employee operates in a non-facilitative creativity context. Given the importance of social context in creativity theories (Woodman et al., 1993) and that climate is a key element of social context theory (Ferris et al., 1998), I expect climate for creativity to moderate the relationship between intrinsic motivation and creativity. Employees may enjoy their work and find some aspects of the job interesting and satisfying, but the extent to which they channel effort into generating new ideas and demonstrating novel behaviour will be contingent upon expectations regarding this form of work-related behaviour or climate for creativity. A facilitative context will encourage intrinsically motivated employees to focus their effort on being resourceful and respond to the unique or non-routine needs of customers leading to creativity. However, a context that is not supportive of creative behaviours might undermine the efforts of intrinsically motivated employees to capitalise on their inner drive. A few studies have investigated contextual moderators of the intrinsic motivation – creativity relationship and found task complexity (Gagne & Deci, 2005) and leader-member exchange (Tierney et al., 1999) to provide intrinsically motivated employees with less constraint and more freedom to engage in creative behaviours. Therefore, I hypothesise that:

Hypothesis 10b: *Climate for creativity moderates the relationship between intrinsic motivation and creativity such that this relationship is stronger when climate for creativity is high but not low.*

3.3 Conclusion

This chapter described social context and self-determination theories and used these theories together with the extant literature to justify the hypotheses of this study. At the branch level and drawing on social context theory, I hypothesised branch-level HPWS to influence branch-level quarterly profit through the pathways of climate for creativity and branch-level creativity. Drawing on contingency theory, I hypothesised environmental dynamism as a boundary condition of the branch-level creativity and quarterly profit relationship. At the individual level and drawing on self-determination theory, I also hypothesised branch-level HPWS to influence basic needs satisfaction through employee-perceived HPWS which, in turn, influences creativity through the pathways of intrinsic motivation and creative process engagement. Drawing on Woodman and colleagues' (1993) interactionist model of creativity, I hypothesised a cross-level moderating influence of climate for creativity on the creative process engagement-creativity as well as the intrinsic motivation-creativity relationship.

In the succeeding chapter, I describe the methodology I employed to develop and validate the HPWS for creativity scale reported in this study.

There are two ways of being creative. One can sing and dance. Or one can create an environment in which singers and dancers flourish.

Warren G. Bennis

Chapter Four

Development and validation of a high performance work system for creativity scale

4.1 Introduction

This chapter describes the methodology I used to develop and validate an HPWS for creativity scale. It consists of two parts. First, I developed a theoretical framework, which informs the configuration of a new scale. Building on the notion that HPWS should be designed for a 'specific objective' (Bowen & Ostroff, 2004; Chadwick, 2010), I used Amabile's (1983, 1996) componential model of creativity as a theoretical basis for the configuration of the HPWS for creativity. Second, I conducted two studies to develop and validate an HPWS for creativity scale. Study 1 focuses on generating an initial pool of items for scale development while Study 2 demonstrates reliability and validity of the newly developed scale.

4.2 Objective-specific HPWS

There are two key points embedded in universalistic, contingency and configurational perspectives discussed earlier in the second chapter. First, the emphasis is on a pattern. Practices are not always completely independent: there are underlying patterns to why the practices are used and how they operate. Second, there is an idea of planned activities - human resource practices are intended to work together to achieve a common goal. However, Becker and Huselid (2006) argued that a limited number of strategic contingencies (positioning strategies, Porter, 1998) define the number of potential architectures, and thus, both contingency and configurational approaches are all largely variations of "the best practices" perspective. This notion of strategy fit clearly limits "the uniqueness of HR architectures across firms, makes them

easier to imitate, and reduces their value as sources of sustainable competitive advantage" (Becker & Huselid, 2006, p. 901). Therefore, they called for increasing levels of focus and differentiation in HPWS architecture in order for HPWS to be a source of competitive advantage.

Similarly, Bowen and Ostroff (2004) noted that an HRM system must be objective-specific to have the best effect on organisational performance. With this in mind, Chadwick (2010, p. 89) further suggested that "it's impossible to configure systems to simultaneously maximise a wide variety of performance measures". Responding to this orientation in the SHRM literature, researchers have not only adopted a configurational approach to conceptualise HPWS, but have also developed HPWS with an objective-specific focus (Liao et al., 2009; Zacharatos et al., 2005). Drawing on aforementioned HPWS differentiation views and previous studies on objective-specific HPWS, I posit that HPWS for creativity should be anchored around a specific organisational objective and strategically important behaviour - creativity - and that practices within such system should supplement each other to create synergistic effects. If organisations seek to develop a unique capability which is hard to copy and imitate (HPWS for creativity) then instead of adopting "the best practices" or HPWS for generic strategies approach, they should design and implement an HPWS which would differentiate an organisation from its competitors.

Building on this emergent objective specific stream of HPWS research and given the growing importance of creativity and innovation in creating and sustaining competitive advantage, this study developed and validated an HPWS for creativity scale.

4.3 A componential model of creativity and HPWS

The first step in developing an HPWS for creativity is deciding on the dimensions that should comprise such a system, a challenging undertaking given the

lack of consensus on what practices are included in general HPWSs (Combs et al., 2006; Lepak et al., 2006). Combs and colleagues (2006) found 22 HR practices that researchers described as HPWPs. Of these practices, those mentioned in more than five studies included incentive compensation, training, compensation level, participation, selectivity, internal promotion, HR planning, flexible work, performance appraisal, grievance procedures, teams, information sharing, and employment security. Recently, Posthuma, Campion, Masimova, and Campion (2013) developed a taxonomy of HPWPs which comprises eight categories: compensation and benefits, job and work design, training and development, recruiting and selection, employee relations, communication, performance management and appraisal, and promotions. Based on practice centrality (overall frequency) in the HPWS literature, Posthuma and colleagues (2013) identified core (most central), broad, and peripheral practices that comprise each of these categories.

The present study draws on Posthuma and colleagues' (2013) taxonomy. However, it should be noted that when developing objective-specific systems, researchers tend to go beyond these traditional domains and include practices that are specific to the desired outcome. For instance, Liao and colleagues (2009) included service quality context-specific practices such as internal service and service discretion. In their HPWS for safety, Zacharatos and colleagues (2005) included employment security and compensation contingent on safe performance. Given the near impossibility of designing a system that maximizes a variety of performance indicators (Chadwick, 2010; Guest & Conway, 2011; Jiang, Lepak, Han, et al., 2012), it is logical that if organisations want to promote creativity, HPWS dimensions should be configured in such a way as to maximise its effects on creativity. Many scholars and practitioners have suggested that motivating creative performance is fundamentally different from motivating routine performance (e.g., Amabile, 1996).

Amabile's (1996) componential model discussed earlier in Chapter 2 underpins my efforts at developing an HPWS for creativity. Specifically, I tailored the HPWS components to reflect domain-relevant skills, creativity-relevant processes/skills, and intrinsic motivation – essentials for individual creativity. Since these elements behave in a multiplicative fashion (Hennessey & Amabile, 1998, 2010), human resource practices associated with one component (e.g., creativity-relevant processes) is not believed to be effective without human resource practices related to other components (e.g., domain-relevant skills and intrinsic motivation). Accordingly, I defined HPWS for creativity as a system of domain-relevant skills enhancing, creativity-relevant processes enhancing, and intrinsic motivation-enhancing practices that aims developing employee creative competencies.

Figure 3 below depicts the constituent HRM domains and how they are tailored to each component in Amabile's model. I included selective hiring, training, performance appraisal and rewards practices as they can directly influence creativity-relevant and domain-relevant skills and to some extent intrinsic motivation. I also included employee participation, communication and job autonomy practices as they can directly influence intrinsic motivation as well domain relevant skills. Symbol X represents practices that should be explored inductively as this study is the first study to develop an HPWS for creativity.

Next, I explain how practices under each domain should be tailored to creativity to achieve internal fit.

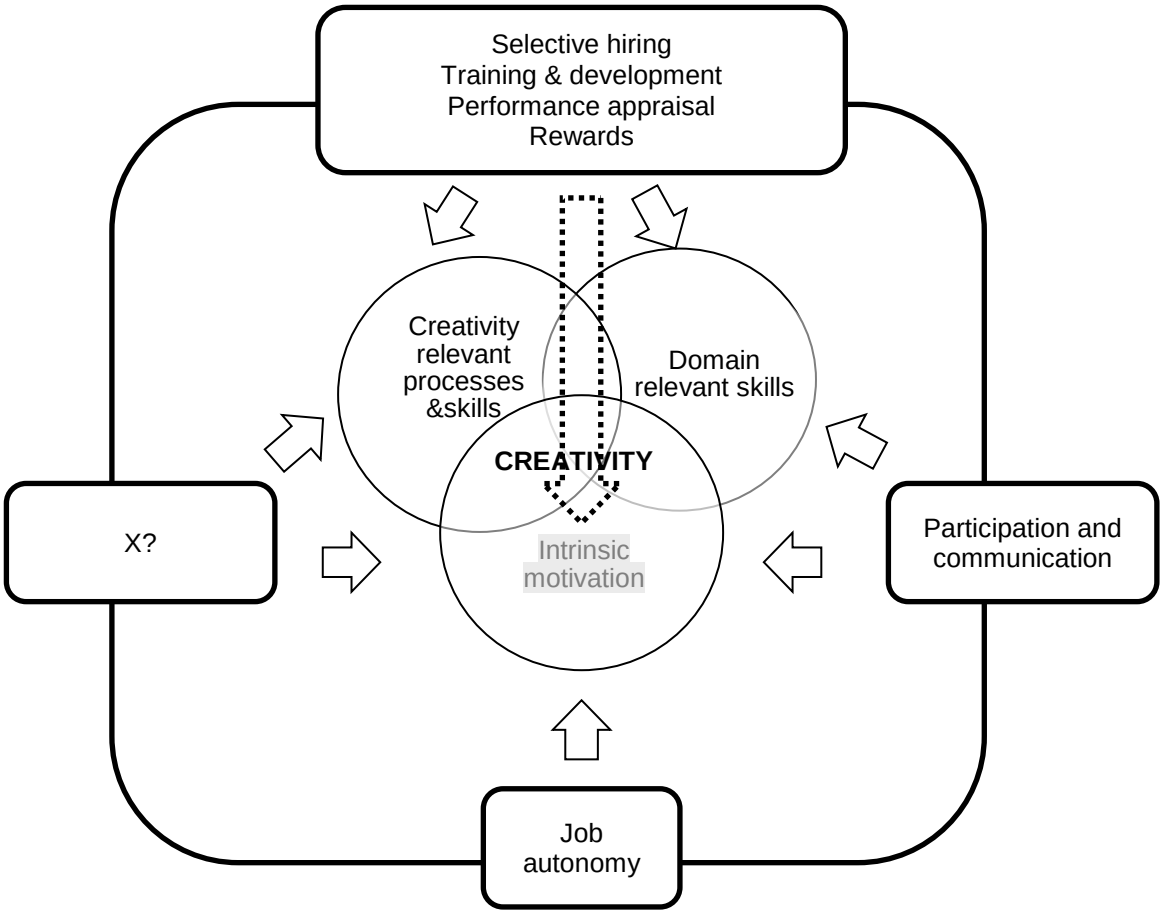

Figure 3: Components of a high performance work system for creativity.

4.3.1 Selective hiring

Employee hiring practices include practices that deal with recruiting applicants and choosing whom to employ (Posthuma et al., 2013). Selection practices cultivate the collective human capital among employees (Pérez-Luño, Cabello Medina, Carmona Lavado, & Cuevas Rodríguez, 2011; Takeuchi et al., 2007; Yang & Lin, 2009; Youndt & Snell, 2004) and are important because they can be tailored to promote all three elements necessary for creativity. Through selective hiring, companies will attract individuals who have domain-relevant skills such as knowledge and experience, as well as are good in creativity-relevant processes: are open-minded, able to think, and solve problems creatively. However, because intrinsic motivation will determine whether individuals use their skills to generate new ideas, recruitment should also

focus on hiring individuals who are motivated by the job tasks. This is because such employees will be motivated to discover problems and generate new solutions as well as look for new ways to improve the status quo. On the other hand, intrinsic motivation is strongly affected by environment and therefore, even if selective hiring practices are designed to promote intrinsic motivation these practices in isolation will not be effective if other HRM initiatives are not designed around the same objective. Recently, Hunter and colleagues (2012) emphasised the importance of selection practices for creativity in order to achieve innovation. They suggested that if organisations want to hire employees with creative potential candidates should be selected based on domain and broad knowledge, domain-specific skills, creative process skills, motivation and abilities such as (e.g. intelligence, divergent thinking). The preceding discussion suggests that selective hiring for creativity is an important component of an HPWS for creativity.

4.3.2 Training

The training component of HPWS includes practices that are related to enhancing skills and competencies necessary in employees' present or future jobs (Posthuma et al., 2013). Similar to selective hiring, training practices can be tailored to enhance both domain- and creativity-relevant skills. As components in Amabile's model are multiplicative, it is expected that training interventions should be designed to enhance both domain and creativity skills as one component will not be effective without the other. I argue that in a service delivery context, employees will not benefit from creativity training alone without receiving training in sales or customer service skills. This is because domain knowledge is necessary for generating new ideas. Grounded in self-determination theory (Ryan & Deci, 2000), I argue that employee training interventions can also contribute to creativity by enhancing an employees' feeling of competence, which, in turn, leads to enhanced intrinsic motivation.

Furthermore, developing job-knowledge and idea generation skills should enable employees to find new approaches to routine tasks, which most likely will enable employees to enhance customer experience, as well as make work more fun, interesting and engaging. Numerous studies have examined the relationships between general training and creativity training interventions and creativity. Shipton and colleagues (2006) in their longitudinal study revealed that training and induction predicted innovation in 22 UK manufacturing companies. Walsworth and Verma (2007) found that training was positively associated with creativity and innovation. Two recent meta-analyses reported creativity training to be related to creativity (Ma, 2006; Scott et al., 2004). Drawing on Amabile's model and empirical findings associated with training, I include training for creativity as an important dimension of the new HPWS measure.

4.3.3 Performance appraisal

Performance management is a set of activities that defines, measures, motivates, and develops the desired performance of employees (DeNisi & Pritchard, 2006; Kinicki, Jacobson, Peterson, & Prussia, 2013). Performance appraisal practices have been most often included under performance management category in HPWS measures (Posthuma et al., 2013). "Performance appraisal is a discrete, formal, organisationally sanctioned event, usually not occurring more frequently than once or twice a year, which has clearly stated performance dimensions and/or criteria that are used in the evaluation process" (DeNisi & Pritchard, 2006, p. 254). It is necessary to have performance appraisal practices included in HPWS for creativity as it signals to employees that creative behaviours are evaluated and are associated with high performance. Feedback on overall performance is helpful for measuring where an employee stands, while feedback in specific areas is beneficial for the employee who is aiming to improve performance (Pritchard, Holling, Lammers, & Clark, 2002). It is therefore important for performance appraisal to comprise feedback on both job and creativity-specific competencies.

Only a few studies have investigated how performance appraisal affects creativity. For instance, Shipton and colleagues (2006) reported that performance appraisal predicted innovation in 22 UK manufacturing companies. Research has also showed that developmental evaluation had positive effects on creativity (Shalley, 1995; Zhou & Oldham, 2001). Therefore, performance appraisal constitutes a creativity-enhancing human resource practice that comprises the elements of developmental feedback, as well as appraising job specific and creativity competencies.

4.3.4 Rewards

The rewards component of HPWS comprises direct and indirect rewards, and payments employees receive from their organisations (Posthuma et al., 2013). The purpose of rewards is to reinforce certain behaviours (Wright et al., 1994) and therefore it is critical that organisations have their compensation and benefits tailored to desired outcomes which, in the context of this study, are creative behaviours. Therefore, reward practices are an essential component of an HPWS because through rewards, creative behaviours are reinforced. In fact, Byron and Khananchi (2012) meta-analysis study revealed that creativity-contingent, but not performance-contingent rewards increased creativity.

Not only tangible rewards for creativity, but also intangible rewards can be effective. Yoon, Choi, Lee, and Kim (2009) found that intangible rewards positively associated with intrinsic motivation in a sample of financial planners of Korean insurance companies. Intangible rewards include social approval, verbal praises, appreciation, respect, and acknowledgement offered by peers or the management (Peterson & Luthans, 2006). Intangible rewards are perceived as less controlling and providing supportive and informative evaluation that may enhance intrinsic motivation conducive to creativity (Deci & Ryan, 1985). Therefore, it is also necessary to consider

recognition for creativity as an important aspect of the rewards component of an HPWS for creativity scale.

4.3.5 Employee participation and communication

The employee participation and communication component includes those practices that deal with the ways information is exchanged in an organisation (Posthuma et al., 2013). Not only have these practices been found to benefit organisational performance (Gibson, Porath, Benson, & Lawler, 2007; Gittell, Seidner, & Wimbush, 2010), but also to positively relate to creativity climate (Dundon et al., 2009).

To facilitate creative performance, employees should be informed about the goals and strategy of an organisation. If a company has practices in place to communicate organisational mission, vision, values as well as short and long-term objectives, it will enable employees to think about ideas and offer suggestions that may help to implement the organisation's strategy. The underlying idea about communication practices is that financial and strategic information is shared with employees, which ultimately, increases employees' job-related knowledge such as knowing an organisation's key competitors, core resources and competences, values as well as financial objectives (revenue, costs, profit, and etc). On the other hand, employee involvement practices ensure that employees are able to communicate their ideas about how an organisation's objectives can be achieved. Involvement and communication practices enable employees to think about the bigger picture and understand better how their job contributes to the organisation's goal attainment. Furthermore, having information exchange mechanisms will enhance employee job-related knowledge and also will encourage employees to use their domain-relevant and creativity-relevant skills to suggest improvements and generate new ideas. In sum, employee communication and involvement is an important component of an HPWS for

creativity. This is because strategic and financial information sharing will help to focus employee creative efforts to implement company strategy and employee involvement mechanisms will provide opportunities to communicate ideas back to top management.

4.3.6 Job design

The job design component incorporates practices that deal with the specific elements of jobs, relationships between jobs, and organisational structure (Posthuma et al., 2013).

It is only in recent times that aspects of job design have been included in HPWS measures as an opportunity enhancing bundle, which provides employees with a facilitative work environment that enables them to use their competencies (Ehrnrooth & Björkman; Jiang, Lepak, Han, et al., 2012). Job autonomy - one of the aspects of job design - has been emphasised in the creativity literature as an essential characteristic of an environment conducive to creativity (Amabile, 1996; Shalley et al., 2004). It is reasonable to expect that autonomy-enhancing practices such as designing jobs where employees can have freedom to decide how to organise their work will encourage employees to find solutions to work-related problems. In this way, employees create new ways of performing everyday activities resulting in increased levels of intrinsic motivation. Also, if employees are allowed to make decisions they will be encouraged to take responsibility for those decisions resulting in a greater effort to generate the best solution which eventually will lead to enhanced creativity. Indeed, previous studies have consistently documented a positive effect of autonomy on creativity (e.g., Amabile et al., 1996; Wang & Cheng, 2010). Beugelsdijk (2008) reported task autonomy and flexible working hours to relate to radical innovations in a sample of Dutch firms. Taken together, HRM practices that are designed to increase the level of autonomy should constitute an important component of an HPWS for creativity scale.

The proceeding discussion suggests selective hiring, training, performance appraisal, rewards, communication & participation, and job autonomy as important components of an HPWS for creativity because they potentially can influence domain-relevant, creativity-relevant skills and processes as well as intrinsic motivation. However, as HRM practices are specific to employee' groups (Lepak & Snell, 2002; Liao et al., 2009), it is necessary to ascertain how these practices can be customised for creativity in service delivery jobs as well as what other HRM initiatives organisations may use to facilitate creativity. For this purpose, I conducted a qualitative study which is presented next.

4.4 Study 1: Inductive approach to development of an HPWS for creativity scale

The purpose of this qualitative study was two-fold. First, to ascertain what practices organisations employ under selective hiring, job autonomy, employee participation and communication, performance appraisal, rewards, and training in order to develop an internal capability to promote creativity. Second, to identify human resource practices not yet been presented in the literature but which organisations may use to foster creativity in a service delivery context. Thus, while the first objective sought to ascertain practices related to each of the domains the second objective was more exploratory, inductively identifying human resource practices and initiatives that can be included in an HPWS for creativity.

4.4.1 Procedure and research participants

In September 2010, using a combination of my network and a cold emailing strategy, I contacted 30 managers asking them to participate in an interview about

human resource management practices in their organisation. Twenty-one managers including 16 HR managers, four sales/commercial directors, and one project manager agreed to participate. Five of the participants were male and 16 were female. The managers were employed in diverse sectors such as business services, retail, wholesale, finance, construction, pharmaceutical, IT and telecommunication. Interviews took place in the interviewees' offices during October - November 2010. The duration of each interview ranged from 40 minutes to 87 minutes with a mean duration of 66 minutes. Details about participants are provided in Table 3. After obtaining participant consent, all interviews were manually recorded (King & Horrocks, 2010). Interview notes were sent back to the participants to assure the accuracy of the content. The interviewees confirmed the content and provided minor corrections.

Table 3: Study 1 interview participants

Code	Job title	Industry	Male/ Female	Interview duration (min)
HR1	HR manager	Investments and real estate	Female	64
HR2	Training manager	Food Retail	Female	64
HR3	HR manager	Laser technologies	Female	87
HR4	HR manager	Clothing retailer	Female	55
HR5	HR director	IT wholesale	Male	78
HR6	HR manager	Construction & Building	Female	62
HR7	HR manager	Automotive dealership	Female	45
HR8	HR director	Insurance	Female	75
HR9	HR partner	Finance	Female	40
HR10	Office manager	IT solutions	Female	70
HR11	HR manager	IT solutions	Female	75
HR12	HR manager	Pharmaceutical	Female	50
HR13	HR manager	Biotechnologies	Female	85
HR14	Personnel manager	Advertising	Female	62
HR15	HR director	Wholesale	Female	68
HR16	HR director	Business consulting	Female	53
SD1	Head of sales department	Insurance	Female	65
SD2	Sales director	Laser technologies	Male	65
SD3	Regional sales director	Telecommunication	Male	70
SD4	Commercial director	Construction& Building	Male	62
PM	Project manager	Public relations	Male	82

In developing a protocol for the semi-structured interviews, I took as a starting point, six HPWS domains. These were selective hiring, job autonomy, employee

participation and communication, performance appraisals, rewards, and employee training.

I prefaced the interview by asking a more general question related to the extent to which creativity was important for their industry and company. I also asked the interviewees to provide examples of how and why creativity is important for customer contact employees. Next, I asked them to give examples of practices and initiatives they use for this specific employee group. For instance, I asked managers to describe in more detail how they select, train, appraise and reward customer contact employees; how information is shared with employees and to what extent customer contact employees' jobs are autonomous. Then I asked whether there are any HR practices to promote creativity. If organisations did not have any formal initiatives, respondents were asked to think about the practices that could be useful in promoting creativity in service delivery. The interview protocol is reported in Appendix B.

4.4.2 Translation procedure

Following Patton's (1990) recommendation that researcher and participants should share the same language, all interviews were conducted in Lithuanian. Although there is no clear consensus in the literature about whether the researcher should or should not engage in data translation (Temple & Young, 2004), the richer understanding of the interview context and of the HRM and sales jargon used in both languages meant that I had to transcribe the interview data. Transcribed interviews were sent back to interviewees to ensure that the language was captured correctly. To better capture the essence of the quotes in its original language, I provided a literal translation and only some quotes were edited in order to ensure their understanding was not compromised (see Appendix C).

4.4.3 Data coding process

I analysed the interview data following a template approach (King, 2004). Template analysis is a flexible set of techniques which can be used across various epistemological positions, allowing the researcher to tailor it to better fit the research purpose. Template analysis allows imposing an initial structure on data analysis by using a priori codes, but at the same time the template development is iterative, thus allowing for flexibility throughout the data analysis (Dick, 2006; King, 2004).

My first template comprised six broad first-order codes reflecting the HPWS domains described earlier. These included selective hiring, employee participation and communication, job autonomy, performance appraisal, rewards, and employee training. For each first-order codes of selective hiring, performance appraisal, rewards and training, I identified two second-order sub-codes, based on my initial theorising. These were domain-skills enhancing and creativity-skills enhancing practices. For the job autonomy theme and based on prior research (Liao et al., 2009; Sun et al., 2007), three second-order themes were identified, autonomy to organise the job, autonomy to make decisions, and autonomy to solve problems. For the employee communication domain, two second-order themes were generated a priori based on Dundon and colleagues (2009), which included sharing financial and strategic information.

The final template served as the basis for the generation of items for the new scale. Following King, Carroll, Newton and Dornan (2002), codes were specified not only for the themes found in the majority of all transcripts but also for those that were prominent in only a few of them. The final template is presented in Table 4.

I am aware that having pre-specified themes before data analysis can lead to the higher risk of researchers' bias. However, first, the nature of a template analysis approach, allows using the pre-specified themes. Indeed, the first objective of content analysis was to look whether the data confirms initial themes (Dick, 2006). Yet, template analysis allows combining both deductive and inductive content analysis.

Deductive approach refers to looking for the pre-specified categories in the data, whereas inductive approach refers to defining categories from the data (Elo & Kyngas, 2007). Using template analysis helps to minimize researcher's bias, because the essence of template analysis is that initial themes are not rigid, but must instead always be held open to modification or even deletion as the researcher reads and interprets the transcripts (King, 2004). Given, that the purpose of the interviews was exploratory and template analysis allowed modified the themes, my initial template evolved and was subjected to a number of changes: not only additional 3rd order subthemes were identified, but a totally new "playfulness at work" category emerged.

Second, it is important to note, that qualitative researchers suggest content analysis being subjective by its nature and some even argue that because of multiple interpretations validation among co-researchers, experts and participants is questionable (Sandelowski, 1993, 1998). Other authors suggest using the dialogue between researchers as a form of confirmation rather verification (Woods & Catanzaro, 1988). To check the way the data was sorted and labelled, I have discussed with two academics in HRM and Organisational Behaviour field about the categories and quotes under each label. After the discussion a few corrections were made. In addition, researchers suggest that participants' recognition of the findings is also a way to improve credibility (Graneheim & Lundman, 2003). Following this suggestion, I have also informally shared with five interviewees the categories and the quotes as reported in appendix C p.225. Interviewees confirmed the template.

Table 4: Study 1 data coding template

First-order themes	Second-order themes	Third-order themes
Selective hiring	Recruitment for domain skills	Experience & knowledge in sales
		Technical knowledge
	Recruitment for creativity	Creative thinking skills
		Learning orientation
Job autonomy	Autonomy to organise job tasks	
	Autonomy in decision making	
	Autonomy to solve problems	
Communication	Financial information	
	Strategic information	
Employee participation	Initiatives for sales people input	
	Participation in decisions	
	Mechanisms to suggest improvements	
	Brainstorming	
Performance appraisals	Appraisal for domain competencies	Development oriented appraisal
		Results oriented appraisal
	Appraisal for creativity	Development feedback for ideas
Rewards	Rewards for achievement in domain	Rewards for individual achievement
		Rewards for group achievement
	Rewards for creativity	Recognition for creativity
		Monetary rewards for creativity
		Non-monetary rewards for creativity
Employee training	Training related to domain skills	Training in sales skills
		Training in generic skills
	Training related to creativity	Non-work related training
		Creativity in induction training
		Training in problem solving

		Training in creative thinking
Playfulness at work	Playfulness training at work	
	Informal office environment	Relaxing environment
		Space for social interaction
	Playfulness initiatives	
	Time & space for non-work activities	

4.4.4 Interview findings: scale item generation

As can be seen in Table 4, the interview data confirmed the a priori template format such that selective hiring, job autonomy, employee participation and communication, performance appraisal, rewards, and training dimensions emerged as broader domains of human resource practices.

In addition, third-order codes were identified. For instance, under pre-specified training for creativity code, four third-order codes were identified representing human resource practices and initiatives organisations employ to train for creativity. These include a creativity component in induction training, training in problem solving, training in creative thinking (divergent thinking, creativity techniques), non-work related workshops (e.g. support for workshops in various non-work related topics). Under rewards for creativity code, I identified three third-order codes: recognition for creativity, monetary rewards for creativity, and non-monetary rewards for creativity.

Given the exploratory focus of this study, a new domain was also identified: playfulness at work emerged as a new set of HR practices for promoting creativity at work with four second-order codes. These were playfulness training at work, informal office environment, initiatives to promote play and fun at work, and time and space to engage in non-work related activities.

The template presented in Table 4 served as a basis for generating an initial pool of items. Specifically, based on second- and third-order codes in the template and the HPWS literature, an extensive list of items was generated. Next, I present the pool of items generated under each domain, which comprises item generation from the interview findings and literature review on the previous HPWS scales. Drawing on Kehoe and Wright (2013) and because I was measuring perceptions of branch HPWS, I retained the group level reference, for instance, *"Employees in my unit receive creativity training."*

Selective hiring

Based on the interview data, three items were generated for selective hiring practices. These include: *"In our unit, recruitment emphasises traits and abilities required for creativity", "In our unit, recruitment emphasises job-specific traits and abilities" and "Our unit places priority on candidates' potential to learn". I also added "Our unit selects the best all-around candidates"* – an item based on Chung & Liao's (2010) work in order for respondents to provide a general assessment of the importance their organisation attaches to selecting talented employees.

Rewards

Three items under rewards domain were generated based on the interview findings. These are "*Employees in our unit are recognised with non-monetary rewards for creative ideas*", "*Employees in our unit are recognised with monetary rewards for creative ideas*", and "*Employees in our unit are recognised and rewarded for creative ideas*".

In addition, four items were added based on the existing literature (Dundon et al., 2009), which were confirmed during interviews: "*Employees in our unit receive compensation partially contingent on individual merit or performance", "Employees in our unit receive compensation partially contingent on group performance",*

"*Employees in our unit are paid primarily on the basis of a skill or knowledge-based pay system" and* "*Employees in our unit are paid a premium wage in order to attract and retain them".*

Performance appraisal

Three performance appraisal items that emerged from the interview findings are *"Employees in our unit receive developmental performance appraisal", "Performance appraisal in our unit is very much focused on the achievement of results", and "Employees in our unit receive developmental feedback for their creative ideas".*

Job autonomy

The a priori job autonomy items were confirmed in the interviews resulting in three items adopted from Liao and colleagues' (2009) scale. These items include: *"Employees in our unit have lots of opportunity to decide how to do their work", "If a problem emerges, employees in our unit can take action to remedy it", and "Employees in our unit have little opportunity to use their own judgment when doing their work"* (reverse-coded).

Employee participation and communication

Four second-order employee participation sub-themes were identified based on the interview data. These were *initiatives for employees' input*, *participation in decisions*, *mechanisms to suggest improvements*, *brainstorming practices,* yielding one item per each theme. These items include: *"There are programs in our unit designed to elicit participation and employees' input", "Employees are often asked by their supervisor to participate in decisions", "There are mechanisms to encourage employees to suggest improvements in the way things are done" and "Employees often use brainstorming technique in our unit". Two items – "In our unit, employees are*

allowed to make decisions" and "Managers keep open communications with employees in our department." were adopted from Sun and colleagues (2007). One item: "*It is easy for people in our unit to communicate their thoughts to management"* was adopted from Liao and colleagues (2009).

Two communication items were based on second-order themes as pre-specified and were adopted from Dundon and colleagues (2009) scale. These are *"Employees in our unit are provided with relevant strategic information"* and *"Employees in our unit are provided with relevant financial performance information".*

Training practices

Based on third-order sub-themes in training for domain-relevant skills, two items were generated: *"Employees in our unit receive extensive training in job specific skills" and "Employees in our unit receive training in generic skills that are not necessarily related directly to their job".* In addition, one item was adopted from Dundon and colleagues (2009) scale: *"Employees in our unit are trained in a variety of jobs or skills".* Based on third-order sub-themes under training for creativity, four items were generated: "*Our unit supports learning/training that is not work related* (*e.g. hobbies)", "Creativity is emphasised in induction training", "Employees in our unit receive training in problem solving", and "Employees in our unit receive training in creativity".*

Playfulness at work

Playfulness at work emerged as a new domain of HR initiatives. Interview data yielded four second-order themes: *playfulness training*, *informal office environment, playfulness initiatives*, and *time and space for non-work activities*. Based on these themes, five playfulness items were generated. One item resulted from playfulness training theme, which was *"Employees in our unit receive training in how to have fun at work/ play at work";* two items were generated from informal office environment theme:

"Our office is designed with the purpose of creating a relaxed and informal atmosphere"; and *"Our office is designed in a way that encourages social interaction between colleagues"*; one item was produced from playfulness initiatives: *"Managers in our unit introduce initiatives to promote fun at work"*; the time and space for non-work activities theme generated one item: "*Our unit provides employees with time to engage in non-work related activities".*

Overall, this process resulted in an initial pool of 38 items comprising the HPWS dimensions of: selective hiring, job autonomy, employee communication & participation, performance appraisal, rewards, training, and playfulness at work. All items are presented in Table 5.

Table 5: The initial set of items with preliminary dimensions of the HPWS for creativity scale

Selective hiring

HRR1 Our unit selects the best all-around candidates when recruiting.

HRR2 In our unit, recruitment emphasises traits and abilities required for creativity.

HRR3 In our unit, recruitment emphasises job specific traits and abilities.

HRR4 Our unit places priority on candidates' potential to learn.

Job autonomy

HRJD1 Employees in our unit have lots of opportunity to decide how to do their work.

HRJD2 If a problem emerges, employees in our unit can take action to remedy it.

HRJD3 Employees have little opportunity to use their own judgment when doing their work.

Employee participation and communication

HRIP1 There are programs designed to elicit participation and employees input.

HRIP2 Employees are provided with relevant financial performance information.

HRIP3 Employees in our unit are provided with relevant strategic information.

HRIP4 Employees are often asked by their supervisor to participate in the decisions.

HRIP5 Employees often use brainstorming technique in our unit.

HRIP6 In our unit employees are allowed to make decisions.

HRIP7 There are mechanisms to encourage employees to suggest improvements in the way things are done.

HRIP8 Managers keep open communications with employees in our department.

HRIP9 It is easy for people in our unit to communicate their thoughts to management.

Performance appraisal

HRPM1 Employees in our unit receive developmental performance appraisal.

HRPM2 Performance appraisal is very much focused on the achievement of the results.

HRPM3 Employees in our unit receive developmental feedback for their creative ideas.

Rewards

HREV4 Employees are rewarded and recognised for creative ideas.

HREV5 Employees receive monetary rewards for creative ideas.

HREV6 Employees receive with non-monetary rewards for creative ideas.

HREV7 Employees receive compensation partially contingent on individual performance.

HREV8 Employees receive compensation partially contingent on group performance.

HREV9 Employees are paid primarily on the basis of a skill or knowledge-based pay system.

HREV10 Employees are paid a premium wage in order to attract and retain them.

Employee Training

HRT1 Employees are trained in a variety of jobs or skills.

HRT2 Employees receive extensive training in job specific skills.

HRT3 Employees receive training in generic skills that are not necessary related to their job (e.g. emotional intelligence, intercultural communication, negotiation skills).

HRT4 Our unit supports learning/training that is not work related e.g. hobbies, self-actualisation workshops and etc.)

HRT5 Creativity is emphasised in induction training.

HRT6 Employees receive training in problem solving.

HRT7 Employees receive training in creativity (e.g. creative problem solving, divergent thinking).

Playfulness at work

HRPW1 Employees receive training in how to have fun at work/ play at work.

HRPW2 Our office is designed with the purpose of creating a relaxed and informal atmosphere.

HRPW3 Our unit provides employees with time to engage in non-work related activities.

HRPW4 Managers in our unit introduce initiatives to promote fun at work.

HRPW5 Our office is designed in a way that it encourages social interaction between colleagues.

4.4.5 Content validity

Content validity refers to the appropriateness with which a measure assesses the domain of interest (Hinkin, 1995). The initial pool of 38 items was subjected to an assessment of content validity. Following Nunally's (1978) recommendations (see also Sanchez, Kraus, White, & Williams, 1999), six doctoral researchers from the Work & Organisational Psychology Group at Aston University were asked to judge the content of each item and assign each item to one of the seven dimensions of an HPWS for creativity measure if the item matched one. The 38 items were listed in random order and descriptions of each of the seven dimensions of an HPWS for creativity scale selective hiring, job autonomy, employee participation & communication, performance appraisal, rewards, training, and playfulness at work were provided to each respondent. In the space beside each item, judges were instructed to indicate the dimension that he or she believed the item matched, or suggested their own title that described the item. Respondents also were given an option to mark item as "NA" if he or she believed the item does not reflect any of the dimensions and they could not come up with suggested titles either. Thirty one of the initial 38 items were matched with the appropriate description by at least four of the six experts and were therefore retained for further analysis. A cut-off point of 60-70% agreement or more has been suggested for retaining items (Bolino & Turnley, 1999; Carlson, Kacmar, & Williams, 2000; Hinkin & Schriesheim, 1989).

The subsequent steps in the scale development process entail refining a generated list of items and testing the structure and psychometric properties of the new scale (Hinkin, 1995). In order to fulfil these objectives, a pilot study (Study 2) was conducted which I describe in the succeeding section.

4.5 Study 2: An HPWS for creativity scale item refinement and evaluation

The purpose of a scale refinement and evaluation process is to assess scale psychometric properties by examining whether the newly developed measure is reliable (consistent and stable) and valid (measures what it intends to measure). DeVellis (2003, p. 49) suggested that "whereas reliability concerns how much a variable influences a set of items, validity concerns whether the variable is the underlying cause of item covariation". There are different types of reliability and validity and there is no unanimous agreement on the tests and assessment (Hinkin, 1995). The American Psychological Association (1985) proposed several criteria for psychometrically sound measures: internal consistency, content validity, criterion-related validity, convergent and discriminant validity. I followed the procedures suggested by DeVellis (2003) and Hair, Black, Babin, Anderson, and Tatham (2006) as well as previous work by Kinicki and colleagues (2010), Ashill and Jobber (2010), Chuang and Liao (2010) on scale development to assess psychometric properties of the HPWS for creativity measure.

Thus, Study 2 had a two-fold objective. First, I sought to refine the scale items by examining the dimensionality of the scale. Second, following DeVellis's (2003) recommendation, I also sought to evaluate scale psychometric properties and demonstrate initial evidence for internal consistency, convergent, divergent, and predictive validities.

4.5.1 Data collection procedure and sample

In order to refine and test the dimensionality of the new measure, the initial 31 items which were retained based on judges agreement, were piloted in a study with customer contact employees recruited from 16 organisations in Lithuania. In February

2011, the HR Directors who were interviewed in the first study (October-November 2010) were contacted for permission to collect data from customer contact employees and their line managers. Nine of the 21 managers who participated in the interviews, agreed to assist in the data collection process. They subsequently informed customer contact employees and their line managers of the survey and encouraged their participation. A list with employees' emails was obtained from contact managers which allowed me to personalise invitations and send a questionnaire link via an online survey administration tool. In addition, during March 2011, I contacted HR managers and sales directors from 12 other organisations using my personal contacts and a cold calling technique. I asked my contact person from each organisation if they were interested in their customer contact employees' opinion about various HRM initiatives in their organisation. Seven managers agreed to sponsor this project and provided me with email contacts of employees who can be further contacted for this research project.

In April-June 2011, questionnaires with the initial HPWS for creativity scale were made available online. In addition employees were asked to complete the social exchange with the organisation (8 items, Shore, Tetrick, Lynch, & Barksdale, 2006), empowering leadership (12 items, Ahearne, Mathieu, & Rapp, 2005), and positive mood (PANAS, Watson, Clark, & Tellegen, 1988) scales. The link was sent via personalised emails to 362 customer contact employees and their line managers (31) from 16 Lithuanian organisations. At Time 1, 256 of the 362 customer contact employees (70.71%) provided data on the aforementioned measures. This sample size and subject to item ratio of 8:1 were adequate and met the criteria for establishing factor structure of a new scale (Osborne & Costello, 2004). At Time 2, the same respondents were asked to provide data on creative process engagement (11 items, Zhang & Bartol, 2010). I was able to match 120 customer contact employees' reports across the two data collection waves. In addition, 31 managers in Time 2 were asked

to rate their followers' creativity (7 items, Wang & Netemeyer, 2004), and I was able to match these ratings to those of 133 employees who had participated in the first wave.

Three of the participating companies were from the insurance industry (114 employees), three were pharmaceutical companies (58 employees), and four were from the ICT sector (23 employees). Others represented laser technologies (4 employees), medical equipment (5 employees), real estate management (5 employees), construction & building (3 employees), automobile (2 employees), and office equipment (16 employees) companies. Study participants were customer contact employees in various positions whose main role was to deliver service to their business or private clients.

Regarding the demographic composition of the subordinate sample, 69.4 % were female and 30.6% were male; the average age was 34.97 years (*SD* = 9.79), the average organisational tenure was 5.49 years (*SD* = 4.46), and the average tenure in the current position was 4.77 years (*SD* = 4.32). Majority of participants had obtained an undergraduate (61.5%) or master's degree (33.5%) while the rest were high school graduates (4.2%), or PhDs (0.8%).

Regarding the demographic composition of the managerial sample, 44% were female and 49% were male; the average age was 34.41 years (SD = 5.96), the average supervisor-subordinate tenure was 1.24 years with minimum tenure being 1 month and maximum 7 years. Majority of participants had obtained a master's (51.2%) or undergraduate degree (19.5%), while the rest had PhDs (2.4%), or did not provide data on their education (26.9%).

4.5.2 Translation procedure

All questionnaires were administered in Lithuanian but were originally constructed in English. Following Brislin (1986) recommended back translation procedure, a bilingual occupational psychologist who was blind to the objectives of the

survey translated the original English language version into Lithuanian while another bilingual psychologist translated it back into English. These two bilingual occupational psychologists and a native English speaker who was a business psychologist in Aston Business School discussed and resolved discrepancies between the original English language and the translated versions. I then consulted five customer contact employees from different organisations to assure the wording of the items. Based on the feedback obtained, I reworded a few items to ensure clarity.

4.5.3 Item refinement: Exploratory factor analysis procedure

Exploratory factor analysis (EFA) is the most widely used technique in scale development for data reduction or refining constructs (DeVellis, 2003; Hinkin, 1995). There are two extraction methods that have been used by researchers to identify a measurement model structure. These are principal components analysis (PCA) and principal axis factoring (PAF). Although there is no consensus on the use of PAF or PAC, Hinkin (1995) reported that PCA was the most frequently used factoring method in social science research.

PCA yields one or more composite variables that capture much of the information originally contained in a large set of items. PAC is grounded in actual data and derived from actual items (DeVellis, 2003), and seeks to identify all the common and unique variance in a set of variables (Thompson 2004). In contrast, PAF yields one or more composite variables that capture much of the information originally contained in a large set of items. These composites, however, represent hypothetical variables. Hence, PAF has more restrictive assumptions because factors determine how items are answered (DeVellis, 2003) which, may cause some problems in the analyses (Hair et al., 2006).

The purpose of the scale refinement was to ascertain the least number of items that are needed to account for the maximum portion of the variance represented in the

original set of variables (Hair et al., 2006) and PAC extraction method served this purpose better.

When running EFA, in addition to choosing extraction method, researchers also need to decide about the rotation method: oblique or orthogonal. Oblique rotation allows factors to be correlated, whereas orthogonal rotation assumes that factors are uncorrelated. Because human resource practices (components) are assumed to be related to each other (Jiang, Lepak, Han, Hong, Kim, Winkler, 2012), I used rotation OBLIMIN (oblique rotation). I run PCA with oblique rotation on all 31 items that were retained after subject matter experts' exercise.

When running PCA with oblimin rotation, I also requested for the Kaiser-Meyer-Olkin (KMO) value and Bartlett's test of sphericity. The KMO statistic is a measure of sampling adequacy, both overall and for each variable (Cerny & Kaiser, 1977; Kaiser, 1970). Kaiser-Meyer-Olkin (KMO) value was 0.87 (minimum value required is 0.5) indicating that common factors exists within the given items. Bartlett's test of sphericity is a test statistic used to examine the null hypothesis that the variables are uncorrelated in the population (Field, 2009; Hinton, Brownlow, McMurray & Cozens, 2004). Bartlett's test revealed a significant result (x^2 = 3301.799, df = 253, $p \leq .001$), which rejected the null hypothesis.

Although the factor structure was pre-established based on my interview findings and confirmed by method experts, in order to minimise bias in the development of the measurement model, I first run EFA without forcing the number of factors.

The number of retained factors was informed by the Kaiser's Criterion of eigenvalues > 1 (Costello & Osborne, 2005; Hair et al., 2006; Hinkin, 1995). For instance, Costello & Osborne (2005) stated that factors with an eigenvalue greater than one are considered significant, whereas factors with an eigenvalue below one are

considered non-significant. This is because when standardised, each item has a variance = 1, hence when factors start to have variance <1, they are explaining less variance than a single item (Hair et al, 2006).

Items under each factor were retained based on a cut-off point of .35 or higher. The commonly accepted cut-off value is .30 but for a sample of 250, Hair and colleagues (2006) recommended retaining items with a loading of .35 or higher on an intended factor and with lower loading than .30 on any other factor. Items were deleted one at a time based on poor factor loading (less .35 on intended factor), loading on more than one factor or having low commonalities as well as feedback from method experts on items with identical content.

4.5.4 EFA results

The EFA results suggested retaining 23 items loading on seven-factors with each factor having an eigenvalue > 1 and all items loading .35 or higher on intended factors and lower than .30 on any other factor. The factors explained 65.25% of the variance in total, which is accepted in the social sciences (Diekhoff, 1992; Hair et al., 2006; Heck, 1998). The first factor accounted for 29.65% of the total variance, with the subsequent six factors explaining 7.86%, 7.47%, 5.89%, 5.12%, 4.83% and 4.42%, respectively. The results of factor loadings are reported in Table 6.

Overall, eight items were dropped because of lower than .35 loading on intended factor, cross loadings, or identical content. For instance, HRR4 was deleted because it loaded on two different factors and not on the same factor as the selective hiring items. HRIP4 had very similar content with item HRIP6 and although its item loading was. 45, the loading was the smallest in the group hence to achieve scale brevity, this item was deleted. DeVellis (2003) recommends that the ultimate decision to retain or delete items should be based on theory rather than on loading (also see Sun et al., 2007).

The final scale resulted in 23 items loading on seven HPWS dimensions with three to four items per dimension: selective hiring (3), job autonomy (3), participation and communication (4), performance appraisal (3), rewards (3), training (4), and playfulness at work (3). Factor loadings and scale reliabilities are reported in Table 6 and item commonalities in Table 7.

Table 6: Factor loadings for HPWS for creativity items

Items	OBLIMIN Rotated Loadings [a]						
	1	2	3	4	5	6	7
Our unit selects the best all-around candidates when recruiting.	.17	.12	-.00	-.32	**.60**	-.17	-.03
In our unit, recruitment emphasises traits and abilities required for creativity.	.09	-.06	.05	-.06	**.49**	-.31	.06
In our unit, recruitment emphasises job specific traits and abilities.	.00	-.03	-.01	.08	**.89**	.05	.04
Employees have lots of opportunity to decide how to do their work.	.00	.05	**.82**	-.07	-.12	-.07	.01
If a problem emerges, employees can take action to remedy it.	-.20	-.16	**.61**	.26	.28	.10	.20
There are programs designed to elicit participation and employees input.	.28	.05	.24	**-.53**	-.01	-.12	.01
Employees are provided with relevant financial performance information.	-.09	-.16	-.08	**-.79**	.03	-.03	.15
Employees are provided with relevant strategic information.	-.03	-.17	.06	**-.56**	.06	.04	.26
Employees are allowed to make decisions.	.10	-.02	**.80**	-.06	.01	-.03	-.08
There are mechanisms that encourage employees to suggest improvements in the way things are done.	.27	-.03	.28	**-.42**	.20	-.07	-.04
Employees receive developmental performance appraisal.	.05	.06	.02	-.24	-.02	-.14	**.68**
Performance appraisal in our unit is very much focused on the achievement of results.	.13	.08	-.06	-.06	.14	.20	**.73**
Employees receive developmental feedback for their creative ideas	.05	-.09	.18	-.02	-.12	-.31	**.61**
Employees are recognised with monetary rewards for creative ideas.	.04	-.04	.08	-.08	-.02	**-.74**	-.10

Employees are recognised with non-monetary rewards for creative ideas.	.02	-.13	.04	.15	-.01	**-.67**	.26
Employees are paid primarily on the basis of a skill or knowledge-based pay system.	.04	-.00	-.03	-.08	.18	**-.64**	-.06
Employees receive extensive training in job specific skills.	**.71**	-.03	-.04	-.09	.13	-.06	-.02
Employees receive training in generic skills that are not necessary related directly to their job.	**.85**	-.06	.09	.02	.02	.17	.03
Employees receive training in problem solving	**.75**	-.09	-.00	-.02	-.06	-.06	.08
Employees receive training in creativity.	**.70**	-.08	-.09	.22	.01	-.27	.11
Our office is designed with the purpose of creating a relaxed and informal atmosphere.	.00	**-.74**	-.08	-.16	-.05	-.04	.02
Our unit provides employees with time to engage in non-work related activities.	.13	**-.84**	.08	.01	-.09	.08	-.06
Managers in our department introduce initiatives to promote fun at work.	.04	**-.80**	.01	.01	.16	-.11	-.10
Alpha (.89*)	.82	.78	.68	.75	.71	.67	.68
Eigenvalue	6.82	1.81	1.72	1.36	1.18	1.11	1.02
Variance explained (%)	29.65	7.86	7.47	5.89	5.12	4.83	4.42
Cumuliative (%)	29.65	37.51	44.98	50.88	55.99	60.82	65.25

Note: these are PCA results. When running EFA with PAF, results remained identical. N= 256; [a]1- Training; 2- Playfulness at work; 3- Job autonomy; 4- Employee participation and communication; 5- Selective hiring; 6- Rewards; 7- Performance appraisal.

Table 7: Items commonalities	Extraction
Our unit selects the best all-around candidates when recruiting.	.674
In our unit, recruitment emphasises traits and abilities required for creativity.	.536
In our unit, recruitment emphasises job specific traits and abilities.	.781
Employees have lots of opportunity to decide how to do their work.	.679
If a problem emerges, employees can take action to remedy it.	.642
There are programs designed to elicit participation and employees input.	.606
Employees are provided with relevant financial performance information.	.718
Employees are provided with relevant strategic information.	.524
Employees are allowed to make decisions.	.693
There are mechanisms that encourage employees to suggest improvements in the way things are done.	.591
Employees receive developmental performance appraisal.	.666
Performance appraisal in our unit is very much focused on the achievement of results.	.613
Employees receive developmental feedback for their creative ideas	.672
Employees are recognised with monetary rewards for creative ideas.	.627
Employees are recognised with non-monetary rewards for creative ideas.	.642
Employees are paid primarily on the basis of a skill or knowledge-based pay system.	.527
Employees receive extensive training in job specific skills.	.617
Employees receive training in generic skills that are not necessary related directly to their job.	.720
Employees receive training in problem solving.	.666
Employees receive training in creativity.	.698
Our office is designed with the purpose of creating a relaxed and informal atmosphere.	.603
Our unit provides employees with time to engage in non-work related activities.	.752
Managers in our department introduce initiatives to promote fun at work.	.761

4.5.5 Scale reliability

Examining internal consistency is one way of demonstrating reliability properties of a new measure (Hinkin, 1995; Kinicki et al., 2013). Internal consistency reliability is concerned with the homogeneity of the items within a scale and it is typically equated with Cronbach's alpha (1951). As HPWS for creativity is a multidimensional scale with dimensions representing an overarching HPWS construct, items within each dimension as well as dimensions should correlate with each other. Alpha estimates of between .60 and .70 are considered acceptable and higher than .70 are considered good (Hair et al., 2006). With the exception of job autonomy (.68), performance appraisal (.68), and rewards (.67), reliabilities for the HPWS dimensions were above .70 as suggested by Nunnally (1978). As the focus of this study is overarching HPWS construct, the overall scale reliability is of more importance, which is .89 and based on Nunnally and Bernstein (1994) suggested criteria, is considered acceptable. Reliability is an essential requirement for validity (Nunnally, 1978).

4.5.6 Convergent and discriminant validity: Hypotheses development

Convergent validity corresponds to the extent a new scale relates to other measures of theoretically similar constructs (Bryant, King, & Smart, 2007). Discriminant validity represents the extent to which a scale demonstrates low correlations or null correlations with dissimilar measures (Campbell & Fiske, 1959; Hinkin, 1998). The evidence on convergent and discriminant validities helps to ascertain the construct validity of a measure (Carlson & Herdman, 2012). To establish convergent validity of the HPWS for creativity measure, I relied on the measures of theoretically similar constructs such as empowering leadership and social exchange

because these constructs are logically within a nomological network of HPWS for creativity. There is no common agreement on how to test discriminant validity (Hinkin, 1995). For instance, Kinicki and colleagues (2013) used social desirability scale for testing discriminant validity, Liao and Chuang (2004) colleagues used employee demographic characteristics such as age, gender, education and tenure. To test discriminant validity, I have chosen a positive mood scale, because first, research evidence suggest positive mood to be an important variable for the creativity (Amabile, Barsade, Mueller, & Staw, 2005; George & Zhou, 2007) and second, although this is not theoretically similar construct to HPWS, mood can influence the way employees respond to the HPWS scale. I therefore theorised that the relationship between positive mood and HPWS for creativity should be lower in comparison to the relationships between HPWS and theoretically similar constructs such as empowering leadership and social exchange with an organisation.

4.5.6.1 Social exchange with organisation

"Social exchange relationships evolve when employers 'take care of employees', which thereby engenders beneficial consequences" (Cropanzano & Mitchell, 2005, p. 882). In comparison to economic exchange where emphasis is on the financial and more tangible aspects, social exchange entails socio-emotional aspects of the employment relationship (Shore et al., 2006). Underlying social exchange is trust (Blau, 1964) and investment in the relationship (Rousseau, 1995). Also social exchange has a long-term orientation as it entails one party (e.g., employer) making a favour that makes another party (e.g. employee) feel obliged, but these obligations are not specified and left to the discretion of the party that made it (Blau, 1964). When HR practices are interpreted by employees as expressing appreciation, investment, and recognition, employees perceive themselves to be in a social exchange, as opposed to a purely economic, relationship (Shore & Shore,

1995). I draw on this rationale and hypothesise that employees will experience social exchange to the extent that HPWS for creativity is interpreted as expressing appreciation, investment, and recognition.

The attraction–selection–attrition perspective (Schneider, 1987; Schneider, Goldstien, & Smith, 1995) suggests that selective hiring for creativity practices will attract a certain profile of candidates who hold similar values to the organisation. In this way, new employees will perceive from the start of their employment that the organisation appreciates them, values their competencies, and invests in selecting high profile candidates. The aspects of HPWS such as creativity-contingent rewards, performance appraisal, and extensive training signal that an organisation acknowledges employees' contributions, provides employees with promotion opportunities, and encourages employees to develop professionally and personally. Playfulness at work practices make employees perceive the organisation as caring about their psychological states by creating an emotionally positive environment. Employee participation initiatives signal to employees that their opinions and contributions are important to the organisation. Hence, it is reasonable to expect that employees who rate higher on HPWS for creativity will also feel that they are obliged to their organisation, resulting in a stronger sense of social exchange with the employer. While HPWS for creativity and social exchange are distinct conceptually, research has reported a high and positive correlation (r = .54, p < 0.01) between employee-rated HPWS and social exchange with an establishment (Takeuchi et al., 2007). Thus, I hypothesise that: *HPWS for creativity is positively related to social exchange.*

4.5.6.2 Empowering leadership

I also expect the newly developed HPWS for creativity scale to be correlated with empowering leadership (Ahearne et al, 2005). This is because as conceptualized by Ahearne and colleagues (2005) the dimensions of empowering leadership comprising (1) enhancing the meaningfulness of work, (2) fostering participation in

decision making, (3) expressing confidence in high performance, and (4) providing autonomy from bureaucratic constraints are closely related to the content of the HPWS for creativity scale. For instance, the first dimension of empowering leadership - enhancing the meaningfulness of work - shares similar content with communication practices of HPWS: communicating financial and strategic information, which is about providing employees with the bigger picture, the vision and goals of organisation and how these goals relate to one's work. It is also intuitively plausible that the fostering participation in decision making dimension of empowering leadership is related to the employee participation dimension of HPWS, and the providing autonomy from bureaucratic constraints dimension of empowering leadership is related to the job autonomy practices of HPWS. The third dimension of empowering leadership - expressing confidence in high performance is expected to positively relate to the performance appraisal practices of HPWS. Although conceptually HPWS and empowering leadership are different constructs with HPWS measuring human resource practices and empowering leadership measuring leadership behaviours, they do converge in terms of their positive influence on employees. Drawing on the preceding discussion, I hypothesised that:

Empowering leadership will be positively related to employee-perceived HPWS for creativity.

4.5.6.3 Positive mood

To assess discriminant validity of the HPWS for creative measure, I relied on the measure of positive mood as a theoretically dissimilar construct of HPWS for creativity. Watson and colleagues (1988) defined mood state as the tendency of respondents to view themselves and the world around them in generally negative terms (negative affectivity) or the propensity of respondents to view themselves and the world around them in generally positive terms (positive affectivity). Researchers have suggested that those with higher positive affect tend to score higher on positive items than those with higher negative affect (Burke, Brief, & George, 1993).

Consequently, employees experiencing positive mood will report higher ratings of HPWS for creativity. If someone is enthusiastic, joyful and happy, it is plausible that this will influence the way he/she will perceive the environment (Lyubomirsky, King, & Diener, 2005). Accordingly, I hypothesised that: *Perceived HPWS for creativity will be related to positive mood but this relationship will be weaker than the relationship amongst HPWS for creativity and the theoretically similar constructs of social exchange with organisation and empowering leadership.*

4.5.7 Predictive validity: Hypotheses development

Predictive validity is a type of criterion-related validity, which pertains to the relationship between a measure and another independent measure (Hinkin, 1995). Cronbach and Meehl (1955) noted that predictive validity is confirmed when the criterion is obtained sometime after the test of the new measure is given. As HPWS has been developed with an objective-specific focus, it is important to examine whether the HPWS for creativity predicts creative process engagement and creative behaviours.

4.5.7.1 Creative process engagement

Creative process engagement comprises different stages: re-framing the problem, gathering information, and generating solutions. I hypothesised that employees will engage in creative process if they perceive that the environment supports creative problem solving behaviours. Employees should experience that the organisation values a 'think differently' attitude and are also allowed spending time and resources in exploring information from a variety of sources. In order to engage in creative process, employees should have tools and resources to be able to generate alternative solutions. To that end, HR practices such as training for creativity provides employees with tools and techniques necessary for creative process. Information

sharing practices allow employees to re-frame problems for the benefit of organisational goals, which will benefit the initial stage of creativity process. Through playfulness at work practices, employees will feel that they have time and space to exchange information about their challenges, receive different insights to the problems they experience, and exchange ideas with their colleagues. Employee participation practices will invite employees to suggest improvements, which will also signal to them that creative process is a part of their daily work. Accordingly, I hypothesised that: *Employee-perceived HPWS for creativity will predict employee creative process engagement.*

4.5.7.2 Creativity

In addition to creative process engagement, I posit that HPWS for creativity will predict creativity. I argued earlier that HPWS for creativity is designed to influence 3 key elements conducive for creativity: domain-relevant, creativity relevant skills, and intrinsic motivation. Through selective hiring, firms will attract employees who have certain personality traits and innovative thinking style. Creativity training interventions strengthen employees' beliefs about their creative potential, equip employees with idea generation and divergent thinking tools as well as enhance employee awareness about possibilities to use creativity in their job. Feedback for creative ideas, recognition, and rewards contingent on creative output encourages employees to be proactive and make those creative outputs visible to their managers. Thus, I hypothesised that: *Employee-perceived HPWS for creativity will predict employee creativity.*

4.5.8 Measures

4.5.8.1 Time 1 measures

HPWS for creativity was measured with the 31-item version of the scale reported in the preceding section. Respondents indicated the extent to which they perceive their organisation as using these human resource practices in managing customer contact employees. Response options ranged from (1) “strongly disagree” to (6) “strongly agree”.

Social exchange with an organisation was measured with an 8-item scale developed by Shore and colleagues (2006). Sample items include: *“My organisation has made a significant investment in me” and “There is a lot of give and take in my relationship with my organisation”.* Response options ranged from (1) “strongly disagree” to (5) “strongly agree”.

Empowering leadership was measured with a 12-item scale developed by Ahearne and colleagues (2005). Sample items include: *“My manager helps me understand how my job fits into the bigger picture”, “My manager expresses confidence in my ability to perform at a high level”, and “My manager allows me to make important decisions quickly to satisfy customer needs”.* Response options ranged from (1) “strongly disagree” to (5) “strongly agree”.

Positive mood was measured with 10 items that are pure markers of positive mood from the Positive and Negative Affect Scale (Watson et al., 1988). Respondents were asked to indicate on a scale from (1) “not at all’ to (5) “extremely”, the extent to which they felt *enthusiastic, interested, determined, excited, inspired, alert, active, strong, proud, attentive* work during the past week. If used with the reference to short time frames, such as 1-week, PANAS is a valid measure to assess mood states (Watson et al., 1988; Watson, 2000). I used only positive mood of PANAS to balance the brevity of questionnaire.

4.5.8.2 Time 2 measures

Creative process engagement was measured with an 11-item scale developed by Zhang and Bartol (2010) but originally based on Amabile's (1983), and Reiter-Palmon and Illies's (2004) work. Employees rated the extent to which they engage in creative process. Sample items are: "*I think about the problem from multiple perspectives" and "I consider diverse sources of information in generating new idea"*. Respondents answered on a five-point scale ranging from (1) "never" to (5) "frequently".

Creativity was measured with a 7-item creative sales behaviours scale developed by Wang and Netemeyer (2004) and was completed by branch managers. This scale has been previously validated in a Lithuanian context (Martinaityte & Sacramento, 2013). Managers assured that this scale was best suited to their context and that they were well positioned to rate the creativity of their direct reports. Sample items are: This person *"Makes sales presentations in innovative ways"* and *"Comes up with new ideas for satisfying customer needs"*. Respondents answered on a 7-point scale ranging from (1) "strongly disagree" to (7) "strongly agree".

Control variables included gender (1-female; 0-male), age (years), education ("high school education", "undergraduate degree", "postgraduate degree", and "other"), and tenure in the position (years) because they have been found to be associated with creativity (Chen et al., 2013; Gong, Cheung, et al., 2012). I also controlled for leader's time with the follower, measured as the number of years, to take into account possible temporal effects of empowering leadership (Wang & Rode, 2010).

4.5.9 Convergent and discriminant validity: Hypotheses testing

To test the convergent validity hypotheses, I correlated HPWS for creativity (rated by employees) with social exchange (Shore et al., 2006) and empowering leadership (Ahearne et al., 2005). I assessed convergent validity by first looking at the significance and size of specific zero-order correlations. I used Cohen's (1988) criteria

of small, medium, and large correlations to assess the magnitude of significant correlations: correlations less than .29 are small, those greater than .30 but less than .49 are medium, and correlations that exceed .50 are large. Carlson and Herdman (2012) indicated that correlations closer to 1.0 indicate stronger convergent validity.

Results in Table 8 indicate that HPWS for creativity highly correlated with social exchange with organisation (r = .52, p < .05) and with empowering leadership (r = .58, p < .05) supporting the convergent validity hypotheses. As predicted, positive mood had medium, but lower correlation with HPWS for creativity (r = .37, p < .01) than with social exchange (r = .52, p < .01) and empowering leadership (r = .58, p < 0.01) indicating that the newly developed HPWS scale is stronger related to theoretically similar constructs, but weaker related to theoretically dissimilar constructs. These results provide initial support for convergent and discriminant validities of the HPWS for creativity scale.

Following Kinicki and colleagues (2013), I utilised t-tests to compare correlations between theoretically similar and distinct constructs. I used Meng's T-test (Meng, Rosenthal, & Rubin, 1992) with a FZT compotator (available from http://psych.unl.edu/psycrs/statpage/regression.html website). The correlation between HPWS for creativity and empowering leadership was compared to the correlation of HPWS for creativity and positive mood (r = .58, p < .01 vs r = .37, p < .01). T-test results revealed that these correlations were significantly different t (200) = 3.21, p < .01. I also compared the correlation between HPWS for creativity and social exchange with organisation with the correlation of HPWS for creativity and positive mood (r = .52, p < .01 vs r = .37, p < .001). T-test results revealed that these correlations were significantly different t (200) = 2.36, p = .05). In sum, the preceding findings indicate that the HPWS for creativity correlations with theoretically similar constructs such as empowering leadership and social exchange were significantly stronger when

compared to the correlation with a theoretically distinct construct such as positive mood, which provides evidence for convergent and discriminant validity.

In addition to the above, I also tested discriminant validity by assessing the relationship between HPWS for creativity and theoretically unrelated constructs obtained from the same source (employees). There is no theoretical or empirical evidence suggesting a relationship between employees' perception of organisational adoption of HPWS for creativity and their demographic characteristics. Accordingly, as Table 8 shows the correlations between perceived HPWS for creativity and employees' age (r = .04), gender (r = .00), education (r = -.12) and tenure (r = .05) were all non-significant (see Liao & Chuang, 2004 for a similar approach).

To document additional evidence of construct validity, I followed the recommendation to show that a newly developed measure distinguishes between groups which are expected to be different (Cronbach & Meehl, 1955; Hinkin, 1995). I demonstrate that an HPWS for creativity measure is able to distinguish different levels of HPWS for creativity across organisations. I aggregated employees' responses on perceived HPWS for creativity (Study 2) to the organisational level and ran a one-way ANOVA to compare means between organisations. The difference between groups was statistically significant as determined by one-way ANOVA (F (16) = 4.09, p = .000) indicating that the new scale has good discriminant properties.

Table 8: Descriptive statistics, correlations amongst constructs and scale reliabilities

	M	*SD*	1	2	3	4	5	6	7	8	9	10	
1. Gender	1.31	.46											
2. Age	34.97	9.79	-.15*										
3. Education	3.07	.85	.03	-.07									
4. Tenure in the position	4.76	4.32	-.17*	.47**	-.07								
5. Leader's time with follower	1.32	1.53	.011	.00	.21*	.09							
6. Perceived HPWS for creativity	4.03	.58	.00	.12	-.12	.05	.02	(.89)					
7. Empowering leadership	3.75	.52	-.01	.03	-.07	.11	.11	.58**	(.88)				
8. Social exchange	3.41	.54	-.00	.07	-.06	.02	.06	.52**	.58**	(.79)			
9. Creative process engagement	3.77	.54	.06	.03	-.14	.13	-.16	.23*	.21*	.21*	(.85)		
10. Creativity	4.90	1.06	-.08	-.02	.01	-.04	.28**	.22*	.27**	.18*	.07	(.95)	
11. Positive mood	3.60	.61	-.12	.09	-.12	.02	-.08	.37**	36**	44**	.24*	.14	(.84)

Note: creativity – managers' ratings and creative process engagement - self- reports, both at time 2. All other measures time 1. N = 70- 211; * $p < .05$; ** $p < .01$

4.5.10 Predictive validity: Hypotheses testing

I examined zero-order correlations to initially test the effect of HPWS for creativity on creative process engagement and creativity. Table 8 shows that HPWS for creativity rated by employees at T1 was related to creativity (r = .22, p < .05) rated by managers at T2. Similarly, employee rated HPWS for creativity at T1 was significantly related to employee rated creative process engagement at T2 (r = .23, p < .05). These results provide initial support for the predictive validity of the newly developed HPWS for creativity measure.

To provide a more robust estimation of predictive validity, I needed to test whether the influence of HPWS on creativity-related variables holds when accounting for the nested structure of data. Team managers rated more than one subordinate, and thus, I had to account for non-independence of supervisor ratings. In this study, individuals (level 1) were nested in teams (level 2), which were nested in organisations (level 3). Therefore, I tested the hypothesised relationships using hierarchical linear modelling (HLM, Raudenbush & Bryk, 2002). First, I ran null model with creativity as an outcome without including any predictors. The results showed that individual and team factors accounted for respectively, 78% and 22% of the variance in individual creativity. Organisational factors did not account for any variance in individual creativity. These results indicate that it is important to account for team belongingness while testing the HPWS-creativity relationship. The null model for creative process engagement showed that individual factors accounted for 99.9% of the variance and almost no variance was accounted for by organisational or team factors. These results indicate that almost all variance in creative process engagement is explained by individual-level factors. For the purpose of consistency, I used HLM (individuals at level - 1, and teams at level - 2) to test both HPWS-creativity and HPWS-creative process engagement relationships. At the team level, I did not include any variables as the purpose was to test only the main effects of employee-perceived HPWS for

creativity on creative process engagement and creativity while controlling for any possible confounding effects of team level factors. I ran a random coefficient Model 1 with creative process engagement and Model 2 with creativity as outcomes, controlling for gender, age, education, position tenure and supervisor-subordinate tenure at the individual level, and then adding employee HPWS at the individual level. I allowed intercept and slope of HPWS for creativity to vary at random across teams.

Researchers suggested to center variables before running the analysis to reduce multi-collinearity and to aid the interpretation of the findings (Enders & Tofighi, 2007; Hofmann & Gavin, 1998). Gavin and Hofmann (2002) suggested two options for centering Level 1 predictors: grand mean centering (in which individual scores are deviated from the grand mean), and group mean centering (in which individual scores are deviated from their respective group means). Researchers also suggested that there is no statistically correct choice and that the decision should be theoretically informed (Kreft, De Leeuw, & Aiken, 1995). My main purpose was to test whether the hypothesised relationship between level 1 variables holds when controlling for level 2 influences. In this case I was not testing the effects of level 2 predictors. Raudenbush (1989) recommended that if no contextual effect is present at the second level, then grand-mean centering instead of group-mean centering is the best choice. In this case, the intercepts at the first level represent the adjusted means for different groups. Grand mean centering is a widely used option among scholars (Chen et al., 2013; Gong, Kim, et al., 2013).

The results in Table 9 (Model 1) show that employee HPWS for creativity (T1) predicted creative process engagement at Time 2 (γ = .34, p = .01) after accounting for team belongingness. The results of Model 2 suggest that employee HPWS for creativity (T1) predicted creativity at Time 2 (γ = .38, p = .027) after accounting for the influence of team level factors.

Table 9: Hierarchical Linear Modeling results for creative process engagement and individual creativity

Variable	Creative process engagement (Model 1)	Creativity (Model 2)
Intercept	3.72 (.25)	5.09(.31)
Gender	-.02(.18)	-.16(.21)
Age	-.01 (.01)	-.01(.01)
Education	.02 (.10)	-.11(.11)
Tenure employee	.02 (.02)	-.02 (.02)
Leader's time	-.02(.05)	.14(.07)*
Perceived HPWS	.34 (.12)**	.38(.17)*
ΔR^2 within groups	.37	.08
Deviance	86.35	288.04

N=52 for individuals, 24 teams. These are square differences and deviance compared to null model.

In summary, the HLM results suggest that even after accounting for the multilevel structure of the data, the relationship between HPWS for creativity and creativity engagement processes holds. Thus, the new measure of HWPS for creativity predicts what it should theoretically predict.

4.6 Discussion and conclusion

In this chapter, I described the procedures I followed in developing the items for an HPWS for creativity scale and reported the results of psychometric tests that

established initial evidence of construct validity of this scale. The HPWS for creativity scale is a theoretically sound measure as it is anchored in Amabile's componential model of creativity (1983), based on which practices within HPWS enhance domain-relevant skills, creativity-relevant processes, and intrinsic motivation. Informed by the creativity and SHRM literatures, I deductively selected six groups of HPWS for creativity practices, namely selective hiring, job autonomy, employee participation and communication, performance appraisal, rewards, and training. Next, I conducted Study 1 with two objectives in mind. First, to ascertain whether practices that have been presented in the extant HPWS measures can be tailored to enhance creativity and secondly, to explore additional HRM practices that organisations employ to promote creativity. Overall, this process resulted in 38 items tailored to creativity and suggested a new – playfulness at work domain of the HPWS for creativity scale. The initial pool of items was presented to a panel of judges who sorted the items according to the presented 7 dimensions. This exercise resulted in thirty-one items with acceptable content validity which was then used for EFA.

The results of Study 2 supported the construct validity of the new measure. HPWS for creativity scale demonstrated an acceptable level of internal consistency suggesting that the new measure is reliable. EFA results indicated that items loaded on seven factors as expected: selective hiring, job autonomy, employee participation and communication, performance appraisal, rewards, training and playfulness at work, providing evidence of construct validity. The new measure demonstrated stronger correlations with theoretically similar constructs such as empowering leadership and social exchange thereby providing initial evidence of convergent validity. HPWS for creativity demonstrated weaker (positive mood) or not significant correlations (employee demographic characteristics) with theoretically dissimilar constructs, thus providing initial evidence for discriminant validity. Furthermore, as hypothesised, HPWS for creativity predicted the creativity-related outcomes of employee self-ratings of creative process engagement and supervisor ratings of creativity both at Time 2,

thereby providing initial evidence of predictive validity. These results also held when accounting for group level influences. Taken together, these findings demonstrate that the HPWS for creativity scale meets the requirements of a reliable and valid measure.

In the next chapter, I employed the newly developed scale to test hypotheses based on the multilevel model presented in Chapter 3.

Reality is merely an illusion, albeit a very persistent one.

Albert Einstein

Chapter Five

Multilevel model testing: Method, data analysis and results

5.1 Introduction

The primary objective of this chapter is to present results of the multilevel model testing with a secondary objective of further assessing the validity of the newly developed HPWS for creativity scale. The chapter starts with a description of the methodology I used to test the hypotheses previously presented. Specifically, I provide a description of Study 3 including the research setting, sample, data collection procedures, measures of the study variables, and data analysis techniques. Given the multilevel structure of the data, I used hierarchical linear modelling (HLM, Raudenbush, Bryk, & Congdon, 2004), to test the hypotheses.

5.2 Research context

This study was conducted in Lithuania, a member of the European Union. While a big part of European Union countries are experiencing renewed downturn or stagnation, Lithuania's economy is still growing (Zilionis, Gelezeviciene, & Urbanavicius, 2013). In Lithuania service sector is contributing approximately 63% of overall GDP, which in turn highlights the importance of the service sector as well as the effective management of employees in this sector.

Lithuania, with a population of less than 3.5 million, represents a very small market and therefore competition amongst players in the same industry is relatively fierce. Usually, there are two or three big players in the same service industry (telecommunications, banking, insurance, IT and etc.), who compete head to head with each other to increase their market share. Hence, in order for companies to get new customers, it is crucially important that they outperform their competitors by

implementing a service excellence strategy. Therefore, organisations acknowledge the importance of investment in the development of their customer contact employees' knowledge, skills and abilities (KSAs) including creativity.

A 2010 survey of the Lithuanian economy conducted by the Lithuanian Free Market Institute reported increased exports, indicating that organisations consider entry into foreign markets as a strategic option for the survival of the Lithuanian economy (Zukauskas, 2011). Total export of goods and services increased by 12.9 % in 2013 second quarter compared with the same period in 2012 (Zilionis et al., 2013). Entry into a foreign market requires among others, an ability to think creatively and flexibility in adapting to new business environments. The criticality of effective performance of Lithuanian organisations in both their domestic and international markets underscores the importance of human resources and the adoption of human resource practices that not only enhance employee KSAs but also motivate them to engage in organisationally appropriate behaviours.

A Cranet survey revealed that HR responsibility in Lithuania is shared by line management and the HR function (Kazlauskaite & Buciuniene, 2010). Majority of 119 medium and large-sized Lithuanian organisations surveyed have HRM departments and an HR strategy. Furthermore, in about half of these organisations, the HR function is represented on the board and is involved to some extent, in business strategy development. The strategic partnership status enjoyed by the HR function in medium and large-sized Lithuanian organisations makes it necessary to understand not only HR's role in the development, but also in the effective implementation of organisational strategy and ultimately, performance. Lithuania therefore provides an interesting context in which to examine why and how the adoption of HPWS facilitates the development of an internal capability to implement a service excellence strategy.

5.3 Sample and data collection

To test the hypothesised relationships, I collected survey data from customer contact employees and their managers in 53 branches of two international retail companies. One of the companies is in retail banking and the other in cosmetics retailing - both major players in their markets. Although these organisations provide different services, both emphasise creativity and innovation in their company's values.

There is a widely accepted notion that HR practices are not applied uniformly across employee groups (Lepak, Taylor, Tekleab, Marrone, & Cohen, 2007; Wright & Boswell, 2002). I focused on customer contact employees – customer advisors and customer services consultants - as they constitute a core group of employees in service delivery. This is because customer contact employees directly contribute to attainment of a company's strategic objectives such as service excellence. This is in contrast to support employees who do not contribute directly to services but rather assist core employee strategic contributions (Lepak et al., 2007). Researchers suggest that organisations invest more in core-employees (Lepak & Snell, 2002; Lepak et al., 2007) and that HRM practices for this group are more sophisticated (Melian-Gonzalez & Verano-Tacoronte, 2006) in comparison to other employee groups.

It is important to acknowledge that the bank and cosmetics retailer have their industry specifics, but the process of serving customers is indeed the same. In both companies the main task of frontline employees is to serve customers and sell company's products, which requires the same set of skills: extensive product knowledge, customer service and sales skill set. In both companies frontline employees are required not only to advise customers on their articulated questions and needs, but also to upsell and cross-sell. An upsell involves getting customer to buy the same type of product, but more expensive with added features or warranties. In the bank context this would mean convincing a customer to get a credit card in addition to

debit card. In a cosmetics retailer case an example of upsell would be convincing a customer to buy a more expensive face cream. A cross-sell implies getting customer buying more products from other categories: getting customer who came to renew his/her debit card to open a saving account; to sell another cosmetic product (e.g., perfume, toner, cleanser) for customer who came to buy a facial cream. These examples indicate that customer advisors and consultants are involved in the identical customer service process although they sell different products and work for different industries.

In addition, I focused on the branch level instead of the organisation because using smaller organisational units (e.g., single branches) and asking respondents to focus on employees within their unit increases reliability of responses by reducing ambiguity (Collins & Smith, 2006; Lepak et al., 2006; Smith, Collins, & Clark, 2005). Similarly Gerhart, Wright, McMahan, and Snell (2000) emphasised that managers are likely to be more familiar with the HR practices that are being implemented at their establishment rather at corporate level (see also Batt, 2002).

To obtain organisational access, in January 2012, I telephoned the HR Directors of four retail companies to request their respective company's participation in a research on customer contact employees' creativity and service performance in general. Next, I sent a follow-up email explaining the research focus and aims, research implications and data collection procedures. I also assured confidentiality of the organisational data. In the email, I encouraged HR Directors to arrange a meeting to discuss project particularities in person. After exchanging a few emails, two HR Directors agreed to support their company's participation. I personally met with those HR Directors in February 2012 in their companies' offices. During these meetings, I started with a more general discussion about the importance of creativity in customer contact jobs, in their organisation, and industry. I also asked HR Directors to give examples of the extent to which HRM practices varied across branches in the same

company. Although the HR function was centralised in both companies, branch managers enjoyed a high level of autonomy in terms of practices they implemented in their branches. At the end of the meeting with the HR Director of each of the companies, we agreed on how to publicise the survey to branch managers and employees, data collection procedure, and deliverables. The HR Director of each company provided me with a list of branches, names of employees, and the contact details of branch managers.

Both companies' branches were located in five major cities in Lithuania. Prior to data collection, the HR Director of each company emailed branch managers about the objectives of the study as well as the data collection procedure. I then telephoned each branch manager to arrange an appropriate time for the distribution of questionnaires. I also cross checked with the manager names and numbers of their subordinates based on the list provided by the HR Director. I travelled to each branch and personally administered questionnaires to customer contact employees and their managers during their scheduled staff morning meeting or lunch break.

Before delivering questionnaires in each branch, I briefly introduced myself to participants, communicated that this study is part of a PhD research project, and expressed a great appreciation of their contribution to my research. Attached to each questionnaire was a cover letter that explained the objectives of the study, assured respondents of the confidentiality of their responses, and the voluntary nature of participation in the survey. To assure the quality of responses, I also briefly talked in person to each participant, answered their questions and re-assured confidentiality of their responses. Each questionnaire was coded so employees did not need to provide their names. Employees and managers received an envelope with a questionnaire inside and their name written on a sticker attached to the envelope. After filling the questionnaire, participants were asked to insert it into the envelope, remove the sticker from the envelope, and return it to the researcher. I have also met with each branch

manager in person, explained the value of this research and assured about feeding back the results. Managers' questionnaires contained names of their subordinates as managers were asked to rate creativity of each of their employees. In this way, I was able to match employee-manager responses.

Three hundred and eighty-nine (389) employees from 62 units were initially selected to participate in the survey. However, nine branches were dropped because they were relatively small (3-4 employees) and their location in smaller towns posed considerable logistical difficulties.

Of the 358 questionnaires distributed in the remaining 53 branches, completed and usable questionnaires were received from 320 frontline employees and 51 branch managers. I was able to match data for 291 respondents. However, due to the list-wise deletion procedure adopted, the final sample on which the hypotheses were tested consisted of 255 individuals distributed across 50 branches.

On average, each branch manager rated the performance of eight subordinates (*min* = 3, *max* = 16). Regarding subordinate participants, 96% were female; the average age was 34.83 years (*SD* = 8.78), the average organisational tenure was 8.16 years (*SD* = 7.21), and average tenure in the current position was 5.78 years (*SD* = 5.92). Majority of employees held an undergraduate degree (63%) or a postgraduate degree (10.2%), while the rest were high school graduates (7.5%) or did not indicate their education (19.3%).

Regarding the branch managers, 91% were female; the average age was 40.02 years (*SD* = 7.41), average organisational tenure was 10.17 years (*SD* = 5.34), and average tenure in the current position was 6.28 years (*SD* = 3.97). Majority of branch managers held an undergraduate (59.2%) or postgraduate degree (30.1%). A minority of respondents were high school graduates (3.8%) or did not indicate their education (6.9%).

5.4 Measures

Questionnaires were administered in Lithuanian but were originally constructed in English. Following Brislin (1986) recommended back translation procedure, a bilingual academic who was blind to the objectives of the survey translated the original English language version into Lithuanian while another bilingual academic translated it back into English. These two academics and a professional translator then discussed and resolved discrepancies between the original English language and the translated versions. I then used my personal network of 10 customer contact employees from various organisations to pilot the Lithuanian version of the questionnaire. Based on the feedback obtained, I reworded a few items to ensure clarity. All measures are reported in Appendix E.

5.4.1 Individual-level measures

Employee-perceived HPWS for creativity I used the 23-item HPWS scale that I developed and validated in Study 1 and Study 2 to measure employees' perceptions of HPWS for creativity. Employees were requested to indicate their agreement with the extent to which they think their branch has implemented each of the constituent HR practices. Drawing on Kehoe and Wright (2013) and because I was interested in how individuals perceive branch HPWS for creativity, I retained the group level reference, for instance, *"Employees in my unit receive creativity training."* Response options ranged from (1) "strongly disagree" to (6) "strongly agree".

Need satisfaction I measured need satisfaction with the 21-item Basic Need Satisfaction at Work Scale developed by Deci and colleagues (2001). This scale comprises three dimensions - need for competence, need for autonomy, and need for relatedness, which each dimension measured with 7 items. Sample items are *"I do not feel very competent when I am at work"* (need for competence, reverse-coded), *"I feel*

like I can make a lot of inputs to deciding how my job gets done" (need for autonomy), and "*I consider the people I work with to be my friends"* (need for relatedness). Response options ranged from (1) "not true at all" to (7) "very true."

Intrinsic motivation I used a 4-item scale developed by Grant and Berry (2011) based on Ryan and Connell (1989) self-regulation scales to measure intrinsic motivation. The items were prefaced with the question "Why are you motivated to do your work?" Using a 7-point response format (1) "strongly disagree" to (7) "strongly agree" respondents then indicated the extent of their agreement with the following reasons: *"Because I enjoy the work itself"*, *"Because it's fun"*, *"Because I find the work engaging"*, and *"Because I enjoy it"*.

Creative process engagement I used an 11-item scale developed by Zhang and Bartol (2010) to measure creative process engagement. The scale includes three dimensions: problem identification, information searching, and encoding and idea generation. Respondents answered the following question: "In your job, to what extent do you engage in the following actions when seeking to accomplish an assignment or solve a problem?" Sample items include: *"I think about the problem from multiple perspectives"*, *"I search for information from multiple sources (e.g., personal memories, others' experience, documentation, internet, etc.)"*, and *"I generate a significant number of alternatives to the same problem before I choose the final solution"*. Response options ranged from (1) "never" to (5) "very frequently".

Creativity in service delivery Branch managers assessed their employees' creativity by using a 7-item creative sales behaviours scale developed by Wang and Netemeyer (2004). Supervisor rating of subordinate creativity is a well-accepted measure of creativity (Eder & Sawyer, 2007). This scale has been previously validated in the Lithuanian context among a sample of customer contact employees (Martinaityte & Sacramento, 2013). Sample items are: *"This person makes sales presentations in*

innovative ways" and *"This person comes up with new ideas for satisfying customer needs"*. Response options ranged from (1) "strongly disagree" to (7) "strongly agree".

5.4.2 Branch-level measures

Branch-level HPWS for creativity scale I used the 23-item HPWS scale that I developed and validated in Study 1 and Study 2 to measure HPWS for creativity. In addition to obtaining data on the perceived HPWS, I also requested branch managers to indicate the extent to which a branch has implemented HPWS for creativity. Sample items are *"In our unit, recruitment emphasises traits and abilities required for creativity"* and *"Employees receive developmental feedback for their creative ideas"*. Response options ranged from (1) "strongly disagree" to (6) "strongly disagree." Following previous researchers (Aryee, et al, 2012; Liao et al, 2009), I summed these practices to form a unitary measure because they have been argued to work synergistically to have their desired effect. This approach has been used extensively by other researchers (Becker & Huselid, 1998; Guthrie, 2001; Lepak et al., 2006; Sun et al., 2007; Takeuchi et al., 2009; Takeuchi et al., 2007; Wright & Boswell, 2002).

Climate for creativity I measured climate for creativity with 9 items drawn from Scott and Bruce (1994) 22-item scale. These 9 items were carefully chosen to avoid an overlap with the HPWS for creativity items. Sample items are *"Creativity is encouraged here."* and *"There is adequate time available to pursue creative ideas here."* Items were measured on a 5-point Likert scale ranging from (1) "strongly disagree" to (5) "strongly agree". In order to justify the aggregation of these items to the unit level, I calculated both within-group agreement - $r_{wg(j)}$ (James, Demaree, & Wolf, 1984) and two intraclass correlations (*ICCs*). *ICC(1)* indicates the proportion of variance due to group (unit or branch) membership, whereas *ICC(2)* indicates the reliability of group (unit or branch) mean differences (Bliese, 2000). For climate for creativity, mean $r_{wg(j)}$ was .95 (ranging from .75 to .99), *ICC(1)* was .17 and *ICC(2)* was .54, $F(52, 263) = 2.19$, $p = .000$. Although the *ICC(2)* value for climate for

creativity was below the suggested cut-off value of .60 (Glick, 1985), criteria such as *ICCs* are dependent on between-group differences being significant and therefore might not be adequate when most of the units are nested in very few organisations (as is it the case in this dataset), rendering statistics such as $r_{wg(j)}$ more suitable for such cases (George, 1990; Schneider & Bowen, 1985). Taking all the evidence into account and given that the $r_{wg(j)s}$ were higher than the commonly accepted criterion of .70 (James, 1982) and *ICC(1)* values were still above .12 (James, 1982), I concluded that there was sufficient within group agreement to aggregate the climate for creativity items to the branch level of analysis.

Branch-level creativity I used a 7-item scale developed by Wang and Netemeyer (2004) to measure employee creativity. Branch managers rated the creativity of each of their direct reports. Sample items are *"This person makes sales presentations in innovative ways"* and *"This person comes up with new ideas for satisfying customer needs".* Response options ranged from (1) "strongly disagree" to (5) "strongly agree". Following the notion that creativity is an isomorphic construct and the structure of the construct does not change across levels (Gilson, 2008), it is reasonable to measure branch-level creativity as an aggregation of individuals' creativity (Kozlowski & Klein, 2000). To provide justification for aggregation of individual creativity to the branch level, I calculated both within-group agreement ($r_{wg(j)}$, James et al., 1984) and two intraclass correlations (*ICCs*). In relation to unit creativity, mean $r_{wg(j)}$ was .98 (ranging from .93 to .99), *ICC(1)* was .36 and *ICC (2)* was .78, $F(50, 278) = 4.59$, $p = .000$. Taking all the evidence into account and given that the $r_{wg(j)s}$ for creativity was higher than the commonly accepted criterion of .70 (James, 1982) and *ICC(1)* value were still above .12 (James, 1982) and *ICC(2)* above .60 (Glick, 1985), I concluded that there was sufficient within group agreement to aggregate the individual creativity items to the branch-level of analysis.

Environmental dynamism I used four of the nine items developed by Paswan, Dant, and Lumpkin (1998) and previously used by Akgün, Keskin, and Byrne (2008) to measure environmental dynamism. Branch managers noted these items to be the most relevant in capturing the degree of dynamism in the environment in which their organisations operated. The branch managers rated the degree of environmental dynamism on a 5-point scale with response options ranging from (1) "very rare" to (5) "very frequent." Sample items are *"Changes in competitor's sales strategies are…"* and *"Changes in competitors' mix of products/brands are..."*

Branch financial performance I defined financial performance in terms of branch quarterly profit (Singh et al., 2012). Data on each branch's profit for the fourth quarter of 2011 and the first quarter of 2012 were obtained from company records in April 2012. As the two companies used different metrics to record financial performance (the retail bank computed profit in terms of the percentage of the achieved projected profits for the quarter based on the branch's history, sales for the same quarter in the previous year, and clients' characteristics, while the cosmetics company recorded profit in terms of the absolute volume for the quarter), I standardised quarterly profit values for each of the units separately before pooling the data (Lee, Stettler, & Antonakis, 2011; Martinaityte & Sacramento, 2013).

Control variables I controlled for employee gender (female = 1; male = 0), age (years), education ("high school education", "undergraduate degree", "postgraduate degree", and "other"), employee tenure (number of years in the position) at individual level. These variables have been found to be associated with creativity (e.g., George & Zhou, 2001; Shalley et al., 2004; Tierney et al., 1999). I also controlled for branch size (number of employees), leader's tenure (years) and previous branch/store profit in Quarter IV 2011. I controlled for branch size, measured by number of employees, because it is plausible that bigger branches will generate higher levels of revenue and profit (Ployhart, Van Iddekinge, & MacKenzie, 2011; Singh et al., 2012). In addition,

previous research suggested that firm size has significant influence on firm innovation and performance (Weiner & Mahoney, 1981). I controlled for previous performance because previous research Wright, Gardner, Moynihan, and Allen (2005) found that controlling for past or concurrent performance virtually eliminates the correlation of HR practices with future performance. Therefore it is important to account for past performance in order to separate HRM affect. Mathieu, Ahearne, and Taylor (2007) also suggested that without controlling for previous performance, it is not possible to avoid cofounding effects and to extract the variance explained by the model.

5.5 Data analysis

In chapter 4, I reported initial evidence of the internal consistency, discriminant validity, convergent validity and predictive validity of the HPWS for creativity scale. The data analysis presented in this chapter comprises three stages. First, I use Study 3 sample to run additional tests to examine the psychometric properties of the HPWS for creativity scale. Second, I conduct a series of CFAs to examine the distinctiveness of latent constructs that are used in the hypotheses testing. Lastly, I use HLM (Raudenbush et al., 2004) to test the hypothesised cross-level relationships.

5.6 Results

5.6.1 Assessing construct reliability and validity of the HPWS for creativity scale

To further examine construct validity, it is essential to confirm how well the scale items converge on the intended dimensions by using an independent sample (Hinkin, 1995). In order to achieve this, I run a Confirmatory Factor Analysis (CFA) test. Then, I examine construct reliability (Fornell & Larcker, 1981) and Average Variance

Extracted (AVE, Fornell & Larcker, 1981) to further test convergent and discriminant validity.

5.6.1.1 Confirmatory factor analysis (CFA)

CFA is considered a suitable data analytic technique when a researcher has a clear and theoretically-driven model which specifies the number of factors, whether these factors are correlated, and which variables reflect which factors (Thompson, 2004). In other words, CFA is a tool that allows a researcher to either reject or accept a hypothesised structure of the measurement model. CFA indicates how well the assigned structure fits reality and thus provides evidence of construct validity. Instead of assigning variables to factors, the pattern of those variables loading on certain factors should be specified a priori (Hair et al., 2006).

The EFA results reported in Chapter 4 suggested that the 23 items of the HPWS for creativity scale loaded on seven dimensions/factors. Therefore the purpose of the CFA analysis was to test whether this structure is confirmed in the independent sample. I used SEM with Mplus (Muthen & Muthen, 1998-2011) to run CFA for the HPWS for creativity scale items. I used list-wise deletion or available case analysis as it is the most common approach to handling missing data (McKnight, McKnight, Sidani, & Figueredo, 2007; Schafer & Graham, 2002). The default choices in SEM tend to be the variance-covariance matrix with ML (Maximum Likelihood) estimation (Jackson, Gillaspy Jr, & Purc-Stephenson, 2009), which I adopted in this analysis. Factor loadings inform how well variables converge on the same factor. Thus, to identify how well items were performing, factor loadings were examined (Bagozzi & Yi, 1988; DeVellis, 2003).

Theoretically, HPWS for creativity has been developed as a second-order construct, with seven factors: selective hiring, job autonomy, participation and communication, performance appraisal, rewards, training, and playfulness at work loading on one overarching higher-order factor of HPWS. Therefore, it was important to examine item loadings on each of the seven dimensions and how these seven

dimensions loaded on a higher order factor. All item loadings were significant and all items except HRIP1 (.45), HRIP3 (.49), HRPM2 (.46) loaded higher than .50 on the intended factor with average factor loading of .69. The seven dimensions of HPWS also significantly loaded on the overarching factor with average factor loading of .74. Podsakoff and MacKenzie (1994) reported average factor loadings of .67 as reasonably substantial and .74 as large. Hinkin (1995) suggested that the most commonly reported cut-off point for item loading is .40. The factor loadings are reported in Table 10.

Table 10: Standardised factor loadings for 23 items [1]

	F1	F2	F3	F4	F5	F6	F7
HRR1	.65						
HRR2	.66						
HRR3	.56						
HRJD1		.73					
HRJD2		.71					
HRIP6		.79					
HRIP1			.45				
HRIP7			.67				
HRIP2			.53				
HRIP3			.49				
HRPM1				.77			
HRPM2				.46			
HRPM3				.86			
HREV 5					.52		
HREV 6					.81		
HREV9					.58		
HRT2						.67	
HRT3						.80	
HRT6						.82	
HRT7						.68	
HRPW2							.63
HRPW3							.75
HRPW4							.87
HPWS for creativity	.62	.90	1.00	0.90	.55	.75	.49

[1]All item loadings were statistically significant $p < 0.000$.

Given that multiple models may fit the same dataset, Thompson (2004) suggested testing a number of plausible competing models. Hence, in addition to a proposed second-order seven-factor model, I tested the following intuitively plausible alternative nested models: a 7-factor first-order Model; a one-factor Model and a 3-factor Model based on the Ability, Motivation, and Opportunity framework: motivation-enhancing HR practices (performance appraisal and rewards), ability-enhancing HR practices (selective hiring and training), opportunity-enhancing HR practices (job autonomy, participation and communication, and playfulness).

Several indices where used to examine the fit of the hypothesised model and compare it with the alternative plausible models. First, I examined Chi-square (χ^2) - Likelihood Ratio Test statistics. Chi-square estimation represents the discrepancy between unrestricted and restricted sample covariance matrixes. Therefore high and significant χ^2 represent a poor model fit with data. Chi-square can be calculated as χ^2 = (N-1) x Fmin, which means a sample size (N) multiplied by the minimum fit function (Fmin); Mplus uses N instead of N-1. This equation implies that the value of chi-square is dependent on the sample size (Byrne, 2011; Hair et al., 2006) resulting in substantial chi–square values when the model does not hold and the sample size is large (Joreskog & Yang, 1996). However, the puzzle here is that analysis of covariance structures are grounded in large sample theory and therefore large samples are necessary to obtain a precise parameter estimates and achieve good model fit. Therefore, most of SEM models result in large chi-square relative to degrees of freedom indicating the need to adjust the model in order to get a better fit.

Regarding Table 11 the hypothesised second-order model yielded a χ^2 of 444.95, with 220 degrees of freedom ($p < 0.000$), suggesting that the fit of the data to the hypothesised model is not entirely adequate. However, given the aforementioned limitations in the use of chi-square test, researchers suggest using a chi-square to degrees of freedom (χ^2/df) ratio which preferably should be 3:1 or less for an

acceptable model (Carmines & McIver, 1981; Kline, 2011). The proposed second-order seven–factor and alternative first-order seven-factor model produced χ^2/df ratio between 2 and 3, which meets the aforementioned requirements to accept the model.

In addition and given the limitations of chi-square test, I further examined four alternative widely used fit indices: *SRMR* (standardised root mean square residual) values less of than .08 indicate a good fit with the data (Byrne, 2011; Hu & Bentler, 1999; Kline, 2011); *RMSEA* (root mean square error of approximation) values of less than .06 indicate a good fit, values above .06 and as high as .08 indicate an adequate fit, values above .08 and less than .10 indicate a mediocre fit, and values above .10 indicate a poor fit (Browne & Cudeck, 1993; Byrne, 2011; Hu & Bentler, 1999); *CFI* (Comparative Fit Index), and *TLI* (Tucker-Lewis Index) values between .90 and .95 are considered a good fit, while values of .95 and higher are considered an excellent fit (Byrne, 2011; Hu & Bentler, 1999; Kline, 2011).

As can be seen in Table 11, the hypothesised seven-factor second-order and alternative seven-factor first-order model demonstrated a good fit with the data, with the first-order model producing a slightly better fit (*CFI* = .92; *TLI* = 91; *RMSEA* = .05; *SRMR* = .05) than the proposed second-order model (*CFI* = .92; *TLI* = 91; *RMSEA* = .06; *SRMR* = .06). These results indicate that the two models fit the data much better than the one-factor model (*CFI* = .80; *TLI* = .78; *RMSEA* = .09; *SRMR* = .08) and the three-factor model (*CFI* = .83; *TLI* = .81; *RMSEA* = .08; *SRMR* = .08).

Table 11: CFA for HPWS for creativity alternatives

Model	χ^2 *(df)*	χ^2/*df*	*p*	*SRMR*	*RMSEA*	*CFI*	*TLI*	*PCFI*[1]
Proposed seven-factor, second-order	444.95(220)	2.02	.000	.06	.06	.92	.91	.80
Seven-factor, first-order model	416.00(207)	2.00	.000	.05	.05	.93	.91	.76
Three–factor model	689.52 (223)	3.09	.000	.08	.08	.83	.81	.73
One–factor model	777.47(225)	3.46	.000	.08	.09	.80	.78	.71

[1]*PCFI= PRATIO* x *CFI*; *PRATIO* = *df* of hypothesised model/ *df* of null model

As may be observed in Table 11, the first-order 7-factor model exhibits slightly better fit than the alternative second-order 7-factor model. This is not surprising as the first-order model uses more paths to capture the same amount of variance (therefore produces a better fit), but at the same time consumes more degrees of freedom, whereas a higher-order factor consumes fewer degrees of freedom. Thus, although the first-order 7-factor model has a slightly better fit, the second-order 7-factor model is a more parsimonious model (Hair et al., 2006). The parsimony-adjusted fit index (*PCFI*) is especially useful for comparing the first and second-order models. *PCFI* is calibrated from the *CFI*, weighing the parsimony of a model against its use of the data in

achieving goodness of fit. As *PCFI* contains corrections for both model complexity and sample size, some researchers recommend it as the fit index of choice (Carlson & Mulaik, 1993; Williams & Holahan, 1994). Although *PCFI* values tend to be lower than those obtained for other indices (e.g. *CFI*), Mulaik and colleagues (1989) consider *PCFI* indices above .50 as demonstrating adequate fit, with a higher value suggesting a better fit. Table 3 shows a higher *PCFI* value for the second-order 7-factor model (.80) relative to the first-order 7-factor model (.76), which provides support for the second order 7-factor model. Overall, the proposed second-order 7-factor model demonstrated a good fit with the data. Although *CFI* and *TLI* values did not reach .95, researchers suggest that these indices depend on the correlations between scale items (Kenny, 2012). As items between factors are mostly correlated at lower than .50, it is logical that *CFI* and *TLI* did not reach .95, yet these indices still meet the required threshold for good model fit (Hair et al., 2006) with *CFI* = .92; *TLI* = .91; *RMSEA* = .06.

5.6.1.2 Internal consistency

To further assess the reliability of the new measure (see Chapter 4), I also examined internal consistency of the HPWS for creativity scale in Study 3 in both employee and manager samples. As can be seen in Table 14, the internal consistency of the HPWS for creativity scale was .88 in the employee and .89 in managerial sample suggesting that the items' internal consistency does not change across the measurement sources.

5.6.1.3 Construct reliability

Netemeyer, Johnston, and Burton (1990) used Fornell and Larcker (1981) formula to calculate two statistics to assess the psychometric properties of scaled measures, namely composite reliability and variance extracted estimates. Construct reliability assesses internal consistency and is equivalent to Cronbach's alpha. Construct reliability is a summary measure of convergence among a set of items

representing a construct (Fornell & Larcker, 1981). I computed construct reliability using Fornell and Lacker's (1981) formula below. Specifically, I divided a squared sum of the factor loadings of the HPWS dimensions (numerator) by the squared sum of the factor loadings plus the sum of residual variances of the factor loadings (denominator). The results below indicate that the HPWS for creativity scale demonstrated good construct reliability of .91.

$$Constructreliability = \frac{(\sum \lambda)^2}{(\sum \lambda)^2 + \sum \varepsilon}$$

$(\sum \lambda)^2 - squered\ sum\ of\ factor\ loadings$;

$\sum \varepsilon - sum\ of residual\ variances\ of\ factorloadings.$

$(\sum \lambda)^2$ =(0.62+0.90+1.0+0.90+0.55+0.75+0.49)²

$$\sum \varepsilon = 0.61 + 0.18 + (-0.02) + 0.18 + 0.69 + 0.43 + 0.76 = 2.83$$

$$Construct\ reliability = \frac{(\sum \lambda)^2}{(\sum \lambda)^2 + \sum \varepsilon} = \frac{27.14}{27.14 + 2.83} = \mathbf{0.91}$$

5.6.1.3 Convergent and discriminant validity: average variance extracted

As the reliability of a construct does not capture the amount of variance that is captured by the construct in relation to the amount of variance due to measurement error, Fornell and Larcker (1981, p. 46) suggested estimating average variance extracted (*AVE*), which is computed as follows:

$$AVE = \frac{\sum \lambda^2}{\sum \lambda^2 + \sum \varepsilon}$$

$\sum \lambda^2$=0.62²+0.90²+1.0²+0.90²+0.55²+0.75²+0.49²= 4.11

AVE= 4.11/ 4.11+2.83=4.11/6.94=**0.59**

The *AVE* for the HPWS for creativity scale was .59 which meets the suggested requirement for convergent validity of at least .50 (Fornell & Larcker, 1981). If *AVE* is less than 0.5 then the measurement error is larger than the variance captured by the construct of interest and the validity of the individual indicators as well as the construct is questionable.

AVE can also be used to ascertain discriminant validity. Hair and colleagues (2006) and other scholars (e.g., Ashill & Jobber, 2010) recommend to calculate average variance extracted for any two constructs and to compare it with the squared correlation estimate between those two constructs (Fornell & Larcker, 1981). The latent construct should explain its items better than it explains the items of another construct. Fornell and Larcker (1981, pp. 45-46) indicated that for any two constructs, A and B, to demonstrate that they explain their items better than each other, the *AVE* for A and the *AVE* for B both need to be larger than the shared variance (i.e., squared correlation) between A and B. Thus, to establish discriminant validity, the first step is to calculate the correlation between HPWS for creativity and another measure, which in this case was empowering leadership (r = .54, p < 0.01). Because a shared variance is the squared correlation estimate between two constructs, shared variance between HPWS for creativity and empowering leadership was .25. Next, the *AVE* for empowering leadership was calculated which was .76. As reported earlier, *AVE* for HPWS for creativity was .59. Thus, both *AVE* for empowering leadership and HPWS for creativity were higher than shared variance between HPWS for creativity and empowering leadership (0.25) providing evidence of discriminant validity.

Overall, the results reported above demonstrate strong support for the second-order 7–factor measurement model (see Table 11). The hypothesised second-order 7–factor measurement model fit the data better in comparison to alternative models ($\chi 2$ (220), = 444.95, p < .000; *CFI* = .92; *TLI* = .91; *RMSEA* = .06; *PCFI* = .80). In addition, each of the hypothesised factor loadings was significant and reasonably substantial in size (M = .69 for items and M = .74 for dimensions). Construct reliability for HPWS for

creativity (Fornell & Larcker, 1981; Netemeyer et al., 1990) was .91 and *AVE* .59 supporting scale convergent validity. *AVE* for the HPWS for creativity scale was higher than the shared variance between the HPWS for creativity scale and empowering leadership providing evidence for discriminant validity.

Next, I report the results of a series of *CFAs* used to examine the distinctiveness of all the study constructs prior to testing the hypotheses.

5.6.2 Measurement model

Prior to hypotheses testing, I conducted a series of *CFAs* to examine the distinctiveness of the variables measured at the same level (Anderson & Gerbing, 1988). First, as the unit-level variables with the exception of climate for creativity (employee-rated) were manager-rated, I conducted a series of *CFAs* to examine whether unit-level HPWS for creativity, climate for creativity, unit creativity, and environmental dynamism are distinct variables. Second, I conducted a series of *CFAs* to examine whether the individual-level variables of employee-perceived HPWS for creativity, climate for creativity, need satisfaction, intrinsic motivation, creative process engagement, and creativity captured distinct constructs. With the exception of creativity, data on these measures *were* employee-rated. I did not include unit-level HPWS for creativity in this second series of *CFAs* as the purpose was not to demonstrate that unit-level HPWS and employee-perceived HPWS are distinct constructs. As mentioned above, manager-rated HPWS for creativity was included in the unit-level *CFA series* to establish its discriminant validity with unit climate and unit creativity. However, I did include climate for creativity in both *CFAs (with unit and individual level variables)* as individual climate for creativity is closely related to individual perceptions of HPWS for creativity and unit climate is likely to be related to unit-level HPWS for creativity.

Given the relatively small sample size in relation to the number of items and to reach a more adequate item-response ratio, I adopted item parcelling procedures (Cattell & Burdsal Jr, 1975). For the uni-dimensional constructs (climate for creativity, creativity, environmental dynamism, intrinsic motivation), parcels were formed by randomly assigning items from their respective scales. For the multilevel constructs, HPWS for creativity, need satisfaction, and creative process engagement, I averaged items within dimensions and treated each dimension as an indicator of HPWS (Aryee et al., 2012; Liao et al., 2009; Sanchez et al., 1999).

The results of the first series of CFAs are reported in Table 12. A hypothesised 4-factor model (HPWS for creativity, climate for creativity, unit creativity, and environmental dynamism loading separately) was compared to a series of intuitively plausible alternative nested models: a 3-factor Model 1 (combining HPWS for creativity and climate for creativity), a 3-factor Model 2 (combining HPWS for creativity and unit creativity), a 3-factor Model 3 (combining climate for creativity and unit creativity), a 2-factor model (collapsing all manager-rated variables), and a 1-factor model. Comparative fit index (*CFI*), the Tucker-Lewis index (*TLI*), and the Root Mean Square Error of Approximation (*RMSEA*) were used to examine model fit. As shown in Table 12, the hypothesised 4-factor Model (*TLI* = .87, *CFI* = .90, *RMSEA* = .08) obtained an acceptable fit and it also fit the data better than the 3-factor Model 1 (*TLI* = .66, *CFI* = .72, *RMSEA* = .14), the 3-factor Model 2 (*TLI* = .67, *CFI* = .73, *RMSEA* = .14), the 3-factor Model 3 (*TLI* = .64, *CFI* = .71, *RMSEA* = .15), the 2-factor Model (*TLI* = .55, *CFI* = .63, *RMSEA* = .17), and the 1-factor Model (*TLI* = .31, *CFI* = .40, *RMSEA* = .21). Furthermore, the chi-square difference test showed that the hypothesised 4-factor Model fit the data significantly better than the 3-factor Model 1 ($\Delta\chi^2$ = 46.63, Δdf = 3, p < .001), the 3-factor Model 2 ($\Delta\chi^2$ = 43.89, Δdf = 3, p < .001), the 3-factor Model 3 ($\Delta\chi^2$ = 50.13, Δdf = 3, p < .001), the 2-factor Model ($\Delta\chi^2$ = 71.72, Δdf = 5, p < .001), and the

1-factor Model ($\Delta\chi^2$ = 129.43, Δdf = 8, p < .001). The results provide support for the discriminant validity of these constructs.

Table 12: Results of Confirmatory Factor Analysis for branch-level measures

Variables	χ^2 *(df)*	$\Delta\chi^2$ (Δ*df)*	*RMSEA*	*TLI*	*CFI*
Hypothesised four-factor model	94.95(71)		.08	.87	.90
Three-factor Model 1	141.58(74)	46.64(3)***	.14	.66	.72
Three-factor Model 2	138.84(74)	43.89(3)***	.14	.67	.73
Three-factor Model 3	145.08(74)	50.13(3)***	.15	.64	.71
Two-factor	166.67(76)	71.72(5)***	.17	.55	.63
One-factor model	224.38(79)	129.43(8)***	.21	.31	.40

Note. N = 44. RMSEA = root mean squared error of approximation; TLI = Tucker-Lewis index; CFI = Comparative fit index.

The results of the second series of CFAs are reported in Table 13. A hypothesised 6-factor model (perceived HPWS for creativity, need satisfaction, intrinsic motivation, creative process engagement, creativity, and climate for creativity loading separately) was compared to a series of intuitively plausible alternative nested models: a 5-factor Model 1 (combining perceived HPWS for creativity and climate for creativity), a 5-factor Model 2 (combining creative process engagement and creativity), a 5-factor Model 3 (combining intrinsic motivation and need satisfaction), a 4-factor model (combining creative process engagement, creativity and climate for creativity), a 3-factor model (combining perceived HPWS for creativity and climate for creativity, creative process engagement and creativity, intrinsic motivation and need satisfaction), and a 1-factor model (combining all variables into one factor).

The hypothesised 6-factor model (*TLI* = .93, *CFI* = .95, *RMSEA* = .05) obtained a good fit, which was better than the fit of the alternative models: the 5-factor Model 1 (TLI = .81, *CFI* = .84, *RMSEA* = .09), the 5-factor Model 2 (*TLI* = .83, *CFI* = .85, *RMSEA* = .09), the 5-factor Model 3 (*TLI* = .87, *CFI* = .89 *RMSEA* = .08), the 4-factor model (*TLI* = .61, *CFI* = .66, *RMSEA* = .12), the 3-factor model (*TLI* = .50, *CFI* = .56, *RMSEA* = .15), and the 1-factor model (*TLI* = .35, CFI = .42, *RMSEA* = .17). Furthermore, the chi-square difference test showed that the hypothesised 6-factor model fit the data significantly better than the 5-factor Model 1 ($\Delta\chi^2$ = 317.11, Δdf = 5, p < .001), the 5-factor Model 2 ($\Delta\chi^2$ = 277.62, Δdf = 5, p < .001), the 5-factor Model 3 ($\Delta\chi^2$ = 180.14, Δdf = 5, p < .001), the 4-factor model ($\Delta\chi^2$ = 864.69, Δdf = 9, p < .001), the3-factor model ($\Delta\chi^2$ = 1155, Δdf = 12, p < .001),and the 1-factor model ($\Delta\chi^2$ = 2855.43, Δdf = 35, p < .001).

Table 13: Results of Confirmatory Factor Analysis for individual-level variables

Model	χ^2 *(df)*	$\Delta\chi^2$ (Δdf)	*RMSEA*	*CFI*	*TLI*
A proposed model	317.17 (155)		0.05	.95	.93
A five- factor Model 1	634.28 (160)	317.11 (5)***	.09	.84	.81
A five- factor Model 2	594.79(160)	277.62 (5) ***	.09	.85	.83
A five -factor Model 3	497.31(160)	180.14 (5)***	.08	.89	.87
A four-factor model	1181.8 (164	864.69 (9) ***	.13	.66	.61
A three-factor model	1472.1 (167)	1155 (12) ***	.15	.56	.50
A one-factor model	3172.6 (190)	2855.43 (35)***	.17	.42	.35

N=255; *RMSEA* = root mean squared error of approximation; *TLI* = Tucker-Lewis index; *CFI* = Comparative fit index.

Overall, results of the *CFA* tests reported above indicate good discriminant properties of the measures that were employed to test the cross-level hypotheses.

5.6.3 Hypotheses testing

Data collected in this study represented a multilevel structure as individuals (level 1) were nested in branches/units (level 2), which were nested in two organisations (level 3). Given the complexity of the model, I first describe the analytical procedure used to test the unit-level hypotheses (H1-H5), and then individual-level hypotheses (H6-H10b).

I tested branch-level hypotheses using a two-level HLM whereby branches (level 1) were nested in organisations (level 2). Before conducting the HLM analyses for the unit-level hypotheses, I examined the degree of between-organisation variance in climate for creativity, unit creativity, and unit financial performance. Results of null models showed that 20% of the variance in climate for creativity and 14% of the variance in unit financial performance were accounted for by organisational factors. The chi-square tests revealed that the between-organisation variances were significant, meaning that the intercept terms for these two variables varied significantly across organisations. None of the variance in aggregated unit creativity was accounted for by organisational factors, meaning that unit (branch)-level factors accounted for 100% of the variance in this variable. Despite this result, I still proceeded to use a two-level HLM analysis given the significant influence of organisational-level factors on climate for creativity and unit financial performance. Note that as hypotheses H1 to H5 refer to relationships between variables at the same level of analysis they can also be tested using linear regression entering the organisation as a control variable. For the sake of consistency, I chose to report all results based on HLM analysis. However, for the

purpose of cross-validation, I also analysed the data using this alternative approach obtaining the same pattern of results.

I included an intercept-only model at the organisational level in order to control for any possible confounding effects of organisational-level variables on the tested relationships (Gong, Kim, et al., 2013). Prior to the data analysis, I grand mean centered all variables to mitigate potential problems of multi-collinearity (Gavin & Hofmann, 2002; Hox, 2002) and to aid the interpretation of the findings. Grand-mean centering is a common approach in the literature when testing relationships at the same level (Chen, Kirkman, Kanfer, Allen, & Rosen, 2007; Gong, Kim, et al., 2013; Wilk & Moynihan, 2005).

I analysed individual-level outcomes (hypotheses H6 to H10b) using a three-level HLM analysis whereby individuals (level 1) were nested in branches (level 2) that were nested in organisations (level 3). Before conducting the HLM analyses, I examined the degree of between-branch and between-organisation variance in perceived HPWS for creativity, need satisfaction, intrinsic motivation, creative process engagement, and creativity. Results of null models showed that individual and branch factors accounted for 62% and 38% respectively, of the variance in individual creativity, for 93% and 7% of the variance in need satisfaction, for 94% and 6% of the variance in intrinsic motivation, while organisational factors did not account for any of the variance in these variables. Regarding creative process engagement and perceived HPWS for creativity, individual and branch-level factors accounted for 88% and 9% respectively, of the variance in creative process engagement, and for 85% and 10% of the variance in perceived HPWS for creativity. Additionally, 2% of the variance in creative process engagement and 5% in perceived HPWS for creativity were explained by organisational level factors. The chi-square tests revealed that between-branch variances were significant for all variables, meaning that the intercept terms varied significantly across branches, while perceived HPWS and creative process engagement were also affected by organisational level factors. Given the evidence

showing that branch and organisational level factors accounted for significant variance in individual-level variables, I employed HLM techniques to test a 3-level hierarchical model. However, as branches were nested only in two organisations, I include an intercept-only model to control for the effects of organisational factors and did not include any variables (Gong, Kim, et al., 2013; Hu & Liden, 2011). Enders and Tofighi (2007) suggested that all individual-level variables should be group mean centered in the presence of cross-level interactions as grand-mean centering can produce misleading results. Following this rationale, all individual- level variables were group mean centered and group-level variables grand mean centered.

I also calculated the total variance explained in the outcome variable by each model specification as compared to the null model (R^2 total) by using the formula R^2 total = R^2 within-group X (1-*ICC 1*) + R^2 between-group X *ICC 1* (Raudenbush & Bryk, 2002). Furthermore, I presented model deviance for each model, with lower deviance representing a better model fit relative to models with the same outcome.

5.6.3.1 Inter-correlations among study variables

Table 14 presents the descriptive statistics, alpha reliabilities, and zero-order correlations among variables in the study.

As shown in that table, unit-level HPWS for creativity positively correlates with climate for creativity (r = .39, p < .01) and unit creativity (r = .37, p < .01) and climate for creativity positively correlates with unit creativity (r = .38, p < .01). However, unit creativity shows a negative but non-significant correlation (r = -.16; *ns*) with quarterly profit (Profit 2012 Q1). Another unexpected finding was the negative relationship unit-HPWS for creativity was negatively related to quarterly profit, but the relationship was not significant (r = -.07, *ns*). Employee-perceived HPWS was found to positively and significantly relate to need satisfaction (r = .46, p < .01), intrinsic motivation (r = .37, p < .01), creative process engagement (r = .25, p < .01) and individual creativity (r = .14, p < .05).

Table 14: Descriptive statistics, means, standard deviations, correlations and scales reliabilities

Variable	*M*	*SD*	1	2	3	4	5	6	7	8
				Individual-level variables						
1. Gender										
2. Age	34.84	8.81	-.15*							
3.Tenure (employee)	5.82	6.04	-.12	.49**						
4. Perceived HPWS for creativity	4.21	.62	-.07	.21**	.15*	(.88)				
5. Need satisfaction	5.22	.66	-.08	.06	.05	.46**	(.81)			
6. Intrinsic motivation	5.70	.99	-.10	.26**	.18**	.37**	.45**	(.89)		
7. Creative process engagement	3.67	.53	.04	.11	.09	.25**	.25**	.28**	(.74)	
8. Creativity [a]	5.08	1.15	.03	.03	.11	.14*	.19**	.03	.09	(.94)
				Branch-level variables						
Branch size	7.2	3.23								
2. Tenure (leader) [a]	5.95	3.99	.14							
3. Branch-level HPWS [a]	4.23	.52	.04	-.16	(.89)					
4. Climate for creativity	3.42	.27	.24	.17	.37**	(.91)				

5. Environmental dynamism	3.52	.71	.00	.05	.16	-.12	(.77)		
6. Unit creativity	5.06	.77	-.09	-.12	.39**	.38**	-.14	(.93)	
7. Unit profit 2011 Q4	.00	.99	.36*	.10	-.18	-.12	-.28	-.33*	
8. Unit profit 2012 Q1	.00	.99	.30*	-.03	-.07	-.01	.01	-.16	.57**

Note. *N* individual level = 255. *N* team level = 49-51. Gender 1 = female, 2 = male. [a] Rated by team managers. All other constructs were rated by team members. Branch size and profit data obtained from companies' records. Profit was standardised for each organisation before pooling the data together, *p < .05, **p < .01; Profit mean before standardization: Mean profit 2011 Q4 (SD) = 33692.38 (63041.22); Mean profit 2012 Q1 (SD) =7669.96 (24220.82).

5.6.3.2 Exploratory analysis

As already mentioned in previous chapters my conceptualization of an HRM system for creativity is founded in SHRM, where the phenomenon of interest is the system of HR practices (see Fombrun, Tichy, & Devanna, 1984). Therefore the focus of this dissertation is to propose, develop and test an HRM system for creativity which packs together a set of specific practices that ideally are internally consistent and mutually reinforcing. This idea of system vs single HRM practices has been supported by previous recent empirical evidence (e.g., Chuang & Liao, 2010; Datta et al., 2005; Lawler et al., 2011; Chang et al, 2014).

Following Way (2002) I also tested the effects of single HPWS dimensions on creativity to see explore whether some components were of greater importance than other components of the system.

Table 15 presents the descriptive statistics, alpha reliabilities, and zero-order correlations amongst the HR practices of selective hiring, job autonomy, employee participation and communication, performance appraisal, training and playfulness at work and their effects on individual creativity. I used Cohen's (1988) criteria of small, medium, and large correlations to assess the magnitude of significant correlations: correlations less than .29 are small, those greater than .30 but less than .49 are medium, and correlations that exceed .50 are large. The results indicate that all seven factors positively and significantly relate with each other. The magnitude of correlations varies from low ($r = .20$, $p<.01$) for playfulness at work and performance appraisal, to large for performance appraisal and job autonomy ($r = .59$, $p<.01$), and for performance appraisal and employee participation and communication ($r = .62$, $p<.01$). Significant correlations between HPWS dimensions demonstrate that selective hiring, job autonomy, employee participation and communication, performance appraisal, training and playfulness at work are interdependent and mutually reinforcing practices: the higher presence of one practice to some extent leads to the higher level of other practices.

The HPWS for creativity dimensions such as job autonomy (r=.10, p<.10), employee participation and communication (r=.13, p<.05), performance appraisal (r=.22, p<.01), and playfulness at work (r=.12, p<.05) were significantly related to creativity, whereas selective hiring, rewards and employee training were not.

I have also adopted Way (2002) approach to test if some components of this study's HPWS were of greater importance than other components of the system. To accomplish this for each of the seven dimensions' included in HPWS for creativity scale a new control variable was created. Control variable was a unitary index - a mean of the remaining six HRM practices. Next I run 7 regressions where I regressed customer contact employee creativity on each HPWS dimension separately (selective hiring, job autonomy, employee participation and communication, performance appraisal, rewards, employee training, and playfulness at work) while controlling for the unitary index of the remaining six HPWS dimensions. The results in table 16 indicate that only employee participation and communication dimension of HPWS significantly relate to employee creativity over the unitary index of other six dimensions. In addition, although single practices such as job autonomy, performance appraisal, rewards, employee training and playfulness at work were not significantly related to creativity, the unitary index of the rest six practices in each regression was also not significant (all regressions are reported in Appendix F), indicating that all dimensions work in tandem and are important for individual creativity. Although we cannot draw any firm conclusions about synergistic effects of single HPWS dimensions within this newly developed HPWS for creativity, these results support the notion of systems vs single practices effect on employee creativity.

Table 15: Correlations amongst HPWS for creativity dimensions and employee creativity

	M	SD	1	2	3	4	5	6	7	8
1. Selective hiring	4.39	.79	(.66)							
2. Job Autonomy	4.51	.91	.42**	(.78)						
3. Employee participation and communication	4.89	.68	.37**	.62**	(.65)					
4. Performance appraisal	5.04	.87	.38**	.59**	.62**	(.78)				
5. Rewards	2.97	1.05	.26**	.30**	.27**	.27**	(.70)			
6. Training	4.16	1.04	.41**	.52**	.45**	.55**	.36**	(.83)		
7. Playfulness at work	3.12	1.12	.25**	.33**	.30**	.20**	.38**	.42**	(.79)	
8. Employee creativity	5.08	1.15	-.03	.10†	.13*	.22**	-.02	.04	.12*	(.94)

N= 295-320; † p < .10, *p < .05, **p < .01

Table 16: The impact of single HPWS practices

HPWS for creativity dimensions	Employee creativity
	B
Selective hiring	-.16 (-1.73)
Job autonomy	.07 (.77)
Employee participation and communication	.45** (3.70)
Performance appraisal	.16 (1.6)
Rewards;	-.10 (-1.50)
Employee training	-.06 (-.73)
Playfulness at work;	.10 (1.5)

I report unstandardized coefficients (*B*) for each HPWS for creativity dimension after controlling for the mean of other 6 HPWS components. N= 295-320; the t-scores are in parentheses, *p < .05, **p < .01.

5.6.3.3 Tests of branch-level outcomes

Hypothesis 1 suggested that branch HPWS will relate to climate for creativity. To test this hypothesis, I regressed climate for creativity (Model 1) on all control variables (quarterly profit in the previous quarter and branch size). As may be observed in Table 17, this model accounted for 17% of the total variance explained. I then tested Hypothesis 1 by including HPWS in the equation (Model 2). HPWS for creativity was significantly related to climate for creativity (γ = .21, p = .026) and accounted for an additional 7% variance in climate for creativity supporting Hypothesis 1. Hypothesis 2 suggested that climate for creativity would be positively related to branch creativity. I tested this hypothesis by regressing branch creativity on HPWS for creativity and climate for creativity controlling for branch size and previous profit. As may be observed in Model 4, climate for creativity was positively associated with branch (aggregated) creativity supporting Hypothesis 2 (γ = .93, p = .012).

Hypothesis 3 suggested that climate for creativity would mediate the relationship between HPWS for creativity and branch creativity. I drew on the work of Kenny and colleagues (Baron & Kenny, 1986; Kenny, Korchmaros, & Bolger, 2003) and Krull and MacKinnon (2001) to test this mediation hypothesis. According to Baron and Kenny (1986), mediation is demonstrated if four conditions are met. First, the independent variable (HPWS for creativity) and the dependent variable (branch creativity) must be related. To test this condition, I regressed branch creativity on HPWS controlling for branch size and previous branch quarterly profit. As may be observed in Model 3, this condition was satisfied (γ = .63, p = .013). Second, the independent variable must be significantly related to the mediator. This condition was met when I found support for Hypothesis 1. Third, the mediator must be related to the dependent variable. This condition was also met when I found support for Hypothesis 2. Finally, the strength of the relationship between the independent variable and the dependent variable is reduced

(partial mediation) or disappears (full mediation) when the mediator is added to the model predicting the dependent variable. To test this condition, I regressed branch creativity on HPWS for creativity and climate for creativity (Model 4). As can be observed by comparing Models 4 and 3, the relationship between HPWS for creativity and branch creativity was reduced when climate for creativity was included as a control variable (γ = .46, p = .060), becoming only marginally significant. These results indicate that HPWS for creativity relates to branch creativity, but indirectly through climate for creativity and support Hypothesis 3.

Following more recent approaches to mediation testing, I used bootstrapping analysis to examine the significance of the indirect effects (Hayes, 2013; Preacher & Hayes, 2008). Based on 100000 bootstrapping samples, I found that the bootstrapping confidence intervals for the indirect effect (b = .1893, boot SE = .117) lies between .016 and .503. Because zero is not in the 95% confidence intervals, I concluded that the indirect effect is indeed significantly different from 0. In addition, although the total effect was found to be significant (b = .56, SE = .237, p = .021), the direct effect was not significant (b = .37, SE = .24, *ns*), indicating full mediation.

Hypothesis 4 suggested that branch creativity positively relates to branch quarterly profit. To test this hypothesis, I regressed branch quarterly profit on environmental dynamism and branch creativity including branch size and previous profit as controls. As can be observed in Model 5, this relationship was not significant (γ = -13, *ns*). Thus, Hypothesis 4 was not supported.

Hypothesis 5 suggested that the relationship between branch creativity and branch quarterly profit is strengthened by environmental dynamism. I tested this moderation hypothesis by regressing branch quarterly profit on the interaction term of environmental dynamism and branch creativity controlling for HPWS for creativity, climate for creativity, previous branch quarterly profit, and branch size (Model 6). Results support the existence

of a moderation effect (γ = .34, p = .013). The interaction term accounted for additional 10% of explained variance in branch quarterly profit. In order to interpret the interaction, I plotted the simple slopes following Aiken and West's (1991) recommendations. Figure 4 reveals that the relationship between creativity and branch quarterly profit becomes less negative when environmental dynamism is high. An examination of the simple slopes shows that the slope is significant and negative when environmental dynamism is low (one standard deviation below the mean), simple slope = -.44 (.16), t = -2.84, p = .007, and non-significant when environmental dynamism is high (one standard deviation above the mean), simple slope = .04 (.14), t = .29, *ns*. Although there is evidence of a significant interaction, the pattern of this interaction is different from what was hypothesised. Environmental dynamism was expected to strengthen the positive relationship between branch creativity and branch quarterly profit. However, the results suggest that branch creativity negatively relates to branch quarterly profit in units with low environmental dynamism.

Table 17: Hierarchical Linear Regression Analysis results for unit-level outcomes: climate for creativity, unit creativity, and unit quarterly profit[a]

Variable	Climate for creativity (Model 1)	Climate for creativity (Model 2)	Branch creativity (Model 3)	Branch creativity (Model 4)	Branch quarterly profit (2012) (Model 5)	Branch quarterly profit (2012) (Model 6)
Intercept	3.68(.06)	3.68(.04)	5.10(.22)	5.11(.25)	-.07(.22)	-.06(.11)
Branch quarterly profit (2011)	-.06(.05)	-.01(.05)	-.04(.15)	-.06(.15)	95(.13) ***	.83(.11)***
Branch size	.02(.01) †	.02(.01)†	-.01(.04)	-.03(.04)	.01(.03)	.03 (.03)
Branch HPWS for creativity		.21(.10)*	.63(.24)*	.46(.24) †	.05(.22)	-.01(.21)
Climate for creativity				.93(.35)*	.34(.32)	.54(.31)†
Branch creativity					-.13(.13)	-1.37(.48)**
Environmental dynamism					.15(.12)	1.54 (.66)*
Branch creativity x environmental dynamism						.34(.13)*
χ^2	.96	.04	2.93†	4.96*	5.46*	.82*
Model deviance	33.21	29.29	119.43	115.01	101.90	96.38
R^2total[b]	.17	.24	.11	.21	.58	.68

[a] Units N = 51; Unstandardised coefficients are reported, with standard errors in parentheses. [b] R^2total = R^2within-organisation x (1-ICC1) + R^2between-organisation x ICC1, where ICC1 represents the proportion of variance in the dependent variable that resides between organisations.† $p < 0.1$, *$p < .05$, **$p < .01$, ***$p < .001$.

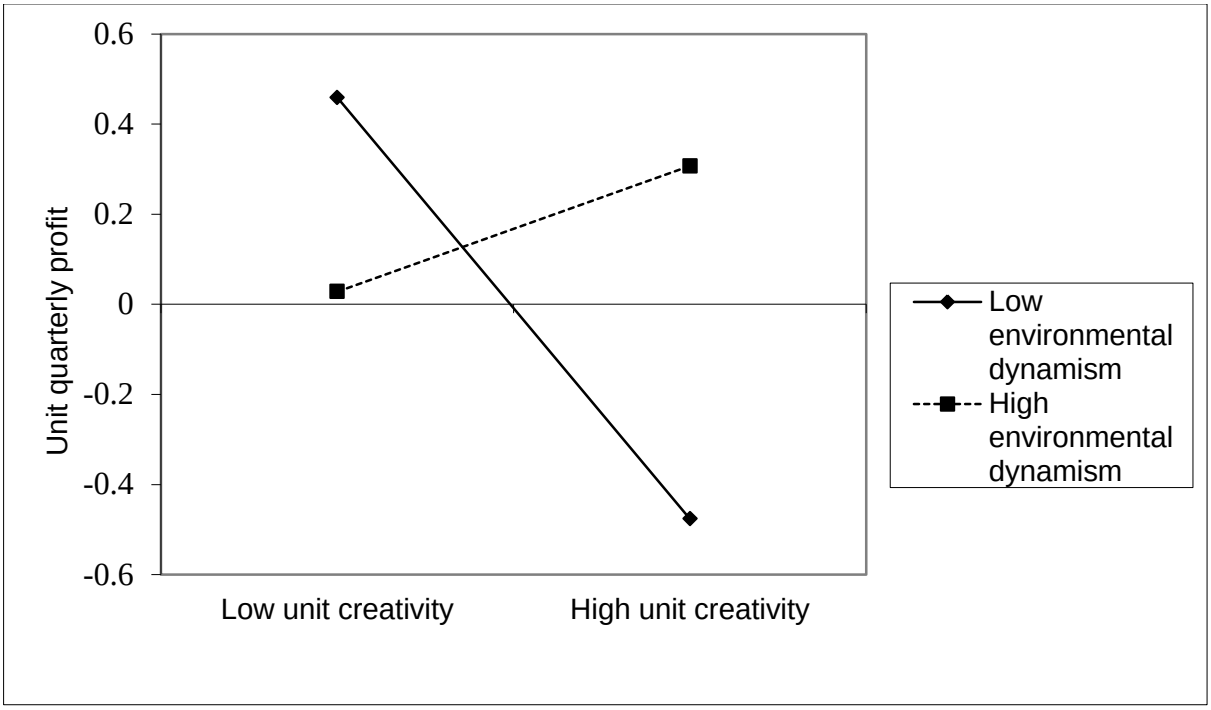

Figure 4: Interaction between unit creativity and environmental dynamism to predict unit quarterly profit

5.6.3.4 Tests of individual-level outcomes

Hypothesis 6 suggested that branch-level HPWS for creativity would have a cross-level influence on perceived HPWS for creativity. To test this hypothesis, I regressed perceived HPWS for creativity on branch-level HPWS for creativity (Model 1) controlling for gender, age, education, tenure in the position (Level 1 controls), unit size, and leader's tenure in the position (Level 2 controls). Table 18 shows that perceived HPWS relates to branch-level HPWS (γ= .25, p < .001). As shown in that table, Model 1 accounted for 4.4% of the total variance explained in perceived HPWS providing support for Hypothesis 6.

Hypothesis 7a suggested that perceived HPWS would be positively related to need satisfaction and Hypothesis 7b suggested that branch-level HPWS would indirectly relate to need satisfaction through perceived HPWS. To test these hypotheses, I followed Baron & Kenny's approach (Baron & Kenny, 1986; Kenny et al., 2003) described earlier. First, I regressed need satisfaction on individual and unit-level controls and unit-level HPWS for creativity (Model 2) and then, added perceived HPWS for creativity in the equation (Model 3). The results reveal that unit-level HPWS does not significantly relate to need satisfaction (γ= .10, ns), thus not meeting the first condition required for mediation (Baron & Kenny, 1986) and not supporting Hypothesis 7b. However, Table 18 also shows that perceived HPWS positively and significantly relates to need satisfaction (γ= .51, p < .001) and accounts for additional 16% in the total variance explained in need satisfaction supporting Hypothesis 7a.

Hypothesis 8a suggested that need satisfaction would be related to intrinsic motivation and creative process engagement. As shown in Table 18 (See Models 5 and 7), need satisfaction significantly relates to intrinsic motivation (γ= .55, p < .001) and creative

process engagement (γ= .14, p < .001). Model 5 accounts for 20% of the total variance in intrinsic motivation and Model 7 accounts for 6% of the total variance explained in creative process engagement, supporting Hypotheses 8a. Hypothesis 8b suggested that intrinsic motivation would fully mediate the relationship between need satisfaction and creative process engagement. This hypothesis was tested in Model 8 and by comparing the results of Model 8 and Model 7. The direct effect of need satisfaction on creative process engagement is significant in Model 7 (γ= .14, p < .01), but no longer significant (γ = .07, ns) after entering intrinsic motivation in the equation. When Model 8 and Model 7 are compared, intrinsic motivation explains an additional 4% of the total variance in creative process engagement thereby providing support for Hypothesis 8b. Hypothesis 8c suggested that need satisfaction will mediate the respective influence of perceived HPWS for creativity on intrinsic motivation and creative process engagement. To test this hypothesis, I first tested the direct effects of perceived HPWS for creativity on intrinsic motivation (Model 4) and perceived HPWS for creativity on creative process engagement (Model 6). As shown in Table 18, perceived HPWS positively relates to intrinsic motivation (γ = .55, p < .001) as well as to creative process engagement (γ= .18, p < .01). The significant and positive relationships between need satisfaction and intrinsic motivation as well as need satisfaction and creative process engagement have been supported when testing Hypothesis 8a. Lastly, the results of Model 5 also show that after entering need satisfaction in the equation, the γ coefficient of the relationship between perceived HPWS for creativity and intrinsic motivation decreased but remained significant (γ= .55 vs γ= .27, p < .05), suggesting a partial mediation. The results of Model 7 show that when need satisfaction is entered in the equation the effect of perceived HPWS on creative process engagement was no longer significant which suggests a full mediation. Thus, Hypothesis 8c received partial support as need satisfaction partially mediates the perceived HPWS -

intrinsic motivation relationship and fully mediates the perceived HPWS - creative process engagement relationship.

Hypothesis 9a suggested that need satisfaction would indirectly relate to creativity through intrinsic motivation and creative process engagement. I test this hypothesis comparing Models 9 and 10. Although the coefficient of need satisfaction on creativity was slightly reduced after entering intrinsic motivation and creative process engagement in the equation, it still remains significant (γ = .26, p < .05). However, intrinsic motivation (γ = -.03, ns) and creative process engagement (γ= .19, ns), do not significantly relate to creativity (Model 10). Thus, Hypothesis 9a was not supported. Hypothesis 9b suggested that intrinsic motivation would indirectly relate to creativity through creative process engagement. Although, intrinsic motivation significantly relates to creative process engagement (γ = .12, p < .001), creative process engagement was not significantly related to creativity (Model 12) disconfirming Hypothesis 9b.

Finally, Hypotheses 10a and 10b suggested that climate for creativity would moderate the relationship between intrinsic motivation and creativity as well as the relationship between creative process engagement and creativity. The results reveal that after entering individual and unit-level controls, Level 1 and Level 2 independent variables, and the two interaction terms into the equation (intrinsic motivation x climate for creativity, creative process engagement x climate for creativity), the interaction term of creative process engagement and climate for creativity is significant (γ= .81, p < 0.05), supporting Hypothesis 10b. The interaction term of intrinsic motivation and climate for creativity is not significant, failing to support Hypothesis 10a. In order to interpret the significant interaction term, I plotted the simple slopes using Preacher's online tool to plot multilevel interactions (http://www.quantpsy.org/interact/hlm2.htm). Following Aiken and West's (1991) recommendations, Figure 5 reveals that the relationship between creative process

engagement and creativity is positive when climate for creativity is high (one standard deviation above the mean), while the slope is slightly negative when climate for creativity is low (one standard deviation below the mean). An examination of the simple slopes shows that the slope is significant and positive when climate for creativity is high, simple slope = .36(.15), t = 2.43, p = .019, and non-significant when climate for creativity was low, simple slope = -.16(.18), t = .03, p = .358. These results indicate that climate for creativity strengthens the effect of creative process engagement on creativity and that this relationship is significant when climate for creativity is high but not when it is low.

Table 18: Hierarchical Linear Regression Analysis results for individual-level outcomes: Perceived HPWS, need satisfaction, intrinsic motivation, creative process engagement, and creativity

Variable	Perceived HPWS (Model 1)	Need satisfaction (Model 2)	Need satisfaction (Model 3)	Intrinsic motivation (Model 4)	Intrinsic motivation (Model 5)	Creative process engagement (Model 6)	Creative process engagement (Model 7)
Intercept	4.17(.05)	5.20 (.05)	5.20 (.05)	5.70(.07)	5.70 (.07)	3.63(.07)	3.63(.07)
Level-1							
Gender	-.11(.19)	-.28(.21)	-.24(.19)	-.26(.29)	-.15(.28)	.15(.17)	.23(.17)
Age	.01(.00)	.00(.01)	.00(.00)	.02(.01)*	.02(.01)**	.00(.00)	.00(.00)
Tenure (employee)	.00(.00)	.00(.01)	.00(.01)	.01(.01)	.01(.01)	.00(.01)	.00(.01)
Perceived HPWS for creativity			.51(.07)***	.55(.11)***	.27(.11)*	.18(.06)**	.12(.10)+
Need satisfaction					.55(.10)***		.14(.06)**
Intrinsic motivation							
Creative process engagement							
Level 2							
Branch size	.01(.01)	.00(.01)	-.00(.01)	-.02(.02)	-.02(.02)	.00(.01)	.00(.01)
Tenure (leader)	.01(.01)	.03(.01)*	.03(.01)	.02(.02)	.02(.02)	.01(.01)	.01(.01)
Branch-level HPWS for creativity	.29(.09)**	.10(.09)	.10(.09)	.02(.14)	.01(.14)	.02(.09)	.02(.09)
Climate for creativity							
Cross-level							
Intrinsic motivation x Climate for creativity							
Creative process engagement x Climate for creativity							
χ^2	74.96**	61.86*	78.06**	78.86**	90.63***	73.59**	75.46**
Model deviance	454.06	504.71	456.71	671.02	642.70	378.70	373.43
R^2total	.044	.035	.20	.18	.20	.03	.06

Table 18 (cont.)

Variable	Creative process engagement (Model 8)	Creativity (Model 9)	Creativity (Model 10)	Creativity (Model 11)	Creativity (Model12)	Creativity (Model 13)
Intercept	3.63 (.07)	5.04 (.10)	5.04 (.11)	5.04(.11)	5.04(.11)	5.04(.10)
Level-1						
Gender	.25 (.17)	.51(.31)	.46(.31)	.51(.31)	.46(.31)	.42(.31)
Age	-.01 (.01)	.00(.01)	.00(.01)	.00(.01)	.00(.01)	.01(.01)
Tenure (employee)	.00 (0.01)	-.02(.01)+	-.02(.01)+	-.02(.01)	-.02(.01)	-.02(.01)
Perceived HPWS for creativity	.08 (.06)	-22(.12)+	-23(.12)+	-21(.12)+	-.24(.12)+	-.21(.12)+
Need satisfaction	.07(.06)	.28(.11)*	.26(.11)*	.28(.12)*	.25(.11)*	.22(.11)+
Intrinsic motivation	.12 (.04)**		-.03(.08)	.00(.08)		-.01(.08)
Creative process engagement			.19(.13)		.17(.13)	.16(.13)
Level 2						
Branch size	.00(.01)	-.00(.03)	-.01(.03)	-.00(.03)	-.00(.03)	-.05(.03)
Tenure (leader)	.01(.01)	-.01(.03)	-.01(.03)	.00(.03)	-.01(.03)	-.02(.02)
Branch-level HPWS for creativity	.02(.10)	.61(.21)**	.61(.21)**	.61(.21)**	.61(.21)**	.42(.20)**
Climate for creativity						1.12(.36)**
Cross-level						
Intrinsic motivation x Climate for creativity						.11(.22)
Creative engagement x Climate for creativity process						.81(.38)*
χ^2	78.57***	182.75***	184.57***	182.75***	184.479***	164.94***
Model deviance	364.83	715.86	713.79	715.86	713.90	693.48
R2total	.10	.09	.14	.11	.11	.33

a Units N = 50, Individuals N = 255; Unstandardised coefficients are reported, with standard errors in parentheses.
† $p <$ 0.1; *$p < .05$; **$p < .01$; ***$p < .001$

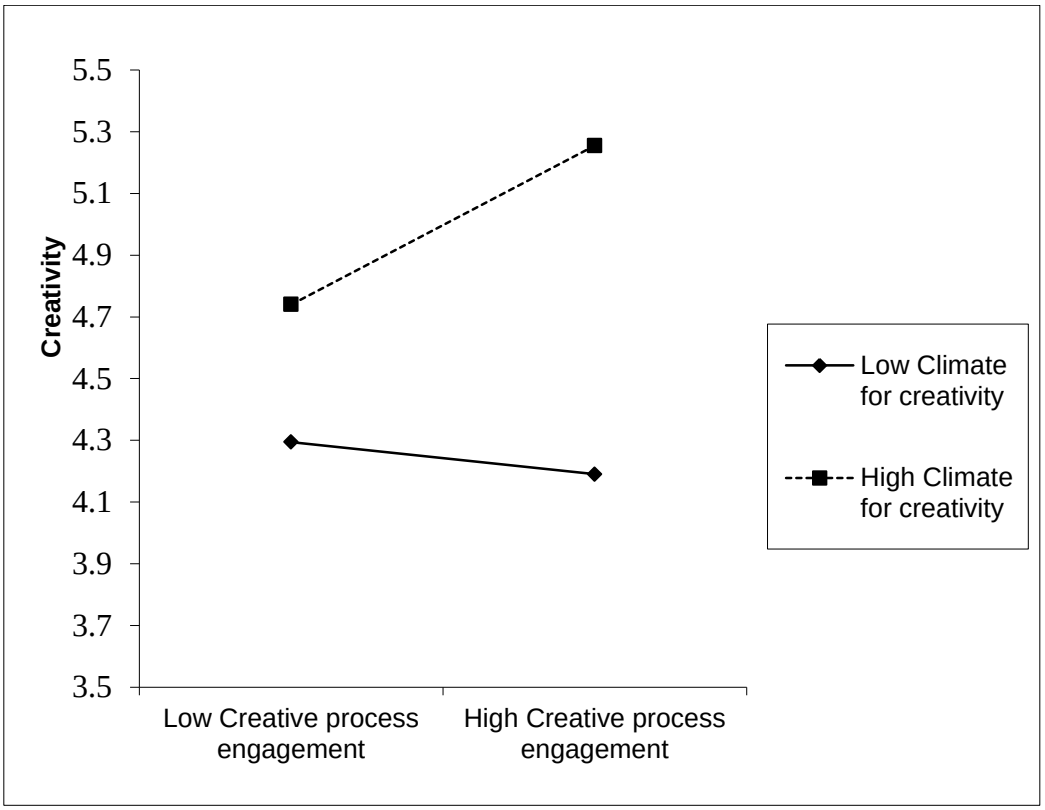

Figure 5: Interaction between creative process engagement and climate for creativity to predict individual creativity

5.7 Discussion

This chapter had a twofold objective. First, I further validated the newly developed HPWS for creativity scale and second, tested the study's hypotheses. The findings presented in this chapter suggest that the HPWS for creativity scale has adequate psychometric properties. The HLM findings revealed psychological pathways through which unit-level HPWS for creativity influences both individual and unit creativity, and unit quarterly profit.

Specifically, *CFA* results confirmed that HPWS for creativity has the structure of a second-order construct comprising the seven first-order factors of selective hiring, job autonomy, employee participation and communication, performance appraisal, rewards, employee training, and playfulness. Each of these factors comprised 3-4 items with 23 items in total. The HPWS for creativity scale also demonstrated good construct reliability (Fornell & Larcker, 1981) and fulfilled the conditions of *AVE* tests for convergent and discriminant validity. Taken together, these findings suggest that HPWS for creativity is a reliable and valid measure that can be used in future research.

The HLM analysis provided mixed support for the study's hypotheses. Pertaining to the branch level, four out of the five hypotheses were supported. As predicted, climate for creativity mediated the relationship between branch-level HPWS for creativity and unit creativity. These results suggest that HRM system enhances employee creativity but indirectly through employees' shared beliefs about the premium the organisation attaches to creativity. Contrary to Hypothesis 3, unit creativity was not significantly related to unit profit indicating that this relationship is not straightforward, but rather complex. As hypothesised, environmental dynamism moderated the creativity-profit relationship such

that the creativity slope on profit was positive although not significant at higher levels of environmental dynamism but negative and significant at low levels of environmental dynamism. One possible explanation is that in this particular study, environmental dynamism did not reach the levels required for creativity to be leveraged into profit. Given that these industries (cosmetics and banking) operate in an environment that is relatively stable, especially when contrasted with the dynamic environment that characterises the electronics industry, this explanation is intuitively plausible.

Pertaining to the individual and cross-level processes leading to individual-level creativity, six out of the ten hypotheses were supported. The HLM results revealed mechanisms through which branch-level HPWS exerts its influence on individual-level variables. Indeed, branch-level HPWS positively and significantly related to perceived HPWS which, in turn, influenced need satisfaction. These results point to the importance of measuring employee perceptions of HPWS (Kehoe & Wright, 2013). Although the results showed that managers' rating of the adoption of HPWS is related to how employees perceive HPWS in their unit, it is perceived HPWS that influences psychological mechanisms that underpin creativity. Consistent with self-determination theory, need satisfaction has been found to be an important psychological mechanism through which perceived HPWS for creativity relates to intrinsic motivation, and creative process engagement. Interestingly, I did not find intrinsic motivation or creative process engagement to relate to leaders' rated employee creativity. It is possible that in a service delivery context, when creativity is about everyday improvements rather radical ideas, intrinsic motivation and creative process engagement will be associated with creativity only under certain conditions. In this study, climate for creativity did not moderate the intrinsic motivation and creativity relationship, but moderated the relationship between creative process engagement and creativity. It is possible that creative process

engagement is a more proximal antecedent of creativity than intrinsic motivation and therefore in a high creativity climate, employees can capitalise on their engagement in creative process but not necessary on intrinsic motivation.

Exploratory analyses on the effects of single HRM practices to individual creativity indicate that specifically the employee perceptions of the dimensions of job autonomy, employee participation and communication, performance appraisal and playfulness at work are positively and significantly related to manager ratings of creativity. HRM practices such as selective hiring, training and rewards were did not have significant effect. This is to some degree in alignment with results of Jiang, Wang, & Zhao (2012) who also did not found all practices, for instance, training relate to creativity. In addition the results of regression analysis when creativity was regressed on each HPWS dimension while controlling for the other six HPWS dimension, indicate that only employee participation and communication dimension of HPWS significantly relate to employee creativity over the unitary index of other six dimensions (Table 16). These results support the existing notion that HR practices do not necessary work in isolation but rather in tandem to predict performance outcomes such as in this case creativity in service delivery. Although as mentioned in chapter 2 there is no agreement how to calculate synergistic effects of single HR practices (Chadwick, 2012), exploratory results indicate that although single HR practices do not necessary relate to desired outcome, the system of those practices does, which support the core assumption in SHRM that 'bundling' of work practices is critical in HPWSs (MacDuffie's, 1995).

In the next chapter, I review the findings of the studies reported in this thesis, discuss their theoretical and practical implications, highlight the limitations of these studies, and suggest some directions for future research.

A little knowledge that acts is worth infinitely more than much knowledge that is idle.

Kahlil Gibran

Chapter Six

Summary of key findings, general discussion, and implications

6.1 Introduction

Given the importance of employee creativity in organisational adaptation to an increasingly turbulent environment, research has examined the influence of single human resource practices on employee creativity. However, this stream of research does not dovetail with the strategic HRM literature that promotes the use of a configuration of human resource practices to foster the skills and competences, motivation, and opportunity (internal capability) to engage in work-related behaviours critical to strategy implementation and therefore organisational survival. Against this backdrop, this thesis reported a series of studies that developed and validated an HPWS for creativity scale (Study 1, 2 and 3). Additionally, this newly validated scale was used to test a theoretically grounded (social context and self-determination theories) multilevel model of the processes linking the use of HPWS for creativity to organisational performance defined in terms of branch-level profit (Study 3). This chapter pulls the threads together and summarises the findings of the studies reported in this thesis, discusses their theoretical and practical implications, highlights the limitations of these studies, and maps out some directions for future research.

6.2 Summary of key findings

6.2.1 Psychometric properties of the HPWS for creativity scale

Based on data obtained from 576 customer contact employees and 104 managers from service companies operating in diverse industries, the findings reported in the three

studies provide evidence of the psychometric properties of the HPWS for creativity scale. Specifically, these findings attest to the reliability as well as content, convergent, discriminant, concurrent and predictive validities of the HPWS scale. Table 19 provides an overview of the scale development and validation steps and results.

Face validity of the new HPWS scale was established in the interviews with HR and sales managers during which scale items were generated. Content validity was assessed and confirmed via expert judges' analysis, exploratory and confirmatory factor analysis, and internal consistency reliability. Convergent validity was demonstrated via different tests: by examining the relationships between HPWS for creativity and theoretically similar measures of empowering leadership, and social exchange; CFA and AVE tests. Discriminant validity was substantiated by a weak relationship with the theoretically different construct of positive mood; a test of comparing AVE (Fornell & Larcker, 1981) versus shared variance between HPWS for creativity and empowering leadership; and a series of confirmatory factor analytic tests that demonstrated the distinctiveness of the HPWS for creativity and climate for creativity measures. Additionally, in Study 2, two tests of predictive validity that controlled for method bias demonstrate that HPWS for creativity is a significant predictor of creative process engagement and creativity.

Table 19: Summary of HPWS for creativity scale validation results

Type of validity	Study 1	Study 2	Study 3
Face validity	Interviews with HR and sales managers: 38 items generated.	Five customer contact employees were asked for feedback on the items.	
Content validity	Subject matter experts' exercise resulted in 31 items on 7 dimensions.	EFA results show that 23 items loaded on 7 intended factors and explained over 65 % of the variance. The dimensional estimates of internal consistency – Cronbach's alpha - ranging from .67 to .82; and overall scale Cronbach's alpha of .89 met suggested standards for applied research (Nunnally, 1978).	Internal consistency of .89 was consistent through both employee and manager samples. Construct reliability (Fornell & Larcker, 1981) of .91.
Convergent validity		EFA results indicated that 23 items loaded on relevant 7 dimensions. Correlations with theoretically related constructs: social exchange and empowering leadership were positive and significant.	CFA results: 23 items converged significantly on 7 factors, which loaded on one higher-order factor. Overall factor loadings were substantial in size with items average loading of .67 on dimensions and with average of .74 on the overarching factor. *AVE* = .59, which met the cut-off point of .50 suggested by Fornell & Larcker (1981).
Discriminant validity		Zero-order correlation with positive mood (.39) was lower than with empowering leadership (.54) and social	*AVE* of HPWS for creativity (.59) was higher than a shared variance between HPWS for creativity and empowering

	exchange (.58).	leadership (.25).
	The correlations between perceived HPWS for creativity and employees' age (r = .04), gender (r = .00), education (r = -.12) and tenure (r = .05) were all non-significant. ANOVA results demonstrated that new measure differentiated between organisations.	Series of CFAs comparing alternative nested models: the model with HPWS for creativity and climate for creativity loading on separate factors fit data significantly better than the model with HPWS for creativity and climate for creativity combined on one factor.
Predictive validity	HPWS for creativity (T1) correlations with creative process engagement (T2) and creativity (T2) were positive and significant.	
Concurrent validity		Both manager and employee rated HPWS for creativity related positively and significantly to employee creativity.

6.2.2 Summary of tests of branch-level hypotheses

The results of Study 3 revealed support for four of the five branch-level creativity hypotheses. Controlling for branch size and previous branch profit, climate for creativity mediated the branch HPWS for creativity and branch creativity relationship suggesting support for hypotheses H1 to H3. However, creativity was unrelated to branch profit. Therefore Hypothesis 4 was not supported. Environmental dynamism moderated the branch creativity and profit relationship but not as predicted. Specifically, the relationship between creativity and profit became less negative when environmental dynamism was high but not low. I interpreted this to mean that instead of strengthening the positive relationship between creativity and profit, environmental dynamism buffered the negative effects of creativity on profit suggesting partial support for Hypothesis 5.

6.2.3 Summary of tests of individual-level hypotheses

The results of Study 3 supported six of the ten individual creativity hypotheses. Branch HPWS for creativity related to employee-perceived HPWS for creativity supporting Hypothesis 6. Subsequently and in support of Hypothesis 7a, perceived HPWS related to need satisfaction, but perceived HPWS did not mediate the relationship between branch HPWS and need satisfaction failing to support Hypothesis 7b. Need satisfaction related to intrinsic motivation and creative process engagement supporting Hypothesis 8a and intrinsic motivation fully mediated the relationship between need satisfaction and creative process engagement supporting Hypothesis 8b. Further, need satisfaction fully mediated the relationship between perceived HPWS and creative process engagement but, only partially mediated the perceived HPWS-intrinsic motivation relationship. Therefore Hypothesis 8c received partial support. The results further revealed that neither intrinsic

motivation nor creative process engagement related to creativity failing to support Hypotheses H9a and H9b. Pertaining to the hypothesised cross-level moderation, climate for creativity did not moderate the intrinsic motivation-creativity relationship but, moderated the creative process engagement–creativity relationship supporting Hypothesis 10b, but not Hypothesis 10a. I interpreted this to mean that creative process engagement and not intrinsic motivation is a more proximal antecedent of creativity. Thus, when climate for creativity is high, employees can capitalise on their engagement in creative effort.

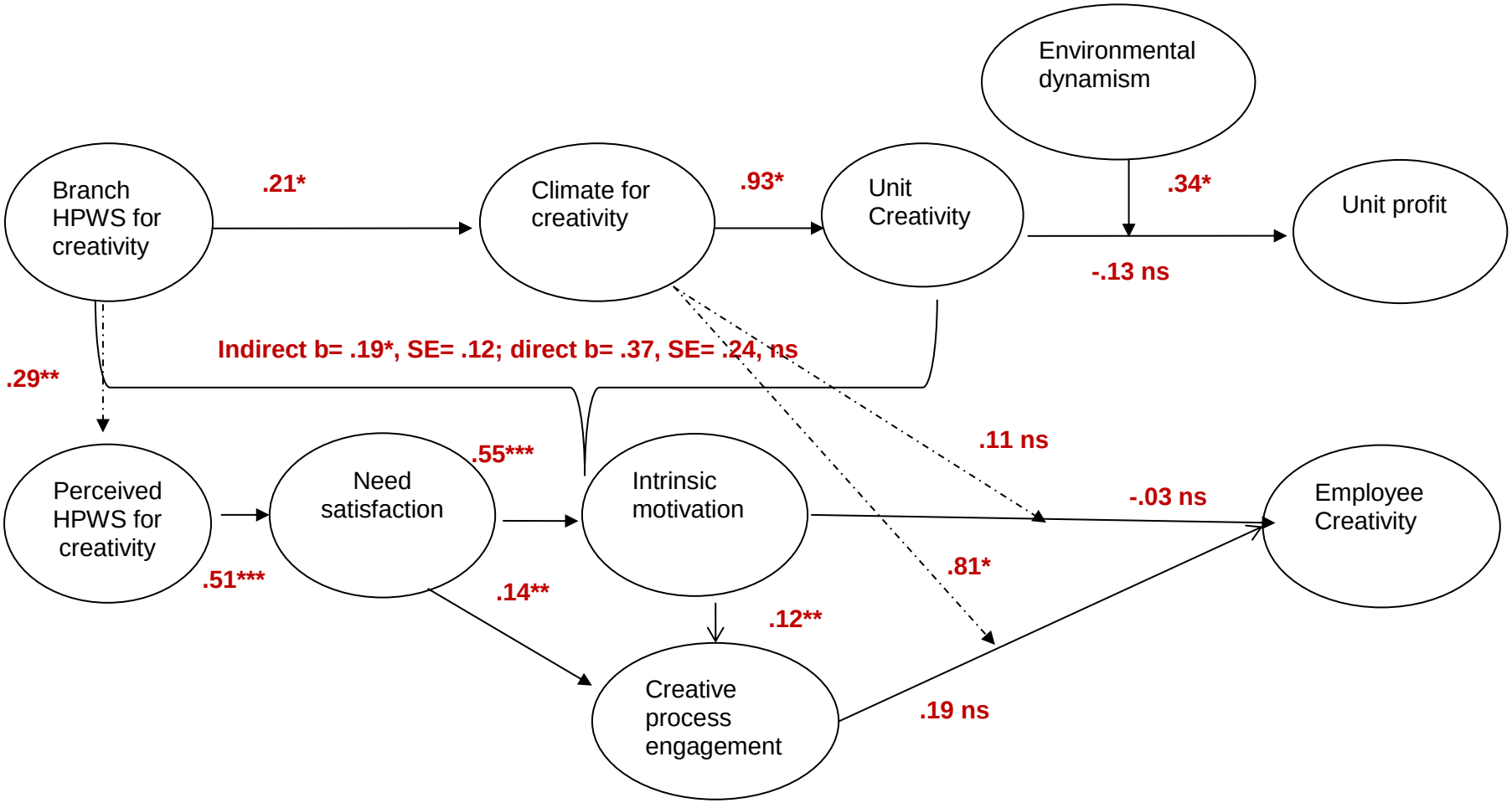

Figure 6: Individual and branch level hypotheses results summary

6.3 Theoretical implications

The preceding findings contribute to the literature in several ways. First, although there is research linking individual human resource practices and creativity (Byron & Khananchi, 2012; Ma, 2006; Scott et al., 2004), with a few exceptions (Binyamin & Carmeli, 2010; Jiménez-Jiménez & Sanz-Valle, 2008; Chang et al, 2014), there is a dearth of research that has examined how these practices systematically combine to influence creativity at both individual and branch levels, and ultimately, organisational performance (Shalley & Guilson, 2004). Thus, by developing and validating an HPWS for creativity scale, this thesis addresses this lacuna in the literature. To adapt and survive in a competitive marketplace, service organisations have adopted a service excellence strategy requiring frontline employees to demonstrate creativity in service delivery. As creativity is a strategic behaviour in the implementation of a service excellence strategy, service organisations must build an internal capability or a social structure to develop and motivate frontline employees to be creative in service delivery. Although there is a growing consensus in the HPWS practices used in SHRM research, many of these studies adopted practices reported in previous scales which have not been validated and with a few exceptions (Liao et al., 2009; Zacharatos et al., 2005) do not have a strategic focus (Bowen & Ostroff, 2004; Lepak et al., 2006). Consequently, the HPWS for creativity scale that was developed and validated in this study speaks to Delaney and Huselid (1996, p. 967) observation that "…the development of reliable and valid measures of HRM systems to be one of the primary challenges (and opportunities) for advancing this line of research". Such a task has become particularly urgent because to constitute a strategic

asset and therefore a source of competitive advantage or value creation, HR systems must now focus on building an internal capability for strategy implementation (Becker & Huselid, 2006). The development and validation of a strategically-focused HPWS constitutes a step in this direction.

How HPWS works to influence organisational performance has been a subject of much theorising (Bowen & Ostroff, 2004; Ferris et al., 1998; Lepak et al., 2006) and empirical research (Aryee et al., 2012; Combs et al., 2006; Jiang, Lepak, Hu, et al., 2012). Yet, there is a dearth of SHRM research (e.g., Den Hartog, Boon, Verburg, & Croon, 2013) that has investigated the simultaneous effects of HPWS on individual and firm-level outcomes. Similarly, with a few exceptions (Chen et al., 2013) there is a paucity of research in the creativity literature that has examined how organisational factors foster creativity across levels. In light of the observation that organisations do not perform (Kozlowski & Klein, 2000), and grounded in social context and self-determination theories, this thesis proposed and tested a multilevel model of the influence of branch-level HPWS for creativity on individual customer contact employees' creativity in service delivery and how it emerges at the branch level to influence branch-level outcomes. The findings revealed the adoption of HPWS for creativity as a managerial action to develop an internal capability that emphasises customer contact employees' service delivery creativity - a strategic behaviour in the implementation of a service excellence strategy. While research has shown other strategically-focused climates such as climate for service to positively influence service performance (Hong et al., 2013; Schneider, Ehrhart, Mayer, Saltz, & Niles-Jolly, 2005), I focused specifically on the social context that engenders creativity as a strategic behaviour in service delivery. Findings linking branch HPWS for creativity and branch creativity also have implications for the organisational literature on creativity that has hitherto focused on individual human resource practices and/or other work environment factors. This finding extends the work on the contextual antecedents of

creativity (Coelho et al., 2011; Kelly et al., 1996) as well as validates Shalley and Guilson (2004) call to systematically examine how human resource practices synergistically combine to influence creativity.

Second, the finding that branch-level creativity was unrelated to organisational performance is in line with the reported mixed findings with some reporting a non-significant (Gong et al., 2013; Merlo et al., 2006) and others a significant (Sung & Choi, 2012) relationship. It is intuitively plausible that branch-level creativity may not directly relate to profit but rather, to operational outcomes such as sales (Gong et al., 2009; Martinaityte & Sacramento, 2013). More critically, the mixed finding suggests a need to examine boundary conditions of the branch-level creativity-organisational performance relationship. Gong and colleagues (2013) reported that employee creativity was not significantly related to firm performance but instead, the relationship was conditional upon a set of factors (riskiness orientation, firm size, and realised absorptive capacity). The moderating influence of environmental dynamism that I uncovered underscores the need for research to examine the boundary conditions of the branch creativity-organisational performance relationship. Although environmental dynamism moderated the creativity-profit relationship, it was not in the predicted direction. A probing of this finding revealed unit creativity to have a significant negative relationship with branch quarterly profit when environmental dynamism is low, but a positive non-significant relationship when environmental dynamism is high. Perhaps in environments characterised by low dynamism or infrequent changes in service products and customer preferences, standardisation rather than customisation of service delivery enables customer contact employees to meet the homogenous needs of customers which enable them to come across as competent and knowledgeable (Gilson, Mathieu, Shalley, & Ruddy, 2005). The low degree of environmental dynamism that characterises the retail banking and cosmetics industries I examined suggests that these industries do not have the frequency

of changes in service products and customer preferences to leverage the internal capability and the resulting strategic behaviour of creativity in service delivery to promote sales and ultimately, improved quarterly profits. Although tentative, this finding underscores the importance of a fit between environmental demands and strategic responses, and ultimately, organisational performance.

Third, the findings also contribute to SHRM research by underscoring the importance of employee perceptions in the way branch-HPWS influences individual-level outcomes. Only recently have SHRM researchers started acknowledging and measuring employee perceptions of HPWS. Building on the view that what managers intend to implement is not necessarily perceived by employees (Den Hartog et al., 2013; Kehoe & Wright, 2013), this study is one of the few that examined employee-perceived HPWS. Drawing on self-determination theory, the findings revealed psychological pathways through which branch-level HPWS for creativity influences employee creativity. Earlier studies have shown intrinsic motivation and creative process engagement as psychological processes conducive for creativity (Zhang & Bartol, 2010) and that organisational factors such as leadership can enhance or inhibit creativity via these processes (Shin & Zhou, 2003; Zhang & Bartol, 2010). Yet, we do not know how and why intrinsic motivation and creative process engagement are enhanced through managerial practices such as HPWS for creativity. Thus, drawing on self-determination theory, this thesis uncovers need satisfaction as an important intermediate mechanism through which perceived HPWS influences intrinsic motivation and creative process engagement. Specifically, the findings revealed that employee perceptions of HPWS shape employees' overall feelings of autonomy, competence and relatedness which, in turn, lead to enhanced intrinsic motivation and engagement in creative process.

Lastly, this study broadens our understanding of the role of climate in facilitating employee creativity in service delivery. Climate for creativity has been previously found to

be an important predictor of individual creativity (Hunter et al., 2007), yet little is known about how such a climate interacts with individual-level variables to predict creativity. By examining climate for creativity as a cross-level moderator, this thesis contributes to the creativity literature by testing Woodman and colleagues' (1993) interactionist perspective. In line with the interactionist perspective, climate for creativity augmented the influence of creative process engagement on individual customer contact employee's creativity in service delivery. However, climate for creativity did not augment the intrinsic motivation-creativity in service delivery relationship suggesting differences in how the constructs of creative process engagement and intrinsic motivation can be leveraged to promote creativity in service delivery.

6.4 Practical implications

Given that creativity in a service context constitutes a strategically important behaviour in promoting unique customer experiences and service excellence, the findings of the studies reported in this thesis have a number of implications for the effective management of customer contact employees.

First, if validated in subsequent research, service organisations can use the HPWS for creativity developed and validated in this thesis as an intervention strategy to develop the internal capability or social structure to facilitate customer contact employees' creativity. While there is no shortage of instruments to measure HPWS, many of them are not designed around a strategic focus (Bowen & Ostroff, 2004). The instrument reported in this study unearthed HRM practices that are tailored towards creativity and can serve as a framework or guideline for organisations that intend to promote creativity in service delivery as a source of competitive advantage. Specifically, if HR and branch managers

aim to facilitate creativity in their organisations they should introduce selection methods to test employee creativity skills. Training for creativity should be made available not only to R&D or Marketing departments but also for customer contact employees in order to develop positive attitudes to creativity and enhance creative problem solving skills. Managers should also think not only about monetary rewards for creativity but also non–monetary rewards such as praise and initiatives that demonstrate appreciation of new ideas. Branch managers should also consider creating a relaxed and informal atmosphere in the office and by introducing initiatives to promote fun at work. Indeed, it is important to emphasise, that this research focused on a system of HR practices rather than stand-alone initiatives and therefore findings of this study underscore the importance of systematically implementing these HRM practices.

Second, the finding that the relationship between HPWS for creativity and unit creativity was mediated by climate for creativity highlights the social structure that must be in place for service organisations to leverage the adoption of this type of HPWS. First, for employees to share beliefs that creative behaviours are expected and rewarded, organisations should implement HPWS for creativity. Second it is not only human resource practices but also the actions of leaders that signal an organisation's priorities and normative behavioural expectations (Hong et al., 2013). Therefore, it is important that leaders understand the implementation requirements to ensure their actions reinforce the signals suggested by an HPWS for creativity. In tandem with the adoption of these practices, organisations should also train and develop leaders who as climate engineers can reinforce the requisite attitudes and behaviours for creativity and implementation of a service excellence strategy.

The fact that perceived but not actual HPWS influenced the psychological mechanisms leading to engagement in creative process, suggests that managers should

not only implement HPWS for creativity but also ascertain how employees perceive these initiatives. Indeed, managers might have a much better knowledge and understanding than their subordinates about the hiring process in their unit and about the training available for their employees. If employees lack information about the actual HR initiatives, their perceptions of HPWS for creativity will be low which will not trigger psychological processes such as need satisfaction, intrinsic motivation, and creative process engagement. My findings reinforce the recent finding by Den Hartog and colleagues (2013) that employee perceptions are even more crucial than actual HPWS in influencing employee outcomes. This finding further highlights the importance of training and developing managers to ensure their behaviours reinforce the messages and/or signals an organisation intends to communicate through the adoption of an HPWS.

Third, the finding relating to the moderating role of environmental dynamism in the relationship between unit creativity and quarterly profit suggests that service organisations that consider customer contact employees' creativity as a behavioural requirement in the implementation of a service excellence strategy must ensure that the level of creativity required is consistent with the demands of their environment. In environments characterised by low dynamism or rare changes in customary preferences, service organisations may be better off standardising the service delivery because there is less need for customisation. However, in environments characterised by high dynamism with frequent changes in customer preferences and services or products, customer contact employees may need to often customise the service delivery. The task therefore is for service organisations to carefully calibrate the extent of dynamism that characterises their environment to decide whether to standardise or customise (and therefore encourage creativity) the service delivery or even combine the two approaches (Gilson et al., 2005).

6.5 Strengths, limitations and directions for future research

The preceding discussion of the findings and their implications must be interpreted against a backdrop of the limitations of the studies reported in this thesis.

First, the use of a primarily cross-sectional design suggests that the findings are correlational rather than causal. That said, in Study 2, HPWS for creativity was measured at Time 1, whereas data on creativity and creative process engagement were collected at Time 2 providing initial evidence of the predictive validity of HPWS for creativity. Furthermore, in Study 3, quarterly profit was time lagged so the theorised relationships between unit creativity and unit profit moderated by environmental dynamism cannot entirely be characterised as correlational. However, future research that employs longitudinal research design will be better placed to demonstrate the causal basis of the relationships reported in this thesis. Although in the past researchers have used quarter as a time frame for financial performance (e.g. Gong, Huang, Farh, 2009; Ployhart, Van Iddekinge, Mackenzie, 2011), a longer time frame (e.g. six month or longer) might be needed to reap the benefits of HPWS on organisational performance (Birdi et al, 2008). In addition, choosing profit as a measure of organisational performance adopts a single shareholder-oriented approach as profit is at the bottom of shareholders' interests. I acknowledge that organisational performance could be measured from different stakeholders' perspectives: employees, customers, shareholders or other groups of interest (Boxall & Purcell, 2008) in terms of turnover, absenteeism, job satisfaction, commitment, and other organisational outcomes, such as productivity, quality, service, efficiencies, customer satisfaction (Dyer and Reeves, 1995). Therefore future research that focuses on creativity in service delivery as a behavioural prerequisite in implementing a service excellence strategy must examine not only financial but also customer-focused

outcomes such as service quality, customer satisfaction, productivity as well as employee-focus outcomes such as job satisfaction and turnover.

Second, although the findings are generally consistent with theoretical expectations, data for Study 3 in particular were obtained from only two organisations in Lithuania and from customer contact employees. Consequently, the extent to which these findings are generalisable to other national contexts and jobs is somewhat limited. Future research in different national contexts and jobs would be helpful in ascertaining the external validity of these findings.

Third, although this study was based on the assumption that a service organisation adopts an HPWS for creativity to develop the internal capability to implement a service excellence strategy, I didn't examine the extent to which such a strategy drives the adoption of an HPWS for creativity. Future research that aims to provide a comprehensive understanding of the role of SHRM in organisational performance will do well to investigate contextual influences such as market orientation on the adoption of a strategically-focused HPWS.

Drawing on contingency theory, I investigated environmental dynamism as an important boundary condition of the branch-level creativity–profit link. However, the marketing literature suggests other environmental, organisational, and branch-level factors that may influence how branch creativity is transferred into profit. For instance, Baldauf and Cravens (2002) tested product type, industry growth, and sales persons' capabilities as boundary conditions of the relationships between sales behaviours and performance. In view of the mixed findings regarding the influence of creativity on organisational performance, future research should further examine the conditions under which creativity in service delivery relates to organisational performance.

Fourth, branch-HPWS for creativity was measured using branch manager's ratings as branch managers were considered the most knowledgeable and aware of HRM practices implemented in the branch. Using single representative data – HR manager or establishment/branch manager for HRM practices or systems is a wildly accepted practice in SHRM literature (Lepak et al., 2007; Aryee et al., 2012, Takeuchi et al., 2009; Jiang, Wang, & Zhao, 2012; Chuang & Liao, 2010). However, some researchers have pointed that using single source in measuring HRM is not a reliable method and creates a measurement error (Gerhart, 2012), which in turn effects estimated relationships between HRM and performance. Future research should also consider a study design that would allow using multiple respondents, for instance branch managers and team leaders/supervisors to assess branch HPWS for creativity (see, Takeuchi et al., 2007; Liao et al., 2009; Chuang, Jackson, & Jiang, 2013).

Fifth, the study's objective was to develop and validate an HPWS for creativity in a service delivery context. There is documented evidence to show that a service excellence strategy can also be achieved through the implementation of an HPWS for service quality and the associated climate for service (Hong et al., 2013). Future research may therefore need to examine the role of creativity in service delivery in achieving service quality and whether the two service excellence-related HPWSs (for creativity and for service quality) and the creativity and service climates that they engender operate as parallel mechanisms to influence intermediate and financial outcomes. In addition, given the current debates in SHRM literature on "the best" vs business strategy-goal specific HRM systems (Delery & Doty, 1996, Chadwick et al., 2010; Chuang et al., 2013), in the future researchers should test incremental validity of HPWS for creativity scale. Although the new scale has been theoretically developed based on the Amabile's componential model by tailoring each HR practice to one of the critical components for creativity and

criterion validity has been established in two studies, the future research needs to empirically test how the newly developed HPWS for creativity scale is different from standard measures of HPWS in predicting creative process engagement and creativity.

Contrary to my hypothesis, intrinsic motivation was unrelated to creativity. Although Coelho and colleagues (2011) reported a positive relationship between front-line employees' intrinsic motivation and creativity, both measures were based on self-reports making it difficult to make any inference about the substantive nature of the relationship they reported. In support of my results, several studies reported intrinsic motivation to be unrelated to supervisor-rated creativity (e.g., Dewett, 2007; Perry-Smith, 2006). In addition and opposing Zhang and Bartol (2010) findings creative process engagement was also not significantly related to manager ratings of employee creativity. It is possible that in a service delivery context other antecedents such as customer orientation or self-efficacy are stronger determinants of creative performance. Customer orientation – predisposition to meet customers' needs in an on-the-job context (Brown, Mowen, Donavan, Licata, 2002) was found to be positively related to supervisors' ratings of performance (Brown et al, 2002). Self-efficacy which refers to the person's belief in his or her ability to perform well in a specific task domain (Bandura, 1997) was found to have both direct and indirect effects on sales performance (Krishnan, Netemeyer, & Boles, 2002). Future researchers should examine both customer orientation and self-efficacy as antecedents of creativity in service context. Given that climate for creativity did not moderate the intrinsic motivation-creativity relationship, but moderated creative process engagement-creativity relationship shows that even creative process engagement was not directly related to creativity, it is still a more proximal antecedent of creativity than intrinsic motivation in the presence of high creativity climate. It is possible that when climate for creativity is high, employees can capitalise on their engagement in creative process, but not on intrinsic motivation.

Despite the preceding limitations, this thesis has a number of methodological strengths that counterbalance its limitations. First, in Study 1, I inductively developed the HPWS for creativity items through interviews with HR and other managers who are knowledgeable about human resource practices used in their respective organisations to manage customer contact employees. Perhaps more significantly, the inductive approach led to the uncovering of a playfulness dimension which is unique to the HPWS scale developed and validated in this thesis.

Second, I controlled for previous unit quarterly profit (Wright et al., 2005) in Study 3 and therefore provided a more rigorous test of the hypothesised processes through HPWS influences unit performance (Singh et al., 2012). Furthermore, unlike previous studies that used subjective measures of unit performance (Chuang & Liao, 2010 ; Takeuchi et al., 2007), I used an objective data in the form of unit quarterly profits to measure organisational performance. Lastly, I obtained data on the constructs used in Study 3 from three different sources: employee ratings, manager ratings, and company records. Although employee and supervisor ratings were collected at the same time, data on branch profit were taken three months before and two month after the survey.

6.6 Overall conclusion

Creativity in service jobs is firmly on the radar of organisations as they seek to achieve and sustain competitive advantage through service excellence. This study contributes to this enterprise in two ways. First, it developed and validated an HPWS for creativity scale. Second, and grounded in social context and self-determination theories, it proposed and tested a multilevel model of the processes through which the adoption of an HPWS for creativity influences individual and branch-level creativity as well as a boundary condition of the influence of branch-level creativity on branch quarterly profit. While the

findings broadly supported the theorised relationships two findings were particularly salient at the branch-level. First, branch HPWS related to branch creativity in service delivery indirectly through climate for creativity. Second, branch creativity in service delivery was unrelated to branch performance defined in terms of branch quarterly profit. However, this non-significant relationship was moderated by environmental dynamism such that the relationship was strong when environmental dynamism was low but not high. The individual and cross-levels evidenced three salient findings. First, branch HPWS related to perceived HPWS. Second, perceived HPWS indirectly related to intrinsic motivation and creative process engagement through need satisfaction. Lastly, creative process engagement and creativity but not intrinsic motivation and creativity relationship was moderated by climate for creativity such that the relationship was strong when climate for creativity was high but not low.

In sum, these findings underscore the importance of organisations pursuing a service excellence strategy to adopt an HPWS for creativity as an intervention tool to build the internal capability to implement this strategy. It is hoped that future research will build on the findings as well as address the limitations of this thesis to further examine how and why an HPWS for creativity influences individual and branch-level performance in both service and non-service sector organisations.

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Appendix A

The literature review on creativity branch/firm performance relationship

Study & Context	Level of analysis	Relevant measures	Results	Limitations
European-based manufacturing companies (Gebauer, Gustafsson, & Witell, 2011).	Firm	Innovativeness items included: *"We are first to market with new products or services"*. Performance items included: *"Over the past three years, our financial performance has exceeded that of our competitors".*	Firm innovativeness was significantly related to firm performance	Common method variance
Korean business-executive sample (Suh et al., 2010).	Team	Process-based creativity: *"The team was highly imaginative in thinking about new or better ways."* Outcome-based creativity: "*The project was innovative." "Compared to our previous, similar projects, at least some parts were daring, risky, or bold."* Subjective measures of net profits and growth in sales relative to expectations. Overall performance in net profits and growth.	Team creative processes were related to project performance; The creativity of the project was not.	Common method variance
Customer service technicians from the Canadian division of a multinational	Team	Creative team environment was measured asking whether team members as a whole: (1) welcomed change, (2) encouraged each other to try new things, even though they might not work, and (3) were willing to try creative solutions to	Creative team environment related to team performance but not to customer satisfaction. Standartisation moderated creativity and	Did not control for prior performance. Measured team environments for

organisation that sells, services, and maintains large office equipment (Gilson et al., 2005).		solve difficult problems. Team performance measure: aggregated measure of objective key performance indicators. Customer satisfaction - company records.	team performance relationship in such a way that it was stronger when standardisation was low. The opposite pattern emerged for customer satisfaction.	creativity not really a team creativity.
13 service firms, four manufacturing and four professional firms (Weinzimmer, Michel, & Franczak, 2011)	Firm	Organisational creativity items included : *"Our company emphasises creativity", "Our company rewards creative thinking"* Objective measures of performance from company financial information.	Creativity and ROA relationship was mediated by firm action orientation.	Creativity measure reflected climate measure.
CEOs from a wide range of companies in Spain (Aragón-Correa, García-Morales, & Cordón-Pozo, 2007).	Firm	Perceptual measures of firm innovation and firm performance both coming from CEOs of the companies.	Firm innovation was significantly related to firm performance	Common method variance
Korean insurance company (Sung & Choi, 2012).	Team	Team creativity rated by leaders, items included *"Our team comes up with new and practical ideas in solving problems".* Objective measure of financial performance of 6th months.	Team creativity was significantly positively associated with financial performance in 6th months.	No control for previous performance
122 U.S. advertising	Firm	Creativity was measured by number of awards. Agency growth was an objective measure.	The performance of public agencies was not	Objective data for both

agencies (Von Nordenflycht, 2007).			conditioned by their creativity. The raw correlation between growth and awards is only .07 and in the regressions using growth as a dependent variable the coefficient on awards is consistently *negative*.	creativity and performance; controlled for 3 consequent years growth.
112 stores within a large national retail chain (Merlo et al., 2006)	Branch level	Retail store creativity reported by store managers. Items included: "*In our store, new insights and ideas get developed into improved services or processes."* Store performance rated by managers. Items included: *"Overall our store runs very efficiently."*	The creativity–store performance link was not significant.	Although common method bias the relationship was not significant.
Rubera and Kirca (2012)	Firm	A meta-analysis on innovativeness and market position, financial position.	Positive effects of firm innovativeness on market position and financial position. Moderators of this relationship were firm size, industry, innovation scope, and advertising expenditure.	
Core knowledge employees from 148 high-technology firms(Gong et al., 2013)	Firm	Core knowledge employee creativity: items adopted from Tierney et al. (1999). Sample items included: Core knowledge employees as a group *"generated novel, but operable work –related ideas",* and *"found new uses for existing methods or equipment"* (1=very inaccurate; 5- very accurate).	Core knowledge employee creativity was related to firm performance when realised absorptive capacity was high, but not when risk orientation was high.	Core knowledge employees rated creativity; Subjective measure of firm performance cross-sectional design.

Appendix B

Study 1 interview protocol

How important is creativity in the industry you operate?

How important is creativity of the survival of your company?

How important is for sales people to be creative? Please give examples.

How do you select and recruit employees in your organisation? Please give examples.

How do you select for creativity? Please give examples.

How much autonomy do sales people have in their job? Please give examples.

How much flexibility do sales people have in your company? Please give examples.

What kind of information is shared with sales people? Please give examples.

How do you share information with sales people? Please give examples.

How are salespeople rewarded? Please give examples.

What initiatives do you employ to reward for ideas? Please give examples.

What training programs do you have available within your organisation for sales people? Please give examples.

Are there any non-sales related training available for your sales force? Please give examples.

Do you have any specific HR practices to promote creativity? Please give examples.

What practices/ initiatives in your opinion could foster creativity in your organisation?

Appendix C

Study 1 interview themes and illustrative quotes

Themes from interviews	Interview examples
Selective hiring	
Creative thinking skills	*HR11: Creativity is in our selection criteria list. We ask questions during interviews to see interviewee's imagination, e.g. we ask to list as many reasons for why clients refuse to buy? We can also ask some random, out of the topic question „why manhole covers are round?"*
	HR12: We have creativity in the job description: sales persons have to find innovative ways to present a product to a customer; we select employees based on job description.
	HR6/ SM8: The importance of creativity could be placed as one third of all required skills in our recruitment and selection process.
	HR13: I relate creativity to knowledge and expertise; to knowledge about product, customers and organisational processes.
	SD3: For me creativity is about 'can do' attitude. If one is not motivated to earn a salary, then I will not recruit such a person. I don't recruit 'standard passport pictures' (author's note: a metaphor used by respondent). If the person has a 'can do' attitude, for me it equals creativity and I would select such person for my team.
Sales skills	*HR9: It is a social skill that is important first, then creativity.*
	HR14: Empathy, ability both speak and listen is important.
	HR4: Our selection priority is based on sales skills rather than creativity. I test empathy using

	empathy test. Also I use communication skills test.
	HR12: Creativity can be in the selection process, but sales skills and experience are in a first place.
Experience & knowledge in the field	*HR10: We require experience in the IT field. Qualifications are the most important here.*
	SD2: For our business specificity background in natural sciences (e.g. a background in physics) is important.
	HR9: If a banker was creative but did not know a product or a market, it would not work out. Sales people need to have knowledge first and only then creativity helps.
Learning orientation	*HR5/HR13: The most important is the 'open-minded' attitude of the candidate.*
	HR12: Ambition to learn and improve. Not afraid of anything, active and feeling responsibility.
	HR4: We don't have creativity criteria in the selection, it is important to learn quickly in our company.
Job autonomy	
Autonomy to organise the job	*PM 1: Work is divided according to the activities you like. However, there are situations when I don't want to do the particular project but I am told that I have to. If there is no space to improve, it does not interest me.*
	HR3: There is a lot of ambiguity in our company. People basically create job descriptions and duties themselves.
	HR12: People are not afraid here, we do no spy them. A working-day is not strictly ruled, they know that if they start working at 10am, they will finish at 6pm. We do not control them.
	SM 1: I tell my people that they don't need to be in the office. We do not have to pretend that we are working.

Autonomy to solve problems	*SD2: Decisions are made by sales people together and they do not need to consult the authority. There are no formalities. I (a sales manager) only ask to send the important bits. There is a lot of freedom. They can come to me, if they are really unsure about something.*
	PM 1: There is a lot of autonomy here. I go and ask only if I really need some help.
Autonomy to make decisions	*HR14: It depends on the importance of a decision. For example, you cannot cancel a project without discussing the matter first. That is, you have a total freedom except for the extremes. You cannot reduce the price or change the ideas that our creative department has developed.*
	HR7: Sales people can say that they are going to a family gathering and they need ... say ...five cars from the showroom. They can go and take those cars as a promotion campaign.
	HR9: Our salespersons have a lot of autonomy in deciding how to develop relationships with their customers. For instance, a salesperson has a certain budget to greet a client on different occasions, such as a birthday. But what he/she does with this budget is an absolute freedom. Our employees have all opportunities to suggest the ideas. They can read business news and search for opportunities to participate in public events. Someone can say that today he/she is going to see a client or going to attend a specific event and they have all autonomy to do that.
Employee involvement & communication	
Initiatives for sales people input	*HR2: We have so called 'ideas' bank': an idea is suggested on our intranet; then HR people check it out and present it to the board of directors. We pick supreme ideas and announce voting. The best idea of the year wins a trip. Sometimes we must provide some kind of framework for creative ideas. For instance, HR department announces that we are looking for ideas about the products' displays in our supermarket.*
	H11: We can collect ideas from people who serve customers by using our 'ideas' box'. Line managers then review those ideas, evaluate them and decide about which ideas to implement.
Participation in decisions	*HR7: If it is a discussion how to organise event for customers, sales people are involved. It also depends on time availability. If it is a decision about a promotional offer, sales people should be involved. However, in some cases such as negotiating a product price with a customer, sales people do not have a*

	lot of flexibility.
	HR3: I am planning to improve our performance management system. For this I will involve our production employees and we will be having ,a brainstorm session.
	HR2: Our salespeople are asked to give suggestions and ideas for products' display in a supermarket, but it is a manager who would say the last word. Our salespeople are those who mostly implement. Creativity is more for marketing people, but supermarket employees also are involved to some degree.
	HR11: Our company decided to improve internal processes: sales managers are invited to give suggestions. There are already theoretical frameworks how it should be done, but with a help of our employees we can adapt frameworks to our reality.
Mechanisms to suggest improvements	*HR10: Our project manager discusses an idea with colleagues and his/her boss, and then they consider possibilities to implement this idea and spend some time to develop it. Then a project manager tries to arrange a discussion with a potential client. A project manager also talks with programmers about available systems and resources. Many colleagues are involved in the discussions. Every Monday production meetings are held, where you can present your idea.*
	HR13: We have a system called 'idea gates'. The purpose is to 'kill' all ideas, the one which survives is valuable and worth implementing. 'Idea gates' is represented by a management team who decides if a certain idea is worth pursuing.
	HR11: There was a letter from a very important client to which we needed to reply. It was an unusual situation and we had to think how to answer it. The letter was sent to the group of all managers and they were asked to give their suggestions.
Brainstorming	*HR14: We are all located in one office. If there is a problem we talk it through. The brainstorming is organised every day.*
	PM: When I face a problem, then I invite my colleagues to have a brainstorming session, we call those sessions 'Brains'. You don't get involved with others' stuff a lot, because our culture is quite individualistic. But you can invite colleagues to brainstorm some ideas to solve a problem.
	HR5: "Last year we had a pre-session where people were thinking of what they would like to have

	in the office. During training programs or meetings we generate many ideas, but there are only 1-2 that are finally chosen from a long list. Managers then decide which idea to pursue and implement and provide employees with feedback.
	SD4: All information is communicated via meetings: project directors, sales employees and top management everybody meets together once in a quarter.
Financial information	*HR3: Line managers participate in top management meetings, especially if it is related to a product development. During those meetings new ideas are shared. We have an open-doors system: you can spontaneously pop in to discuss ideas with a managing director.*
	HR2: For communicating our mission we use creativity as well, for instance we personalise our mission 'To make every day a little easier' to each employee by using the slogan: 'Ease your day!'
	HR10: Breakfast with a company director and all employees is our monthly event, during which we discuss about our office results. Projects are overviewed, and those most successful ones are announced: people that were working on these projects are acknowledged. We also discuss things which
Strategic information	*have not been yet achieved.*
	HR13: We have our intranet where we communicate company's mission, vision, values and company history. We also put messages in the intranet related to key strategic decisions, product development and general news in the market. We encourage people to write and share their achievements. In addition, we have informational meetings where we also exchange information with our employees and we listen to their suggestions and receive feedback.
Performance appraisal & rewards	
Development oriented performance appraisal	*HR12: We evaluate based on goals and competences: we discuss what to improve, what help is needed from management, and knowledge and skills to be developed.*
	HR14: the purpose of our performance appraisals is to analyse, understand better our employees' behaviour and to make improvements happen. We write about what each of us has to achieve, what literature has to be red, what trainings should be attended.

Results oriented performance appraisal	*SD3: The emphasis is on how goals have been achieved and what training needs are. The conversation is based on an educative feedback, but we discuss mistakes as well.*
	HR3: In our commercial branch we measure achievement of goals, not the level of competencies.
Development feedback for creative ideas	*HR1: It is important to give feedback for new comers and those who work for 1-2 years. Later they need to learn how to reflect and make self- assessments.*
	SD4: [...] An idea has to be weighted. You have to see more than 2 or 3 opportunities. If someone comes with an idea, I say that it is great, but we have to think about the other options as well...
	HR2: We have an automatic response in our system and in this way we can provide a minimum feedback when ideas are received. Descriptions of the ideas are located in our intranet. If the idea is not realistic, we also make a phone call to the author and explain the reasons.
Recognition for creativity	*HR12: One sales person suggested a new way of positioning our product in the market. The idea was presented in our head office in Scotland: e-mails were sent to everybody acknowledging the idea, and it was also acknowledged during a regional meeting. A manager has to know what kind of acknowledgment employees need. Some people do not mind being publicly recognised, some want to stay in a 'corner', while others value only a monetary reward.*
	HR14: We used to acknowledge employees in public for their ideas, but it did not work properly. There is no pride receiving them. Maybe managers' assistants would be pleased but for project managers it is not enough. They should probably get a trip or something similar.
	HR1: We don't have practice to praise for ideas. If everything goes fine, it is taken for granted. If something goes wrong, then management starts paying attention. It is important, to recognise for ideas, especially, newcomers or those who are for 1-2 years in the company, because they it is important for them. But if we announce a competition, then we also announce a reward. Employees like to be rewarded. For instance we had a competition for the best presentation template.
Monetary rewards for creativity	*HR11: Logically, if an idea is implemented then as a result employees will get their incentives. Employee receives a percentage from a project, so in the end the ideas get rewarded anyway.*
	HR14: We do not relate ideas to monetary rewards, because if creativity helps to reach sales

	targets it means that a sales person will get a reward anyway.
	HR7: If an idea is directly related to one's job and it helped to deliver results, a sales person will receive a bonus. Specifically, ideas are not always rewarded as it is difficult to know whose idea it was [...] Acknowledgement is very important, though. If an invention gave profit, a reward is worth to give.
	HR13: We had a monetary initiative for new products development, but it was detrimental for motivation. There were no new ideas for some time if employees knew they would not be rewarded for the specific output.
	HR2: We announce competitions, for instance competition for 'the best seasonal products display in the supermarket'. Employees compete within each other and winners receive both acknowledgment and monetary reward. We have 'ideas' bank', where the greatest ideas are selected by voting. The best idea of the year wins a trip.
	HR9: If we talk about creativity then maybe a reward itself could be creative. Money kills creativity.
	SD2: We recognise and praise for ideas during monthly meetings. We spend five minutes for a success story.
Non-monetary rewards for creativity	*HR5: We don't have anything else but ,nice words'. On a few occasions you could hear recognition in our intranet for new ideas. At the end of a year we have the best employee of the year event. But we don't tie ideas with specific rewards, because if an idea is profitable, employees will get their bonuses.*
	HR7: We don't always reward for creativity, because it is difficult to identify the authorship. If an idea is implemented then we always praise and recognise. But there are many people who have ideas, but they remain unimplemented.
Rewards for individual and group achievement	*SD3: Sales people receive incentives based on their individual performance.*
	HR 9: Salary is partially based on an individual merit and on team performance.
	HR12: Monthly incentives are contingent on individual performance and yearly bonuses on overall company performance.

PM: I get fixed pay and then there are some incentives, which depend on company's revenue every month.

SD2: Incentives depend on individual merit and sales group performance. We don't limit bonuses. Sometimes they are 50% of fixed pay.

Training and development

Training in variety jobs or skills	*HR13: Management studies are financed by our company. Doctorate studies are also sponsored. There are 32 employees that are being financially supported. The company sponsors education even if it is not directly relative to the job description. If our company will not profit directly from sponsoring high education, it will still be beneficial for the country. Sometimes we break limits as it is more a society benefit rather than firm's profit. University studies despite its relevance to the current job position increases a general level of erudition of our employees.*
	SD4:Job rotation is a good idea, but I don't know how to implement it. We are lost in our routine and we have ten projects waiting on our list. Yet, our employees are trained in a variety of jobs and skills because they work in various positions from very bottom till they become project managers. We rarely hire project managers from outside as they don't know all the manufacturing process.
Training in sales skills	HR5: *Sales people participate in various training programmes to develop their sales skills, negotiation and presentation skills*. *Also they participate in personal effectiveness training such as managing stress and conflicts and also 'fun at work' workshops.*
	HR15: *Mostly we provide training which is directly related to their job such as sales skills customer service or negotiation skills.*
	HR4: *Our priority is to develop sales skills of our customer contact employees. We are weakest at exploring customers' needs, presenting value and helping our customers to decide.*
Training in generic skills	*HR15: In our company ecology training session is compulsory.*
	SD4: We have training programs on emotional intelligence, managing emotions in negotiations, e-communication skills, impression management, customer service, intercultural communication and etc.

	HR12: Training in our company is mostly about personal development e.g. emotional intelligence. We run brainstorm sessions, we learn how give a constructive feedback and etc. The broader views and knowledge someone has, the more he/she is receptive to ideas and change.
	HR1: We have training programs on intercultural relationships, where everybody takes part.
	HR5: Sales people participate in trainings to increase personal effectiveness such as workshops on stress and conflict management.
Support for not work related (e.g. hobbies, self-actualisation workshops and etc.)	*HR11: We support such activities as 'find yourself as a painter', dancing, creating a staff pictures etc. They help people to relax.*
	HR1: I support all kinds of training if it helps people better understanding themselves. It could be psychotherapy or other programs that increase self-awareness.
	HR8: We used to have some prestige training programs - self- realisation workshops- which were not directly related to our jobs at all. We were among pioneers in the country who implemented such a program in a business environment.
Creativity in induction training	*HR1: Induction training is about meeting with partners, learning business etiquette, planning. There is no creativity included in the beginning. Creativity comes at a later stage, when a new comer warms-up and starts understanding more about the job.*
Training in problem solving	*HR1: We had a training project 'A different approach to problem solving'. Employees had a chance to be actors in solving a real dilemmas and look for a maximum amount of alternative solutions through re-enactment.*
Training in creativity (e.g. creative problem solving, divergent thinking)	*HR2: We do have a standard policy for our department stores and we provide internal training based on that standard. One part is for creativity. We present some particular techniques for creativity. We also discuss what creativity is, and why it is important. We also provide with examples of creative organisations. Our new employees even take 'creativity vows' as a symbol of promise to be creative. In our leadership academy one of our modules is creativity.*
	HR1: If it was only my decision I would definitely organise creativity training for all employees.
	HR11: It would be beneficial for our employees to learn the principles of creative problem solving.

SD4: I have attended creativity training myself; it was under the leadership program. We sat dressed in shorts and slippers and played games. I am not sure how it would work with my employees. We are a construction company. Planners and estimators probably won't understand it. Maybe salespeople would as they are more into soft skills.

HR3: We could have creativity training only if I frame it in technical terms as our engineers are against any soft skills training.

Playfulness at work

Playfulness at work training

HR2: We have also training for playfulness at work; it is called 'it is fun to work in shopping centre'.

HR5: Our sales people participated in playfulness workshop where they were learning to have a positive attitude to various work related issues as well as to brainstorm some initiative to increase a fun atmosphere in the office.

Informal & relaxing office environment

HR12: We try to create home atmosphere in our office.

HR5: We are planning to design a room called 'Relax room'. Usually, I have an idea but I do involve others as well. [..]. Last year we had a pre-session where people had to think about what they would appreciate having in the office and this resulted into a 'Relax room' idea.

HR1: Having dinner with colleagues was alright in one of our offices, but it did not work in another town. We do have breakfast all together on Fridays, but not too sophisticated. [...]We do need a bit of playfulness in our workplace so people could feel better and maybe less stressed, but not too much. It is noted here that with customers you have to interact nicely and politely. The most important is a passion for your job. Our culture is 'cool' and 'fun' is seen differently by everyone. You should not go too far. In order to be fun, it has to be fun for everybody.

Playfulness initiatives

HR14: We could do weekly projects, e.g. some interesting window decorations or some kind of competition like 'the most organised and tidy person' [...] For instance, it could be a competition to make one's book-shelves look interesting and differently. But we are like a shoe maker without shoes...we are

	advertising agency and we organise fun for others but not for ourselves. *HR5: We have milkshakes in the kitchen, photo competition, sculptures and films making in our office. Even though drinking a milkshake, people still talk about their job, they hear about what is going on. It gets easier to talk about work when you share the same experience.* *HR11: Tools for creativity can be direct and indirect. Indirect can be all kind of competitions. Sometimes we all dress in red in order to create a certain atmosphere.*
Time & space for non-work activities	*HR10: People can play darts in the office. We organise competitions now and then. You come quickly to play a game and then back to work. Sometimes ideas come when being out of the workplace. People have to relax. We cook soups in the kitchen. People try new recipes and then treat colleagues with lunch.* *SD2: We have discussions about our job while drinking beer as well. 'Away days' are organised monthly or every two months. Every Friday we have dinner together. We play basketball with sales managers, and people from other departments also join us. We also play with our competitors or suppliers.* *HR11: We organise games in the office and outside the office, such as basketball matches, carting activities. I do not believe that creativity will be encouraged directly through playing games. It happens because of interaction with others.*

Appendix D

Average variance extracted

AVE calculation for empowering leadership using Fornell and Larcke (1981) formula:

$$AVE = \frac{\sum \lambda^2}{\sum \lambda^2 + \sum \varepsilon}$$

$\sum \lambda^2$=1²+1.415²+.806²+0.904²= 4.47

AVE=4.47/4.47+1.35=4.47/5.82=**0.76**

Appendix E

Study 3 questionnaires

Dear Participant,

Research aims to examine how sales people perceive various human resource management practices and other factors that influence creativity in a sales context.

This survey is a part of PhD research project developed by doctoral researcher Ieva Martinaityte under supervision of Work and Organisational Psychology group researchers in Aston University.

We hope that research results will provide human resource and line managers with critical information on how to develop human resource management practices in a sales context.

This research is purely conducted with a purpose of knowledge creation and without any financial purposes. This research aims to test management theories in practice and to present finding in the doctoral dissertation. In addition this research aims to promote evidence based management practices for the development of the organizations.

Your opinion and view is very important and therefore I hope that you will participate. Please note that participation in this study is voluntary and you can withdraw from this study at any time.

The questionnaires are coded and you do not need to write your name or surname on the questionnaire. No one besides the researcher will have access to the individual questionnaires. In any case when results of the survey are presented in organisational reports or academic publications, it will be done in a way that prevents identification of respondents.

It will take about **10-15 minutes** to complete questionnaire.

If you wish to withdraw your data after the completion of the questionnaire you have to contact the researcher and request your data to be removed.

All data will be treated in accordance with the Data Protection Act 1998 under which data handling procedures at Aston University are registered. Electronic data will be kept for 5 years; physical data (questionnaires) will be kept for 2 years. Confidentiality of your data will be maintained at any time.

If you require any further information, please do not hesitate to contact Ieva Martinaityte at martinai@aston.ac.uk

Thank you very much for your input and collaboration!

ASTON UNIVERSITY **REG/04/624**

ETHICS COMMITTEE

CONSENT FORM FOR VOLUNTEERS

PROJECT TITLE: Human Resource Management system for Creativity

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SW8022

Volunteer's Statement

I agree to participate in the study "Human Resource Management system for Creativity" conducted by Work and Organisational Psychology group in Aston Business School. I have been informed, by writing, about the purpose of the study and the particular form of participation required. I am aware that I am free to withdraw from the study at any time.

Signature: _____

Full Name: _____

Date: _____

INTRODUCTION

- In this questionnaire, you are asked to respond to statements about various management practices in your work place.
- Read each statement carefully and decide whether or not the statement describes you by using the scales given in each section.
- **There are no right or wrong answers**. Simply describe yourself honestly and state your opinions accurately.

DIRECTIONS ON USING THE SCALES

Sample 1: **Please use the following scale to indicate how closely you agree or disagree with each statement.**

		Strongly Disagree	Disagree	Slightly Disagree	Slightly agree	Agree	Strongly Agree
A	My favourite fruit is orange.	1	2	3	4	(5)	6
B	I do not like to swimming.	(1)	2	3	4	5	6

Sample 2 : **Please use the following scale to indicate how often each statement describes you.**

C	I like watching horror movies.	**Never**	~~**Rarely**~~	**occasionally**	~~**Frequently**~~	**Very frequently**
D	I love Sunday roast.	**Never**	**Rarely**	**occasionally**	**Frequently**	**Very frequently**

Sample 3: **Please use the following scale to indicate how closely you think each statement describes you.**

not at all true — somewhat true — very true

1	2	3	4	5	6	7

E	I like theatre to cinema……	***5***
F	Next week I will swim in the Baltic sea ……..……	***1***

Please turn to the next page to start the questionnaire.

Customer contact e**mployees' questionnaire example**

SECTION I

The items below describe human resource management practices that are used to manage sales persons like you. Think about yourself and your colleagues in the same store/branch and express your own opinion.

It is very important your answers to be honest as only then it allows researchers to make valid conclusions of the findings

	Strongly disagree	Disagree	Moderately disagree	Moderately agree	Agree	Strongly agree
The company selects the best all-around candidates when recruiting	1	2	3	4	5	6
Recruitment emphasizes traits and abilities required for creativity	1	2	3	4	5	6
Recruitment emphasizes traits and abilities required for sales	1	2	3	4	5	6
Our organisation places priority on candidates' potential to learn	1	2	3	4	5	6
Employees in our unit are allowed to make job related decisions	1	2	3	4	5	6
Employees have lots of opportunity to decide how to do their work	1	2	3	4	5	6
If a problem emerges, employees can take action to remedy it	1	2	3	4	5	6
Employees have little opportunity to use their own judgment when doing their work	1	2	3	4	5	6
There are programs designed to elicit participation and employees input	1	2	3	4	5	6
Employees in our unit are provided with relevant financial performance information	1	2	3	4	5	6
Employees are provided with relevant strategic information	1	2	3	4	5	6
Employees often asked by their supervisor to participate in decisions, which concern work within sales department	1	2	3	4	5	6

Employees often use brainstorming technique in our organisation	1	2	3	4	5	6
There are mechanisms within organisation that encourage employees to suggest improvements in the way things are done. (intranet, group meetings, face to face and etc)	1	2	3	4	5	6
Employees receive developmental performance appraisal	1	2	3	4	5	6
Performance appraisal in our organisation is very much focused on the achievement of sales results	1	2	3	4	5	6
Employees receive developmental feedback for their creative ideas	1	2	3	4	5	6
My organisation rewards and recognizes employees for creative ideas	1	2	3	4	5	6
Employees are recognized with monetary rewards for creative ideas	1	2	3	4	5	6
Employees are recognized with non-monetary rewards for creative ideas	1	2	3	4	5	6
Employees receive compensation partially contingent on individual merit or performance	1	2	3	4	5	6
Employees receive compensation partially contingent on group performance	1	2	3	4	5	6
Employees are paid primarily on the basis of a skill or knowledge- based pay system	1	2	3	4	5	6
Employees are paid a premium wage in order to attract and retain them	1	2	3	4	5	6
Employees are trained in a variety of jobs or skills	1	2	3	4	5	6
During the induction creative approach to problem-solving is stressed	1	2	3	4	5	6
Employees receive extensive training in sales skills.	1	2	3	4	5	6
Employees receive training in generic skills that are not necessarily related directly to their job (e.g, communication skills, conflict management, emotional intelligence and etc)	1	2	3	4	5	6

Our company supports learning/training that is not work related (e.g. hobbies, self-actualisation workshops and etc.)	1	2	3	4	5	6
Employees receive training in problem solving	1	2	3	4	5	6
Employees receive training in creativity (e.g. creative problem solving, divergent thinking, training that promote positive attitudes towards creativity)	1	2	3	4	5	6
Employees receive training in how to have fun at work/ playfulness at work	1	2	3	4	5	6
Our office is designed with the purpose of creating a relaxed and informal atmosphere	1	2	3	4	5	6
Our company provides possibilities to engage in non-work related activities that help me to relax(give an example)	1	2	3	4	5	6
Branch manager and another managers in our organisation introduce initiatives to promote fun at work (e.g. informal outfit, swapping places with the boss, and similar)	1	2	3	4	5	6
Our office is designed in a way that it encourages social interaction between colleagues	1	2	3	4	5	6

SECTION II

The following questions concern your feelings about your job during the last year. (If you have been on this job for less than a year, this concerns the entire time you have been at this job.) Please indicate how true each of the following statement is for you given your experiences on this job. Remember that your boss will never know how you responded to the questions. Please use the following scale in responding to the items.

Not at all true		Somewhat true				Very True
1	2	3	4	5	6	7

I feel like I can make a lot of inputs to deciding how my job gets done	
I really like the people I work with	
I do not feel very competent when I am at work …….....	
People at work tell me I am good at what I do.....	
I feel pressured at work.....	
I get along with people at work.....	
I pretty much keep to myself when I am at work	
I am free to express my ideas and opinions on the job	
I consider the people I work with to be my friends.....	
I have been able to learn interesting new skills on my job.....	
When I am at work, I have to do what I am told.....	
Most days I feel a sense of accomplishment from working.....	
My feelings are taken into consideration at work …….....	
On my job I do not get much of a chance to show how capable I am	
People at work care about me i.....	
There are not many people at work that I am close to	
I feel like I can pretty much be myself at work.....	
The people I work with do not seem to like me much.....	
When I am working I often do not feel very capable.....	
There is not much opportunity for me to decide for myself how to go about my work	
People at work are pretty friendly towards me	

Please use the following scale to indicate why you are motivated to do your work. Please <u>circle</u> the relevant number

Why are you motivated to do your work?

		Strongly disagree	Disagree	Slightly Disagree	Neither agree or disagree	Slightly Agree	Agree	Strongly agree
A	Because I enjoy the work itself	1	2	3	4	5	6	7
B	Because it is fun	1	2	3	4	5	6	7
C	Because I find the work engaging	1	2	3	4	5	6	7
D	Because I enjoy it.	1	2	3	4	5	6	7

In your job, to what extent do you engage in the following actions when seeking to accomplish an assignment or solve a problem? Please think about your behaviour and <u>circle</u> the most relevant answer.

	I spend considerable time trying to understand the nature of the problem	**Never**	**Rarely**	**occasionally**	**Frequently**	**Very frequently**
	I think about the problem from multiple perspectives	**Never**	**Rarely**	**occasionally**	**Frequently**	**Very frequently**
	I decompose a difficult problem/assignment into parts to obtain greater understanding	**Never**	**Rarely**	**occasionally**	**Frequently**	**Very frequently**
	I consult a wide variety of information	**Never**	**Rarely**	**occasionally**	**Frequently**	**Very frequently**
	I search for information from multiple sources (e.g., personal memories, others' experience, documentation, internet, etc.).	**Never**	**Rarely**	**occasionally**	**Frequently**	**Very frequently**
	I retain large amounts of detailed information in my area of expertise for future use	**Never**	**Rarely**	**occasionally**	**Frequently**	**Very frequently**
	I consider diverse sources of information in generating new ideas	**Never**	**Rarely**	**occasionally**	**Frequently**	**Very frequently**
	I look for connections with solutions used in seeming diverse areas	**Never**	**Rarely**	**occasionally**	**Frequently**	**Very frequently**
	I generate a significant number of alternatives to the same problem before I	**Never**	**Rarely**	**occasionally**	**Frequently**	**Very frequently**

	choose the final solution.					
	I try to devise potential solutions that move away from established ways of doing things.	**Never**	**Rarely**	**occasionally**	**Frequently**	**Very frequently**
	I spend considerable time shifting through information that helps to generate new ideas.	**Never**	**Rarely**	**occasionally**	**Frequently**	**Very frequently**

SECTION III

Think about your branch manager. Read each statement and think to what extend you agree or disagree with the following. Please write a number in a given space.

Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
1	**2**	**3**	**4**	**5**

A	My manager helps me understand how my objectives and goals relate to that of the company	
B	My manager helps me understand the importance of my work to the overall effectiveness of the company.	
C	My manager helps me understand how my job fits into the bigger picture.	
D	My manager makes many decisions together with me.	
E	My manager often consults me on strategic decisions.	
F	My manager solicits my opinion on decisions that may affect me.	
G	My manager believes that I can handle demanding tasks.	
H	My manager believes in my ability to improve even when I make mistakes.	
I	My manager expresses confidence in my ability to perform at a high level	
J	My manager allows me to do my job my way.	
K	My manager makes it more efficient for me to do my job by keeping the rules and regulations simple.	
L	My manager allows me to make important decisions quickly to satisfy customer needs.	

SECTION IV

Think about the work environment in your store and indicate the extent you agree or disagree with the following statements. Circle the relevant number.

		Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree
1	In our store creativity is encouraged / Creativity is encourage here	1	2	3	4	5
2	Store managers expect people will do creative work/ In this organization, top management expects people will do creative work	1	2	3	4	5
3	In our store employees are allowed to try to solve the same problems in different ways /Around here, people are allowed to try to solve the same problems in different ways	1	2	3	4	5
4	Our store can be described as flexible and continually adapting to change This organization can be described as flexible and continually adapting to change	1	2	3	4	5
5	In this store we tend to stick to already proven methods/ In this organization, we tend to stick to tried and true ways	1	2	3	4	5
6	In the store, support for the development of new ideas is available/ Assistance in developing new ideas is readily available	1	2	3	4	5
7	In our store there are enough resources for innovations/ There are adequate resources devoted to innovation in this organization	1	2	3	4	5
8	In our store there is time to brainstorm and develop new ideas/ There is adequate time available to pursue creative ideas here	1	2	3	4	5
9	This organization gives me free time to pursue creative ideas during the workday?	1	2	3	4	5

Age (Please indicate) .....

Education (circle the number)

High School	Undergraduate degree	Undergraduate degree	Phd degree	Other (please indicate)
1	**2**	**3**	**4**	**5**

How much time have your been in a present position?.....years.....months.

How much time have you been with your present organisation?.....years.....months

The end of this questionnaire

Managers' questionnaire example

SECTION I

The items below describe potential human resource management practices to manage employees in your branch. Think about your direct reports and only your branch. Express your own opinion. It is very important your answers to be honest as only then it allows researchers to make valid conclusions of the findings

	Strongly disagree	Disagree	Moderately disagree	Moderately agree	Agree	Strongly agree
The company selects the best all-around candidates when recruiting	1	2	3	4	5	6
Recruitment emphasizes traits and abilities required for creativity	1	2	3	4	5	6
Recruitment emphasizes traits and abilities required for sales	1	2	3	4	5	6
Our organisation places priority on candidates' potential to learn	1	2	3	4	5	6
Employees in our unit are allowed to make job related decisions	1	2	3	4	5	6
Employees have lots of opportunity to decide how to do their work	1	2	3	4	5	6
If a problem emerges, employees can take action to remedy it	1	2	3	4	5	6
Employees have little opportunity to use their own judgment when doing their work	1	2	3	4	5	6
There are programs designed to elicit participation and employees input	1	2	3	4	5	6
Employees in our unit are provided with relevant financial performance information	1	2	3	4	5	6
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Employees often asked by their supervisor to participate in decisions, which concern work within sales department	1	2	3	4	5	6
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There are mechanisms within organisation that encourage employees to suggest improvements in the way things are done. (intranet, group meetings, face to face and etc)	1	2	3	4	5	6
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Employees receive training in generic skills that are not necessarily related directly to their job (e.g, communication skills, conflict management, emotional intelligence and etc)	1	2	3	4	5	6
Our company supports learning/training	1	2	3	4	5	6

that is not work related (e.g. hobbies, self-actualisation workshops and etc.)						
Employees receive training in problem solving	1	2	3	4	5	6
Employees receive training in creativity (e.g. creative problem solving, divergent thinking, training that promote positive attitudes towards creativity)	1	2	3	4	5	6
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Our office is designed in a way that it encourages social interaction between colleagues	1	2	3	4	5	6

SECTION II

Think about the external environment of your branch and indicate the extent you thing the changes in branch environment are rare or frequent. Circle the relevant number.

		Very rare				Very frequent
1	how frequent are changes in sales strategies in the industry are ...	1	2	3	4	5
2	how frequent are changes in competitor's mix of products/brands are ...	1	2	3	4	5
3	how frequent are changes in competitor's sales strategies are ...	1	2	3	4	5
4	how frequent are changes in competitor's sales promotion/advertising strategies are ...	1	2	3	4	5

SECTION III

Please reflect on each of your direct reports behaviours on the statements below. Please circle the number on a scale from 1(strongly agree) to 7 (strongly disagree) to indicate the extent you

agree that each employee demonstrates this particular behaviour.

Strongly disagree			Neither agree nor disagree			Strongly disagree
1	2	3	4	5	6	7

	Name Surname	Name Surname	Name Surname	Name Surname
1. Making sales presentations in innovative ways				
2. Carrying out sales tasks in ways that are resourceful				
3. Coming up with new ideas for satisfying customer needs				
4. Generating and evaluating multiple alternatives for novel customer problems				
5. Having fresh perspectives on old problems				
6. Improvising methods for solving a problem when an answer is not apparent				
7. Generating creative selling ideas				

Age (Please indicate) .....

Education (circle the number)

High School	Undergraduate degree	Undergraduate degree	Phd degree	Other (please indicate)
1	**2**	**3**	**4**	**5**

How much time have your been in a present position?.....years……months.

How much time have you been with your present organisation?..... years……months

The end of this questionnaire

Appendix F

Exploratory analysis results

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.394	.461		9.522	.000
	HPWS_hrpw	.161	.106	.089	1.525	.128
2	(Constant)	4.410	.461		9.573	.000
	HPWS_hrpw	.087	.117	.048	.746	.456
	mhrpw	.097	.066	.095	1.478	.141

a. Dependent Variable: mean individual creativity, mhrpw -mean playfulness at work, HPWS_hrpw-unitary index without playfulness at work.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.184	.458		9.134	.000
	HPWS_hrt	.218	.109	.116	1.998	.047
2	(Constant)	4.165	.459		9.070	.000
	HPWS_hrt	.283	.141	.150	2.005	.046
	mhrt	-.060	.083	-.054	-.725	.469

a. Dependent Variable: mean individual creativity, mhrt – mean employee training, HPWS_hrt – unitary index without employee training.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.067	.455		8.939	.000
	HPWS_hrev	.236	.104	.132	2.282	.023
2	(Constant)	4.069	.454		8.962	.000
	HPWS_hrev	.307	.114	.172	2.701	.007
	mhrev	-.104	.070	-.095	-1.490	.137

a. Dependent Variable: mean individual creativity, mhrev – mean rewards, HPWS_hrev – unitary index without rewards.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.425	.423		10.461	.000
	HPWS_hrpmr	.166	.104	.093	1.593	.112
2	(Constant)	4.126	.461		8.951	.000
	HPWS_hrpmr	.044	.129	.025	.345	.730
	mhrpmr	.156	.097	.115	1.607	.109

a. Dependent Variable: mean individual creativity, mhrpmr- mean performance appraisal, HPWS_hrpmr – unitary index without performance appraisal.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.335	.442		9.802	.000
	HPWS_hjd	.184	.107	.100	1.727	.085
2	(Constant)	4.287	.447		9.595	.000
	HPWS_hjd	.115	.139	.063	.828	.408
	mhjd	.074	.095	.059	.774	.440

a. Dependent Variable: mean individual creativity, mhjd – mean job autonomy, HPWS_hjd – unitary index without job autonomy

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.519	.416		10.863	.000
	HPWS_hrip	.141	.102	.081	1.389	.166
2	(Constant)	3.502	.492		7.124	.000
	HPWS_hrip	-.148	.127	-.084	-1.164	.245
	mhip	.447	.121	.268	3.697	.000

a. Dependent Variable: mean individual creativity, mhip –mean employee participation and communication, HPWS_hrip- unitary index without employee participation and communication.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.203	.420		10.008	.000
	HPWS_hrr	.215	.101	.124	2.138	.033
2	(Constant)	4.538	.461		9.841	.000
	HPWS_hrr	.309	.114	.178	2.709	.007
	mhrr	-.164	.095	-.113	-1.730	.085

a. Dependent Variable: mean individual creativity, mhrr- mean selective hiring, HPWS_hrr – unitary index without selective hiring.